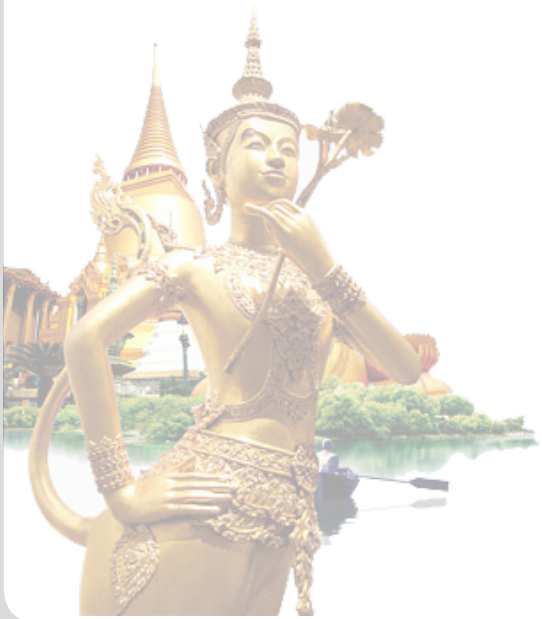
GENERAL CONFERENCE INFORMATION



GENERAL CONFERENCE INFORMATION

Registration Desk Opens:

September 6, 2018: 7:30 am – 7:00 pm
September 7, 2018: 7:30 am – 7:00 pm
September 8, 2018: 7:30 am – 7:00 pm

Congress Registration Fee Includes:

- Evening Symposium by PharmaNord
  September 6, 2018, Thursday at 5:30pm – 7:00pm at the Athenee Crystal A Ballroom
- Welcome Cocktail Party
  September 7, 2018, Friday at 6:30pm – 9:30pm at the Athenee Crystal B Ballroom
- Lunch, refreshments and coffee breaks (Morning & Afternoon)
- Conference program book
- Delegate bag

Exhibition Hours:

September 6, 2018, Thursday	8:00am – 8:00pm
September 7, 2018, Friday	8:00am – 8:00pm
September 8, 2018, Saturday	8:00am – 8:00pm

GENERAL CONFERENCE INFORMATION

Other Information:

- Any delegate who loses their badges can proceed to the registration desk for a “visitor” replacement badge; however, your badge name be announced as “Lost Badge”
- Taking photos or any video recordings in the conference room is strictly prohibited.
- Official conference staff only are permitted to take photos, videos, and audio recording to the conference room.
- Taking photos in the exhibition hall is allowed.
- All speakers can download their slides in the speaker’s room (Japan room) If you need any help or assistance our secretariat room is located at London I room, or you can approach one of our staff who has H.E.A.T logo on their shirt, please feel free to stop by.
- Any delegates who leaves a feedback at www.a4mthailand.com/contact-us.html will received a link containing speakers lecture materials by email.

Upcoming Events:

September 9, 2018
International Detoxification and Chelation Workshop (Exclusive for 20 delegates)
March 6 - 7, 2019
Integrate Anti-Aging Medicine into Aesthetic Practice
June 13 – 14, 2019
Phuket Wellness Connection 2019
September 12 – 14, 2019
The 11th A4M Thailand Congress on Anti-Aging and Aesthetic Medicine 2019

Robert Goldman, M.D., Ph.D., DO, FAASP
Chairman of the Board, The American Academy of Anti-Aging Medicine
(A4M; www.worldhealth.net & www.a4m.com)
Chairman, The World Anti-Aging Academy of Medicine
(WAAAM; www.waaam.org)

Dear Colleagues,

Growing stronger for 10 years now, the American Academy of Anti-aging Medicine Thailand Congress, (known as A4M Thailand) is now considered as one of the strongest pillars in the different fields of Anti-aging, Regenerative & Aesthetic Medicine in Asia!

To all our world-renowned speakers from all over the world, thank you for sharing with us and all the delegates your time and expertise, as we continue our journey as the leading educators, the latest breakthroughs in this challenging medical revolution.

To all our delegates, who unwaveringly continue their journey to bring the best medical care to their patients, the American Academy of Anti-aging Medicine will always be your partner in your continuing education and help mold a new generation of Anti-Aging & Regenerative Medicine practitioners!

Congratulations to us all and looking forward to seeing you at the conference!

Sincerely,
Dr. Robert Goldman
Chairman of the Board, The American Academy of Anti-Aging Medicine
(A4M; www.worldhealth.net & www.a4m.com)
Chairman, The World Anti-Aging Academy of Medicine
(WAAAM; www.waaam.org)

Jakkris Bhumisawawasdi, B. Sc., M.D., MPH
President of A4M Thailand

Warm greetings from A4M Thailand!

As a medical practitioner and strong believer of Anti-aging & Preventive Medicine, being a part of the A4M Thailand community has always been an utmost privilege.

With endless opportunities of receiving 1st hand information on the latest news, technology, science and products in the field of Anti-Aging, preventive & Aesthetic medicine, American Academy of Anti-aging Medicine Thailand Congress is still the one and only leading congress delivering all these here in Asia!

As we celebrate 10 years this year, the challenge to all of us - health practitioners, scientists, researchers, product innovators, our world-renowned speakers from all over the world continues as we deliver the best medical care to our patients, this year and for more years to come! Thank you all for sharing with us and all the delegates, your time and expertise!

Looking forward to seeing you here in Thailand in our upcoming 10th American Academy of Anti-aging Medicine Thailand Congress!

Sincerely,
Jakkris Bhumisawasdi, B. Sc., M.D., MPH.
President
A4M Thailand

Patana Teng-umnuay, MD, PhD
Vice President of A4M Thailand

Dear Colleagues,

The American Academy of Anti-aging Medicine Thailand Congress, (known as A4M Thailand Congress) will celebrate its 10 years anniversary at the Athenee Luxury Collection on September 6-8, 2018. It will be the biggest A4M Thailand ever and you probably don't want to miss.

Our venue, the Athenee Luxury Collection Hotel has been one of the most beautiful and the most luxurious hotels in the country. You will spend three days in the delightful environment; enjoy delicious food while learning something new from world-renowned speakers including Dr. Andrew Heyman (A4M U.S.A.), Dr. Raymond Pahlplatz (Netherland), Dr. Lenny Da Costa (India) and Mr. Danai Chanchaochai (one of the most celebrated Thai speakers). In addition, we will have a special session "Let's Talk about Sex" for the first time. To see the complete program please visit www.a4mthailand.com.

On Friday night September 7, we will host the A4M Thailand welcome cocktail party where sumptuous food will be served, a delightful wine will be poured, live music will be played, and the dance floor will be opened. We will thrill you with a spectacular Thai kickboxing show; beautiful Thai dance shows with some martial art stars on stage. If that is not enough, to celebrate A4M Thailand anniversary, we will have lucky draws for free gifts and free passes to A4M Thailand 2019.

Good news is this year the party is free to all delegates, but the sad news is it will be the last time that we host a party like this. Next year, A4M Thailand will move to a smaller venue and focus more on anti-aging education. So, don't wait until the party is over because it won't happen again. Register now at www.a4mthailand.com before the price goes up.

See you at the 10th A4M Thailand on September 6-8, 2018. Let us share this 'edutainment' experience together, for one last time.

Sincerely,
Dr. Patana Teng-umnuay
Vice President
A4M Thailand

Assoc. Prof. Kris Chatamra, MD

Honorary Speaker

- “Pink Park” The Home for End Stage Breast Cancer Patients

Biography

Medical School: - M.D., Faculty of Medicine, University of London at Westminster Hospital, UK, 1969 Board Certifications: - FRCS, UK, 1975 - MD Thesis, UK, 1982 Fellowships: - General Surgery & Oncology, 1979 Academic Rank: Associate Professor, Chulalongkorn University, Thailand Special Clinical Interests: - General Surgery, Oncology, Breast and Upper Gastrointestinal Surgery

The Pink Park Village, Thailand's first non-profit holistic centre for underprivileged, terminally ill women suffering from stage-4 breast cancer, is a long-awaited charity project finally seeing the light of day.

It is reported that one in 10 women in Thailand will contract breast cancer in her lifetime.

Playing a vital role in the coming-together of the Pink Park Village is the Queen Sirikit Centre for Breast Cancer Foundation (QSCBCF), at the frontier of the country's fight against the disease. They offer state-of-the-art medical equipment and internationally recognised approaches to the diagnosis, treatment and research of breast cancer.

The Queen Sirikit Centre for Breast Cancer Foundation is taking its efforts to the next stage with this ambitious project geared toward not just holistic care, but diagnosis.

Housed among the scenic rice fields of Minburi, away from the pollution of Bangkok, Pink Park Village will embody perfect calm and provide a serene environment for the ill. Without a doubt, this natural setting promises to play a key role in healing the emotions of breast-cancer patients.

Pink Park Village is designed for its facilities to match its natural surroundings, so patients can find respite and inner peace among the greenery both inside and out -- a place where they can truly feel at home.

This internationally recognised approach in caring and treating breast-cancer sufferers taps into their emotional state, reducing stress and anxiety they would otherwise experience, reflecting among other things HM the Queen's vision for the foundation as a "sanctuary for all women in need".

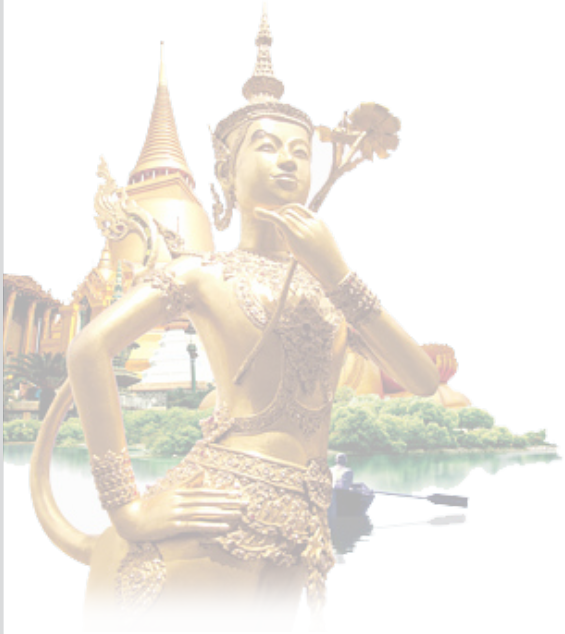
The Queen Sirikit Centre for Breast Cancer Foundation is led by Dr Kris Chatamra, a leading surgeon in the field of breast cancer. He has dedicated his life to raising the standards of breast-cancer care in a number of ways in this country. One of these was by helping establish the Queen Sirikit Centre for Breast Cancer at Chulalongkorn Hospital in 2007.

Pink Park Village will be open for the general public to get involved and join the cause through various means. Besides donations, people can plant and donate trees, volunteer during and after the development process of the hospice, and more.

Capt. (Ret.) YONGYUTH MAYALARP, MD, MBBS (London), MSc (London), ABAARM (USA), DTM&H (London)
Moderator

Dr.Yongyuth Mayalarp attended primary and secondary education at St.Gabriel's College, Bangkok, and continued with the Fifth and Sixth form levels of study at Eastbourne College, UK. He graduated from the London Hospital Medical College, University of London, with MB BS in 1983 and gained clinical experiences in many hospitals in UK for the following five years. He then attained MSc Degree in Clinical Tropical Medicine and Diploma in Hygiene and Tropical Medicine from the London School of Hygiene and Tropical Medicine, University of London. On his return to Thailand, he worked as a physician at Pramongkutklao Military Hospital for four years and later as a general practitioner and department director at Phyathai 2 International Hospital. He became a board certified physician of ABAARM in 2017 and is now attending MSc Degree course in Anti-Aging and Regenerative Medicine at Dhurakij Pundit University, Bangkok. Yongyuth is a very well-known TV and radio celebrity, anchoring prime time evening news and presenting foreign issue analysis for Thai TV Channel 5 for over two decades. He received numerous national awards for his contribution to the Thai Media sector and a plaque of honour from the St.Gabriel's Alumni Association for his outstanding achievement in many fields. Dr.Yongyuth Mayalarp was recently presented with a royally-bestowed Theptong Award 2017 as an outstanding TV personality. He was twice appointed as the Government Spokesman for two Royal Thai Governments in 2006 and 2014 and served as an advisory committee member for a former Minister of Foreign Affairs, Prof.Surakiart Sathirathai. At the present age of 60, he is the Director of Corporate Partnership and Social Responsibility at Phyathai 2 International Hospital, an English-language narrator for the Television Pool of Thailand's live telecast of royal and state ceremonies and an advisor to the boards of TV Pool of Thailand and TV Channel 5.

PRE-CONGRESS PROGRAM



PRE-CONGRESS PROGRAM

Thursday 6th September, 2018

"Combating Aging Forces: Translating basic science into clinical practice"
Location: Athenee Crystal A Ballroom

Pre-Congress : Combating Aging Forces		
Time	Topic	
08:45 - 09:45	Fructotoxicity, Hyperuricemia, Metabolic Syndrome, and Renal Failure	Dr. Patana Teng-umnuay
09:45 - 10:15	Coffee Break	
10:15 - 11:00	Anti-inflammatory Diet	Dr. Anongnuth Chavalithamrong
11:00 - 12:00	The difference between the intracellular and extracellular environment	Dr. Raymond Pahlplatz
12:00 - 13:00	Lunch Buffet at Athenee Crystal B Ballroom	
13:00 - 13:45	Cannabis, Cannabinoids and the Endocannabinoid System	Dr. David Bearman
13:45 - 14:30	Autoimmunity: A Functional Medicine perspective	Dr. Shabnam Das Kar
14:30 - 15:15	Restoring Health to Combat Ageing	Dr. Lenny Da Costa
15:15 - 15:30	Coffee Break	
15:30 - 16:15	Gut Inflammation and Chronic Diseases: How to Cool the Fire Inside your Gut	Dr. Sanjay Kapur
16:15 - 17:00	Building Biology: a foundation to support life-long health by reducing external stress	Eric GT Walker
17:00 - 17:30	Evening Symposium Cocktails (opened to all delegates)	
"Combating Aging with Nutraceutical Supplementation" Sponsored by PharmaNord		Moderator: Dr. Yongyuth Mayalarp
17.30 - 18.00	Supplementation with CoQ10 and Selenium – remarkable effect on inflammatory and oxidative stress markers	Prof. Dr. Urban Alehagen
18:00 - 18:30	Evidence based Nutraceutical in Chronic diseases	Dr. Sira Suparb
18:30 - 19.00	Pycnogenol and Astaxanthin: The Perfect Combination for Skin Supplementation	Dr. Patana Teng-umnuay

CONGRESS PROGRAM

CONFERENCES PROGRAM

Integrating Anti-aging Medicine knowledge into Clinical Practices
Friday 7th September, 2018

Open Ceremony and Plenary Session
Location: Athenee Crystal B Ballroom

Main Congress Day 1		
		Moderator: Dr. Yongyuth Mayalarp
07:30 - 19:00	Congress Registration	
08:45 - 09:15	Opening Ceremony	Dr. Robert Goldman Dr. Jakkris Bhumisawasdi Dr. Patana Teng-umnuay
09:15 - 09:45	Honorary Lecture "Pink Park" The Home for End Stage Breast Cancer Patients	Dr. Kris Chatamra
09:45 - 10:00	Coffee Break and Exhibition Booths	
Plenary		Moderator: Dr. Yongyuth Mayalarp
10:00 - 10:45	Biotoxins and Chronic Inflammatory Response Syndrome	Dr. Andrew Heyman
10:45 - 11:15	Pycnogenol for Musculoskeletal and Cardiovascular Health	Jeffry Michael Strong, N.D.
11:15 - 12:00	Strategies to overcome physical and mental fatigue associated with ageing	Dr. Robert Corish
12:00 - 13:30	Lunch Buffet located in the Grand Ballroom on the 2nd floor	

Friday 7th September, 2018

Location: Athenee Crystal B Ballroom

Athenee Crystal B Ballroom		
Anti-aging Innovation		Chair: Dr. Sujitra Napathorn Co-chair: Dr. Mart Maiprasert
13:15 - 13:40	Stress and NeuroInflammation	Dr. Andrew Heyman
13:40 - 14:05	Benefits of Cannibis in Health and Diseases	Dr. David Bearman
14:05 - 14:30	Intermittent Fasting for Weight Loss	Dr. Mart Maiprasert
14:30 - 14:55	Oxidative Stress and Inflammation Damage Markers	Dr. Kobkul Sudsuansri
14.55 - 15.20	Preliminary report on the phase II randomized, double-blind, placebo-controlled evaluation of AHCC For the eradication of HPV infections in woman with HPV positive pap smears	Dr. Judith Smith
15:20 - 15:35	Coffee Break	
Food and Supplement		Chair: Dr. Sujitra Napathorn Co-chair: Dr. Wilai Thanasarnaksorn
15:35 - 16.00	Benefits of Polyphenol Hydroxytyrosol in Olive Oil	Dr. Wilai Thanasarnaksorn
16.00 - 16:25	Supplementation with CoQ10 and Selenium – reduced fibrosis in elderly	Prof. Dr. Urban Alehagen
16:25 - 16:50	Oligonol: A Novel Polyphenol Lychee Extract (From Japan) for Promising Reduction of Visceral Obesity, Metabolic Syndrome, Cardiovascular Risks and Sport Performance Improvement	Dr. Patsri Chuepool
16:50 - 17:15	Fish Bone Calcium and Collagen for Osteoporosis	Dr. Pansak Sugraroek
17:15 - 17:30	Break	
17:30 - 18:30	Plenary Session in Athenee Crystal A Ballroom	
Welcome Cocktail Party Moderator: Dr. Yongyuth Mayalarp		
18:30 - 18:45	Opening Ceremony	
18:45 - 21:30	Welcome Cocktail Party in Crystal Hall B	

Friday 7th September, 2018

Location: Athenee Crystal A Ballroom

Athenee Crystal A Ballroom		
Let's Talk about Sex		Chair: Dr. Pansak Sugraroek Co-chair: Dr. Atiwut Kamudhamas
13:15 - 13:40	Diagnosis of Sexual Disorders; what and why anti-aging physicians need to know.	Dr. Atiwut Kamudhamas
13:40 - 14:05	When Menopausal Women Cannot Have Sex	Dr. Pansak Sugraroek
14:05 - 14:30	Testosterone Replacement Therapy in Men	Dr. Sanjay Kapur
14:30 - 14:55	Low Intensity Shock Wave Therapy for Erectile Dysfunction	Dr. Nouval Shahab
14.55 - 15.20	When Julie wants to become Jimmy	Dr. Sukit Worathamrong
15:20 - 15:35	Coffee Break	
Sexual and Genitourinary Problems in Women		Chair: Dr. Kasean Panyakhamlerd Co-chair: Dr. Orawee Chinthakanan
15:35 - 16.00	Management of Genitourinary Syndrome of Menopause	Dr. Kasean Panyakhamlerd
16.00 - 16:25	The Science of RF and Feminine Rejuvenation	Dr. Susan Murrmann
16:25 - 16:50	Cosmetic Gynecology	Dr. Orawee Chinthakanan
16:50 - 17:15	Psychological effects of BHRT and Feminine Rejuvenation	Dr. Susan Murrmann
17:15 - 17:30	Break	
Plenary Session		Chair: Dr. Yongyuth Mayalarp Co-chair: Dr. Pakpilai Thavisin
17:30 - 18:00	Money Cannot Buy Happiness	Danai Chanchaochai
18:00 - 18:15	Kao-Kon-La-Kao: Step by Step Together, the marathon project for the nation	Dr. Samitada Sungkapo
18.15 - 18.45	Q&A	
18:45 - 21:30	Welcome Cocktail Party in Crystal Hall B	

Friday 7th September, 2018

Workshop
Location: Terrace Room B

Workshop Terrace Room B		
Time	Topic	
15:30 - 17:00	Bioresonance by Rayonex- an integrated and personalized approach to health an beauty	Eric GT Walker (The Resonance)
17:30 - 19:00	Oligoscan Workshop Neurodegeneration	Dr. Raymond Pahlplatz (Oligoscan)

Friday 7th September, 2018

AstaReal Symposium
Location: 2nd floor, London II , III

AstaReal Symposium (Opened to Public)		
13:30 - 15:00	Dermatology benefits with Astaxanthin	Dr. Bheerathida Rattakul
15:00 – 15:15	**Coffee Break**	
15:15 - 16:45	Mobility and how astaxanthin fits in	Dr. Robert Corish

Saturday 8th September, 2018

Location: Athenee Crystal B Ballroom

Anti-Aging Athenee Crystal B Ballroom		
Detoxification		Chair: Dr. Pakpilai Thavisin Co-chair: Dr. Bancha Daengneam
08:45 - 09:10	IV Detox therapies in routine Clinical practice - practical pearls	Dr. Lenny Da Costa
09:10 - 09:35	Mercury: The Iatrogenic Toxin	Dr. Pakpilai Thavisin
09:35 - 10:00	Detoxification: The first step to successfully combating aging	Dr. Silvia Binder
10:00 - 10:25	Detoxification: Heavy Metals and Chemicals	Dr. Andrew Heyman
10:25 - 10:40	Coffee Break	
Integrative Approach for Cardiovascular Diseases		Chair: Dr. Pakpilai Thavisin Co-chair: Dr. Bancha Daengneam
10:40 - 11:05	Reversal of arterial stiffness	Dr. Raymond Pahlplatz
11:05 - 11:30	Stress and Cardiovascular Disease: Is Cortisol the Key?	Dr. Sanjay Kapur
11:30 - 11:55	Women and CVD: Men and women are not alike!	Dr. Shabnam Das Kar
11:55 - 12:20	Correcting Mitochondrial Dysfunction in routine practice	Dr. Lenny Da Costa
12:20 - 13:30	Lunch Buffet located in the Grand Ballroom on the 2nd floor	
Increasing Lean Muscle Mass		Chair: Dr. Somboon Roongpornchai Co-chair: Tirasak Termsubsarn
13:30 - 13:55	Benefits of Whey Protein	Craig Burton
13:55 - 14:20	Exercise for Optimizing Testosterone & Growth Hormone	Dr. Tanjung Subrata
14:20 - 14:45	Exercise Management for Weight Loss	Dr. Somboon Roongpornchai
14:45 - 15:10	TAI-CHI Training	Tirasak Termsubsarn
15:10 - 15:30	Coffee Break	
Functional Medicine		Chair: Dr. Yongyuth Mayalarp Co-chair: Dr. Kobkul Sudsuansri
15:30 - 15:55	Autoimmunity: Why do we start with the gut?	Dr. Shabnam Das Kar
15:55 - 16:20	Myofascial Dry Needling for Musculoskeletal Pain	Dr. Tanjung Subrata
16:20 - 16:45	The Importance of Finding the Root Cause of Chronic Conditions – the Hidden Threat of Non-Metal Toxicity	Ai Namima-Davison
16:45 - 16:50	Break	
Plenary Session		
16:50 - 17:30	Combating Aging Forces	Dr. Patana Teng-umnuay
17:30 - 18:30	Light Meal	

Saturday 8th September, 2018

Location: Athenee Crystal A Ballroom

Aesthetic Athenee Crystal A Ballroom		
Contouring		Chair: Dr. Jinda Rojanamatin Co-chair: Dr. Rumpa Linpiyawan
09:10 - 09:35	Facial Contouring with Fillers	Dr. Jinda Rojanamatin
09:35 - 10:00	Panfacial Contouring: My Experience	Dr. Cristina Puyat
10:00 - 10:25	Ultrasonic Body Contouring	Dr. Rumpa Linpiyawan
10:25 - 10:40	Coffee Break	
Stem Cells in Aesthetics Medicine		Chair: Dr. Tharanus Krataithong Co-chair: Dr. Wajana Wongpitirungruang
10:40 - 11:05	Liposuction and Adipose Derived Stem Cell Collection	Dr. Wajana Wongpitirungruang
11:05 - 11:30	Autologous Fat Transfer	Dr. Sarawalai Rakchart
11:30 - 11:55	Stem Cell Face Lift	Dr. Cristina Puyat
11:55 - 12:20	Platelet Rich Plasma versus Platelet Rich Fibrin	Dr. Patana Teng-umnuay
12:20 - 13:30	Lunch Buffet located in the Grand Ballroom on the 2nd floor	
What's new in Aesthetic Dermatology - From Bench to Bedside		Chair: Dr.Rungsima Wanitphakdeedecha Co-chair: Dr. Ratchathorn Panchaprateep
13:30 - 13:55	Fractional Assisted Drug Delivery	Dr. Thanya Techapichetvanich
13:55 - 14:20	Update Treatment in Melasma	Dr. Sasima Eimpunth
14:20 - 14:45	Non- and Minimally-invasive Hair Growth Stimulators	Dr. Ratchathorn Panchaprateep
14:45 - 15:10	Filling Myself with My Own Fillers	Dr. Rungsima Wanitphakdeedecha
15:10 - 15:30	Coffee Break	
Integrate Energy Medicine into Aesthetics Practice		Chair: Dr. Nalinee Sutthipisal Co-chair: Dr. Tharanus Krataithong
15:30 - 15:55	Face Lock (Surgical Facial Rejuvenation)	Dr. Choldhis Sinrachtanant
15:55 - 16:20	Adjunctive Pre-op Post-op care for the Aesthetics Successful Outcome	Dr. Nalinee Sutthipisal
16:20 - 16:45	Adjunctive Therapy to Combat Inflammation	Dr. Silvia Binder
16:45 - 16:50	Break	
16.50 - 17.30	**Plenary Session in Crystal Hall B**	

Saturday 8th September, 2018

Workshop
Location: Terrace Room B

Workshop		
Time	Topic	
10:30 - 12:00	Masculine and Feminine Rejuvenation (Explicit Content)	Dr. Nouval Shahab (AME)
13:30 - 15:00	Charging Yourself With Electrolyzed Reduced Water : HEALING IS VOLTAGE	Nitchamon Pureeanuntasak (Kangen)
15:30 - 17:00	Learn How to use AED, You will need it!!	Krisada Hungsasoot (Meditop)

Saturday 8th September, 2018

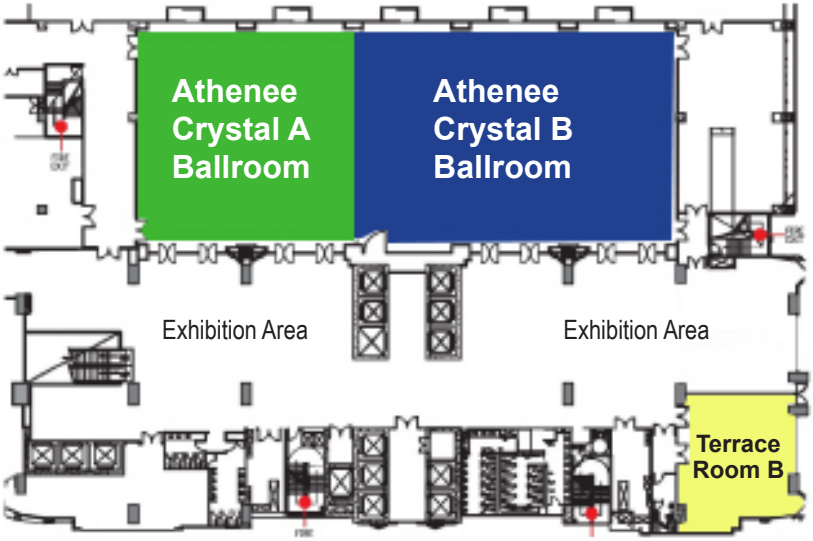
Basic Science Research Presentation
Location: 2nd floor, London II, III

Anti-aging and Aesthetics Basic Science Research Presentation (Opened to Public) Breakfast break will be served		Chair: Dr. Nattavut Wongdeethai Co-chair: Dr. Phawit Norchai
10:00 - 10:15	Growth Factors in Platelet Rich Plasma	Dr. Nattavut Wongdeethai
10:15 - 10:30	The effect of oral Nystatin drug to urine indican level in dysbiosis	Dr. Phawit Norchai
10:30 - 10:45	Anti-aging effect of oral very high proline complex collagen (DERMOFIX®) on skin properties: a randomized, double-blind, placebo-controlled clinical study	Dr. Pornsayapat Likhitthummagun
10:45 - 11:00	The Effectiveness of probiotics in the treatment of inflamed acne	Dr. Siripa Kitkuakosol
11:00 - 11:15	The effective of court-type Thai massage (CTTM) in healing pressure ulcer	Ms. Supisara Phonkrut
11:15 - 11:30	A study of oral Turmeric powder on the level of marker of chronic inflammation and Glycosylated hemoglobin	Dr. Jareeporn Pokpirom
11:30 - 11:45	Comparison Effect of Black Glutinous Rice and Black Non-Glutinous Rice on Blood Glucose and Insulin Levels in People with Normal Blood Glucose	Dr. Chayanan Wongkaew
11:45 - 12:00	Knowledge Attitude and Practice of Home Product Center Plc Employee toward UHT Cow's Milk Drinking	Ms. Siriwan Sermcheep

FLOOR PLAN

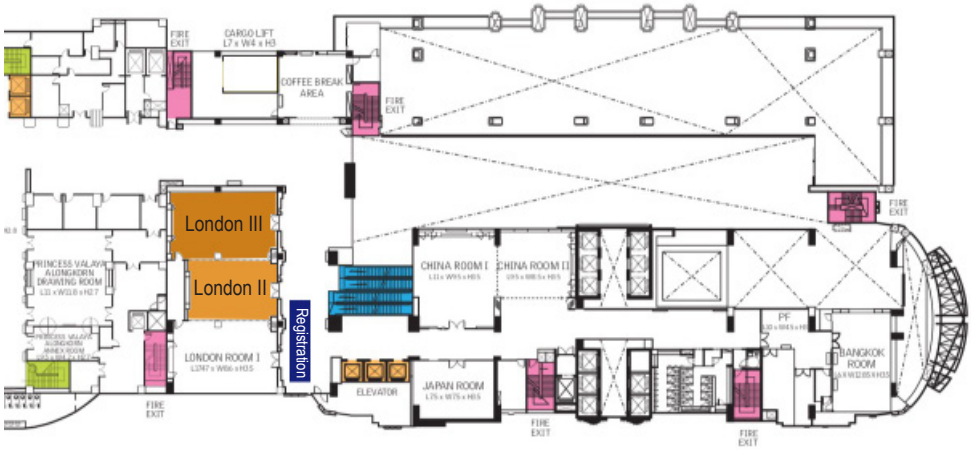
Conference Room 3rd Floor

Crystal A and Crystal B and Terrace Room B

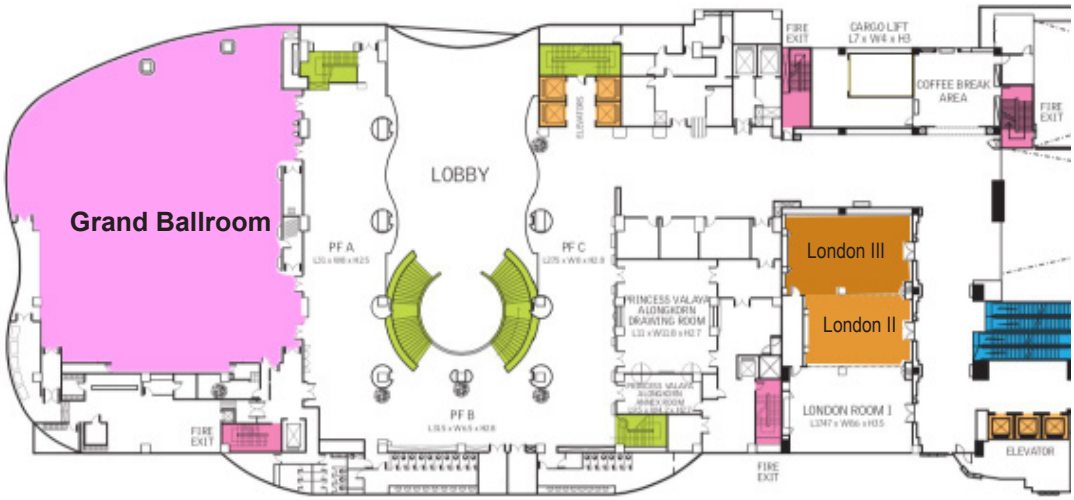


Conference Room 2nd Floor

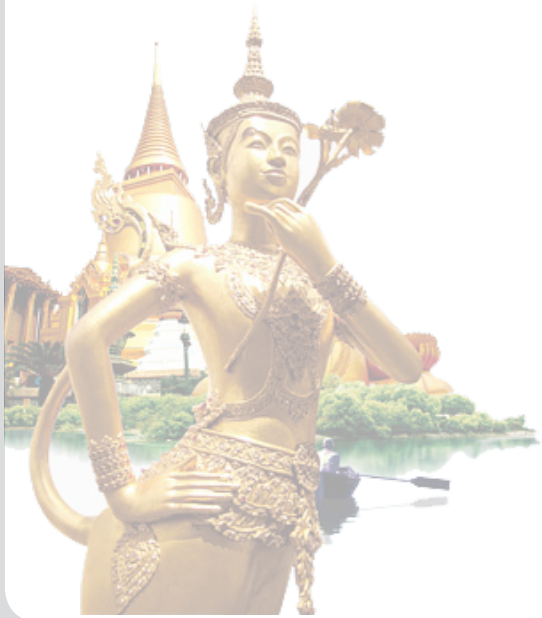
London II and London III

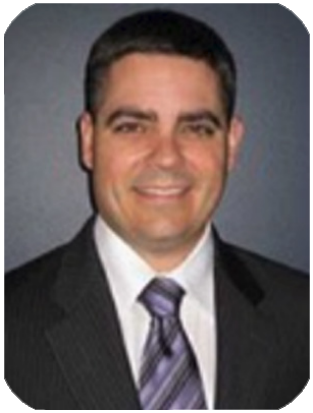


Lunch Buffet located in the Grand Ballroom on the 2nd floor



KEYNOTE SPEAKERS





Andrew Heyman, MD, MHSA

- Stress and NeuroInflammation
- Biotoxins and Chronic Inflammatory Response Syndrome
- Detoxification: Heavy Metals and Chemicals

Biography

Dr. Heyman has held several leadership positions in the field of Integrative Medicine. He is currently the Program Director of Integrative Medicine at George Washington University in Washington DC. http://smhs.gwu.edu/integrative-medicine/integrative-medicine-programs. Here he has developed the first integrative medicine program offered at a 4- year university.

He holds the position of Chief Medical Officer for the Metabolic Code Enterprise. This is a group of clinical experts that consults to physicians, health systems and public professionals seeking to develop wellness, lifestyle and nutrition programs. He is also the online editor for the Journal of Men's health in the section of Integrative medicine, and holds the position of Editor in Chief of the Internet Journal of Anti-Aging and Aesthetic Medicine.

Previously, he was the national clinical working group co-chair of the Consortium of Academic Health Centers for Integrative Medicine for 4 years. This was a collaboration of 57 North American universities involved in Integrative Medicine. He has been featured on the Discovery Channel, in the Martha Stewart Living Magazine, Ladies Home Journal, Natural Health Magazine, and appeared in many other TV and print venues. He is a widely sought after and celebrated speaker and travels around the world giving talks on various Integrative Medicine topics.

Dr. Heyman has been practicing medicine since 2004. He received his medical degree from the University of Michigan. His approach is described as deeply rooted in scientific evidence, grounded in the clinical reality of expert patient care and readily accessible to both the new learner and seasoned practitioner.

In 1990 he received formal training in Five-element Shiatsu and Traditional Chinese Medicine. During this time he developed an interest in increasing access of natural therapies to underserved populations while partnering with the University of Pennsylvania. He continued this work with Jim Gordon, MD at the Center for Mind-Body Medicine in Washington DC. Here he explored the intersection between public health, at risk groups and alternative therapies.

Dr. Heyman eventually went on to receive a Masters in Health Services Administration at the University Of Michigan School Of Public Health and upon graduation, became the administrator for the University of Michigan Complementary and Alternative Medicine Research Center where he was responsible for administering a seven million dollar NIH grant to research alternative therapies for cardiovascular diseases. The center was one of the first in the country to place alternative therapies and their scientific examination in academic context.

Dr. Heyman's research interests include the stress response, neuroendocrinology, cardio metabolic disease, men's health and clinical outcomes research methodologies.

Dr. Heyman remains clinically active as the owner the Virginia Center for Health and Wellness in Northern Virginia. When not traveling or in clinic, Dr. Heyman enjoys country drives, cooking and taking his beloved dog, Murphy, to the dog park and on hikes throughout beautiful northern Virginia.

Abstract

• Biotoxins and Chronic Inflammatory Response Syndrome

This lecture reviews the role biotoxin exposures play in igniting chronic inflammation, and how genetics can predetermine susceptibility. Up to 20% of the population may be suffering from this important category of illness, often described as chronic fatigue, fibromyalgia, and atypical depression. In fact, this is a multi-symptom, multi-system disease complex that requires insightful care by the practitioner to unwind these very sick patients.

• Stress and Neuro-Inflammation

Stress is common. Stress also has wide ranging metabolic effects on the immune and nervous system that may result in significant metabolic derangements underlying cognitive, immune and neurologic disorders. This lecture explores the relationship between cortisol, the central and peripheral nervous and the immune system. We go beyond the limiting term 'Adrenal Fatigue' to better understand the deeper, evidence-based aspects of the impact stress can have on serious illnesses such as chronic infections, neurodegenerative disorders, and autoimmune conditions.

• Detox: Heavy Metals and Chemicals

We live in a world that constantly challenges our immune system. Certainly stress, food, and a sedentary lifestyle contribute to the epidemic of obesity, fatigue and chronic inflammation. But what about patients that have attempted to change their diet, reduce stress, balance their hormones, repleted nutrients, performed various functional tests and still remain ill? What about exposure to Heavy Metals or Chemicals? Evidence is accumulating that these negative factors influence metabolism and can act as endocrine disruptors, neurotoxins and harm the vascular endothelium. This lecture will review common exogenous exposures and their clinical impact as well as therapeutic strategies to detoxify patients safely.

Jeffry Michael Strong, N.D

- Pycnogenol for Musculoskeletal and Cardiovascular Health

Biography

Dr. Jeffry Michael Strong (Director of Scientific Communications, Asia Pacific and Japan Country Manager, Horphag Research) is a naturopathic doctor trained in Primary care medicine with special interests in complementary and alternative Medicine and Pycnogenol®. He graduated from Bastyr University, Washington, with A doctorate of naturopathic medicine. Dr. Strong is a member of the American Association of Naturopathic Physicians, the Japanese Society of Anti-Aging Medicine, the Japanese Society for Complementary and Alternative Medicine and Treatment and special advisor to the Japanese Natural Therapeutics Clinical Research Society.

Abstract

Pycnogenol® for musculoskeletal and cardiovascular health

Pycnogenol® is a USP standardized patent-protected extract derived from the bark of the French maritime pine tree, which grows only in the Landes de Gascogne in France. Originally developed as a pharmaceutical product for cardiovascular health in France in the 1960ies and still used as an OTC pharmaceutical in 11 countries, today Pycnogenol® is available in more than 100 countries as a health food ingredient. Pycnogenol® has been studied for more than 50 years including more than 140 clinical studies involving more than 12,000 patients. Pycnogenol® has been shown in clinical studies to be a superior antioxidant, a natural anti-inflammatory, significantly improve the function of blood vessels promoting full body circulation and reduction of multiple cardiovascular risk factors, improve blood sugar control, and support the health of the skin and connective tissue. This presentation will provide an overview on the wide array of research related to the cardiovascular health benefits while also reviewing the use of Pycnogenol® in supporting musculoskeletal health, specifically osteoarthritis.

Robert Corish, MD

- Strategies to overcome physical and mental fatigue associated with ageing

Biography

Dr. Robert Corish is a board certified anesthesiologist and toxicologist. He is a Fellow of the Health Studies Collegium and a member of the American College of Nutrition and the Australasian College of Nutrition and Environmental medicine.

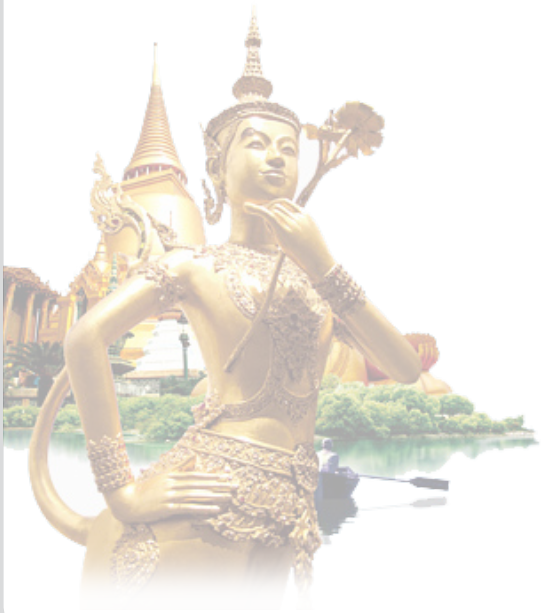
He is an international lecturer on preventative medicine, cellular physiology and integrative medicine. Dr Corish is one of the world's medical experts on the antioxidant, natural Astaxanthin and he is the author of two books, one of which is aptly titled, "Natures Perfect Antioxidant - Astaxanthin".

Abstract

"Strategies to overcome physical and mental fatigue associated with ageing"

Fatigue is inextricably connected with the ageing process and indeed with chronic illness. Acknowledging that the mitochondria are the sentinel organelles within cells - offers us a physiological map into energetics. The mitochondria can be manipulated to maximize energy levels required for vigor, vitality and healthy dynamics during the ageing process.

ANTI-AGING SPEAKER



Patana Teng-umnuay, MD, PhD

- Combating Aging Forces
- Fructotoxicity, Hyperuricemia, Metabolic Syndrome, and Renal Failure
- Detoxification: Plasmapheresis
- Platelet Rich Plasma versus Platelet Rich Fibrin

Biography

Dr. Teng-umnuay received his medical degree with first class honors from Chulalongkorn University, Thailand in 1986 and also board certification in Internal Medicine and Nephrology in 1990 and 1992. Then, he went to study at the University of Florida in the field of Molecular Cell Biology where he earned his PhD degree in 1998. Dr. Teng-umnuay is one of the well-known lecturers on the subjects of nutraceutical supplements, stem cell biology, and anti-aging medicine. He is a faculty of the Anti-aging and regenerative program of Dhurakij Pundit University and the vice president of A4M Thailand. He is also a colomnist for FHM Magazine Thailand, hosts a television show 'and also serves as a consulting physician for S Medical Clinic and Phyathai 2 Hospital, Thailand.

Abstract:

• Fructotoxicity, Hyperuricemia, Metabolic Syndrome, and Chronic Kidney Disease

During the last decades, excessive consumption of sugar is one of the primary causes of obesity epidemic and metabolic disorders like diabetes and cardiorenal syndrome. Table sugar or sucrose is a disaccharide compound composed of one molecule of glucose and one molecule of fructose. Both fructose and glucose are hexose with the same chemical formula, $C_6H_{12}O_6$. However, their molecular structures and metabolism pathways are different. Since only blood glucose has been used as a diagnostic indicator of diabetes, most people including doctors get the wrong impression that fructose is safe. Some nutritionists even recommend fructose for diabetic patients because it has very low glycemic index and does not trigger the production of insulin. As a matter of fact, fructose can be converted into glucose, triglyceride, and LDL-cholesterol in the liver. Excess fructose consumption can cause obesity, insulin resistance, hypertension, and metabolic syndrome.

In the past, dietary fructose consumption was trivial. But since 1960s, a corn industry has manufactured high fructose corn syrup (HFCS), a high concentration of fructose and glucose mixes. HCFS has become a primary ingredient in a vast majority of sweetened beverages and processed foods due its low cost and delicious sweet taste. In addition, while glucose suppresses the hunger hormone ghrelin and stimulates leptin, which suppresses the appetite, fructose has no effect on ghrelin or leptin production leading to overeating that help increasing product sales.

Another health hazardous effect of fructose is hyperuricemia. The metabolism of fructose within the cell generates a large amount of AMP, which in turn metabolized into uric acid that cause gout, endothelial dysfunction, hypertension, kidney stone, and renal failure. While doctors recommend patients, who have gout to restrict high-purine diets such as poultry, only few of them recognize the de novo effect of fructose that can lead to uric acid overproduction. There have been numerous studies found a significant risk of hyperuricemia, gout, and metabolic syndrome associated with the consumption of fructose or fructose-rich foods. Elevated uric acid level in patients with chronic kidney disease (CKD) has been related to increased risks for the development of hypertension and cardiovascular diseases. Many studies have shown that reduction of uric acid level with allopurinol therapy improves endothelial function, reduces cardiovascular and hospitalization, and most importantly, slows down the progression of kidney disease in CKD patients.

Since metabolic syndrome and chronic kidney disease have become one of the major health problems, it is crucial that doctors need to know about the disastrous metabolic effects of fructose and consider uric acid as a potential treatable risk factor in metabolic syndrome and CKD.

• Pycnogenol and Astaxanthin: The Perfect Combination for Skin Supplementation

Skin, just like every cell in the body, needs nutrients. Oxidative stress and inflammation are two major mechanism of aging that effect the body as a whole as well as the skin. The damaging effect of sunlight is contributed mainly to singlet oxygen, one of the reactive oxygen species. The effects of singlet oxygen cause skin wrinkle, decreased collagen and elastin production, skin hyperpigmentation, and a risk of skin cancer. Astaxanthin is a reddish pigment that belongs to a group of chemicals called carotenoids. Diets high in carotenoids are considered to be the first line of defense against singlet oxygen toxicity. Astaxanthin occurs naturally in certain algae and causes the pink or red color in salmon, trout, lobster, shrimp, and other seafood. In nature, highest levels of astaxanthin are found in the microalgae Haematococcus pluvialis. These special red algae have been cultivated and their extract rich in astaxanthin has been used as a nutraceutical supplement and also a cosmetic ingredient. Many lines of evidence indicate that astaxanthin might be the most potent anti-oxidant against photoaging found in nature.

An experimental study has shown that singlet oxygen quenching activities of astaxanthin is 75 times higher than lipoic acid, 110 times higher than vitamin E, 800 times higher than coenzyme Q10, and 6000 times higher that vitamin C. Clinical studies have shown the benefits of astaxanthin for the skin and the eye. Astaxanthin supplements improve skin appearance, prevent skin photo damage, reduce eye fatigue, and improve visual performance. Pycnogenol is a pine bark extract that numerous studies have shown that it enhances skin microcirculation and anti-inflammation. It also has the positive effects on skin hyperpigmentation, hyaluronic acid production, and collagen and elastin protection.

When taken together, these two anti-oxidants will provide complementary benefits for the skin. While astaxanthin protects the skin from the harmful effects of UV ray and singlet oxygen, pynogenol will reduce the collagen and elastin degradation, and inhibit melanogenesis. In addition to skin health, both supplements are strong anti-oxidants and anti-inflammatory agents that can provide benefits for overall health.

• Combating Aging Force

Aging is the accumulation of changes in the cells and tissues that increase the risk of organ dysfunction and death. Only if we understand these aging forces, we can combat aging. These aging forces are oxidative stress, glycation end products, inflammation, toxins, acidosis, and stress. Oxidative Stress is one of the major factors of aging process. We can reduce our oxidative stress by restrict our caloric intake and use the right combination of anti-oxidants. Excessive consumption of refine carbohydrate is one of the important causes of chronic illness. We need to reduce the amount of sugar we are consuming. Both oxidative stress and sugar toxins will lead to inflammation, underlying pathology of many chronic illnesses. To combat inflammation, we need to select the right kind of dietary fat. While omega 3 and omega-9 fatty acid are precursors for anti-inflammatory prostaglandins, omega 6 fatty acids can be converted into pro-inflammation mediators, arachidonic acids.

Toxins accumulation in the body has been accounted for various health problems. These toxins have been contaminated in the food we eat, the air we breathe, the water we drink, and even medication we take. The body has the system for detoxication using liver, kidney, lung, and skin. The principles of these detoxification programs involve the body resting by fasting while refueling the body with healthy nutrients, stimulate the liver detoxification process, improving blood and lymphatic circulation, and promoting toxin elimination through the intestines, the kidney, and the skin.

These integrative programs are detox diet, vitamins and anti-oxidants, sauna, detox massage, colon hydrotherapy, and chelation. Each program has its own benefits and limitations. Although these programs are usually safe, proper patient selection is required in order to prevent complications. It is very important that medical practitioners are capable of choosing the right detoxification method for the patient.

Anti-aging clinics now provide several intervention programs to combating these aging forces such as the use of anti-oxidants and nutraceutical supplements, detoxification program, and also stem cell therapy. But these interventions alone won't be enough to combat aging forces in these patients, it also requires their understanding and willingness to change their life style. Food, exercise, and stress reduction are important keys of successful anti-aging story. Because individuals are different, we cannot tell them what to do but can only guide them to find the way to a better and healthier life style.

• PRP versus PRFM

Platelet Rich Plasma (PRP) is a concentrate of platelet rich plasma found in buffy coat after citrate blood is centrifuged to remove red blood cells. It contains high concentration of numerous growth factors including platelet alpha granules, platelet-derived growth factor (PGDF), transforming growth factors-β (TGF-β), vascular endothelial growth factor (VEGF), and epidermal growth factor. After activation with calcium chloride, these PRP will release bioactive molecules that provide healing benefits. In humans, PRP has been used for several types of treatment including chronic tendinitis, osteoarthritis, alopecia, and collagen stimulation in aesthetics.

Platelet Rich Fibrin Matrix (PRFM) is a second-generation PRP. In this procedure, the citrate blood is collected in a special designed tube containing a special gel that have less density than white cells and red cells. After low speed centrifugation, white and red blood cells will be trapped underneath the gel while platelets are floating in the platelet rich plasma on the top. After stimulation with calcium chloride, the doctors will have 10 minutes to perform injection through a cannula allowing fibrin clot to form matrix. The benefits of PRFM over PRP is the matrix can protect growth factors from proteolysis and allowing the neo-collagen synthesis

For autologous fat transfer, PRFM should be mixed with adipose tissue at the ratio of 2:1 since the growth factors within PRP will enhance fat cell survival. PRFM can also be mixed with any types of filler at the ratio of 4:1 to give additional long-term rejuvenation effects.

Mart Maiprasert, MD

- Intermittent Fasting for Weight Loss and Increasing Lean Body Mass

Biography

M.D. 1st Class Honours (Faculty of Medicine, Chulalongkorn University) 1994
Family Medicine 2000
American Board of Anti-Aging and Regenerative Medicine : ABAARM (A4M-USA) 2007
Fellowship in Anti-Aging and Regenerative Medicine : FAARM (A4M-USA) 2010
Fellowship in Aesthetic Medicine (USA) 2012
Fellowship in Cosmetic Surgery (KCCS) 2015
Dr. Mart Maiprasert is an accomplished aesthetic specialist with more than 10 years experience. His success has come from the application of anti-aging science into his work in the field of aesthetics medicine and cosmetic surgery. Currently, Dr. Maiprasert owns a private practice at S-Mart Clinic, Bangkok, Thailand and also serves as the Program Director of Master Degree of Science in Anti-Aging and Regenerative Medicine at Dhurakit Pundit University.

Abstract:

Diet control is one of successful methods for weight loss. One type of diet control is fasting that is one of most ancient and widespread healing traditions in the world. There are 2 main type of fasting; 1. Intermittent fasting (I.F.) and 2. Prolonged or Periodic fasting (P.F). Examples of Intermittent fasting are Alternate Day Total Fasting (ADTF), Alternate Day Partial fasting (ADPF) and Time Restricted Feeding (TRF).

ADTF means to eat no caloric food or drinks on fasting days, alternate with ad libitum eating days. While ADPF means to consume 25% of energy needs 2 days per week, ad libitum eating on non-fasting days. And TRF means Ad libitum eating within specified time frame such as eating only within a 7- or 8-hour period of time during the day (resulting in 13–16 hour fasting).

Prolonged Fasting means fasting more than 3 days, this will stress body more and produces more profound results (stimulating protectionist and rejuvenation modes). One example of PF that is very popular nowadays and has a lot of evidenced-based beneficial outcomes is Fasting Mimicking Diet (FMD). It is developed by Dr. Valter Longo, University of Southern California Longevity Institute.
IF and FMD are proved to have benefit for losing weight in obesity with preservation of lean mass, improved insulin sensitivity and increased PGC1 alpha that are benefit of diabetic patients, stimulated GH, IGF1 and regulated other hormone homeostasis, improved cardiovascular stress adaptation and heart rate variability, improved blood pressure, decreased CRP and inflammation, improved neuronal resistance to injury, decreased neurodegeneration, stimulated BDNF(Brain Derived Neurotrophic Factor), promoted hippocampal neurogenesis, improved cognitive performance, improved immunity and decreased autoimmune conditions, preserved bone density, promoted stem cells and regenerative markers and also protected cancer, too. IF and FMD are also methods to boost autophagy; programmed cell death that has advantages in cancer, D.M., neurodegenerative disease, fatty liver and infectious disease etc.

IF and FMD seem to have benefits as the same as caloric restriction but possible downsides of IF such as rebound hunger, effects on stress hormone or ability for more intense exercise are not fully explored. And FMD may improve outcome such as autophagy more than other methods and seems to have more compliance because of fewer fasting days per month. So, it may be easier for some people to do on an ongoing basis.

David Bearman, MD

- Cannabis, Cannabinoids and the Endocannabinoid System
- Benefits of Cannabis in Health and Diseases

Biography

One of the most clinically knowledgeable physicians in the U.S. in the field of medicinal marijuana. He has spent 40 years working in substance and drug abuse treatment and prevention programs. Dr. Bearman was a pioneer in the free and community clinic movement. His career includes public health, administrative medicine, provision of primary care, pain management and cannabinology. His almost 40-year professional experience in the drug abuse treatment and prevention field includes being the Co-Director of the Haight-Ashbury Drug Treatment Program, being a member of Governor Reagan's Inter Agency Task Force on Drug Abuse, a member of both the Santa Barbara and the San Diego County Drug Abuse Technical Advisor Committees, and a consultant to Hoffman-LaRoche, Santa Barbara County Schools and the National PTA. He has been recognized by the Santa Barbara Medical Society with the Humanitarian Recognition Award.
Dr. Bearman is also the author of Drugs Are NOT the Devil's Tools: How Discrimination and Greed Created a Dysfunctional Drug Policy and How It Can Be Fixed in 2 volumes.

Abstract:

• CANNABIS, CANNABINOIDS AND THE ENDOCANNABINOID SYSTEM

Botanical historians tell us that Hemp (Cannabis) has existed on the planet for over 35 million years. It is one of the oldest cultivated agricultural plants, having been farmed for at least 10,000 years. Hemp has more than 25,000 industrial uses. Cannabis has been used for over 4,000 years as a medicine and longer as a spiritual aid and as social lubricant.

The Endocannabinoid System (ECS), is arguably the largest neurotransmitters in the human body. The ECS was characterized by researchers in the late 1980's. It consists of at least two endocannabinoid neurotransmitters, anandamide and 2 AG, two transmitter receptors, CB1 located largely in the brain, and CB2 located primarily in the immune system and two enzymes FAAH and MAGL. Retrograde inhibition and the role of dopamine in that process will be covered.

The cannabis plant, like all plants, is complicated. It has 512 molecules, 113 which are cannabinoids (21 carbon molecules which can block or stimulate CB1, and/or CB2 receptors). Many cannabinoids have therapeutic effects. In addition to cannabinoids there are more than 200 terpenes in the cannabis plant. Terpenes are what give cannabis plants their distinctive odor. Many Terpenes also have therapeutic value. The combined therapeutic effect of the medicinally active cannabinoid and terpenes was postulated by Raphael Mechoulam, PhD. as the entourage effect.

The presentation will provide a foundation for a better understanding of how and why cannabis has been beneficial for treating a wide range of symptoms and medical conditions.

• BENEFITS OF CANNABIS IN HEALTH AND DISEASE

The presentation covers how endocannabinoids and phytocannabinoids interact with the body's own endocannabinoid system to provide therapeutic relief for many conditions. I will address the beneficial effects of some of the cannabinoids and terpenes in the plant. The presentation will cover some specific dosage suggestions. It will include discussion of the entourage effect, (the combined therapeutic effect of all the medically useful constituents of the plant).

The role of retrograde inhibition in treating migraines, seizure disorder, ADD, and Crohm's disease will be addressed. This mechanism for modulation of the speed of neurotransmission helps to treat anxiety, panic attacks, impulse control, and anger management issues and PTSD.

Cannabis is a also nutracuelicated and a vegetable whose regular use can help maintain good health. It is an anti-oxidant and an anti-inflammatory. It is helpful for vascular health and is neuroproductive. The anti-proliferative effects of cannabis and the mechanisms of action for cannabis anti poetic (anticancer) effect will be covered.

The safety and side effects of this amazing plant that has been used as a medicine for over 4,000 years will also be included in the presentation.

Anongnuth Chavalithamrong, MD

- Inflammatory Diet

Biography

Dr. Anongnuth Chavalithamrong received her M.D. from Chulalongkorn University and her M.B.A. from Stanford University.

Dr.Chavalithamrong was the first Thai doctor to be American Board Certified in Anti-Aging Medicine (ABAAM) in 2003 and received her Masters in Prevention and Anti-Aging Medicine from the European Society of Anti-Aging Medicine in 2006. She has lectured both locally and internationally for the A4M, WOSAAM and IMCAS.

Dr.Chavalithamrong co-founded Vitallife Wellness Center at Bumrungrad International in 2001 and Addlife Anti-Aging Center in 2007.

Kobkul Sudsuansri, PhD

- Oxidative Stress and Inflammation Damage Markers

Biography

Dr Kobkul Sudsuansri received her B.Sc and M.Sc from Mahidol University Thailand, Ph.D. in Chemistry from University of Cincinnati, USA and Post-doctoral from University of Rouan France. After her Post-doctoral in France, she worked as communication director for Functional Laboratory in Paris for more than 15 years. Then she came back and forth between Thailand and France and started her job as consultant and lecturer for Functional Medicine for N-Health Asia etc... Now she works as distributor for Institute of Research Development and Pathology human from France and Genova and Metametrix Clinical Laboratory from USA. She also plans for setting Functional Lab and clinic in Thailand. Her interests are focused on the role of nutrition, gut health, oxidative stress and impaired detoxification in chronic diseases neurodevelopmental, neuropsychiatric, neurodegenerative disorders and cancers including the important role of epigenetic regulation.

Abstract

• Oxidative Stress and antioxidant capacities

In the course of normal human activity energy production, detoxification of pollutants and immunologic defense mechanisms, free radicals are produced. These free radicals are unstable molecules that can extract an electron from a neighboring molecule, causing damage in the process.

Oxidative stress results when this delicate pro-oxidant/antioxidant equilibrium is disrupted in favor of the pro-oxidant (free radical) state.
Inflammation

Inflammation is a way for the body to protect itself from injuries or infections, and inflammation can be caused by smoking, high blood pressure, and high blood sugar.

Excessive inflammation has been linked to heart disease. This can also be bacteria colonizing a wound or a splinter piercing your finger.

Judith Smith, MD

- Preliminary report on the phase II randomized, double-blind, placebo-controlled evaluation of AHCC For the eradication of HPV infections in woman with HPV positive pap smears

Biography

Dr.Judith A.Smith is an Associate Professor in the Department of Obstetrics, Gynecology and Reproductive Sciences at UTHealth McGovern Medical School and Director of the Women's Health Integrative Medicine Program. She received a Bachelor of Science in Pharmacy and Doctor of Pharmacy from Union University Albany College of Pharmacy. She completed residency in Pharmacy Practice and Oncology Pharmacy Practice at NIH followed by a fellowship in Clinical Pharmacology at UT M.D. Anderson Cancer Center(UTMDACC). Previously she Faculty in the Department of Gynecologic Oncology at UTMDACC. She has been Board Certified in Oncology Pharmacy and Certified Professional in Healthcare Quality. Her research mission is to advance the progress of the safe and effective use of nutritional and herbal supplements with pharmacologic modalities as it relates to women's health and cancer through innovative thinking, systematic methodology and collaborative interactions throughout the UTHealth System and global research community

Abstract:

• Preliminary Report on the Phase II randomized, double-blind, placebo-controlled evaluation of AHCC for the eradication of HPV Infections in women with HPV positive pap smears

Purpose: Evaluate the efficacy AHCC 3 grams by mouth once daily to eradicate HPV infections in womenwith HPV positive PAP smears. Observe the durability of response to AHCC. Define the adverse effects ofAHCC compared to placebo.

Prof. Urban Alehagen, MD

- Supplementation with CoQ10 and Selenium – remarkable effect on inflammatory and oxidative stress markers
- Supplementation with CoQ10 and Selenium – reduced fibrosis in elderly

Biography

Professor Urban Alehagen is one of Sweden's most experience cardiologist. He is senior physician and associate professor or Cardiology at Linköping University.
Professor Alehagen headed to the KiSel-10 research team.
Medical Education:

- Special in Internal Medicine - 1992
- Specialist in Cardiology – 1995
- Accepted for Ph.D. studies – 1995
- Ph.D. exam – 2003
- Associate Professor in Cardiology 2009
- Professor in Cardiology 1st of June 2016 Thesis: Heart Failure in Primary Case. Special emphasis in Natriuretic Peptides in the Elderly.

Abstract

• Supplementation with CoQ10 and Selenium – remarkable effect on inflammatory and oxidative stress markers

Background: Selenium and coenzyme Q10 are both important for optimal function of all living cells. It is known that a decreased level of either – or both – substances increases the risk for diseased patients.

We wanted to evaluate the effect of supplementation with both selenium and coenzyme Q10 on healthy elderly patients, both on mortality, but also on inflammation and oxidative stress.

Methods: 443 elderly community living persons were included. On top of their usual medication, if any, they received selenium 200 micrograms/day, and coenzyme Q10 200 mg/day for 4 years. The follow-up time is now 12 years. Evaluations of cardiovascular mortality has been performed.

Biomarkers for inflammation evaluated: sP-selectin, CRP, osteopontin, osteoprotegerin, THFr1, TNFr2. Biomarkers for oxidative stress: Copeptin, MR-proADM.

Results: Significant reduced cardiovascular mortality could be demonstrated in the active treatment group after 5 years, 10 years and 12 years.
Highly significant differences in the biomarkers for inflammation and oxidative stress could be demonstrated with less concentration of each biomarker in the active treatment group.

Conclusion: The supplementation with selenium and coenzyme Q10 results in significantly reduced mortality that can be seen also after 12 years. This is the result of a complex mechanism in the body, where inflammation and oxidative stress are important components. We here present data indicating remarkably strong effects on both inflammation and oxidative stress as a result of the intervention.

• Supplementation with CoQ10 and Selenium – reduced fibrosis in elderly

Background: Selenium and coenzyme Q10 are both important for optimal function of all living cells. It is known that a decreased level of either – or both – substances increases the risk for diseased patients.
It is also known that the aging process results also in increased apoptosis and fibrosis of the cardiovascular system.
We wanted to evaluate if supplementation with selenium and CoQ10 could influence the aging process of the cardiovascular system, and mortality.

Methods: 443 elderly community living persons were included. On top of their usual medication, if any, they received selenium 200 micrograms/day, and coenzyme Q10 200 mg/day for 4 years. The follow-up time is now 12 years. Evaluations of cardiovascular mortality has been performed.

Biomarkers for fibrosis evaluated: Cathepsin S, Endostatin, Galectin 3, Growth Differentiation Factor-15 (GDF-15), Matrix Metalloproteinases 1 and 9, Tissue Inhibitor of Metalloproteinases 1 (TIMP 1) and Suppression of Tumorigenicity 2 (ST-2). Biomarkers for apoptosis evaluated: Insulin growth factor 1 (IGF-1)

Results: Significant reduced cardiovascular mortality could be demonstrated in the active treatment group after 5 years, 10 years and 12 years.
Highly significant differences in the biomarkers for fibrosis and apoptosis could be demonstrated with less concentration of each biomarker in the active treatment group.

Conclusion: The supplementation with selenium and coenzyme Q10 results in significantly reduced mortality that can be seen also after 12 years. This is the result of a complex mechanism in the body, where the aging process of the cardiovascular system is central. We could demonstrate significantly reduced levels of fibrosis and apoptosis biomarkers in the active treatment group indicating an anti-aging effect of the supplementation as one of the explanations behind the positive mortality effects.

Asst. Prof. Pansak Sugkraroek, MD, FRCOG (T)

- When menopausal women don't have SEX
- Fish Bone Calcium and Collagen for Osteoporosis

Biography

Dr. Pansak Sugkraroek MD, FRCOG (T) is an Assistant Professor in Obstetrics and Gynecology. His articles on menopause and sexual health have been published in many leading magazines in Thailand.

Dr. Pansak graduated as a Doctor of Medicine from Ramathibodi Hospital Medical School, Mahidol University, Thailand in 1974 and had been train in Obstetrics and Gynecology since then. He had been training in Reproductive biology from Loeb research institute at Ottawa Civic Hospital, University of Ottawa. His past work at Ramathibodi hospital as Reproductive endocrinologist made him interest in Sexual Health and he is a founding member of International Society for Studying of Aging Male. He attended and gave lecture in many seminar and conference involving sexual medicine for the last 15 years. Currently he is Chairperson Department of Obstetrics and Gynecology at Bumrungrad International Hospital and Head of Fertility and Menopause units there.

Dr. Pansak has been writing and teaching about sexual health for over 25 years, and he has appeared on leading women's health TV programs and has been a published columnist in newspapers and health magazines since 2000.

Abstract:

• Fish Bone Calcium and Collagen for Osteoporosis

Osteoporosis is a major public disease in elderly people as result of significantly reduction in bone density. Calcium is known to be an essential element required for numerous functions in our body including strengthening of bone. Presentation of natural compounds as supplement which is rich in calcium are necessary to use as an alternative to medicine to improve bone health.

Generally most common and trusted source of calcium is milk and other dairy products, some people especially Asians do not prefer to take milk because of lactose indigestion and intolerance . New evidence also emerged that milk consumption may increase osteoporosis and bone fracture.

Among fish by products, fish bone or skeleton is considered as a potential source to obtain calcium, only few studies have been carried out to identify bioavailability of fish bone calcium and its potential applications.

It is well documented that consumption of whole small fish is providing with a rich source of calcium. In the recent years dried fish bone was used as food ingredient in diet for fish and other animals with a positive effect on growth compared to traditional foods.

Twenty different amino acids were found in Tuna bone products and amount of the collagen associated amino acids such as glycine ,proline and hydroxyproline were high which help in promoting bone health.

Fish bone material derived from processing of large fish is a useful calcium source where the quantity of calcium is concerned. To incorporate fish bone into calcium-fortified food or supplement it should be converted into an edible form by softening its structure. Many methods had been evaluated for amount and quality of calcium for food supplements.

• When Menopausal Women Can Not Have Sex

The loss of Estrogen, Progesterone and Testosterone following menopause can lead to changes in women's body and sexual health.

Decrease in Estrogen and Testosterone levels after menopause can cause decrease in sexual desire and sexual arousal. Postmenopausal women may notice that they are not as easily aroused, and they may be less sensitive to intimate touching and stroking. Also lower in estrogen level affect vaginal condition that lead to vaginal dryness and thinning of vaginal mucosa which lead to painful intercourse and less or no pleasurable for intimate relationship. All of this can lead to loss of interesting in sex and deny in engagement of sexual relationship which may lead to marital problem.

In addition to vaginal dryness and decrease sexual desire, menopause can be associated with other troublesome symptoms that can affect sexual drive and function such as difficulty in getting to sleep and maintain sleep, mood swing, easily fatigue, bladder control problems, vasomotor symptoms, weight gain and change in body contour, anxiety and depression etc.

Bioidentical Hormones therapy both vaginal and topical with or without water-soluble lubricants are gold standard of treatment together with sexual counselling. Systemic bioidentical hormones therapy in menopausal women without contraindication should be consider for improvement of general health and well-being too.

Somboon Roongphornchai, MD

- Exercise technique for weight loss

Biography

Dr Somboon Roongphornchai, MD is one of the leading physicians in Thailand specializing in Antiaging medicine, sports medicine and personalised supplementation.

Dr Somboon holds a medical degree from the prestigious Mahidol University, and is board certified in Obstetrics and Gynaecology, as well as Family Medicine. Over the last ten years Dr Somboons passion has focused on Anti Aging medicine, Functional, Sports and Integrative Medicine.

He is one of the leading physicians in Thailand specializing in the use of Bio-identical hormones, as well as designing personalised supplementation programs for clients.

Lenny Da Costa, MD, MBBS, DGM, CMT (USA), MCCP, MSASMS

- Restoring Health to Combat Ageing
- Correcting Mitochondrial Dysfunction in routine practice
- IV Detox therapies in routine Clinical practice - practical pearls

Biography

Dr Lenny Da Costa is a Consultant Geriatrician, Preventive Cardiologist and anti-aging specialist. On qualifying from The Goa Medical College he started his basic practice in Goa . It was during this period, he realized, that one of the biggest problems ailing the community was morbidity and mortality due to ageing.

This led him to do his speciality in Geriatric Medicine form M S Ramaiha Medical College Bangalore. On completion he pursued his training in the practice of Anti-aging and Preventive Cardiology. He is amongst the few in the country certified by the International Board of Clinical Metal Toxicology USA as a FCMT, and the only one from Goa and Western Maharashtra (outside Mumbai) trained to administer chelation therapy.He has also been certified by the Academy of Anti-Aging Medicine of India and Affiliate of the American Academy of Anti-Aging Medicine in the field Anti-Aging Medicine and in the use of Bio-identical Hormone Replacement Therapy. He has further trained in the use of Ozone Therapy under the auspices of Indian Ozone Society.

Dr. Da Costa is a member of a number of Medical Organizations including the IMA, IMA CGP, Research Society for the Study of Diabetes in India, GPA Greater Mumbai, Geriatric Society of India, to name a few. He is currently the Gen Secretary of the Indian Society for the Study of Metal Toxicology and Chelation Therapy (a nation wide organization that conducts workshops, training sessions, conferences for Chelation Therapy practitioners).

Dr. Da Costa has over the last 5 years treated more than 12000 patients suffering from IHD, CAD and other chronic degenerative disorders, all over Maharashtra and Goa . Dr Da Costa currently visits affiliate clinics in Ratnagiri, Chiplun, Mahad, Mangaon, Panvel, Mumbai, Thana, Nasik, Satana, Ahmednagar, Kholapur, Sangli while having is own clinic at Pune also.

Abstract

• Restoring Health to Combat Ageing

Are we on a quest for anti-aging remedies? Is there such a thing, a magic pill or a secret solution? Is it the extension of life that intrigues us? Or is it the possibility that we may live as productive, happy and disease-free people if we use restorative approaches to correct imbalances in hormones, nutrition, toxins, mind and body, allowing our body does what it does best; keep us healthy.

Whether you call it “anti-aging” or “restorative” or “functional”; this is no myth.
Restoring Health means optimizing the ability of our cells to do what they do best: keep us healthy, happy, keep those cancer cells at bay and repair those arteries that are damaged daily and thus combat ageing. This involves correcting deficiencies of 1) hormones and 2) nutrients, 3) removing toxicities 4) mental peace and 5) a body which is pain free and structurally sound. All disease is a manifestation of imbalances in these five areas, rather than just one cause. In this lecture learn the science behind the restoration of optimal cellular function through hormones, nutrition, detoxification and balancing of the mind and body.

• IV Detox therapies in routine Clinical practice - practical pearls

Metals – their presence in the air that we breathe, the water that we drink and the food that we eat have devastating effects on our body. One of the most common dangerous chemical processes linked to metals is oxidation. On entering the body, they affect the various biochemical reactions and physiological mechanisms in the body leading to setting in of Chronic Degeneration at a much earlier age and thus leading to premature aging and many of the symptoms we see in our daily practice.

Metals produce toxicity by forming complexes with cellular compounds containing sulfur, oxygen, or nitrogen. The complexes inactivate enzyme systems or modify critical protein structures leading to cellular dysfunction and death. The most commonly involved organ systems include central nervous, gastrointestinal (GI), cardiovascular, hematopoietic, renal, and peripheral nervous systems.
Silent symptoms of chronic, low level heavy metal accumulation in tissues can progress from a steady decline in energy, productivity and quality of life to accelerated cardiovascular disease, premature dementia and total debilitation. Unfortunately, the possibility of heavy metal burden is often not considered, and patients continue to suffer needlessly.

To maintain good health and wellness and stop premature aging we need to remove these metals. Removal of these offending metals is achieved by using IV therapies as per well laid down protocols.

The presentation will also feature other Detox IV therapies used in daily practice which include IV Glutathione, IV ALA, Meyer's Solution, IV Vit C etc.

• Correcting Mitochondrial Dysfunction in routine practice

Mitochondrial Dysfunction is one of the primary reasons for cell destruction and death. This is more seen in tissues that need high energy like the heat and brain. This is perhaps looked at as the possibly the single biggest pathology that one sees in Heart failure or brain atrophy due to ischemia. This presentation looks at how the Mitochondria can be supported by increasing the ATP turn around thus increasing its energy supply and thus preventing cell death from occurring. This is done using metabolic treatment which normally uses naturally occurring substances in the body to support the naturally occurring metabolic reactions within the cell. This is opposite of any pharmaceutical treatment which blocks rather than enhances cellular processes. Metabolic therapy does not have profound effects or changes in physiological levels like that of Blood pressure or Heart rate.

Some of the metabolic substances that impact the mitochondrial function are
1. D Ribose – is energy substrate that supports the oxidative phosphorylation
2. L carnitine – support beta oxidation of fatty acids within the Mitochondria thus producing energy
3. Co enzyme Q 10 – is a lipid soluble antioxidant which plays a vital role in cellular ATP production
4. Magnesium – important role in over 300 enzymatic reactions improving energy in cells.

Enhancing all these improve cellular energy production and support mitochondrial function.
This presentation will look at this new field and help us understand the use of its principles in clinical settings.

Pakpilai Thavisin, MD

- Mercury: Iatrogenic Intoxication

Biography:

Dr. Pakpilai Thavisin is a certified medical professional in Aesthetic and Anti-Aging Medicine. She has had extensive experience both within Thailand and internationally.Dr. Pakpilai is now the Medical Director of S Medical Clinic. She was the Founder and the President of S Medical Spa, the multi-awards winning rejuvenation center in Bangkok (2005-2013). She is a regular speaker in many congresses such as AMWC (Anti-Aging Medicine World Congress), Aesthetic Asia (Singapore), ICAD, ICAAM (Dubai) and IMCAS and also a regular guest for many TV programs in Thailand including "The Doctors" (H+ channel), "Health Society" (Channel 9). Dr. Pakpilai was on board committee of Thai Aesthetic Dermatology and Surgery Association (2009-2012), World MediSpa Association and World Society of Anti-Aging Medicine. She is a well-known contribute columnist in Thailand for several magazines including Marie Claire, Slimming, Ceci and Grazia and an author of 6 pocket books.

Abstract:

"Mercury the Iatrogenic toxin"

Though amalgam fillings (Silver fillings) have been used for over 100 years but this doesn't mean that it is safe. Amalgam consists approximately 50% Mercury, the heavy metal that is highly toxic to human beings. There is no "minimum safety dose" for mercury. A single dental amalgam filling with a surface area of only ½ square cm is estimated to release as much as 15 micrograms of mercury per day primarily through evaporation, mechanical wear (chewing, grinding, bruxism and teeth brushing) and exposure to magnetic fields including computer. WHO (1991) determined that mercury absorption is estimated to be approximately 4 times higher from amalgam fillings than from fish consumption.

The mercury vapor from amalgams is fat soluble and passes through cell membranes and across the blood brain barrier, builds up in brain, adrenal glands, liver, kidneys and other parts of the body. Mercury from amalgams has been implicated as a possible contributory factor to Multiple Sclerosis, Parkinson's disease, IBS, Reproductive disorders, allergies, anemia, CFS, myalgia and a variety of other illnesses. Data suggest that approximately 19-20% of the general population may experience sub-clinical CNS and/or kidney function impairment as a result of the presence of amalgam fillings.

A 2009 WHO expert consultation concluded that "…a global phase down should be pursued by promoting disease prevention and alternatives to amalgam; research and development of cost-effective alternatives; education of dental professionals and the raising of public awareness." (Mercury and Health; Fact sheet N°361. Updated September 2013, WHO) How can these health problems be treated if most medical doctors forget, unaware and overlook the truth that heavy metals can be the cause of these chronic diseases?

Silvia Binder, N.D., Ph.D

- Detoxification: The first step to successfully combating aging
- Adjunctive therapy to combat inflammation

Biography:

Founder of The Binder Institute for Personalized Medicine, Germany
CEO/President of The Ondamed Companies, Germany & New York
Silvia Binder is the Founder of The Binder Institute for Personalized Medicine in Southern Germany and the CEO of the Ondamed Companies in New York and Germany. She was born in Germany, and grew up in Vienna, Austria, where she earned her degree in business. A motorcycle accident at the age of 15 brought her into a coma for 21 days and announced clinically dead 5 times. She spent her 16th year of life recuperating from her injuries, bound to a wheel chair. Her life changed dramatically ever since by having heightened awareness. Silvia's career led her to New York in 1989 where she lived for 20 years until moving back to Germany in 2010. Her personal story with her 5-year old son fueled her passion for complimentary medicine. Silvia received her N.D. degree from the College of Naturopathy in London, U.K. followed by her Ph.D. degree in naturopathy. Silvia works with physicians and chronically ill patients from around the world and offers unique Healing Retreats in select locations. She is a faculty member of the American Academy for Anti-Aging Medicine, guest writer for FAIM (USA), board member of OIRF (Canada), lectures and teaches specialized courses on Integrative Personalized Medicine globally and is the author of a number of articles and the book "ONDAMED - a story of love, healing, and medical revolution".

Abstract:

• Detoxification: The first step to successfully combating aging

Detoxification is a necessary process our patients need to undergo no matter what treatment solutions are provided. Ideally offered ahead or alongside with the choice of treatment including stem cells, nutrition, bio-identical hormones, pharmaceutical, energetic, or surgical interventions. Toxic materials and waste residing in the cellular environment hinders the desired optimum therapeutic effect until our patients begin a detoxification program which quickly leads to improved cellular metabolism.

Goals and Objectives:

• Review of the ancient wisdom still valid today relating to toxicity and purification
• Identify causes of toxicity and pathways of detoxification
• Discover detoxification solutions for our patients impacting their physiology, as well as their mental, emotional, and spiritual wellbeing
• Learn about the significance to open a gateway to cells and cell environments stimulating with innate vibrational signals enabling pathways for specific metabolism exchange
• Review cases including Immune Deficiency Disorders, Eczema and Vascular Disease

Why this program should be added:

Detoxification is a vital cellular task that if lacking will lead to early morbidity and mortality.
Toxicity is all around and within us. We cannot really avoid living in a modern world, but we can certainly help the body and mind better deal with the daily pollution from food, water, and the environment along with high stress levels and unresolved emotional shock or trauma presenting emotional toxicity.
Every healthcare provider should educate their patients on how to reduce toxic load while offering simple detoxification methods which can easily be part of patients' daily routines.

• Adjunctive therapy to combat inflammation
Inflammation is linked to most chronic disease. While lab reports may indicate elevated CRP levels or increased white blood cell markers, it is unknown where the inflammation is located. Treatment approaches are not specific to a local inflamed area in standard care today. Innovative technology available today can identify inflamed areas and treat such areas locally with the mechanism of action of focused pulsed electromagnetic fields. This approach enables immune reaction to be stimulated in areas of inflamed tissue reducing inflammation and relieving pain without any known side effects.

Goals and Objectives:

• Review of inflammation and theories dating back to European scientists from the middle of the 20th Century
• Identify pulsed electromagnetic fields and scientific review over the past 50 years
• Discuss the method of locating inflamed or dysfunctional areas and providing localized treatment stimulation
• Review a gene expression study and patient cases including Immune Deficiency Disorders, Cancer, Eczema and Vascular Disease

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Sira Sooparb, MD

- Supplementation for the kidney

Biography

Dr. Sira Sooparb graduated M.D. from Faculty of Medicine (Honors), Ramathibodi Hospital, Mahidol University, Thailand in 1992. He was internship/residency in St. John's Episcopal Hospital and State University of New York Health Science Center at Brooklyn, New York, USA from 1995 to 1998. After Dr. Sooparb has completed residency training, he went to Emory University School of Medicine, USA to be Nephology and Renal Ultrasonography fellowships from 1998 to 2001. Nowadays, he is an expert in Nephology especially kidney transplantation, acute renal failure and kidney stone. His current knowledge and experience lead him to be the well-known nephrologist in Thailand.

Raymond Pahlplatz, MD

- The difference between the intracellular and extracellular environment
- Neurodegeneration
- Reversal of arterial stiffness

Biography

1968 born in Kerkrade, the Netherlands
1987 Gymnasium B Coriovallum College Heerlen
1994 Medical University Maastricht (MD)
1994 Captain in Dutch army
1995 MD in the International Biomedical Center in Leende, the Netherlands
1996 Orthomolecular medicine
1997 Clinical metal toxicologist (IBCMT.com)
2000 Board member IBCMT.com
2001 - … Presentations, lectures, teaching in the Netherlands, Germany, Belgium, Spain, Portugal, Austria, Taiwan, South-Africa
"An Approach to treating Cancer" "Parkinson's Disease and other neurodegenerative diseases"
"Arterial Stiffness" "Autism" and "ADHD" "Chemistry of chelating agents" "Why are Metals Toxic?" "Gluten"
"New insights into Diabetes" "Metabolic syndrome" "Cause and treatment of rheumatoid arthritis" "Stress"
"Intra versus Extracellular"
And many more on behalf of IBCMT.com
2004 contributor to textbook of Clinical Metal Toxicology
2005 Article "Lactoferrin" in Ortho® nr. 5-2005 (dutch)
2010 Article "Insulinresistenz" linsulin resistance) in german orthomolecular magazine "OM & Ernährung" nr. 132 (german)
2013 Scientific advisor Atrium Innovations, Almere, Netherlands

Abstract

• The difference between the intracellular and extracellular environment

"The cell membrane is literally the cross road of all communication and transportation. In almost all chronic illnesses the cell membrane is involved. All diagnostics so far test however in the extracellular environment. For five years we can have a look intracellularly regarding minerals, trace elements, and toxic metals. We show how to interpret these new diagnostics in comparisons to hair mineral analysis, full blood mineral analysis or provocation testing."

• Neurodegeneration

"Neurodegeneration will soon overtake the prevalence of all chronic illnesses. All treatment modalities so far are impeded by the fact that the central nervous system is very impenetrable (blood brain barrier). In this presentation we show what the main culprit is in neurodegeneration. Both Parkinson's and Alzheimer's disease are problems in waste disposal. By reducing toxic load, inflammation, and restoring cortisol sensitivity we are able to stop Parkinson's in early onset."

• Reversal of arterial stiffness

"In this presentation we show how both Pulse Wave Velocity (PWVao) and endothelial function (Augmented Index: AIXao) are significantly improved."

Sanjay Kapur, MD

- Gut Inflammation and Chronic Diseases: How to Cool the Fire Inside your Gut
- Testosteronel Replacement Therapy in Men
- Stress and Cardiovasular Disease: Is Cortisol the Key?

Biography

Dr. Sanjay Kapur is the CEO at AYUMETRIX, a Research and Diagnostic Organization that offers specialized high complexity functional laboratory consulting services for platform technology firms and diagnostic companies. He is an internationally known and recognized anti-aging expert, with dozens of peer-reviewed publications and abstracts, as well as numerous invited presentations. He is a highly-sought speaker on health and wellness at international medical conferences. Dr. Kapur's strong desire and passion to educate physicians all around the world motivated him to found the Society for Regenerative, Aesthetics and Anti-Aging Society of India. He also serves on Editorial and Scientific Boards of several scientific journals and international anti-aging societies.

Abstract

• Gut Inflammation and Chronic Diseases: How to Cool the Fire Inside your Gut

One of the most insidious consequences of hormonal imbalances, and insulin resistance in particular, is inflammation, which is now thought to be at the root of all chronic illness we experience — from heart disease, obesity and diabetes to dementia, depression, cancer and even autism.

Inflammation and immune balance are yet another one of the body's core systems we must address to prevent disease and power our vitality. We may feel healthy, but if this inflammation is raging inside of us, we're in trouble. The real concern is not our acute inflammatory response to injury or infection, but the chronic smoldering inflammation that slowly destroys our organs, compromises our ability for optimal functioning and leads to rapid aging.

As the prevalence of obesity and associated diseases continues to rise and concerns for the spiraling economic and social costs also escalate, innovative management strategies beyond primary prevention and traditional lifestyle interventions are urgently needed. Several key inflammatory markers have been consistently associated with both obesity and related chronic diseases, which suggests that a persistent, low-grade, inflammatory response is a potentially modifiable risk factor. This presentation discusses supporting perturbation of the intestinal microbiota and changes in intestinal permeability as potential triggers of inflammation in chronic disorders. Further characterization of the mechanisms underpinning the triggers of such inflammatory responses in high risk individuals could offer unique opportunities for intervention strategies to help ameliorate the risk of chronic diseases.

• Testosterone Replacement Therapy in Men

Low testosterone levels are prevalent in aging men – the Hypogonadism in Men (HIM) study found that almost 39% of men aged 45 and older, who went to their primary care doctor's office for any reason, had low testosterone levels. The contribution of low testosterone levels to the development of diabetes, is a critical aspect of men's health that could have a major impact on preventive medicine. The decline in testosterone levels as men age has been compared to the hormonal impact of menopause in women. Referred to as "andropause", its impact on the development of cardiovascular disease is as important as that of menopause, but many men are unaware that hormone replacement therapy is not just an option for their female counterparts. This presentation outlines the serious consequences of low testosterone levels for men's long-term health and cardiovascular wellness and identifies appropriate screening strategies that can direct lifestyle changes and possibly testosterone supplementation to prevent risk of developing diabetes.

• Stress and Cardiovascular Disease: Is Cortisol the Key?

High cortisol levels can be seen as a result of some rare forms of cancer affecting the hypothalamic-pituitary axis, but most commonly they are a result of persistent emotional or physical stress. Whatever the cause, high cortisol induces sweeping changes in the body's chemistry that, under normal conditions, would prepare the body for "fight or flight". When stress conditions persist, these changes are sustained and start to affect long-term health. Reproductive and immune functions are suppressed, bone density decreases, and abdominal fat increases. Many of these changes lead ultimately to an increased risk of diabetes and cardiovascular disease. The problem of high cortisol levels is now a significant health problem in societies characterized by stressful lifestyles, and we could see a big impact on health as a result of the current economic crisis in many countries around the world. Treatment of stress can be an important part of reducing diabetes and cardiovascular disease risk.

Emotional and physical stress can lead to chronically high cortisol levels, which have a huge impact on overall health. Cortisol is central to many biochemical processes and is not supposed to remain high for long periods. This presentation outlines what happens when this hormone is out of balance, and how it creates ripple effects that ultimately impact cardiovascular health.

Wilai Thanasarnaksorn, MD

- Benefits of Polyphenol Hydroxytyrosol in Olive Oil

Biography

She graduated with a Medical Degree from Ramathibodi Hospital, Mahidol University in the year of 1987 and earned a Diploma in Dermatological Sciences from United Kingdom and a Diplomate American Board of Aesthetic Medicine. Since 1994, she has been a Dermatologist at Samitivej Esthetic Institute ,Samitivej Sukhumvit Hospital , Bangkok, Thailand and a lecturer and consultant Dermatologist at Dermatological Unit, Department of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand since 1994.She has been a lecturer and trainer in Cosmetic Dermatology (Laser & Light Therapy, Botulinum Toxin ,Filler and Sclerotherapy) in Thailand. Also she has been invited to share her expertise in fillers and laser cosmetics with doctors in so many countries.

Shabnam Das Kar, M.D., FMNM.

- Autoimmunity: A Functional Medicine perspective
- Women and CVD: Men and women are not alike!
- Autoimmunity: Why do we start with the gut?

Biography

Dr. Kar is a consultant in Functional and Metabolic Medicine. She works as Director Medical Education, Better Medical Centre, Calgary AB. Her medical practice is in India. She is the co-founder of Metabolic Dietary Solutions Program. She worked as an OBGY for more than 20 years. She completed a Fellowship in Metabolic and Nutritional Medicine from the American Academy of Anti-Aging Medicine (A4M), USA. She transitioned into practicing Functional Medicine since completing the Fellowship.
Dr. Kar's focus of interest are Autoimmune Conditions and Metabolic Dysfunction. She is an international speaker, having spoken for A4M in Indonesia and UAE. She is an invited speaker at Malaysia, India and Canada.

Abstract

• Autoimmunity: A Functional Medicine perspective

"Autoimmunity "means immunity against oneself. An autoimmune disease is a condition in which the immune system mistakenly attacks its own tissues. There are about 80-100 autoimmune diseases currently known. Though the exact cause for autoimmune disease is not known, several factors are considered to be important. According to Pediatric Gastroenterologist and Celiac Disease researcher, Dr. Allesio Fasano, for an autoimmune condition to develop there must be an interaction between the following:

• Genes
• Immune System
• Trigger/s
• Gut Barrier Dysfunction ("Leaky Gut")

In my presentation I will highlight the importance of Chronobiology and Stress Response in affecting Autoimmune Disease. In addition, I will provide a brief overview of the use of Chronotherapeutic in managing Rheumatoid Arthritis.

Through my presentation I will explore the measurement of dysregulated stress response and briefly discuss how cumulative lifetime stress and adverse childhood experiences impact autoimmunity. In addition, I will outline mind-body approaches in mitigating stress.

• Women and CVD: Men and women are not alike!

Cardiovascular disease (CVD)–heart disease and stroke, is the biggest killer of women worldwide. More women die of CVD than breast cancer, yet the awareness about the unique risks of CVD in women is lacking amongst women as well as healthcare providers Earlier it was thought that heart disease in women is the same as it is in men. However, in recent years gender-specific studies have highlighted the differences in heart disease in men and women. Traditionally CHD has been associated with obstructive atherosclerosis in epicardial coronary arteries causing ischemia. However, in women about 60 % of the time obstructive coronary artery disease is absent, but women have other unique pathophysiology. Though many women with acute coronary syndrome present with chest pain, some may present with atypical symptoms like profound fatigue, pain in both arms, jaws, abdomen or breathlessness. Because of this, women sometimes delay in seeking treatment.

• Autoimmunity: Why do we start with the gut?

The gut is the largest immune organ in the body and is also the dwelling place for numerous microbes. The microbiota and host immune system communicate with each other to maintain host health. Imbalances in this relationship may lead to dysbiosis and inflammation, leading to autoimmunity. Inflammation and dysbiosis may in turn lead to gut barrier dysfunction. The gut is the largest area of contact between the external environment and the immune system. For any autoimmune condition to develop, genes, immune system and the gut barrier have to interact. The following gut factors are important for autoimmunity.

Through my presentation I will highlight the importance of the Gut Microbiome and Intestinal Barrier Dysfunction in Autoimmunity.
Gut Microbiome: The Human Microbiome is the collection of all the microorganisms living in association with the human body. These communities consist of bacteria, viruses, yeast, helminths. These microbes along with their genes and metabolites produced by them influence health and disease. In recent years the gut microbiome has been studied the most.

Gut Barrier Dysfunction ("Leaky Gut"): The intestinal epithelium is a single-cell layer thick. It acts as a selectable permeable barrier permitting the absorption of electrolytes, nutrients and water while keeping out toxins, antigens and gut flora. The gut barrier function is highly dynamic. Gut epithelial barrier dysfunctions are a major contributor to autoimmune diseases.

I will outline strategies to deal with gut dysbiosis and gut barrier dysfunctions that can be implemented easily.

Patsri Chuepool, MD, ABAARM, WOSAAM

- Oligonol: A Novel Polyphenol Lychee Extract (From Japan) for Promising Reduction of Visceral Obesity, Metabolic Syndrome, Cardiovascular Risks and Sport Performance Improvement

Biography

Education
2008 • Certified American Board of Anti-Aging Medicine (ABAAM) - United States
2007 • Diplomat American Board of Anti-Aging Medicine - United States
2005-2006 • Certificate of Post-University Education in Anti-Aging Medical Therapeutic (Great Distinction) - Paris, France
1997-2002 • Chulalongkorn university, Faculty of Medicine, Doctor of medicine (Second Class Honor) - Bangkok, Thailand
1995-1997 • Trium Udom Suksa School - Bangkok, Thailand
1995-1997 • Wattana Wittaya Academy School - Bangkok, Thailand

Mr. Craig Burton

- Benefits of Whey Protein

Biography

Craig is a practicing Clinical Nutritionist who holds an array of qualifications in nutrition, as well as in health, fitness and lifestyle coaching. He originally attained a B.A. in Applied Science (Sports Science) from Edith Cowan University, Perth, Australia along with Ohio State University in the United States. Craig also holds accreditation as a Performance Enhancement Specialist from the National Academy of Sports Medicine in the United States.

He has over 20 years of experience working in the health and fitness industry moving from Sports Scientist and trainer to Sports Nutritionist and later to his calling as a Clinical Nutritionist. His unique approach to transforming client's health and wellbeing includes naturally addressing: vitamin and mineral deficiencies, digestive system dysfunction, inflammatory issues, toxicity, and hormonal imbalances through an individually optimised diet, lifestyle, movement and supplement plan.

Craig is experienced in using a wide range of functional medical tests and tools to better asses a client's health status. This allows him to design a uniquely tailored nutrition and lifestyle plan for his clients.

Abstract

Whey protein is one of the most studied functional foods in the last 30 years. It is a major source of Branched Chain amino acids that can support optimizing body composition. Additionally, Whey has been shown to have many immune system boosting compounds and allow to produce intracellular glutathione that has been studied to aid in the prevention and treatment of many diseases including forms of cancer and AIDS. Many of the studies supporting whey protein's health attributes will be shared along with a position on how to choose and consume whey protein from a Sports Nutritionist Perspective.

Tanjung Subrata, MD, MRepro, ABAARM.

- Exercise for Optimizing Testosterone & Growth Hormone
- Myofascial Dry Needling for Musculoskeletal Pain

Biography

Dr. Tanjung has dedicated himself to the education of health and exercise to the Indonesian people. He serves as lecturer and researcher at Faculty of Medicine Warmadewa University, where he develops a unique and distinct approach in the treatment of musculoskeletal injury with acupuncture needle. He holds key positions at various health, fitness and bodybuilding organizations, including Rai Institute Fitness Education, Indonesian Diabetes Educators Association (PEDI), Indonesia's Bodybuilding Federation. Dr. Tanjung also known as Doctor T is also a national and international speaker at various medical, health, acupuncture, anti-aging & fitness conferences.

Abstract

• Exercise for Optimizing Testosterone & Growth Hormone

As we age our youthful hormones decline, beginning with our Growth Hormone in our 20's, Testosterone (men) and Progesterone (women) in our 30's and Estrogen (women) in 50's. Decrease in these hormones have implications on health, such as decline of well-being, decrees of strength and endurance, immune impairment, changes of body composition (gain fat and reduced bone and muscle mass), metabolic disorders (diabetes, dyslipidemia, hypertension etc.)

Anti-Aging Medicine (AAM) was developed to overcome these problems, they use a variety of therapeutic modalities to inhibit the aging process and maintain the youthful hormone level. One of this modality is exercise. Exercise has the ability to unleash powerful hormonal forces, either powerfully beneficial or powerfully detrimental. Exercise can increase insulin sensitivity; or it can decrease insulin sensitivity. Exercise is potentially the most powerful natural growth hormone stimulator known to science, and, therefore, an unmatched anti-aging force, fat burner, and immune booster; or it can suppress growth hormone levels. Exercise can raise testosterone levels, opening the door to all the physiological and psychological qualities of youth; or it can suppress testosterone so low that mating and building muscle are near impossibilities. Exercise can suppress cortisol; or it can cause a catabolic jailbreak, loosing this hostile hormone to assault immune system, eat-away at precious muscle tissue, and create generalized havoc within the body.

The reason why most people achieve sub-optimal results from exercise is that their workouts are hormonally incorrect. Exercise is like medicine, they need correct doses, frequency, intensity and type of exercise, to gain optimal result without harm for the body. Develop an appropriate exercise program together with a balanced nutrition is determining the outcome. Nutrients have an important role in the process. The type, amount and the time of consumption will greatly affect the process of optimizing the youth hormones.

• Myofascial Dry Needling for Musculoskeletal Pain

Myofascial pain is a common form of pain that arises from muscles or related fascia and is usually associated with myofascial trigger points (MTrP). An MTrP is a highly localized, hyperirritable spot in a palpable, taut band of skeletal muscle fibers. When an MTrP is stimulated, 2 important clinical phenomena can be elicited: referred pain and a local twitch response.

Epidemiologic studies from the United States have shown that MTrPs were the primary source of pain in 30% to 85% of patients presenting in a primary care setting or pain clinic because of pain. MTrPs were the primary source of pain in 74% of 96 patients with musculoskeletal pain who were seen by a neurologist in a community pain medical center, and in 85% of 283 patients consecutively admitted to a comprehensive pain center. Therefore, MTrP pain constitutes a substantial burden for both individual patients and for society as a whole. Despite this, there is evidence that MTrPs that cause musculoskeletal pain often to go undiagnosed by both physicians and physical therapists, which leads to chronic conditions. Numerous noninvasive methods—such as stretching, massage, ischemic compression, laser therapy, heat, acupressure, ultrasound, transcutaneous electrical nerve stimulation, biofeedback, and pharmacological treatments—have been used to alleviate chronic myofascial pain, but no single strategy has proved to be universally successful. Another way to treat myofascial pain is by dry needling (intramuscular stimulation, Western acupuncture, medical acupuncture), which is a minimally invasive procedure in which an acupuncture needle is inserted directly into an MTrP. Although an acupuncture needle is used, the therapy is based on the traditional reasoning of Western medicine. The sites for needle insertion are located in skeletal muscles taught in any basic anatomy course.

Different methods of dry needling, its effectiveness, and physiologic and adverse effects are discussed. Dry needling is a treatment modality that is minimally invasive, cheap, easy to learn with appropriate training, and carries a low risk. Its effectiveness has been confirmed in numerous studies and 2 comprehensive systematic reviews. The deep method of dry needling has been shown to be more effective than the superficial one for the treatment of pain associated with myofascial trigger points. However, over areas with potential risk of significant adverse events, such as lungs and large blood vessels, we suggest using the superficial technique, which has also been shown to be effective, albeit to a lesser extent.

Ai Namima-Davison

- The Importance of Finding the Root Cause of Chronic Conditions - the Hidden Threat of Non-Metal Toxicity

Biography:
Ms. Ai is managing Asian Market for the Great Plains Laboratory (GPL), a world leader in providing testing for metabolic, genetic, mitochondrial, and environmental factors in chronic illnesses. Over the last three years Ms. Ai's passion has focused on Functional and Integrative Medicine that leads her to travel across Asia and the U.S. to support Biomed conferences. GPL offers a variety of state-of-the-art metabolic and genetic tests such as the Organic Acids Test, GPL-TOX (Toxic Non-Metal Chemical Profile), IgG Food Allergies Test, and our newest test the Mycotox Profile. GPL's ultimate goal is to help physicians provide their patients with the most personalized medicine possible and improve their quality of life.

Abstract:
A high percentage of all people are now exposed to a soup of toxic chemicals. Toxic chemical exposure has been implicated as a major factor in impaired learning ability, attention deficit, hyperactivity, pervasive developmental disorder, Alzheimer's disease, depression, cancer, multiple sclerosis, chronic fatigue, skin rashes, and autism. Documentation of common chemicals in the environment that cause illnesses and their sources will be presented along with methods to prevent exposure and to remove them when exposure has already occurred.

Atiwut Kamudhamas, MD, DHS, Ph.D., RTCOG, ACS

- Diagnosis of Sexual Disorders; what and why anti-aging physicians need to know

Biography

1985-1991 - Doctor of Medicine (First Class Honor)
1991-1992 - Post-graduate certificate in clinical medical science
1992-1995 - Diplomate Thai Board of Obstetrics and Gynecology
1998 - Maternal and fetal medicine, Washington University in St Louis's Louis, Missouri, USA
2004 - Diplomate Thai Board of Family Medicine
2011 - Doctor of Human Sexuality, Institute for Advanced Study of Human Sexuality, San Francisco, California, USA
2013 - Ph.D. in Human Sexuality, Institute for Advanced Study of Human Sexuality, San Francisco, California, USA

Dr Kamudhamas is the only one Thai doctor who received Certified American Board of Sexologist, and now works as clinical sexologist and sexual physician in Thammasat University Hospital. As a clinical sexologist and sexual physician, he provides sex counseling and sex therapy at Sexual Health Clinic in Thammasat University Hospital. As a lecturer, he provides comprehensive sexuality education to all levels of student including; internships, medical students, students of other faculties in the universities, and also high school students. He is also a gynecologist, so he practices operative treatment for female sexual pain disorder and vaginismus. He is also skillful in cross-sex hormone administration for transgender people. He is now the head of the department of Obstetrics and Gynecology, Faculty of Medicine, Thammasat University.

Abstract

• Diagnosis of Sexual Disorders; what and why anti-aging physicians need to know

Prevalence of sexual disorders in both males and females is as high as 30-40 percent but approximately only 4 percent of them seek medical care. Many reasons explain that including lack of knowledge and understanding of physicians in this field. Understanding the diagnosis of sexual disorders is thus basically essential for physicians need to know. Diagnosis refers to ICD-10 and DSM-5 and especially discuss what have been changed from DSM-IV to DSM-5 that is important to understand.

Mr. Eric GT Walker

- Building Biology: a foundation to support life-long health by reducing external stresses
- Bioresonance by Rayonex- an integrated and personalized approach to health an beauty

Biography

I try to balance technical and human sustainability by integrating building biology with clean energy sources, green building systems, and community resilience. My insight has been used to guide engineering offices, lead policy research, and create effective cross-sector partnerships to catalyse green growth innovation.

Qualifications
MSc: Material Science: University of Hong Kong.
BSc: Geology/Environmental Science: University of British Columbia
Certified Building Biologist and Certified Trainer: Paul-Schmidt-Academy, Germany.
Certified Energy Manager (CEM): Association of Energy Engineers (Life member).
LEED AP (Building Design + Construction): Green Building Certification Institute.

Management & Technical Experience

Director, Building Central : Building Biology Central www.bbiocentral.com
Deputy Director, Integrated Solutions, Greater China
The Climate Group www.theclimategroup.org
President / Co-founder : WindFuture Energy Technology Ltd.
Research Director : Friends of the Earth (HK) Lted. www.foe.org.uk
Independent Education Consultant Yukon Chamber of Mines / Government of Canada
Forestry Technician University of Alberta / Government of NWT, Canada
Steering Committee Member
Green building standard: the Comprehensive Environmental Performance Assessment Scheme (CEPAS)
Online renewable energy planning platform: the Integrated Assessment System for Renewable Energy Resources

Professional Study

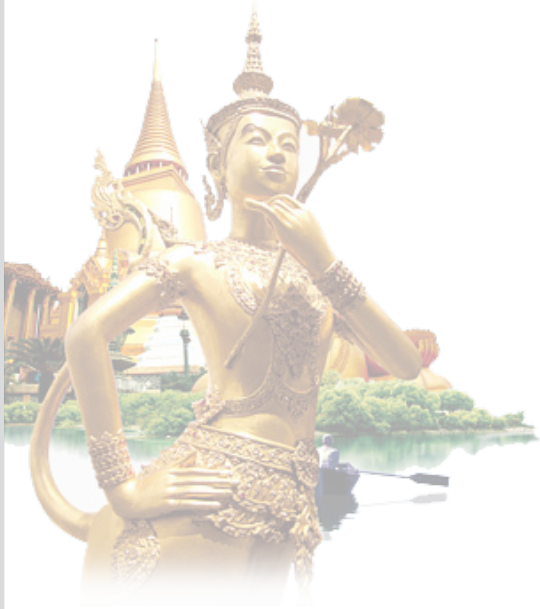
Building biology theory and practice: Palu-Schmidt-Academy, Germany.
Solar thermal driven HVAC systems: Fraunhofer Institute for Solar Energr, Germany.
Wind flow modelling and wind farm project design: EMD Denmark, EMD Germany.

Abstract

• Building biology: a foundation to support life-long health by reducing external stresses.
The presentation will look at what natural and artificial stresses are important to reduce in our home, especially in our sleep environments, in order to optimize health, child development, and disease prevention. A wide range of case studies from an active building biology practice will be used to show how stresses are identified in homes and how solutions are implemented to improve life quality.

• Bioresonance by Rayonex- an integrated and personalized approach to health and beauty
The workshop will present both theory and hands-on demonstration for participants to explore the key parts of Bioresonance by Rayonex, including; 1. How to identify and reduce external stresses on our endocrine system; 2. How to test for personal food intolerances that stress our skin and digestive system; 3. How to use bio-field devices to strengthen our immune system, and 4. How to create non-invasive personalised treatments for existing health conditions, disease prevention and anti-aging using Bioresonance.

AESTHETIC SPEAKER



Sukit Warathamrong, MD

- When Julie wants to become Jimmy

Biography

EDUCATION :
MD. FROM SIRIRAJ HOSPITAL, MAHIDOL UNIVERSITY 1985
DIPLOMATE THAI BOARD OF PLASTIC SURGERY, CHULALONGKORN UNIVERSITY 1991
PRACTICE AND EXPERIENCE PLASTIC SURGEON
- HADYAI HOSPITAL, SONGKHLA 1992-1995
- MITTRAPARP HOSPITAL, SARABURI 1995-1999
- YANHEE HOSPITAL, BANGKOK 1999-PRESENT
ORAL PRESENTATION AND INVITED SPEAKER
: Staged approach for female to male reassignment surgery: The way we do to reduce the complications and increase rate of success, OSAPS 9th 2004, Bangkok, Thailand, December 6-8, 2004
: Female to Male (FtM) SRS in Yanhee hospital, How I do it? OSAPS 2014, Pattaya, Thailand, October 27-29, 2014
: Total Phalloplasty by Radial Forearm Free Flap: The Plan to Success, TST meeting 2016, Phuket, Thailand, March16-18, 2016
: Goal of 7th Version Standard of Care from WPATH for the Health of TG, and Gender Nonconforming People, The 18th ASEAN Congress of Plastic Surgery 2017 , Bangkok,Thailand , March 8-10 2016.
: The 250 Cases of Radial Forearm Free Flap Phalloplasty for FTM Transsexual; How to Success?
The 18th ASEAN Congress of Plastic Surgery 2017 , Bangkok,Thailand , March 8-10 2016
: Sexchange MIS : Female to Male,The “FRESH III” International workshop, Ramathibodi Hospital, Bangkok, Thailand, February 8-10, 2017

Abstract:

Total phalloplasty for Female to male (FTM) Gender Dysphoria patients is known as one of the most challenging operation and has many complications that still not easily managed. All the surgeons in most centers of the world try to develop the methods that reduce the complications and increase the rate of success. The plan of the surgery is now accepted to be arranged as multiple steps with different designed. The goal to have the ideal penis that serves both the excellent form and function is the highest expectation of patients and surgeons. After the era of microsurgery, the result of tissue transplantation is more successful and makes the most difficult areas possible to be solved and also the phalloplasty.

Phalloplasty in Yanhee hospital is set up as 3 steps protocol. Until present after multiple reviews of the techniques and refinements for 18 years lead to 260+ cases of FTM patients received total phalloplasty by Radial forearm free flap with the higher success rate and lower urologic complications compared with the other main centers of SRS. The patients can urinate through the penis tip, have the proper size and the acceptable appearance and almost all have the sensated penis. The silicone implant designed by the surgeon serves as a temporary good stiffener and provides the penis firm enough for sexual purpose in most cases. The more researches for the specific penile implant that designed for these patients, the urological changes after phalloplasty are needed in the future.

The detail about how to approach the patients, the Yanhee protocol, the refinement of the surgery and the result will be presented.

Choladhis Sinrachtanant, MD

- Face Lock (Surgical Facial Rejuvenation)

Biography

-Board of Otolaryngology and Head Neck Surgery (Thai Medical Council).
-Sub-Board of Facial Plastic and Reconstructive Surgery (Thai Medical Council).
-Chair of Board examiner in Facial Plastic and Reconstructive Surgery (Thai Medical Council).
-Founder of Facial Plastic and Reconstructive Surgery Association of Thailand (1989).
-President of Facial Plastic and Reconstructive Surgery Association of Thailand (2006 – 2015).
-Executive committee of Royal College of Otolaryngologist of Thailand.
-Senator of Thailand (2006).
-General Secretory of ASEAN Academy of Facial Plastic and Reconstructive Surgery.
-Founder of ASEAN Academy of Facial Plastic and Reconstructive Surgery.
-Founder of Asian Facial Plastic Surgery Society.
-Founder of Pan Asia ASEAN Academy of Facial Plastic and Reconstructive Surgery.
-Editor & Author text book of “Asian Blepharoplasty” The Short Incision Technique 2014, Elsevier (Singapore) Pte Ltd. All rights reserved.

Asst. Prof. Rungsima Wanitphakdeedecha, MD, MA, MSc

- Filling Myself with My Own Fillers

Biography

Associate Professor Dr. Rungsima Wanitphakdeedecha is a dermatologist and dermatologic surgeon in Bangkok, THAILAND. She completed her dermatology residency in 2003 at Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, THAILAND. She has been serving as a faculty in Dermatosurgery Unit, Department of Dermatology, Faculty of Medicine Siriraj Hospital, Mahidol University since then.

She completed her research fellowship training in Procedural Dermatology at the University of Texas-MD Anderson Cancer center, Houston, Texas, USA, and Laser and Cosmetic Surgery at Washington Institute of Dermatologic Laser Surgery, Washington DC, USA in 2007 and 2008, respectively.

She has lectured nationally and internationally on the topics of dermatologic surgery, laser, and cosmetic procedures. She has published many book chapters and manuscripts in peer-reviewed journals.

Maria Chistina A. Puyat, MD, FPDS, FPADSFI

- Panfacial Contouring: My Experience
- Stem Cell Face Lift

Biography

Dr. Puyat is the founder and medical director of Asian Stem Cell Institute,Inc.She received her medical degree from the University of Santo Tomas, and completed her residency in dermatology at the Jose R. Reyes Memorial Medical Center, Manila, Philippines. She has a fellowship in dermatology and dermatological surgery from the Baylor College of Medicine in Texas (USA).She has a Master's degree in Preventive and Regenerative Medicine from the Dresden International University (Germany), and a Stem Cell fellowship from the American Academy of Anti-Aging Medicine.

Dr. Puyat is a Founding member, board, and pro of World Council of Preventive Medicine (WOCPM), Board member and Vice President of Philippine Academy of Dermatologic Surgery Foundation Inc. (PADSFI), Board member of International Society of Dermatologic Surgery (ISDS), Board of Governor's Aesthetic Stem Cell Society, Procedural Dermatology Consultant and Subsection Head of Cosmetic Surgery Department in Rizal Medical Center. A member of the Fillers Advisory Committee, a Fellow of the American Academy of Dermatology (AAD), a Charter Member of Philippine Society of Liposuction Surgery, a Fellow of Philippine Dermatologic Society (PDS), and a member of the American Academy of Anti-Aging Medicine (A4M).Dr. Puyat is an invited faculty and panel expert in topics ranging from dermatology to regenerative cellular therapies. She has been an invited faculty at the International Darmstadt Live Symposium in Germany numerous times, and has served in the capacity as a facilitator, faculty, chair and co-chair for the ISDS in Istanbul, Las Vegas, Philippines, Vienna, Thailand, Bucharest, Luzern, and New Delhi; DASIL, APACS, A4M, WOSIAM, Euromedicom Aesthetic Asia, IMCAS, and World Consensus for WOCPM, and ITCAM Anatomy Master Courses.

Dr. Puyat's most recent peer review study "Volumetric Changes After a Stem Cell Facelift: A Multiple Case Study" is published in the April 2014 issue of Prime International Journal of Aesthetic and Anti-Aging Medicine. Ma. Cristina A. Puyat, MD, FPDS, FPADSFI

Abstract

• Panfacial Contouring: My Experience

In every medical aesthetic procedure, patient safety is one of the main goals of a good doctor. That is why it is important to build doctor-patient relationship as it plays a vital role in how each procedure will be planned and achieved. Currently, Botulinum Toxin A and Dermal Fillers are well-known for its cosmetic indications to diminish moderate to severe facial wrinkles, for face contouring, lifting, volume and rejuvenation. Dermal fillers and toxins are the most commonly sought procedure when it comes to facial contouring as it brings out the person's facial features more harmonized and balanced. As with any of the novel technological innovations currently available, understanding of the different properties of the ingredients used and knowledge in optimal technique is vital to clinical and aesthetic success. In this day and age, we all know that there is no single treatment that can achieve all the results desired in facial contouring and we believe that combination treatment produces the best result.

Through this, I will be presenting the Panfacial Contouring: My Experience, more specifically how I have addressed the ever-changing preferences to the facial harmony and balance as seen in my practice.

• Stem Cell Facelift

Various novel breakthroughs have been discovered in the field of medicine as technology & research are concerned. Regenerative Medicine is an area of biomedical research, technology and patient care that is rapidly growing. This field aims to develop fresh therapies to help our bodies restore or regenerate organs, tissues that have been damaged. Over the last two decades, a new therapeutic standard has emerged which has changed the way debilitating diseases may be treated in the future. Stem Cell has vast potential and new developments happening so quickly and a shift toward more minimally invasive techniques has resulted in a wider range of practitioners performing cosmetic and dermatologic procedures. Through this, I'll be presenting Stem Cell Facelift, more specifically how I have addressed the ever-changing preferences to the facial rejuvenation as seen in my practice.

Jinda Rojanamatin, MD

- Facial Contouring with Fillers

Biography

Dr. Jinda Rojanamatin is a dermatologist, certified by the Royal College of Thailand. He graduated Doctor of Medicine from Chulalongkorn University, Diploma of Thai Board of Dermatology from Institute of dermatology. Then he continued the professional training in Fellowship in Dermatosurgery and Laser, Teikyo University, Japan and Certificate in Cosmetic Dermatology, University of Miami, USA. Currently, he is an Acting Director and Head of Dermatosurgery and Laser Department at Institute of Dermatology, Bangkok. He has also served on the board of Dermatological Society of Thailand.

Currently, Dr.Jinda is an Deputy Director at Institute of Dermatology, Bangkok. He has also served on the Chairman of Scientific committee of Dermatological Society of Thailand.

Dr. Jinda Rojanamatin has been invited as a speaker at the several prestigious international meetings, such as World Congress of Dermatology, International Society for Dermatologic Surgery, including International Congress of Dermatology and Eurasian Congress in Aesthetic & Anti-Aging Medicine. His major topics of interest are skin laser surgery, as well as, Botulinum toxin and Fillers.
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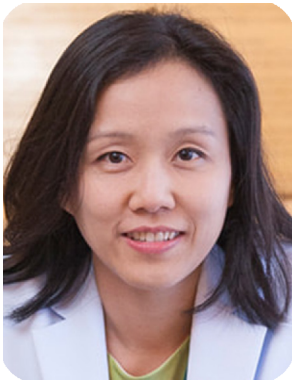


Sasima Eimpunth, MD

- Update Treatment in Melasma

Biography:

Sasima Eimpunth, MD, a board-certified dermatologist and dermatologic surgeon, work as a full-time assistant professor in Dermatologic Surgery Division at the Department of Dermatology, Faculty of Medicine Siriraj Hospital since 2008. After graduate from Dermatology training, she extended her study in Dermatologic Laser and Cosmetic Surgery, Cosmetic Dermatology, and Procedural Dermatology at Ramathibodhi hospital, University of Miami (USA), and University of California, San Diego (USA).

She has published and involved in many research articles published in peer-reviewed journals in the Dermatology, Dermatologic Surgery, and Cosmetic Dermatology fields.

Her main interest is in discovery and sharing more effective and safer dermatologic procedures.

Ratchathorn Panchaprateep, MD

- Non-and Minimally-invasive Hair Growth Stimulators

Biography

Dr. Ratchathorn Panchaprateep is an associated professor at Division of Dermatology, Chulalongkorn University, Bangkok, Thailand.

She is a board-certified dermatologist and PhD in dermatology from division of dermatology, Chulalongkorn University. Her PhD research is focus on hair follicle stem cells and hair regeneration. Then, she compleed her clinical fellowship in dermatologic surgery at Ramathibodi hospital, Mahidol University and Dermatology, laser and vein specialists of the Carolinas, Charlotte, North Carolina, and United State. She also completed fellowship in hair restoration surgery from DHT clinic (ISHRS) and hair and nail disorders from University of Miami, Miller School of Medicine, Department of Dermatology & Cutaneous Surgery, Miami, Florida, and United State. She also received diplomatic American Board of Hair Restoration Surgery.

She has authored many medical papers and has presented a wide range of scientific presentations in the fields of hair restoration surgery, hair biology and disorders as well as laser and cosmetic dermatology.

Assoc. Prof. Kasean Panyakhamlerd, MD

- Management of Genitourinary Syndrome of Menopause

Biography

Specialty: OB/GYN (Women) - OB/GYN (Women), Menopause
- M.D., Faculty of Medicine, Chulalongkorn University, Thailand, 1989 Board Certifications:
- Diploma of The Thai Board of Obstetrics & Gynecology, 1995
- Diploma of The Thai Board of Reproductive Medicine, 1999
- Academic Rank: Associate Professor, Chulalongkorn University, Thailand Special Clinical Trainings:
- Reproductive Medicine Special Clinical Interests:
- Menopause

Orawee Chinthakanan, M.D., MPH., PhD.

- Cosmetic Gynecology

Biography

Dr. Orawee Chinthakanan is a board-certified urogynecologist. After finished her OB/Gyn residency training in 2009, she received the Japan-Joint World Bank Scholarship to pursue master's degree in public health at Emory University, Atlanta, GA. After graduation, she did fellowship in Urogynecology with Dr. Willy Davila at Cleveland Clinic Florida. Then she also trained with Drs. Miklos and Moore in Atlanta for cosmetic gynecology. Currently, she is a lecturer at Female Pelvic Medicine and Reconstructive Surgery in the Department of Obstetrics & Gynecology at Ramathibodi Hospital, Mahidol University, Bangkok, Thailand. She is a consultant for Urogynecology and cosmetic gynecology at Bumrungrad and Bangkok Hospital.

Abstract

• Cosmetic Gynecology

Cosmetic gynecology, as known as female cosmetic genital surgery (FCGS) or cosmetic vaginal surgery or aesthetic vaginal surgery or vulvovaginal rejuvenation, which consists of procedures designed to improve appearance and/or functional aspects of female genitalia. Patients undergoing FCGS have emotional and social concerns specific to aspects of genital appearance or function. There are numerous procedures of FCGS involving external genitalia and vaginal canal. FCGS for external genitalia includes labiaplasty, clitoral hood reduction, labia majora reduction or augmentation, labia majora divergence repair, perineal skin reduction, mons pubis reduction. Vaginal rejuvenation, which encompasses perineoplasty and vaginoplasty, is a term that is commonly utilized to describe surgical repair of the vaginal canal and introitus following childbirth and/or aging to treat sexual dysfunction related to vaginal relaxation.

Most patients undergoing FCGS report overall satisfaction and subjective enhancement of sexual function and body image, but the literature is retrospective. FCGS procedures appear to fulfill many patient's desires for cosmetic and functional improvement, as well as sexual satisfaction. More research on quality of life changes in FCGS patient population should be explored.

Rumpa Linpiyawan, MD

- Ultrasonic Body Contouring

Biography:

- Certified Board of Internal Medicine
- Certified Board of Dermatology, Board of Family Medicine

Dr. Rumpa is a well-known dermatologist who had been assistant Professor in Dermatology at Mahidol University, Siriraj Hospital. In 2004, she had co-founded and established several successful private skin centers in Thailand. She has been invited as a speaker and trainer on trusted aesthetic technologies and world class injectables in Thailand and overseas.

Dr. Rumpa is one of the Certified Honorable Trainers of Galderma Asia Pacific and a leading Luminary doctor for Venus Concept. She's one of the pioneers using the Venus Viva. Currently Dr. Rumpa is a director of the Rampada International Skin Clinic.

Wajana Wongpitirungruang, MD

- Liposuction and Adipose Derived Stem Cell Collection

Biography

M.D., Faculty of Medicine, Khon Kaen University Thailand, (second class honors),
International Membership Certificate in the Korean college of cosmetic surgery ;Korean College of Cosmetic Surgery.

Specialty: Nose Surgery, Liposuction , Fat Grafting , Botox , Filler , Thread Lifting

Training
2017 (Bangkok, Thailand) - "Anti-aging Medicine : From Basic Science to Clinical Management"
2015 (Korea) - KCCS Asian Eyelid Surgery Workshop
2015 (Korea)- KCCS Hair Transplantation Workshop & Hands-on Course
2014 (Seoul Korea) - Asian eyelid surgery workshop at MEPS
2013 (Bangkok Thailand) - Secret of Korea beauty by JW Plastic Surgery Center.
2013 (Seoul Korea) - The 17th International Rhinoplasty
2013 (Korea)- KCCS International Conference "Live Demonstration and Panel Discussion"

Thanya Techapichetvanich, MD

- Fractional Assisted Drug Delivery

Biography

Current Position : Clinical Instructor at Siriraj Hospital
Fields of Interests : Skin cancer and Mohs micrographic surgery , Laser and Aesthetic surgery

PROFESSIONAL EXPERIENCES
2016 –present Clinical Instructor, Department of Dermatology, Siriraj Hospital, Bangkok, Thailand
2013 –2016 Clinical Instructor, Division of Dermatology, Ramathibodi Hospital, Bangkok ,Thailand
2012– 2013 Fellowship training in Dermatologic Laser Surgery, Ramathibodi Hospital, Bangkok, Thailand
2009 –2012 Residency training in Dermatology, Ramathibodi Hospital, Bangkok, Thailand
2007– 2009 Diploma in Clinical Dermatology, Ramathibodi Hospital, Bangkok, Thailand
2003 MD, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Dr. Techapichetvanich completed board certification in dermatology and clinical fellowship in laser and dermatologic surgery at Faculty of medicine, Ramathibodi hospital, Mahidol University. Her special interests include skin cancer surgery, Mohs micrographic surgery, laser surgery and aesthetic dermatology. In addition, she is also a mentor of Ramathibodi Training Course in Cosmetic Dermatology, Ramathibodi hospital, lecturer and mentor in International Congress of Aesthetic Dermatology (ICAD), The International Thai Cosmetic Dermatology Congress on Aesthetic Medicine (ITCAM) and also Aesthetic Dermatology Academy Conference (ADAC).

Dr. Techapichetvanich currently practices as clinical instructor for dermatologic residents ,clinical and visiting fellows at dermatologic laser surgery unit, Department of Dermatology, Siriraj hospital .

Nalinee Sutthipisal, MD

- Adjunctive Pre-op Post-op care for the Aesthetics Successful Outcome

Biography

Nalinee Sutthipisal, M.D. 1st Class Hons. (Chulalongkorn Univercity) is a Dermatologist, Head of the Department of Dermatology and Esthetics Institute, Samitivej Sukhumvit Hospital, Bangkok, Thailand and also the CEO of Acantus Clinic, Nonthaburi, Thailand.

Her skills and qualifications are Botulinum toxin, Filler injections, Laser & light therapy, Skin allergy. She also be certified in Anti–Aging Medicine Specialization (WOSAAM), Acupuncture & Moxibusion Traditional Chinese Medicine and Homeopathy.

She is currently the Vice President of The Thai Association of Anti-Aging and Regenerative Medicine Association (TAARM) and a Scientific Committee of the Thai Society of Cosmetic Dermatology and Surgery

Abstract

- ADJUNCTIVE THERAPY IN THE PRE & POST-OPERATVE CARE FOR SUCCESSFUL OUTCOME

Good pre and postoperative care always yield a successful outcome and finalized in patients and doctors ` satisfaction .

FREQUENCY MEDICINE , the modern Biophysics is now considered to be one of the promised Adjunctive Therapy in this era.

The treatment with electromagnetic fields is now accepted by The United States National Institutes of Health (NIH) for the following symptoms : Bone and chronic tendon injury repair , nerve stimulation , wound and varicose ulcer healing , osteoarthritis, electro puncture, tissue regeneration , immune system stimulation and endocrine modulations . Other experts have extended the spectrum of therapy such as : pain, trauma and injury control, reducing swelling and improving blood circulation, fibromyalgia, infectious process, malaria treatment, stress reduction, the correction of neurological disturbances, increasing physical energy and athletic performance .

Various clinical cases ; Pre-op & Post-op care with Electromagnetic device plus the Biofeedback for precise enhancement in organ function , reduction in inflammation ,increment in blood circulation and lymphatic drainage promoting faster wound healing will be presented .

Susan Murrmann, MD

- The science of radiofrequency and feminine rejuvenation
- Psychological effects of BHRT and feminine rejuvenation

Biography

Dr. Susan Murrmann is an obstetrician-gynecologist in Germantown, Tennessee and is affiliated with multiple hospitals in the area, including Baptist Memorial Hospital for Women and Baptist Memorial Hospital-Memphis. She received her medical degree from Rosalind Franklin University of Medicine and Science and has been in practice for more than 20 years. She is one of 83 doctors at Baptist Memorial Hospital for Women and one of 164 at Baptist Memorial Hospital-Memphis who specialize in Obstetrics & Gynecology.

Education & Medical Training

- University of Tennessee Medical Center Residency , Obstetrics and Gynecology
- University of Illinois College of Medicine at Chicago Internship , Transitional Year
- Rosalind Franklin University of Medicine and Science Medical School

---

Nouval Shahab, MD

- Low Intensity Shock Wave Therapy for Erectile Dysfunction

Biography:

Dr. Nouval Shahab is a Sexologist in Senayan, Jakarta and has an experience of 23 years in this field. Dr. Nouval Shahab practices at Ultimo Aesthetic & Dental Center in Senayan, Jakarta. He completed S.Ked from Universitas Indonesia in 1995,dr. from Universitas Indonesia in 1998 and Sp.U from Universitas Indonesia in 2005.

Some of the services provided by the doctor are: Urinary Incontinence (Ui) Treatment,Male Sexual Dysfunction Treatment,Treatment Of Erectile Dysfunction,Male Sexual Problems and Female Sexual Problems etc.

Sarawalai Rakchart, MD

- Autologous Fat Transfer

Biography

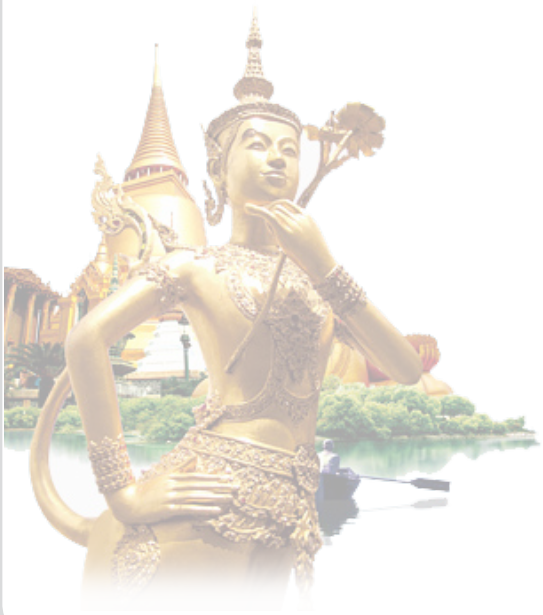
• Medical Degree, Chulalongkorn University
• Diplomate and Master of Science in Dermatology, Department of Dermatology, King Chulalongkorn Memorial Hospital,Chulalongkorn University
• Clinical Fellow in Dermatologic Surgery, Division of Dermatologic Surgery Department of Dermatology, Siriraj Hospital, Mahidol University
• Dermatologist and Partner at Innovative Skin and Laser Surgery Center (iSKY) Clinic
•Aesthetic Dermatology Academy Conference (ADAC) Congress Director and Organizer
•Speaker and Instructor for the Dermatologic Surgery Fellow, Dermatologist and General Professional Careers.
•PERFECTHA Asia-Pacific Regional Trainer

Abstract

Autologous fat transfer is an increasingly popular procedure used for facial rejuvenation and body contouring. Not only the filling effect but also the rejuvenation effect that can improved the quality of the skin. Because of regenerative potential owing to the presence of stem cells in fat tissue.

However, its results are variable and unpredictable. Nearly every step of autologous fat transfer has the potential to influence graft outcomes. A standard fat transfer technique is commonly performed in 3 stages: (1) harvesting of adipose tissue from a donor site; (2) processing of the aspirated fat to eliminate cellular debris, acellular oil and excess of infiltrated solution, (3) reinjection to the recipient. Harvesting technique with low negative-pressure aspiration with large-bore cannulas was performed to minimize the fat cell damage. Resulting in high fat cell viability. For fat processing, centrifugation at a low speed is preferable to high-speed centrifugation, gravity separation or filtration. Fat injection at the recipient site should be performed using 16G-18G cannulas in a fanning pattern to create the small fat parcels to facilitate the tissue imbibition. This technique will reduce the fat necrotic area resulting in high fat retention rate. For good result and fat taking rate, better done fat grafting over multiple sessions, rather than a single session.

SPECIAL INVITED SPEAKER



Mr.Danai Chanchaochai

- Money Cannot Buy Happiness

Biography

Chief Executive Officer of DC Consultants and Marketing Communication Ltd. Mr. Chanchaochai specializes in Marketing field and Public Relation that are well-known such as being the Public Relations Consultant of Bangkok Metropolis and initiator of Love to Read Project. He has been an Independent Director of Thai HA Public Company Limited (alternate name Thai Ha Plc) since July 2008. He presents as the Committee of The National Council on Social Welfare of Thailand, Thai Rice Foundation under Royal Patronage, Foundation for Slum Child Care, being an innovator of Drink Don't Drive Project and promote Buddha's teaching and moral standard to apply with the organization. He specializes in CSR (Corporate Social Responsibility) which is very useful with the Thai Ha Plc to develop and create advantages to social and environment in various aspects.

Mr. Chanchaochai holds a Master's Degree in Marketing from Thammasart University and Gothenburg University Sweden.

Mr.Tirasak Termsubsarn

- TAI-CHI Training

Biography

Education

•Msc. with Merit in Tourism Management and Marketing, Bournemouth University, UK

•Postgraduate Cert. in International Marketing Management, Bournemouth University, UK

•Bsc. Social administration,Thammasat UniversityTraining

•Certificate for Body Balance Program (by California Wow Experiences), Les Mills, New Zealand

•Certificate for Pilates Matt , Balanced Body University, USAWorks

•Exercise Guru, Hi Channel

•Health Guru, Health Plus Channel

•Excercise Guru, DailyNews TV

•Yoga instructor, Bangkok hospital

•Pilates and Body Balance Instructor, GMM Fitness

Samitada Sungkapo, MD

- Kao-Kon-La-Kao: Step by Step Together, the marathon project for the nation

Biography

Dr. Samitada Sungkapo is a physical medicine and rehabilitation specialist. She loves running both road and trails. Marathon and ultramarathon is her journey and travelling around the world. Her experience from running, working on rehabilitation, antiaging sciences leads to the achievement of Kao-kon-la-kao project; running from southeast to northeast of Thailand by raising a fund for 11 hospitals around Thailand. Her happiness is being a social benefit and someone's inspiration to take good care of their wellness.

The History of Kao-Kon-La-Kao Project Marathon Charity Run.

Rock star Artiwara aka "Toon Bodyslam" Kongmalai completed his 55-day charity run on schedule, reaching the finishing line at the border checkpoint in Mae Sai district of Chiang Rai on Monday.

The singer has raised more than 1.1 billion baht, far exceeding his 700-million-baht target, by calling for small donations from all Thais. The money will be donated to 11 state hospitals nationwide to buy essential medical equipment.

Toon started the final day of his marathon at 2.30am from Muang district, using Phahon Yothin Road toward the northernmost point of Thailand at the Thai-Myanmar the border. He ran 61.5 kilometres on Monday to reach the destination.

Toon reached the target distance of 2,191km in Mae Chan district and continued for another 24km to the finish line, for a total distance of 2,215km.

He started his journey on Nov 1, leaving from Betong district of Yala province. The rocker has run through 20 provinces. Toon reached his final destination to a warm welcome from people in Chiang Rai. More than 100 local artists in Chiang Rai had waited to greet him in tambon Ban Du of Muang district since 2am. He had planned to reach this checkpoint on Sunday evening but cut short his run due to injury.

The rocker crossed the final line at 6.20pm, having spent 55 days on the road or 386 hours.

The Kaokonlakao Project is a charity run for fundraising to purchase medical instruments for 11 hospitals nationwide.

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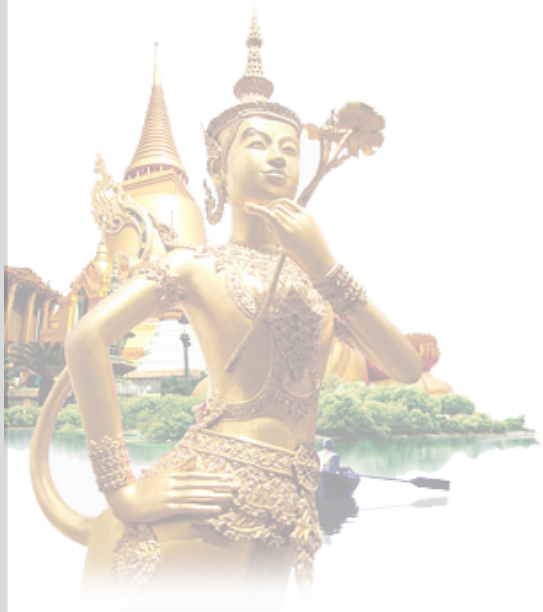
BASIC SCIENCE RESEARCH SPEAKER



Nattavut Wongdeethai, MD, M.Sc.

- Growth Factors in Platelet Rich Plasma

Biography

Education Background:
Medical degree 2015, Gullas Collage of Medicine, University of the Visayas, Philippines.
Master's Degree in Tropical Medicine, Major Microbiology and Immunology
2008, Mahidol University, Thailand,
Bachelor's Degree in Medical Technology
2002, Rungsit University, Thailand,
Working Experiences:
Medical Technologist Kasemraj Hospital, Sep. 2002 – Apr. 2004
Molecular specialist Mahidol-Oxford Tropical Medicine Research Unit (MORU) 2008 to 2010
Lecturer in Microbiology, Immunology and Molecular biology Faculty of Medical Technology, Rangsit University 2010-2012

Abstract

• Growth Factors in Platelet Rich Plasma

Nattavut Wongdeethai M.D., M.Sc., Tappitak Thammuang B.Sc., Jettana Rongdaj B.Sc., Yupa Pengthumand B.Sc., and Patana Teng-umnuay M.D., Ph.D.

Platelets rich plasma (PRP) is claimed to contain high levels of numerous growth factors that can provide clinical benefits. Platelet derived growth factors can promote tissue regeneration and contributes an important part for tissue repair. Currently, PRP injection has been used for various clinical applications such as orthopedics, ophthalmology, and aesthetic medicine due to its great regenerative potential. Our study aim is to compare the amounts of growth factors and inflammatory cytokines from platelet rich plasma obtained from non-smoking and smoking subjects. The results showed that growth factors in PRP in individuals varied from ages and smoking condition. The levels of HGF and FGF2 and inflammatory cytokines IFN-γ and IL-10 are higher in smoking subjects. Our finding suggests that the concentration of PRP derived growth factors could be different among people depend on life styles. A further study is needed to give us better understanding the effects of smoking on PRP derived growth factors in individuals.

Phawit Norchai, MD

- The effect of oral Nystatin drug to urine indicant level in dysbiosis

Biography

Dr. Phawit Norchai received his M.D. from Chiangmai University and his Master degree of science in Antiaging and regenerative Medicine from Dhurakit Pundit University.
He has got American Board of Antiaging and regenerative Medicine (ABAARM)
Dr.Phawit Norchai has been PhD.candidate in clinical epidemiology at Faculty of Medicine Thammasat University.
For his future position as the research advisor and lecturer in college of integrative medicine Dhurakit Pundit university.
He had experiences as an executive medical doctor director and consultant for many years.
He has been working as a medical doctor in Aesthetic and Antiaging Medicine at Apex Medical Center.

Abstract

Microorganisms in the intestinal tract are living normally together as a microbiota, an ecological community of commensal, symbiotic and pathogenic microorganism. There are more than 99 % of bacteria, and also Candida albicans, the most common type of fungus in the gut. When benefit bacteria are decreased in quality and quantity, they will definitely affect the intestinal ecosystem. There many factors that stimulate the growth of Candida albicans known as yeast overgrowth that may be one of the intestinal dysbiosis causes.

The effect of oral Nystatin to urinary indicant level has been influenced in this study. The urinary indicant is a urinary marker for dysbiosis in this study. The 25-50 years old, male and female who suspected dysbiosis without underlying diseases, gastrointestinal diseases, probiotics, antibiotics, steroids and antacids were selected as mentioned from the inclusion criteria. The procedure started from the dysbiosis questionnaire answering then passed through by criteria score for dysbiosis, then they had been the urinary indicant testing. According to the criteria of admission, the 30 patients were selected when the results were measured by certified standardized test kit as levels 2, 3 and 4. Each person took 500,000 iu or 5 ml. of Nystatin twice a day then repeated urinary indicant level measurement after 2 and 4 weeks, respectively. The results showed that the urinary indicant was negative 96.67 percent in both 2ndand 4th week, respectively. Cochran Q test analysis showed a statistically significant difference at p value < 0.001 and by McNemar test analysis showed that negative urinary indicant levels were significantly different from prior experiment ($p < 0.001$) in both of 2nd and 4th week respectively, but at 4th week result compared to 2nd week result was not significantly different at p value > 1.0. As a result, found something related between Nystatin, the Candida killer and the decreasing of urinary indicant level in Dysbiosis. I have suggested that additional functional testing of intestinal yeast overgrowth that are more specific to Candida albicans, such as Urine D-Arabinitol, urinary marker for Candida albicans or Candida sIgA may be considered.

Candida albicans has been known as a well-tolerated and adaptable properties in a different status of intestinal tract. The rapid growth and resistance of Candida albicans could probably be happened. Additional study in the future must be concerned.

Pornsayapat Likhitthummagun, MD

- Anti-aging effect of oral very high proline complex collagen (DERMOFIX®) on skin properties: a randomized, double-blind, placebo-controlled clinical study

Biography

• American Board of anti-aging and regenerative medicine 2017 The American Board of Anti-aging and Regenerative Medicine, ABRAAM, USA (candidate)
• M.Sc. program in anti-aging and regenerative medicine 2015-2017 College of integrated medicine, DPU
• Laser and skin therapy 2013 Harvard medical school, Harvard university, Boston, USA
• Diploma of dermatology 2011-2012 Cardiff university, UK
• Fellowship of hair clinic 2010-2011 Departmentof dermatology, faculty of medicine, Chulalongkornuniversity
• Doctor of medicine (1st class honor) Faculty of medicine, chulalongkornuniversity 2003-2009

Others
• Marketing certificate program2014CONC Thammasat university

Work experience
• PranungkloaHospital, Nonthaburi2009-2010
• TA, Clinical Pathology2010-2011Faculty of medicine, Chulalongkornuniversity
• Pewdee clinic 2011-presentPart time doctor at Central Chidlom, Central Ladphrao
• Doctor life clinic 2011-2017Part time doctor at Future Park Rangsit
• Skin care/supplement product development consultant

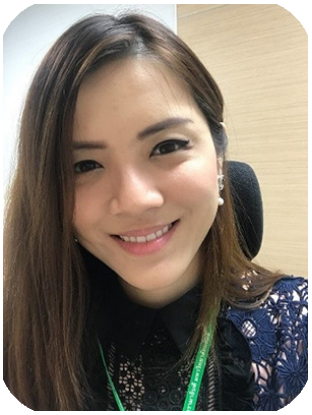
Abstract

Nowadays, world population are turning to 'grey population', so is Thailand. Moreover, the anti-aging health trend is also finding public favor. Taking collagen supplement to rejuvenate the skin is one of a kind. Synthesizing collagen, the body needs specific amino acids – Glycine, Proline, Hydroxyproline, which the researcher called "Proline complex" to make each polypeptide chain before they wound around one another to form triple helix collagen fiber. DERMOFIX®, which is a new very high proline complex containing collagen supplement, will help promoting collagen synthesis naturally and has anti-aging effect on skin properties as well as other collagen containing organs.

The objective of this research is to study the anti-aging effect of the very high proline complex collagen (VHPCC) on skin properties compared to placebo and commercially available collagen (CAV) in Thailand. In this randomized, double blind, placebo-controlled clinical trial, 50 women aged 30-45 years old were randomized to receive the very high proline complex collagen 10 g, commercially available collagen 10 g or placebo once daily for 8 weeks. 6 aging related skin properties, which are skin elasticity, skin hydration, melanin index, transepidermal water loss, skin smoothness and wrinkle were objectively measured at 0, 1, 2, 4, 8 weeks. Photo shooting was done by professional photographer before and after the study. In addition, the blood test was evaluated for the safety of these supplementation as well as for the anti-aging effect by testing Sirt1 gene expression. The satisfaction assessment for skin, knee joint and other collagen containing organs improvement were also assessed.

Results: The very high proline complex collagen showed statistically significant improvement and gain faster effects than the commercially available collagen and placebo, in skin elasticity, hydration, melanin index, transepidermal water loss, smoothness and wrinkles. Most of these effects showed significant difference since the first week of the study. The skin satisfaction assessment results are go along well with the objective measurement. In VHPCC group, some of knee joint problems were assessed impressively improved. Besides, there were beneficial reports on muscle, ligaments and tendons. Feeling energetic instantly after taking was reported. However, the Sirt1 gene expression did not improve in any other group. No adverse event was noted throughout the study.

Conclusion: The study demonstrated that the very high proline complex collagen (DERMOFIX®) supplement was proved safe and led to more significant improvement and gain faster anti-aging effects on skin properties including skin elasticity, skin hydration, melanin index, transepidermal water loss, skin smoothness and wrinkles compared to commercially available collagen and placebo. There was impressively beneficial report on knee joint problems, muscles, ligaments and tendons along with feeling energetic. It will be the best choice for quickly rejuvenating the skin from inside out and anti-aging sustainably.



Siripa Kitkuakosol, MD

- The Effectiveness of Probiotic in the Treatment of Inflamed Acne

Biography

Education

2001-2007: Doctor of Medicine (second class honors), Ramathibodi Hospital
2011-2012: Diploma in Dermatology and Dermatosurgery, Institute of Dermatology
2016-2018: Master's Degree of Anti-Aging and Regenerative Medicine, Dhurakij Pundit University

Work Experience

2008-2011: General practice, Department of Family Medicine, Ramathibodi Hospital
2010-2018: Aesthetic doctor at Dermcare Clinic and Immagini Clinic

Abstract

Background: Acne Vulgaris is the most common skin disease in adults. Prolonged use of oral antibiotic in inflamed acne can destroy the beneficial microorganisms causing other diseases. Probiotic can reduce inflammatory mediators by improving the gut dysbiosis, decrease IGF-1 level which is involved in follicular hyperkeratinization and also decrease substance P level effecting on sebocytes and sebum production. In combination with topical regimens, probiotic can be favorable in acne treatments and are concurrently beneficial to the gut.

Objectives: To evaluate the effectiveness of probiotic in the treatment of inflamed and non-inflamed acne.

Materials and Methods: The prospective, experimental study follows the double-blinded, randomized controlled trial. Thirty female patients , aged between 20-40 years old, with mild to moderate acne vulgaris were enrolled. All participants were divided equally into two groups and randomly assigned either probiotics (100 × 109 CFUs/day) or placebo to be taken for 12 weeks. Both groups were received topical 2.5% benzoyl peroxide and 1% clindamycin lotion applied twice daily. TS6 probiotic is synbiotic which contains 6 species (Lactobacillus acidophilus, Lactobacillus casei, Bifidobacterium longum, Bifidobacterium infantis, Bifidobacterium bifigum, Lactococcus lactis) and one prebiotic (Oligosaccharide). Inflamed lesion counts, comedones and total lesion counts were evaluated at 0, 2, 4, 8, and 12 weeks. The sebum at forehead, both cheeks and chin were assessed by Sebumeter at 0, 12 weeks. Post-acne redness (PAR) were estimated by Mexameter MX18 at 0, 12 weeks. The Statistical analysis within group used pair T-test whereas in between groups using T-test.

Results: Twenty-five patients completed the study. Mean age of thirteen participants in the probiotic was 29.2 ± 4.0 year. Mean age of the twelve participants in the placebo group was 27.8 ± 4.5 years. Both of the probiotic group and the placebo group showed significant decrease in inflamed lesion counts at 2nd week ($p < 0.01$ and $p < 0.05$), significant comedones depletion at 8th week ($p < 0.01$ and $p < 0.05$), and significant improvement in total lesion counts at 4th week ($p < 0.01$ and $p < 0.05$) with no difference between two groups in inflamed lesion counts, comedones and total lesion counts. This acne improvement may come from topical 2.5% benzoyl peroxide and 1% clindamycin lotion. Percentage reduction of inflamed lesion counts in the probiotic group was higher than in the placebo group in any visits. (at 2nd week were 35.3% and 28.6%, at 4th week were 47.1% and 35.7%, at 8th week were 70.6% and 50%, and at 12th week were 76.5% and 64.3%, respectively). Comedones in the placebo group increased in first 2 weeks (2.6%) and gradually decreased by week 4 to week 12, whereas comedones in the probiotic groups have reduced in every weeks since the beginning.

Percentage reduction of comedones in the probiotic group was higher than in the placebo group in any visits (at 2nd week were 8.3% and -2.6%, at 4th week were 14.6% and 10.3%, at 8th week were 33.3% and 23.1%, and at 12th week were 50% and 41%, respectively). Percentage reduction of total lesion counts in the probiotic group was higher than in the placebo group in any visits (at 2nd week were 15.4% and 3.8%, at 4th week were 23.1% and 17.3%, at 8th week were 43.1% and 28.8%, and at 12th week were 58.5% and 46.2%, respectively). Implying that probiotic can augmenting the acne treatment, but still have no statistical significant.

At 12th week, sebum score of all forehead, both cheeks and chin areas in the probiotic group were reduced, though insignificantly. Probiotic probably showed benefits on sebum production, but have to extend the course of treatment to prove the significant results. At 12th week, the erythema index of the PAR in both groups reduced significantly ($p < 0.01$, $p < 0.01$) with no difference between two groups. So that probiotic have no benefit on the PAR compared to the control group. Five participants (38.5%) in the probiotic group experienced an increased in the frequency of defecation. No participants complaint about any side effects after probioticadministration.

Conclusion: The treatment of mild to moderate acne by supplementing probiotics with the standard topical regimens have no significant difference in inflamed lesion counts, comedones and total lesion counts comparing to the topical treatment only. But percent reduction of inflamed lesion counts, comedones and total lesion counts in the probiotic group were higher than the control group in every visits. However, further studies including the duration of treatment, an appropriate amount of probiotic per day or the specific microorganisms of probiotic should be conducted.
Keywords: probiotics, acne vulgaris, inflamed acne, comedoes

Ms. Supisara Phonkrut

- The effective of court-type Thai massage (CTTM) in healing pressure ulcer

Biography

Miss Supisara Phonkrut was born on February 16, 1986 in Nonthaburi Province, Thailand. I gained my Bachelor's Degree in Nursing from Mahidol University in 2011, and then continued my Master of Science Program of Anti-Aging and Regenerative Medicine Faculty of Applied Science, Dhurakij Pundit University. Currently, I am studying in Master of Nursing Science Program in Community Nurse Practitioner at Mahidol University. About my work experience, I had been employed at Institute of Bamrasnaradura Infectious Diseases until 2014.And I am now working at Thai Traditional and Integrative Medicine Hospital in Bangkok. My motto is "Think wisely, Live well".Personally I am an open-minded person who is characterized by morality and integrity. Being a nurse, generosity comes first, and I was nurtured to care for others. Referring to my role model, The King Rama IX of Thailand who initiated the sufficient economy theory empowers me to lead my life with righteousness. With his theory, prosperity of the country becomes better, and so are the qualities of life.

Abstract

• The effective of court-type Thai massage (CTTM) in healing pressure ulcer

Supisara Phonkrut* Dr.Pongsiri Koonngam**

Background: Pressure ulcer (PC) is one of the major health problems in the hospital. Patients with impaired mobility are potentially at risk of developing a pressure ulcer. PC represents a major burden of sickness for families, hospitals and countries as it requires high treatment cost. This study aimed to explore the Thai traditional procedure that could promote the healing of PC. According to Thai Traditional medicine theory, there are major signal points that deliver blood and nerve supply to the organs. This study applied this theory to provide treatment to patients with PC.

Objective: To investigate the effectiveness of court-type Thai massage (CTTM) on the promotion of PC healing.

Study design: The randomized cross-over controlled trail was performed in 20 patients with stage 2-3 PC in elderly care centers in Bangkok and Nonthaburi. The patients were divided into 2 groups. The first group received CTTM six times, three times a week for 14 days and the no treatment period was 28 days after the first phase. The second group stated with 21 days of no treatment period and followed by CTTM for 21 days as first group. Then received CTTM six times, three times a week for 14 days after no treatment period. The healing effect was measured by Bates Jensen Wound Assessment treatment (BWAT) at day 0, 7, 14, 21, 28, 35 and 42. T-test was employed to compare healing effect between two groups whereas paired t-test was done to measure before-after effects in healing.

Study result: The first group had the higher healing scores significantly (p=0.000) in the first period which had treatment, but it was not different during day 7-14 and 14-42 (p= 0.187, 0.654 respectively). In the second group, the healing was higher significantly during day 21-28 and 28-35 (p= 0.012, 0.028 respectively) which had treatment period. Like the first group, the healing was not significant in day 0-21 (p= 0.069). The result showed that CTTM help to speed up the healing of PC.

Conclusion: CTTM help promoting healing of PC regardless of time proving CTTM because the stimulation of major signal points would reduce muscle stretch and improve blood circulation.

Jareeporn Pokpirom, MD

- A study of oral Turmeric powder on the level of marker of chronic inflammation and Glycosylated hemoglobin

Biography

Dr. Jareeporn Pokpirom received her M.D. from Songklanakarin University on the year 1991 and OB/GYN Board from Ramathibodi Hospital Mahidol University on the year 1997.

She got her master's degree of science in Anti-aging and Regenerative medicine from Dhurakij Pundit University. She has been working as an OB-GYN doctor in Thaksin Hospital Surat Thani Province since 1997.

Abstract

• A study of oral Turmeric powder on the level of marker of chronic inflammation and Glycosylated hemoglobin

Now a day chronic disease is the big problem in the world. And we know that the underlying cause is chronic inflammation. Turmeric is an herbal that used to help in treatment of many diseases for a long time. Curcumin is the active ingredient in Turmeric that we have known for inhibit many inflammatory pathways so that it can help to prevent chronic inflammation and chronic diseases

We have studied on the consumption of the Turmeric power, for the result in the decreasing level of chronic inflammation (hs-CRP) and Glycosylated hemoglobin (HbA1c).The result show that consuming the Turmeric powder with the enhancement formula which stimulated the absorption rate (added some black peppers in the ratio of 20:1) in the 12 weeks' time; it actually help to reduce hs-CRP and HbA1c but didn't increase on the liver enzyme (no increased of the SGPT level).

The study process was called a Prospective Clinical Trial. It was done by observing and studying on a sample group in of 46 people with the Metabolic Syndrome who lived in Suratthani Province area. The sample group was given to consume the Turmeric powder for 12 weeks continuously. They were tested on the level of their hs-CRP, HbA1c and SGPT in blood before and after the consumption of the Turmeric; the results were analyzed by the Pair-T-Test statistic.

The result after studying show that after consuming the Turmeric power for the 12 weeks, the hs-CRP and HbA1c levels in blood of the sample group were decreased significantly ($p < 0.05$) but didn't increase in the level of liver enzyme. In additional, SGPT level had also decreased significantly.

Chayanan Wongkaew, MD

- Comparison Effect of Black Glutinous Rice and Black Non-Glutinous Rice on Blood Glucose and Insulin Levels in People with Normal Blood Glucose

Biography

Education

Graduated Doctor of Medicine (MD), College of Medicine and Public Health, Ubon Ratchathani University in 2012.

Received Accreditation to the American Board of Anti-Aging and Regenerative Medicine (ABAARM) in 2018.

Graduated Master's Degree of Science in Anti-Aging and Regenerative Medicine from Dhurakit Pundit University in 2018.

Work Experience

Worked as a general practitioner at Sapphasittiprasong Hospital, Ubon Ratchthani in 2012-2013.

Working as a medical director at Mit Maitree Medical Clinic.

Abstract

• Comparison Effect of Black Glutinous Rice and Black Non-Glutinous Rice on Blood Glucose and Insulin Levels in People with Normal Blood Glucose

Diabetes is a serious health problem for people around the world, and it is increasing with significant medical and economic consequences due to patients developing chronic complications. Postprandial glycemic control is very important in preventing diabetes and slowing its complications.One study found that 66% of diabetic patients mainly consumed glutinous rice and those patients had higher HbA1c than those who mainly consumed white non-glutinous rice. The aim of this study was to compare the effect of black glutinous rice and black non-glutinous rice on blood glucose and insulin levels in people with normal blood glucose also to explore the behavior and satisfaction of consuming rice. This information would be used to develop advice on rice consumption.

This was an open-label randomized crossover study. Sixteen subjects, having normal blood glucose levels, randomly ate 90 kcal of black glutinous rice or black non-glutinous rice. Blood samples were collected for analysis of glucose and insulin levels 4 times, including fasting, 30, 60 and 120 minutes.

Statistical analysis was performed by paired T-test and incremental area under the curve (iAUC). The results showed that there was no statistically significant difference of changes in blood glucose and insulin levels between the black glutinous and black non-glutinous rice groups. I recommend eating black glutinous rice or black non-glutinous rice as a food exchange while considering the proportion of food to be consumed.

Result from the questionnaire showed that, rice, the subjects consume the most in daily life is white non-glutinous rice (75%). The second is white glutinous rice (18.75%). The third is brown non-glutinous rice (6.25%). The subjects prefer black glutinous rice rather than black non-glutinous rice in taste, feeling their hunger satisfied after eating, and the time between feeling hungry again. In contrast, they prefer black non-glutinous rice to black glutinous rice in terms of ease of supply, price and cooking methods.

Ms. Siriwan Sermcheep

- Knowledge Attitude and Practice of Home Product Center Plc Employee toward UHT Cow's Milk Drinking

Biography

2008 - 2018 Vice President Marketing at Home Product Center Public Company Limited
2007 - 2008 Group Account Director at K2 Retail Marketing Services (Thailand) Co., Ltd, OMG Asia Group
2003 - 2007 Client Management Director at M&C Saatchi (Thailand) Co. Ltd
2000 - 2003 Brand and Sales Promotion Managers at Asia Beverage Co. Ltd. (Thai Beverage Public Company Limited)

Academic
2016-2018 MSc in Anti-Aging and Regenerative Medicine from Dhurakit Pundit University
1990-1992 MA in Mass Communication California State University Fresno, USA

Abstract

Background: Cow milk is not a usual part of Thai diet and has been considered more as a supplement. Campaigns after campaigns to promote milk drinking from both government and private sectors contribute to higher milk consumption as well as higher milk market value. Thais have been influenced by the myth that milk is essential to the body especially on the "Pro" side knowledge. It helps build bone strength in children and adolescent and helps prevent Osteoporosis in adults. With doctor's recommendation to pregnancy mothers, cow milk has become the top of the list supplemental food. Consumer worldwide is starting to suspect that cow milk may not be such a good functional food for health. However today, in Anti-Aging field, cow milk has become a major target for criticism. Certainly, public awareness of this problem is growing.

Objectives: To study the "Knowledge, Attitude and Practice (KAP) of office employees at Home Product Center Public Company Limited's Head Office towards drinking UHT Cow Milk", and to study the relationship between numerous factors, which include the Knowledge and Attitude of Home Pro's employees that affect their behavior or Practice of drinking UHT Cow Milk. The randomized sample group of this study consists of 313 people. The research instrument was a questionnaire. The SPSS program was used to analyze the collected data which is Chi-square, incorporating both descriptive statistics, which are frequency, percentage, mean and standard deviation, and inferential statistics.

Result: Study shows that 77.3% of the respondents are female, and 56.5% of them aging between 25 - 35 years old. The knowledge score of the sample group on UHT Cow Milk drinking is classified into three levels; high, medium, and low. Among the sample group, the top three areas with high level of knowledge are the benefits of UHT Cow Milk; 1) UHT Cow Milk has high nutrition values that can fill up the stomach but cannot replace a main meal, 2) UHT Cow Milk can help energize the body, and 3) UHT Cow Milk is one of the best sources of nutrients. Four areas that the sample group has low level of knowledge are 1) UHT Cow Milk is not appropriate for elderly people, 2) there are research findings that show drinking UHT Cow Milk does not support longevity, 3) drinking UHT Cow Milk can increase the risk of cancer, and 4) UHT Cow Milk can cause acidosis. The overall score of Attitude towards UHT Cow Milk benefits is high. The sample group's attitude is that UHT Cow milk supplements a source of nutrients for the body and promotes good health. The highest level of attitude in packaging and features aspect is that UHT Cow Milk has convenient packaging design for take-away and consumption. The highest level of attitude in credibility aspect is that UHT Cow Milk is produced from certified production facilities.

Conclusion: The study concludes that the sample group's knowledge of UHT Cow Milk affects their UHT Cow Milk drinking behavior, especially the frequency of drinking at significance level of CL = 0.05. Most of them realize the nutrition values of milk, but also know that drinking milk cannot totally replace main meals. The different level of Milk KAP; packages, credibility, and benefits, has different effect on the milk flavors they choose. From the 5-score scale, the top three levels which are best, good and medium, choose to drink plain milk and low-fat flavors. However, Cow Milk benefits aspect does not have an effect on brand selection. The research results can benefit in supporting the formation of health promotion policies sharing the new knowledge of Cow milk in anti-aging and regenerative medicine aspect for their employees at the Head Office.

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Table

Kingseal
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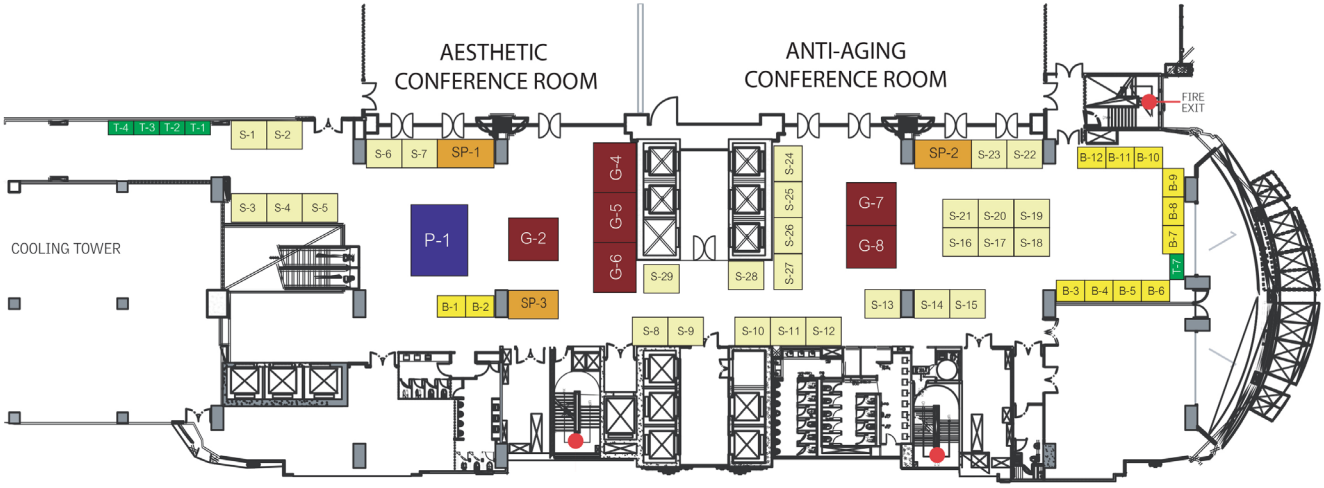
ร้านกระเป๋า
ร้านเครื่องทองเหลือง
Crisalix
มูลนิธิศูนย์มะเร็งเต้านมเฉลิมพระเกียรติ



P : PharmaNord

G2 : Dermalink
G4 : Merz Aesthetic
G5 : Dr.BoPlus
G6 : Astareal
G7 : Max Maxlife
G8 : Acantus& The Resonance

SP1 : BTL Aesthetic
SP2 : Gibthai
SP3 : Meditop

S1 : Blackmores
S2 : Dr.Orawan Clinic
S3 : ResearchBooks Asia
S4 : DKSH
S5 : Tion Biotec
S6 : Thistle
S7 : I-Nutra & medica Lab
S8-9 : AME
S10 : Kangen Siam
S11 : AHCC Thailand
S12 : Interpharma
S13 : Vitech Pro
S14 : Quantum
S15 : World Wide Medical
S16 : Rapport
S17 :
S18 : Abbott
S19 : Daewoong
S20 : Oligoscan
S21 : APA Biotechs Care
S22 : WURX & Troya
S23 : Fresubin
S24 : Great Plain Lab
S25 : Wincell Lab
S26 : Ultimate Skin Design
S27 : C Wellness
S28 : Edencolors
S29 : Thaicellfix

B1 : A4M US
B2 : DPU
B3 : NTD Inter trade
B4 : Imagene Labs
B5 : Aesthetics by Ampex
B6 : Qualimed
B7 : Cosma Medical
B8 : NutriPath
B9 : LDK
B10 : Bausch & Lomb
B11 : Gold Light (HK)
B12 : Natural PureLife

T1 : Kingseal
T2 : Bangkok R.I.A. Lab
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T7 : Crisalicx

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- *Official reference product for ICQA (International Coenzyme Q10 Association)*

Patented recrystallization process improving bioavailability at body temperature

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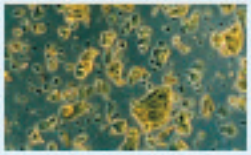

An inferior preparation is more like a mixture of CoQ10 crystals and oil, resulting in poor bioavailability of the active CoQ10.

Bio-Quinone Q10 is prepared through a special heating process that transforms the molecular structure of the CoQ10 from rough crystals to a snowflake-like shape.

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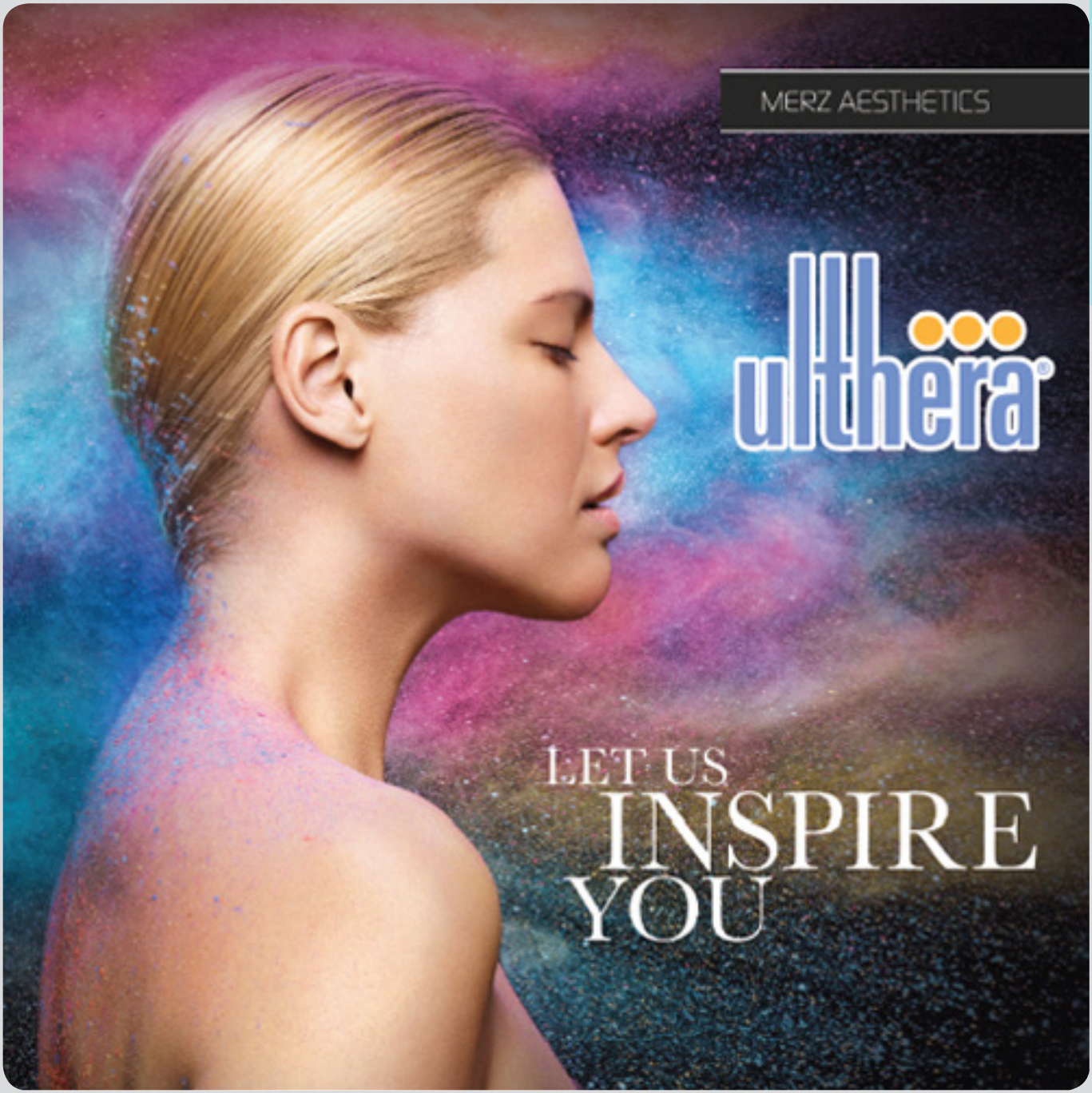
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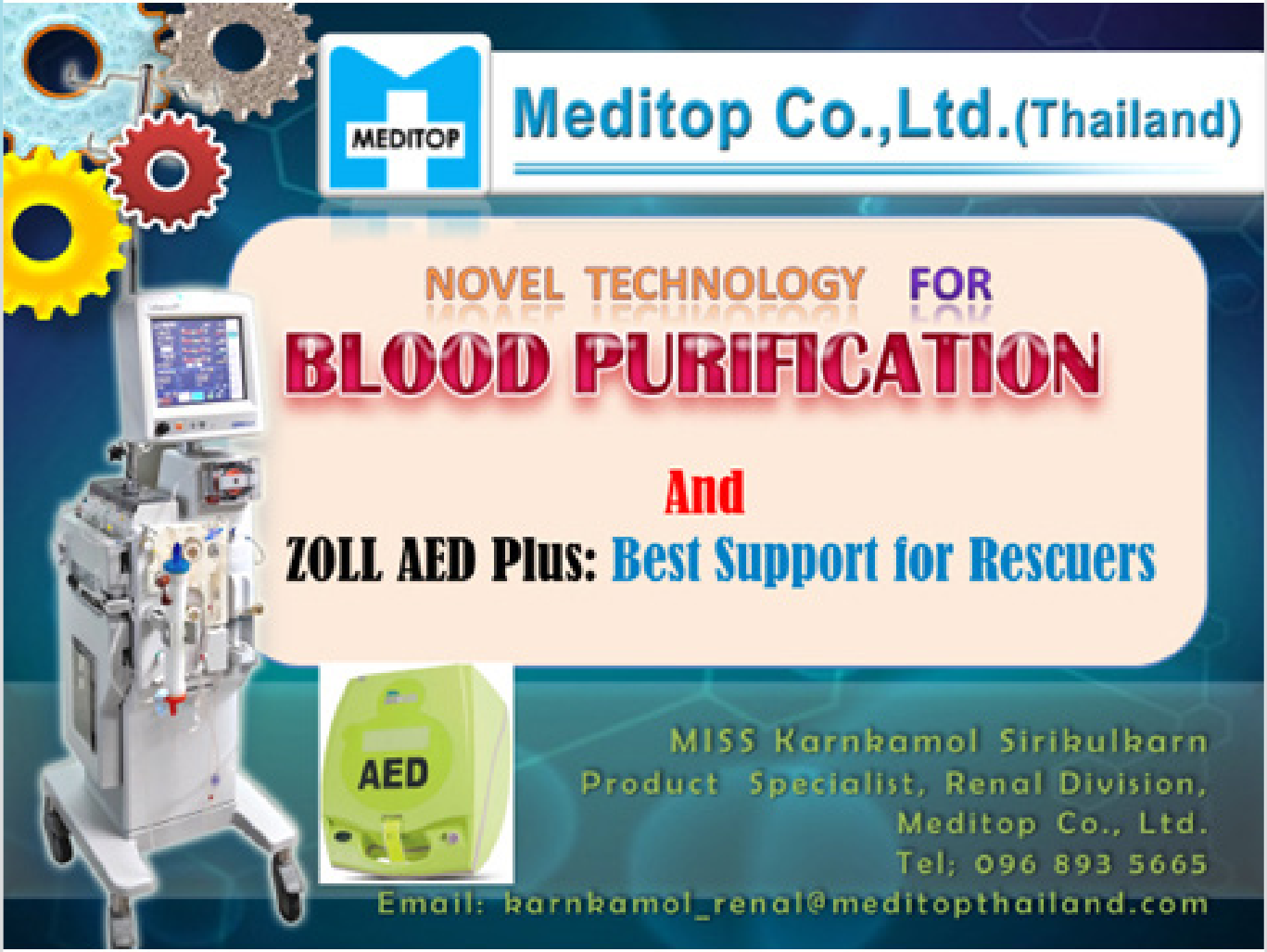
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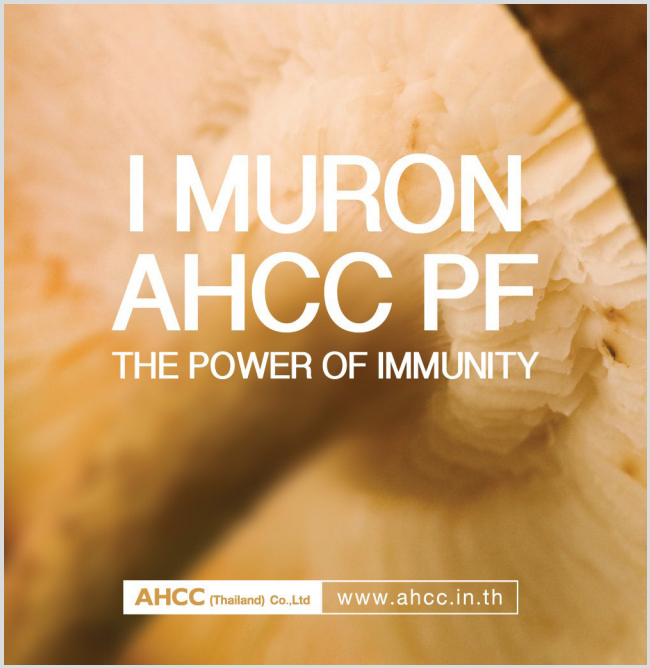
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钙	(Ca)	337.6	279.0	598.0							
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磷	(P)	184.1	144.0	199.0							
硅	(Si)	11.6	15.0	31.0							
钠	(Na)	72.2	21.0	89.0							
钾	(K)	15.3	9.0	39.0							
铜	(Cu)	9.4	11.0	28.0							
锌	(Zn)	145.2	125.0	155.0							
铁	(Fe)	14.0	5.0	15.0							
锰	(Mn)	0.37	0.31	0.75							
铬	(Cr)	0.93	0.82	1.25							
钒	(V)	0.018	0.009	0.083							
硼	(B)	1.50	0.84	2.87							
钴	(Co)	0.039	0.025	0.045							
钼	(Mo)	0.029	0.035	0.085							
碘	(I)	0.16	0.32	0.59							
锂	(Li)	0.081	0.052	0.120							
锗	(Ge)	0.024	0.003	0.028							
硒	(Se)	2.12	0.95	1.77							
硫	(S)	51.2	48.1	52.0							

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June 13-14, 2019

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@Centara Grand & Bangkok Convention Centre at CentralWorld
Pre-Congress September 12, 2019
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Dr. Walun Vilaihong

Dr. Pitch Pisessith

Dr. Ratchathorn Panchaprateep

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Dr. Nattawut Wongdeethai

08.15 - 08.30	Transportation from the ground floor of Waldorf Astoria
08.30 - 09.00	Breakfast
09.00 - 10.15	Basic Stem Cell Biology
10.15 - 10.30	Break
10.30 - 12.15	Mesenchymal Stromal Cell Therapy, PRP, PRFM and Placenta Extract
12.15 - 13. 15	Lunch Break
13.15 - 14.30	Live Demonstration: Hair Regeration with Autologous Scalp Cells Suspension
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Anti-aging effect of oral very high proline complex collagen (DERMOFIX®) on skin properties: a randomized, double-blind, placebo-controlled clinical study

Pornsayapat Likhitthummagun[a] , Pongsiri Koonngam[b] and Amornpun Seeremaspun[c]

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Abstract

Taking collagen supplement to rejuvenate skin is now finding public favor due to anti-aging trend. Synthesizing collagen, the body needs a specific amino acid group –Proline, Hydroxyproline and Glycine called "Proline complex" to make a core structure of every type of collagen fiber in human body. DERMOFIX®, which is a new very high proline complex containing-collagen supplement, helps promoting collagen synthesis naturally leading to anti-aging effects on skin properties as well as other collagen-containing organs.

The objective is to study the anti-aging effects of the oral very high proline complex collagen (VHPCC) primarily on skin properties compared to placebo and commercially available collagen (CAV) in Thailand, and secondarily on knee joint. In this randomized, double blind, placebo-controlled clinical trial, 50 women aged 30-45 years old were randomized to receive the VHPCC 10 g, CAV 10 g or placebo 10 g once daily for 8 weeks. Six aging related skin properties, which are skin elasticity, hydration, melanin index, transepidermal water loss, smoothness and wrinkle were objectively measured at 0, 1, 2, 4, 8 weeks. Knee joint assessments, photo-shooting, blood tests for CBC, creatinine and *sirt1* gene expression level were evaluated before and after the study.

Results: The VHPCC showed statistically significant improvement and gave faster effects than the CAV and placebo, in skin elasticity, hydration, melanin index, transepidermal water loss, smoothness and wrinkles. Most effects by VHPCC showed significant improvement since the first week while CAV showed improvement mostly at fourth or eighth week. Safety blood tests are normal in all groups. However, the Sirt1 gene expression did not increase in any groups. No adverse effect was reported throughout the study.

Conclusion: The study demonstrated that the VHPCC (DERMOFIX®) supplement was proved safe, gave much faster and more effective effects than CAV in anti-aging of skin properties, knee joints and collagen-containing organs.

Keywords: clinical trial, proline complex, collagen, collagen peptide, anti-aging, skin, elasticity, hydration, melanin index, transepidermal water loss, smoothness, wrinkle

Introduction

Nowadays, world population are turning to 'grey population' which means the number of elderly people is increasing, so is Thailand. The anti-aging health trend is also finding public

favor especially ‘beauty from within’ in order to keep beauty and healthy to one’s optimum. Taking collagen supplement to rejuvenate the skin is one of a kind.

Skin aging is caused by intrinsic and extrinsic factors such as UV radiation, oxidative stress, smoking, etc. After age of 20, the extracellular matrix especially collagen fiber starts decreasing gradually making unfavorable skin aging signs such as wrinkles, skin laxity, elasticity reduction, skin dryness, unevenness, aging spot and thinner skin thickness leading to loss of skin integrity and normal physiologic function. Moreover, collagen fiber in other collagen-containing organs are also depleting such as bone and joint. Knee joint degeneration problem by aging and weight bearing activities greatly becomes a point of concern due to increase in number of elderly.

The key difference between aging and young skin is pathologically physiological decline of extracellular matrix such as number, size and activity of fibroblast, number and size of collagen fiber, elastin and hyaluronic acid. To reverse (or anti-aging) those aging characteristics, the skin needs to have more aforementioned components in extracellular matrix especially collagen fiber. To have more, the body needs to synthesize more. Synthesizing new collagen fiber, the fibroblast needs a group of amino acids which are proline, hydroxyproline and glycine, called ‘proline complex’ to make an essentially core structure of every type of collagen fiber in human body. Not only skin will be rejuvenate, but also the other collagen-containing organs especially knee joint.

DERMOFIX® which is the new collagen peptide dietary supplement, contains very high content of selectively manufacturing ‘proline complex’ which is specific for collagen synthesis in human body. Compared to leading conventionally commercially available collagen peptide sold in modern drug store in Thailand, could DERMOFIX® give more anti-aging effectiveness and/or faster effects on skin properties? Moreover, this study measures the most number of aging-related skin properties so far, which are 6 parameters, blood test for safety-proven and longevity gene expression along with effect on knee joint in the same time.

Literature review

Watanabe-Kamiyama et al. studied the absorption and effectiveness of orally administered low-molecular-weight collagen hydrolysate in rats and found that these collagen peptides and free amino acids were simultaneously distributed in many parts of body, particularly to the dermis, cartilage, bone, brain, muscle, etc. So, not only skin, but every collagen-containing organ will be beneficially affected by orally administered collagen peptide.

Naoki et al. conducted a randomised double-blind placebo-controlled clinical trial and found that collagen hydrolysate with a higher content of bioactive collagen peptides (H-CP) showed significant improvement than the collagen hydrolysate with a lower content of bioactive collagen peptides (L-CP) and the placebo, in facial skin moisture, elasticity (R2), wrinkles and roughness. H-CP was considered as containing high ratio of free-formed Pro-Hyp or Hyp-Gly to product content with more than 2 gkg^{-1}, while DERMOFIX® has free-formed of Pro, Hyp, Gly more than 400 gkg^{-1} so this is considered as ‘very high’ of Pro, Hyp and Gly content.

Ohara et al. performed an in vitro study to support that ingestion of collagen peptides helped stimulating dermal fibroblasts proliferation and synthesis of hyaluronic acid. The study showed Pro-Hyp maximally induced stimulation of fibroblast cell proliferation of 1.5 fold and induced a 3.8 fold increase in hyaluronic acid synthesis.

Tanaka et al. examined the effect of daily ingestion of collagen peptides on skin after damage induced by repeated UV-B irradiation. The 6-week study was done on hairless mice and showed that collagen peptides supplement were beneficial to suppress UV-B induced skin damage and photo-aging.

Nakatani et al. investigated the direct effect of prolyl-hydroxyproline (Pro-Hyp) on chondrocytes under in vivo and in vitro conditions and found that collagen hydrolysate and Pro-Hyp inhibited the loss of chondrocytes and thinning of the articular cartilage layer and increased staining area of glycosaminoglycan in the extracellular matrix.

Accordingly, we designed the randomized, double-blind, placebo-controlled clinical trial to study anti-aging effects of the orally administered very high proline complex collagen on all skin properties from literature review which are skin elasticity, hydration, transepidermal water loss, melanin index, smoothness and number of wrinkle along with anti-aging effect on knee joint in the same time.

Most studies reported that collagen peptide effects were seen at 4 weeks after ingestion. Koyama et al. performed a study demonstrated that women after ingestion of 5 or 10 g of pig skin collagen perceived improvement of their skin already after just 3 weeks and at the end of the treatment after 7 weeks. So we design to measure more frequent to see if the VHPCC can be significantly faster than 3 weeks or how fast the result will show.

Materials and Methods

Investigation Products

The test product used in this study was a collagen peptide composed of very high content of selectively-manufacturing amino acids group, called "proline complex"- proline, glycine and hydroxyproline- with about 500 g/kg of product. The product was provided by DERMOFIX (THAILAND) co., ltd (Bangkok, Thailand), commercially available under the name DERMOFIX®. The average molecular weight is 500 Da and the average size is 2 nanometer particle. The commercially available collagen was a collagen peptide purchased from modern trade stores in Thailand. The placebo was inulin fiber. Each 10 g test sample was packed in identical aluminium sachet and could not be distinguished by the subjects or investigators.

Study design

This study was carried out as a randomized, placebo-control, and double-blind experiment study on the anti-aging effects of VHPCC on 6 skin properties (primary interest) as well as anti-aging effects on knee joint and other collagen-containing organs (secondary interest) compare to CAV and placebo after 8 weeks. The protocol was approved by the Institutional Review Board, Faculty of Applied Science, Dhurakij Pundit University, Bangkok, Thailand. All participants received detailed information and signed consent form.

A total of 50 Thai women participants were enrolled at the beginning of the study and were randomized into 3 treatment groups: VHPCC, CAV, and placebo in a 2:2:1 ratio to receive a daily dose of 10 g of either VHPCC, CAV, or placebo. There were no differences between the treatment and the placebo groups (table 1) with regard to age.

The participants took the products orally at home once daily with water or any other liquid for 8 weeks. Data including demographic, health, skin health and Oxford knee score questionnaire, to evaluate the signs, symptoms and severity of osteoarthritis, were collected and assessed prior to the beginning of oral treatment. Skin properties measurement was done at 0, 1, 2, 4, 8 weeks of the study at test areas- both cheeks and forearms. Each visit every participant had to do the questionnaire to assess the subjective improvement on skin, knee joint and other collagen-containing organs. Blood test for CBC, creatinine were collected before and after the study to test safety of the products together with blood test for *sirt1* gene expression. The *sirt1* gene expression was associated with anti-aging and powerful anti-oxidant system. The more *sirt1* gene expresses, the longer longevity one have. Moreover, all participants were photo taken before and after the study by professional photographer having light control

During the trial, the subjects had to refrain from using new skin care products, taking new supplements, medicine, doing treatment, laser, or anything affected skin condition on test areas. The study participants were not allowed to change their usual skin care routine and not allowed to apply the skin care on test areas. Moreover, ablative laser, botox, filler treatment on the test areas were not allowed within 6 weeks prior to the start of the study. In addition to that, changes in living or dietary habits, intravenous vitamin injection, losing weight more than 5% of baseline body weight, and intensive exposure to sun or UV light were prohibited during the study.

Inclusion criteria

The inclusion criteria was: healthy female, 30-45 years old, Fitzpatrick skin type III-IV, general good health and mental condition, and has willingness and capability to follow the study rules and a fixed schedule.

Exclusion criteria

The exclusion criteria was: dermatological disease or disorder on test areas, abnormal collagen-producing dermatological disorder (e.g. scleroderma), skin malignancy or precancerous lesion, hormonal replacement therapy, food allergic to test products, no protein or amino acids intake restriction conditions, no current skin-affecting medication (e.g. Roaccutane, tranxenamic acid), no other collagen-containing supplement intake, scurvy, heavy smoking, ablative laser treatment within 3 months prior to the study, botox injection within 6 months prior to the study, filler, fat or cell injection within 1 year prior to the study, and pregnancy or breastfeeding.

Discontinuation criteria

The discontinuation criteria was: pregnant during the study, forget to take the test products more than one time in 2 weeks, treatment or laser on test areas, all aesthetic facial injection (e.g. botox, filler), weight loss more than 5% of baseline body weight, start new skin care product or change routine skin care, take new supplement or change eating habit, change in lifestyle, acute stress, acute stress (e.g. moving, heavy exercise), intensive sun or artificial UV exposure (solarium) on the test areas or participant want to discontinue the study.

Skin Properties Measurement

Test areas

The test areas were 4 points: right and left sides of the face, 2.5 cm below the lateral canthus, and right and left sides at the middle of inner aspects of both forearms.

Measurement times

There were 5 measurement times: 0, 1, 2, 4, and 8 weeks of treatment for skin elasticity, hydration, melanin index and TEWL. The skin smoothness, wrinkle, blood tests and photo shooting were done at 0, 8 weeks.

Measurement of skin properties

The subjects had to wash the test areas and acclimatized for 15 minutes before skin measurement. There were 2 medical dermatological measurement device: Cutometer ® Dual MPA 580 and Visioscan® VC 98. 6 aging-related skin properties were skin elasticity, skin hydration, melanin index, transepidermal water loss, smoothness, and number of wrinkles. The first 4 were performed by using Cutometer ® Dual MPA 580. Skin elasticity was performed by using Cutometer probe. Skin hydration was performed by using Corneometer probe. Mean melanin index was performed by using Mexameter. Trandsepidermal water loss was performed

by using Tewameter. Visioscan VC 98 was used to assess skin smoothness and wrinkle. Skin smoothness includes acne scar, acnes and skin scaling. The measurement of each test area was repeated 3 times then calculated for the average.

Sirt1 Gene Expression

Famous sirtuin 1, which was a protein encoded by *Sirt1* gene, is an enzyme that deacetylates proteins contributing to cellular regulation such as reaction to stressors. *Sirt1* helps protecting human cells from inflammation and oxidative stress which are the cause of aging, and results in healthy and longevity. The more *Sirt1* gene expresses, the longer age one lives, and the more anti-aging effect one have. Herein, *Sirt1* gene expression level was measured to assess the systemic anti-aging effect of tested products. Isolation of human peripheral blood mononuclear cells (PBMC) was performed by using density gradient centrifugation with Lymphoprep™. The process was done at Nanomedicine Research Unit, Department of Anatomy, Faculty of Medicine, Chulalongkorn University.

Blood test

Since the VHPCC and CAV are nutritionally defined as protein group. 10 g per day of VHPCC is considered as safe and the VHPCC product was already approved by Thai FDA. Concerning safety of this kind of product, we focused on kidney function, so creatinine was measured together with CBC.

Statistical analysis

Difference among three groups was analyzed by using One-Way Analysis of Variance (ANOVA). Also, statistical analysis in each group was performed using paired *t*-test. Statistical significance was considered when $P<0.05$.

Results

Demographic characteristics

Four participants dropped out. One was pregnant and others had difficulty to follow up on fixed schedules. None of which were related to the adverse effect of product intake or the study procedure. There was no significant difference in age between the groups. Blood test of all participants showed no adverse effect and there was no adverse reaction reported.

Table 1. Panel demographics

	Number of subjects			Age		
Group	Baseline	Dropout	Week 8	Minimum	Maximum	Mean age at week 8*
Placebo	10	2	8	30	41	34.75 ± 4.37
VHPCC	20	0	20	30	42	33.45 ± 3.65
CAV	20	2	18	30	43	33.83 ± 3.60
Total	50	4	46			

*Data are expressed in mean ± SD

VHPCC, Very high proline complex collagen; CAV, Commercially available collagen

Skin elasticity

There was no significant difference in skin elasticity levels between the VHPCC, CAV and placebo groups prior to trial in all test areas, right face, left face, right arm and left arm (P=0.856, 0.939, 0.339, 0.300). At week 8, the VHPCC and CAV groups showed statistically significant improvement in skin elasticity at both cheeks and forearms compared to placebo

(*P*<0.05 in all cases). VHPCC showed statistically significantly higher skin elasticity improvement than CAV in all test areas (*P*<0.05 in all cases). Moreover, VHPCC showed statistically significantly faster skin elasticity improvement than placebo and CAV groups since the first week of the study (*P*<0.05 in all cases). Changing rate (%), which is a change from week 0 to 8, VHPCC and CAV showed statistically significant enhancement of skin elasticity (*P*<0.05) compared to placebo group. Moreover, changing rate of VHPCC group showed 3-fold more than CAV group in both cheeks and forearms. The results are summarized in table 2.

Table 2. Skin elasticity (R2, Cutometer) **Mean ± SD (*10^{-4})**

Group	Week 0	Week 1	Week 2	Week 4	Week 8	Changing rate (%), week 8
Right-Face						
Placebo (n=8)	6858 ± 413.96	6780 ± 386.31	6848 ± 397.28	6885 ± 326.47	7034 ± 427.87	2.57 ± 1.38
VHPCC (n=20)	6938 ± 677.59	7455 ± 638.73 [1 2]	8442 ± 608.32 [1 2]	8763 ± 587.75 [1 2]	9120 ± 499.47 [1 2]	32.219 ± 10.22 [1 2]
CAV (n=18)	6989 ± 441.91	7018 ± 415.32	6951 ± 356.88	7536 ± 339.29 [1]	7787 ± 342.53 [1]	11.585 ± 3.62 [1]
Left-Face						
Placebo	7052 ± 525.70	6994 ± 461.26	7090 ± 428.31	7005 ± 453.76	6940 ± 449.33	-1.494 ± 2.56
VHPCC	7078 ± 706.61	7749 ± 661.73 [1 2]	8398 ± 651.73 [1 2]	8969 ± 552.17 [1 2]	9246 ± 467.88 [1 2]	31.542 ± 11.40 [1 2]
CAV	7129 ± 402.49	7230 ± 381.35	7597 ± 388.33	7656 ± 360.76 [1]	7991 ± 319.91 [1]	12.251 ± 4.26 [1]
Right-Arm						
Placebo	7634 ± 397.58	7520 ± 305.52	7611 ± 311.88	7704 ± 367.73	7557 ± 400.14	-0.977 ± 3.01
VHPCC	7712 ± 498.09	8218 ± 323.61 [1]	8885 ± 269.72 [1 2]	9354 ± 235.36 [1 2]	9596 ± 262.60 [1 2]	24.817 ± 7.00 [1 2]
CAV	7899 ± 495.08	7964 ± 520.06 [1]	8355 ± 384.19 [1]	8304 ± 409.56 [1]	8464 ± 389.12 [1]	7.344 ± 4.81 [1]
Left-Arm						
Placebo	7874 ± 288.51	7802 ± 217.39	7795 ± 227.82	7878 ± 186.65	7739 ± 192.36	-1.671 ± 1.70
VHPCC	7936 ± 462.47	8506 ± 348.77 [1 2]	9311 ± 249.66 [1 2]	9666 ± 193.02 [1 2]	9840 ± 141.50 [1 2]	24.392 ± 7.48 [1 2]
CAV	8105 ± 373.19	7708 ± 315.00	8151 ± 274.30	8536 ± 291.48 [1]	8804 ± 300.54 [1]	8.762 ± 4.51 [1]

All data in week 0-8 are expressed in mean ± SD (*10-4)

[1] Intergroup comparison (p < 0.05, vs. Placebo)

[2] Intergroup comparison (p < 0.05, VHPCC vs. CAV)

"Changing rate (%)" shows changing rate in % figures before vs. 8 weeks after ingestion

VHPCC, Very high proline complex collagen; CAV, Commercially available collagen

Skin hydration

There was no significant difference in skin hydration levels between the VHPCC, CAV and placebo groups prior to trial in all test areas except left face (*P*=0.009). So, left face hydration levels were not able to do intergroup comparison. At week 8, the VHPCC showed statistically significant improvement in skin hydration at right face and both forearms compared to placebo (*P*<0.05) and CAV (*P*<0.05). CAV showed significantly enhanced skin hydration only at right face and right arm (*P*<0.05) compared to placebo at week 8. VHPCC showed statistically significantly faster skin hydration improvement than placebo and CAV since the second week of the study (P<0.05 in all cases). Like skin elasticity, changing rate of VHPCC and CAV showed statistically significant enhanced skin elasticity (P<0.05 in all cases) compared to placebo group and VHPCC changing rate was significantly greater than CAV group in right face and both forearms. The left face was analyzed intragroup comparison, VHPCC and CAV were both statistically significant improved skin hydration since the first week until the end of the study. However, VHPCC group showed 2.8 times more in skin hydration enhancement than CAV. The results are summarized in table 3.

Table 3. Skin hydration (Corneometer)			**Mean ± SD**			
Group	Week 0	Week 1	Week 2	Week 4	Week 8	Changing rate (%), week 8
Right-Face						
Placebo (n=8)	49.67 ± 4.58	50.43 ± 4.09	51.95 ± 4.02	52.49 ± 4.07	51.33 ± 3.03	3.74 ± 6.15
VHPCC (n=20)	52.33 ± 6.63	58.11 ± 7.09 [1 2]	68.43 ± 7.58 [1 2]	75.56 ± 7.88 [1 2]	79.49 ± 7.77 [1 2]	52.902 ± 13.61 [1 2]
CAV (n=18)	51.26 ± 4.09	52.61 ± 3.73	55.47 ± 3.41	58.27 ± 3.40	62.90 ± 3.24 [1]	23.082 ± 6.7 [1]
Left-Face						
Placebo	55.33 ± 4.77	51.87 ± 1.97	54.67 ± 2.80	53.43 ± 2.13	55.67 ± 3.56	0.811 ± 3.20
VHPCC	50.75 ± 5.34	54.73 ± 5.87 *	64.83 ± 7.02 *	71.44 ± 7.20 *	75.13 ± 7.72 *	48.535 ± 12.56
CAV	54.96 ± 3.15	55.83 ± 3.33 *	56.45 ± 3.52 *	60.61 ± 2.97 *	64.44 ± 2.96 *	17.412 ± 5.11
Right-Arm						
Placebo	36.87 ± 3.61	36.70 ± 3.44	37.34 ± 3.44	37.49 ± 3.15	36.79 ± 3.24	-0.121 ± 1.86
VHPCC	35.68 ± 3.98	37.97 ± 3.79	43.03 ± 3.79 [1 2]	46.52 ± 3.73 [1 2]	48.17 ± 3.61 [1 2]	35.72 ± 8.57 [1 2]
CAV	36.34 ± 3.59	36.68 ± 3.59	37.04 ± 3.66	39.38 ± 3.66	41.15 ± 3.70 [1]	13.402 ± 4.01 [1]
Left-Arm						
Placebo	38.15 ± 4.15	37.20 ± 3.38	38.12 ± 4.26	38.55 ± 3.93	38.05 ± 3.82	-0.165 ± 2.59
VHPCC	37.04 ± 3.50	39.51 ± 3.44 [2]	45.15 ± 3.37 [1 2]	47.44 ± 3.37 [1 2]	49.09 ± 3.98 [1 2]	32.922 ± 8.27 [1 2]
CAV	35.74 ± 2.91	36.02 ± 2.97	37.90 ± 3.04	38.10 ± 3.09	39.97 ± 2.93	11.971 ± 3.78 [1]

All data in week 0-8 are expressed in mean ± SD

* Intragroup comparison ($p < 0.05$, vs. before)

[1] Intergroup comparison ($p < 0.05$, vs. Placebo)

[2] Intergroup comparison ($p < 0.05$, VHPCC vs. CAV)

"Changing rate (%)" shows changing rate in % figures before vs. 8 weeks after ingestion

VHPCC, Very high proline complex collagen; CAV, Commercially available collagen

Skin melanin index

There was no significant difference in mean melanin index between the VHPCC, CAV and placebo groups prior to and after the trial in all test areas ($P>0.05$ in all cases) due to wide standard deviation. Instead, intragroup comparison was analyzed. VHPCC group showed significant decrease of melanin pigment volume in week 1 to 8 ($P<0.05$ in all cases) and changing rate in VHPCC group was significantly less than CAV and placebo group in all test areas ($P<0.05$ in all cases). Although the VHPCC group showed greater decrease in mean melanin index in all test areas among the three groups, it failed to show statistical significance. The results are summarized in table 4.

Table 4. Melanin index (Mexameter)	Mean melanin index ± SD					
Group	Week 0	Week 1	Week 2	Week 4	Week 8	Changing rate (%), week 8
Right-Face						
Placebo (n=8)	210.338 ± 21.40	206.450 ± 20.71	210.088 ± 20.82	211.625 ± 20.61	212.413 ± 19.66	1.115 ± 3.71
VHPCC (n=20)	200.155 ± 35.68	196.020 ± 33.30 *	191.535 ± 33.24 *	187.135 ± 32.62 *	183.330 ± 31.21 *	-8.179 ± 4.79 [1 2]
CAV (n=18)	198.244 ± 33.93	201.817 ± 33.56	201.694 ± 34.88	198.806 ± 34.68	195.528 ± 32.80 *	-1.264 ± 3.43
Left-Face						
Placebo	199.413 ± 21.45	200.663 ± 19.76	202.413 ± 19.94	203.163 ± 21.01	201.650 ± 20.27	1.194 ± 1.95
VHPCC	193.550 ± 35.08	191.240 ± 33.85	185.555 ± 31.19 *	183.870 ± 35.40 *	179.650 ± 32.23 *	-6.901 ± 5.61 [1 2]
CAV	203.389 ± 38.83	204.656 ± 38.39	203.444 ± 37.48	199.861 ± 36.55	198.511 ± 36.03 *	-2.117 ± 4.00
Right-Arm						
Placebo	206.413 ± 18.95	207.75 ± 22.79	205.963 ± 17.14	206.375 ± 15.38	207.163 ± 16.83	0.655 ± 7.01
VHPCC	203.060 ± 48.29	199.665 ± 46.71 *	195.360 ± 45.67 *	186.660 ± 46.31 *	182.850 ± 45.98 *	-10.004 ± 5.99 [1 2]
CAV	202.456 ± 46.64	204.289 ± 46.08	205.417 ± 48.89	207.050 ± 48.29	206.722 ± 47.65	2.4 ± 7.84
Left-Arm						
Placebo	208.713 ± 16.67	209.038 ± 20.50	207.625 ± 16.72	206.125 ± 13.01	205.788 ± 14.79	-1.23 ± 5.19
VHPCC	202.885 ± 50.90	198.410 ± 49.73 *	194.440 ± 46.72 *	184.755 ± 45.92 *	180.165 ± 44.82 *	-11.053 ± 6.19 [1 2]
CAV	206.700 ± 47.52	208.311 ± 48.45	206.894 ± 51.53	207.411 ± 49.31	208.483 ± 47.79	1.241 ± 8.90
All data in week 0-8 are expressed in mean ± SD						
* Intragroup comparison (p < 0.05 vs. before)						
[1] Intergroup comparison (p < 0.05 vs. Placebo)						
[2] Intergroup comparison (p < 0.05, VHPCC vs. CAV)						
"Changing rate (%)" shows changing rate in % figures before vs. 8 weeks after ingestion						
VHPCC, Very high proline complex collagen; CAV, Commercially available collagen						

Skin transepidermal water loss

There was no significant difference in transepidermal water loss (TEWL) between the VHPCC, CAV and placebo groups prior to the study. The TEWL at both face and arm in VHPCC group was statistically significantly decreased compared to placebo group (P<0.05) and CAV group (P<0.05) from week 4 to the end of the study. A significant reduction of TEWL in VHPCC group was greater than CAV group since week 2 (P<0.05). The changing rate of VHPCC was significantly far more than CAV and placebo at both face and arm (P<0.05 in all cases). However, CAV group did not show the significant improvement of TEWL compared to the placebo. The results are concluded in Table 5.

Table 5. Transepidermal water loss (TEWA meter)	Mean transepidermal water loss ± SD					
Group	Week 0	Week 1	Week 2	Week 4	Week 8	Changing rate (%), week 8
Face						
Placebo (n=8)	13.54 ± 2.02	13.15 ± 1.74	13.08 ± 1.68	13.46 ± 1.71	13.13 ± 1.66	-2.471 ± 8.17
VHPCC (n=20)	13.31 ± 2.65	11.85 ± 2.88	10.74 ± 2.18 [2]	9.88 ± 1.66 [1 2]	9.46 ± 1.44 [1 2]	-27.779 ± 9.22 [1 2]
CAV (n=18)	12.88 ± 2.94	12.23 ± 2.86	13.01 ± 2.70	12.66 ± 2.56	12.32 ± 2.64	-3.594 ± 12.48
Arm						
Placebo	10.61 ± 1.52	10.31 ± 1.26	10.50 ± 1.37	10.88 ± 1.27	10.40 ± 1.01	-1.112 ± 9.78
VHPCC	10.82 ± 1.93	9.66 ± 1.56	9.13 ± 1.40 [2]	8.72 ± 1.21 [1 2]	8.41 ± 1.14 [1 2]	-21.26 ± 8.72 [1 2]
CAV	10.77 ± 2.42	10.52 ± 2.36	10.96 ± 2.22	11.32 ± 2.16	11.40 ± 2.33	6.981 ± 15.77
All data in week 0-8 are expressed in mean ± SD						
[1] Intergroup comparison (p < 0.05, vs. Placebo)						
[2] Intergroup comparison (p < 0.05, VHPCC vs. CAV)						
"Changing rate (%)" shows changing rate in % figures before vs. 8 weeks after ingestion						
VHPCC, Very high proline complex collagen; CAV, Commercially available collagen						

Skin smoothness and skin wrinkle

There was no significant difference in skin smoothness and wrinkle at face between the VHPCC, CAV and placebo groups prior to the study. Only VHPCC group showed significantly

improved skin smoothness (P<0.05) at the end of the study compared to CAV and placebo groups. Furthermore, VHPCC group showed a significantly ten-fold difference in changing rate of smoothness improvement (P<0.05) more than CAV group. Regarding number of wrinkles, though there was no significant difference between VHPCC, CAV and placebo group after the study due to wide standard deviation, every group showed significantly improvement when compared internally between baseline and week 8. However, only VHPCC group showed marked significantly greater changing rate (P<0.05) than CAV and placebo group. VHPCC changing rate was three times more than CAV group. However, there was no significant difference of skin smoothness, wrinkle, and their changing rate between CAV and placebo group. The results are shown in Table 6.

Table 6. Skin smoothness and wrinkle (VisioScan)	**Mean ± SD**		
Group	Before	After	Changing rate (%)
Smoothness			
Placebo (n=8)	224.638 ± 30.22	230.100 ± 33.32	2.389 ± 4.68
VHPCC (n=20)	225.025 ± 41.32	312.040 ± 53.66 [1 2]	41.484 ± 30.08 [1 2]
CAV (n=18)	236.367 ± 56.67	245.639 ± 57.75	4.149 ± 8.24
Number of wrinkles			
Placebo	65.381 ± 9.79	63.634 ± 9.18*	-2.569 ± 3.35
VHPCC	72.254 ± 13.54	62.098 ± 11.37*	-13.748 ± 5.66 [1 2]
CAV	68.226 ± 15.06	65.081 ± 15.31*	-4.542 ± 8.86
All data are expressed in mean ± SD			
* Intragroup comparison (p < 0.05, vs. before)			
[1] Intergroup comparison (p < 0.05, vs. Placebo)			
[2] Intergroup comparison (p < 0.05, VHPCC vs. CAV)			
"Changing rate (%)" shows changing rate in % figures before vs. 8 weeks after ingestion			
VHPCC, Very high proline complex collagen; CAV, Commercially available collagen			

Subjective feeling of all subjects were get along well with the objective measurement. Almost all VHPCC group reported improved skin qualities since the first week which went well with the objective results that significantly improved since the first week. Moreover, VHPCC subjects reported that mostly they perceived improved skin change after 3 days of ingestion. CAV group perceived skin improvement at week 4, same as the objective measurements that improved at week 4. In VHPCC group, not only 6 measured skin qualities improved, but other skin qualities were also reported: faster wound healing (100%), stretch mark improvement (66.7%), less oily face (85%), less hair loss and hair qualities improvement (90%) and nail strengthening (70%). Atrophic acne scar improvement was seen in skin smoothness parameter.

Blood test

Blood test for *Sirt1* gene expression results demonstrated that no significant improvement among the VHPCC, CAV and placebo group. The complete blood count (CBC) and creatinine level at baseline and after 8 weeks of ingestion was within the limits of standard values. Furthermore, no adverse effect was reported throughout the study. Blood test analysis results are shown in Table 7.

Table 7. CBC Blood test

		Placebo (n=8)		High Proline Collagen (n=20)		Available Collagen (n=18)		All Groups (n=46)	
Item	Unit	Before	After	Before	After	Before	After	Before	After
WBC	$*10^3$/uL	8.11 ± 2.543	7.91 ± 1.997	7.07 ± 2.278	6.91 ± 1.980	7.93 ± 1.839	7.05 ± 1.724	7.59 ± 2.165	7.14 ± 1.879
RBC	$*10^6$/uL	4.92 ± 0.421	4.99 ± 0.335	4.58 ± 0.494	4.57 ± 0.482	4.74 ± 0.461	4.69 ± 0.384	4.70 ± 0.476	4.69 ± 0.440
Hb	g/dl	12.85 ± 1.180	13.05 ± 1.138	12.51 ± 0.999	12.46 ± 0.960	12.80 ± 1.353	12.69 ± 1.255	12.68 ± 1.164	12.65 ± 1.110
Hct	%	39.18 ± 3.149	39.85 ± 3.221	38.44 ± 2.590	37.73 ± 2.586	39.02 ± 3.744	38.54 ± 3.300	38.79 ± 3.126	38.42 ± 3.022
PLT	$*10^3$/uL	272.25 ± 52.462	273.63 ± 55.688	283.5 ± 76.146	283.75 ± 72.635	307.28 ± 59.866	298.61 ± 70.326	290.85 ± 66.511	287.80 ± 68.324
Cr	mg/dl	0.73 ± 0.152	0.7 ± 0.122	0.66 ± 0.096	0.64 ± 0.109	0.7 ± 0.097	0.69 ± 0.096	0.69 ± 0.109	0.67 ± 0.107

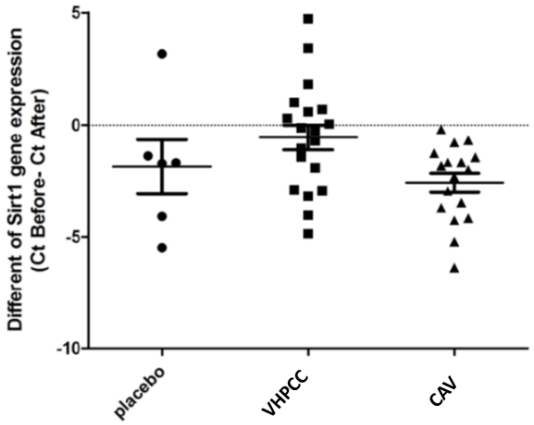

Figure 1. Difference of Sirt1 gene expression level between before and after the study. No group was able to improve Sirt1 gene expression level.

Figure 2. Before(left) and after(right) pictures of VHPCC participant (frontal, at rest). The after picture showed facial skin looking more volumized, rejuvenated and hydrated with brighter and smoother appearances, and decreasing wrinkles. Under eyes area was brighter. Besides, nasolabial folds were better. This participant stated that she felt like she had received Botox, filler injection and laser treatment.

Figure 3. Before(left) and after(right) pictures of VHPCC participant (right oblique). The after picture showed facial skin looking more volumized especially at forehead and cheeks. Facial skin looked rejuvenated and hydrated with brighter and smoother appearances. Besides, nasolabial folds were better. Acnes and acne redness spots were much improved without permission of using any drugs or treatments.

Figure 4. Before(left) and after(right) pictures of VHPCC particiapant (left oblique, at rest). The after picture showed facial skin looking more volumized especially at forehead and cheeks. Facial skin looked rejuvenated and hydrated with brighter and smoother appearances. Besides, nasolabial folds were better. Acnes and acne redness spots were much improved without permission of using any drugs or treatments.

Figure 5. Before(left) and after(right) pictures of VHPCC participant (frontal, smile) showed less wrinkles around eyes area, crow's feet, less dark circles under eyes. Besides, nasolabial folds were improved. Facial skin looked rejuvenated and hydrated with brighter and smoother appearance. The face also looked more volumized.

Figure 6. Before(left) and after(right) pictures of VHPCC participant (right oblique, smile) showed less wrinkles, crow's feet, and improved under eye area. Besides, nasolabial folds were improved. Acne redness spots and scar on the cheek were much improve without permitted using any drug or treatment. The face looked volumized, rejuvenated and hydrated with brighter and smoother appearance.

Figure 7. Before(left) and after(right) pictures of VHPCC participant (left oblique, smile) showed less wrinkles, crow's feet, and improved under eye area. Besides, nasolabial folds were improved. Acne redness spots and scar on the cheek were much improve without permitted using any drug or treatment. The face looked volumized, rejuvenated and hydrated with brighter and smoother appearance.

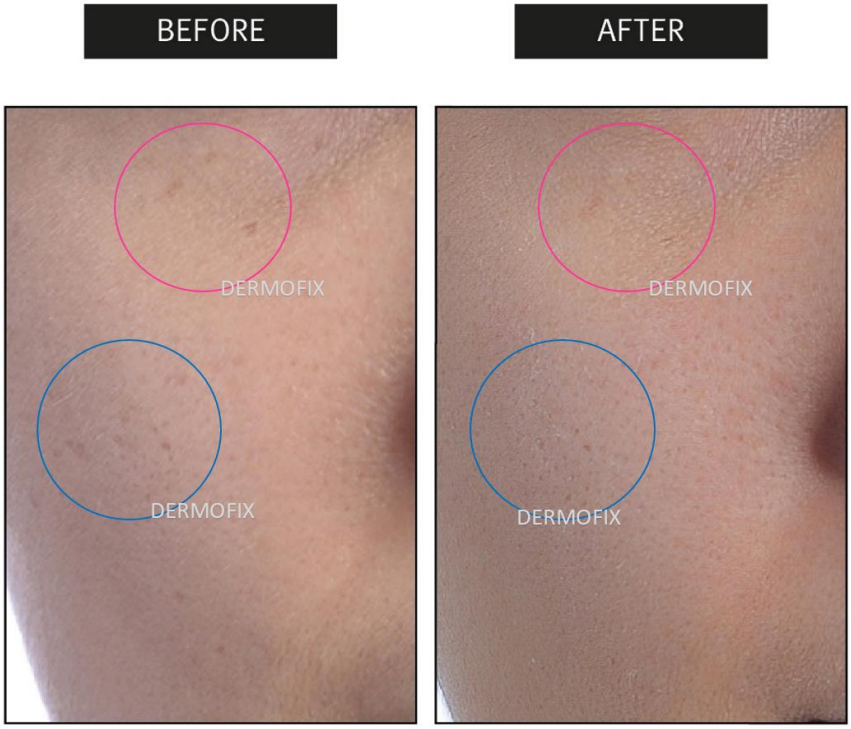

Figure8. Before(left) and after(right) picture set of VHPCC participant. The after picture showed pigmented spots were less and pigmented spot color was lighter.

Secondary objective was to evaluate anti-aging effect on knee joint. Prior to the study, every participant was evaluated by Oxford knee score and it was found that no one was likely diagnosed as osteoarthritis (OA) of knee. Then 7 signs and symptoms of OA knee were evaluated before and after the study. In VHPCC group, 5 subjects had joint pain before the trial and all of them reported joint pain decrease (100%) at week 8 of the study. 5 subjects had joint sound on movement, 4 of 5 improved , 1 was same as before. 2 subjects had joint stiffness, one had better result, the other had symptom at same level. On the other hand, in CAV group, 4 had joint pain prior to the study, only 1 had joint pain improvement, the others stayed the same. One had joint sound and another had limited range of motion, yet none had improved result. For placebo group, 1 had joint pain and another had joint stiffness, none had better outcome. The effects on OA knee are summarized in Table 8.

Table 8. Sign & symptom of osteoarhtritis knee

	Placebo (n=8)		High Proline Collagen (n=20)		Available Collagen (n=18)	
Sign & symptoms	Before	Better after	Before	Better after	Before	Better after
Joint pain	1	0	5	5	4	1
Joint sound on movement	0	0	5	4	1	0
Joint stiffness	1	0	2	1	0	0
Joint deformity	0	0	0	0	0	0
Joint edema	0	0	0	0	0	0
Limit ROM* of knee joint	0	0	0	0	1	0
Joint instability	0	0	0	0	0	0

ROM, range of motion

Besides that, VHPCC group also reported other improvement in collagen-containing organs: faster muscle and/or tendon recovery after injury or exercise (77.78%), improve myofascial pain (66.67%), more body flexibility (10%), cellulite reduction (15%) and feeling energetic (50%) after taking VHPCC.

From aforementioned study data, it can be concluded that VHPCC was proved safe and gave far faster and better anti-aging effects than CAV essentially on skin properties, improve sign and symptoms of osteoarthritis of knee joint and has benefit on other collagen-containing organs.

Discussion

To the best of our knowledge from literature reviews, the present study is the first clinical trial demonstrating the efficacy and safety of oral VHPCC on skin properties and knee joint in the same trial, and is the world's most numbers of dermatological testing which consists of 6 skin properties measurement so far.

The clinical study demonstrates that ingestion of VHPCC, which contains a selectively-manufacturing high content of the free-formed Proline, Hydroxyproline and Glycine called "Proline complex", was proved safe and gave much faster and more effective anti-aging effects than CAV essentially on skin properties, improve sign and symptoms of osteoarthritis of knee joint and has benefit on other collagen-containing organs. CAV was also effective but only on skin elasticity and hydration and results were lesser and slower, seen at week 4 and 8 respectively. CAV effects form present study are consistent with many previous studies of collagen peptide that effects were mostly seen in 4 weeks. Many participants from VHPCC group have increase in *Sirt1* gene expression level and VHPCC group overall tend to have increase in *Sirt1* gene expression level but fail to show significant difference. If number of subjects increase, probably significant difference may be seen. The CBC and creatinine blood tests are within normal standard of level. This can assure and answer the consumers' frequently asked problem if taking collagen supplement badly affected the kidney and health or not.

The faster and more effective results of VHPCC than CAV may result from 1) very high content of "proline complex"- a group of amino acids that is specific for collagen synthesis in human body 2) very low average molecular weight – 500 Da, which is pretty lighter than other collagen peptide that has weight range 500-8000 Da 3) very small molecule size – about 2 nanometer, as nanoparticle can be absorbed not only by intracellular but also intercellular way from previous study but CAV rarely have small size in nanometer unit 4) highest amount of collagen peptide permitted by Thai FDA was used, 10 gram per day 5) the purity of VHPCC raw material is more than 95% but the purity of CAV is unknown depending on each factory 6) the purity final product was not diluted by any powder or fiber while manufacturing in OEM. So, consumers get highly pure product.

The quickly significant result may result from mechanism of acute inflammation which takes just a first few days meanwhile normal collagen synthesis process takes 6 weeks. This hypothesis are get along well with the study of Postlethwaite et al. which reported that hydroxyproline-containing peptides resulted chemotactic for fibroblasts and both collagen and collagen derived peptides might function as chemotactic stimuli for fibroblasts in vivo and attract these cells for the repair of damaged tissues. It means that there was preexisting damaged tissue and hydroxyproline-containg peptide or collagen peptide come to repair damaged tissue via acute inflammation process.

From previous studies, mechanisms of action of VHPCC in dermis are 1) act as substrate of collagen fiber 2) Pro, Hyp, Gly act as signal transducer on dermal fibroblast 3) stimulate fibroblasts growth, proliferation, motility, metabolism to repair damaged tissue 4) induce an increase in collagen fibers' density and diameter in the dermis 5) increase hyaluronic acid production 6) activate protection against UVB radiation. Increased number of collagen fibers leads to increased skin elasticity. Hyaluronic acid increases hydration of the extracellular matrix and reduces transepidermal water loss and helps fibroblast proliferation process. Increased in number of collagen fibers, hyaluronic acid create skin smoothness appearance, reduce number of wrinkles, increase skin hydration and reduce transepidermal water loss. Activation against UVB help decreasing mean melanin index. Increase in number of fibroblasts, collagen fiber and extracellular matrix component make dermal thickness thicker and lead to more skin integrity and youth. Moreover, previous studies reported that Pro-Hyp inhibited the loss of chondrocytes and thinning of the articular cartilage layer and increased glycosaminoglycan in the extracellular matrix. By all those mechanisms of action, skin properties, knee joint and other collagen-containing organs can be anti-aged by VHPCC.

Other collagen-containing organs improved simultaneously, so this is to confirm that the orally dietary VHPCC supplement (DERMOFIX®) has benefit on not only skin but also knee joint, bone, ligament, tendon and other collagen-containing organs simultaneously.

Conclusion

Though the present study demonstrates that both VHPCC and CAV are safe and effective supplements for the skin properties improvement but there is a significant difference between conventionally commercially available collagen peptide and a new type of collagen peptide with very high proline complex content. VHPCC demonstrates a much greater and faster improvement in anti-aging effects on all skin properties since the first week and showed improved knee joint degeneration sign and symptoms. Beneficial effects on other collagen-containing organs were reported. DERMOFIX®, a new very high selectively-manufacturing 'proline complex'-containing-collagen peptide (VHPCC), has proved safe and effective in quickly and greatly reverse unfavorable aging skin properties, knee joint degeneration problems and improve other collagen-containing organs simultaneously. It is suitable for who needs to quickly rejuvenating their skin to reveal beauty from within and keep their health to the optimum sustainably.

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The Effectiveness of Probiotic in The Treatment of Inflamed Acne

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ABSTRACT

Background: Prolonged use of oral antibiotic in inflamed acne may impair the beneficial microorganisms. Probiotic can reduce inflammatory mediators by improving the leaky gut, decrease IGF-1 level which is involved in follicular hyperkeratinization and also decrease substance P level effecting on sebocytes and sebum production.

Objectives: To evaluate the effectiveness of probiotic in the treatment of inflamed acne.

Methods: The prospective, experimental study follows the double-blinded, randomized controlled trial. Thirty female patients, aged between 20-40 years old, with mild to moderate acne vulgaris were enrolled. All participants were divided equally into two groups and randomly assigned either TS6 probiotics (100×10^9 CFUs/day) or placebo to be taken for 12 weeks. Inflamed lesion counts, comedones and total lesion counts were evaluated at baseline and during follow-up visits 2, 4, 8, and 12 weeks from the treatment initiation. The sebum score at forehead, both cheeks and chin were assessed by Sebumeter at baseline and 12^{th} week. Post-acne redness (PAR) were estimated by Mexameter MX18 at baseline and 12^{th} week. The statistical analysis within group used pair T-test whereas in between groups using T-test.

Results: Twenty-five patients completed the study. Both of the probiotic group and the placebo group showed significant decrease in inflamed lesion counts at 2^{nd} week ($p < 0.01$ and $p < 0.05$), significant comedones depletion at 8^{th} week ($p < 0.01$ and $p < 0.05$), and significant improvement in total lesion counts at 4^{th} week ($p < 0.01$ and $p < 0.05$) with no difference between two groups. Percentage reduction of inflamed lesion counts in the probiotic group was higher than in the placebo group in every follow-up visits (at 2^{nd} week were 35.3% and 28.6%, at 4^{th} week were 47.1% and 35.7%, at 8^{th} week were 70.6% and 50%, and at 12^{th} week were 76.5% and 64.3%, respectively). Percentage reduction of comedones in the probiotic group was higher than in the placebo group in every follow-up visits (at 2^{nd} week were 8.3% and -2.6%, at 4^{th} week were 14.6% and 10.3%, at 8^{th} week were 33.3% and 23.1%, and at 12^{th} week were 50% and 41%, respectively). Percentage reduction of total lesion counts in the probiotic group was higher than in the placebo group in every follow-up visits (at 2^{nd} week were 15.4% and 3.8%, at 4^{th} week were 23.1% and 17.3%, at 8^{th} week were 43.1% and 28.8%, and at 12^{th} week were 58.5% and 46.2%, respectively). At 12^{th} week, the sebum score of all forehead, both cheeks and chin areas in the probiotic group were reduced, though insignificantly. At 12^{th} week, the erythema index of the PAR in both groups reduced significantly ($p < 0.01$, $p < 0.01$) with no difference between two groups.

Conclusion: The treatment of mild to moderate acne by supplementing probiotics with the standard topical regimens have no significant difference in inflamed lesion counts, comedones and total lesion counts comparing to the topical treatment alone. Percent reduction of inflamed lesion counts, comedones and total lesion counts in the probiotic group were higher than the placebo group in every follow-up visits. However, further studies including the duration of treatment, an appropriate amount or specific microorganisms of probiotic should be conducted.

Keywords: probiotics, acne vulgaris, inflamed acne, TS6 probiotic

INTRODUCTION

Acne vulgaris is a common skin condition that affects most of the population. The pathogenesis of acne is starting from the follicular hyperkeratinization and increased sebum production by sebaceous gland hyperplasia, so that the lesions become closed or open comedones. Moreover bacterium named *Propionibacterium acnes* secret chemotactic and inflammatory mediators leading to inflamed lesions, such as papule, pustules and nodulocystic lesions.

Acne treatment, consisting of topical and systemic medications, is depending on the acne severity. Prolong use of oral antibiotic may destroy beneficial microorganisms in the body causing other conditions. Probiotic supplementation can reduce systemic markers of inflammation, decrease IGF-1 level which is involved in follicular hyperkeratinization and also decrease substance P level effecting on sebocytes and sebum production. In combination with topical acne medications, probiotic may be favorable in acne treatments and are concurrently beneficial to the gut.

LITERATURE REVIEW

Strokes and Pillsbury (1930) provided a theoretical and practical consideration of gastrointestinal mechanism to explain how the skin is influenced by emotional and nervous states. The emotional states such as depression, worry and anxiety alter gastrointestinal tract function and microbiota, which the authors theorised, in turn promotes local and systemic inflammation. Later in 1983, a study involving 80 acne patients showed the presence of lipopolysaccharide (LPS) endotoxins from *Escherichia coli* in the serum of acne patient (Juhlin *et al*, 1983). The study of 13,000 adolescents showed that those with acne were more likely to experience gastrointestinal symptoms including constipation, halitosis, and gastric reflux. More specifically, abdominal bloating was 37% more likely to be associated with acne and other seborrheic diseases (Zhang *et al.*, 2008).

Previous studies enquiring into the potential link between diet and acne vulgaris have shown controversial results. The underlying mechanism of dietary effect in acne vulgaris formation might be the role of insulin-like growth factor-1 (IGF-1) in facilitating cell proliferation involved in acne pathogenesis (Cordian, 2005). Acute hyperinsulinemia due to consumption of high glycemic load diet would cause and increase in IGF-1/insulin-like growth factor binding protein-3 (IGFBP-3) ratio thus enhancing the effects of IGF-1(Cordian *et al*, 2002). Hyperinsulinemia resulting from high glycemic load diet would also increase circulating androgens and decrease sex hormone binding protein, leading to increase sebum synthesis, which are crucial in acne development. Moreover, the loss of *bifidobacteria* by poor dietary choices - high fat, sugar - leads to increase intestinal permeability, encroachment of LPS endotoxins through the intestinal barrier, which in turn leads to low grade inflammation, oxidative stress, insulin resistance and sickness behavior (Cani & Delzenne, 2009)

Substance P induces, both directly and indirectly, inflammation by modulating the release of proinflammatory cytokines and chemokines (also in the skin). This neuropeptide affects the activity of the pilosebaceous unit by stimulating proliferation and differentiation of sebaceous glands, lipid synthesis and induction of neutral endopeptidase expression in sebaceous cells and of E-selectin in perifollicular vessels (Makrantonaki *et al*, 2011). 40 of 80 participants with acne vulgaris presented a higher average substance P than the controls (Rokowska-Waluch *et al*, 2016).

Probiotic, such live microorganisms, have been used for decades to help abdominal symptoms by reducing endotoxins and inflammatory cytokines when administered in adequate amounts (FAO/WHO). *Bifidobacteria* and *Lactobacilli* are lactic-producing bacteria normally found in the gut that may assist in the treatment of inflammatory skin diseases, such as acne (Hacici-Rachinel, 2009). Probiotics can prevent the deleterious effects of TNF-α and interferon-Ɣ on the

intestinal epithelium, a finding that may be helpful for other inflammatory conditions (Resta-Lenert, 2016). The orally administered *Bifidobacterium lactis* can improve fasting insulin levels and glucose turnover rates, even in the presence if a high-fat diet (Burcelin, 2010). Probiotics influence the release of substance P in the intestinal tract and the skin (Bowwe, 2014). The ability of probiotics to help attenuate substance P release in the skin and intestinal tract (Gueniche *et al* , 2010) is also of relevance in the pathway between the nervous system, gut, and skin.

The study in 1961 gave probiotic tablets containing both *L. acidophilus* and *Lactobacillus bulgaricus* to 300 patients for 16 days with an interim two-week washout after the first eight days. The author reported 80% if patients with acne had some degrees of clinical improvement, with the greatest improvement in those with severe inflammatory acne. Unfortunately, the study did not have controls and the rationale for such a dosing regimen is unclear (Siver, 1961). One study tasted an oral supplement composed of lyophilised *L. acidophilus* and *B. bifidum* in 40 patients as an adjuvant to standard antibiotics in the half of the group. The author reported patients treated with a probiotic had improved clinical outcome and reported fewer side effects from the standard antibiotics (Marchetti, 1987).

The purpose of this study was to evaluate the anti-inflammatory effects of the probiotic supplementation on the inflamed acne, and other beneficial skin conditions, such as, sebum production and post-acne redness.

METHODS

The study was approved by the Ethic committee, Faculty of Regenerative Medicine, Dhurakij Pundit University (No.005/60). All patients signed informed-consent forms before inclusion.

From January to April 2018, 20 to 40 years old of healthy female patients enrolled in this prospective, randomized, double-blinded study. Only subjects with mild to moderate acne vulgaris were included (comedones less than 10 and/or inflamed lesions less than 10 were classified as mild acne; comedones 10 to 40 and/or inflamed lesions 10 to 40 and/or cystic lesions 1 to 3 were classified as moderate acne). Patients were excluded from trial if they had history of acute/chronic illness or other facial skin diseases. Pregnant or breastfeeding patients were also excluded from the study. Patients who were concurrently using isotretinoin or oral contraceptive pill within the past 6 months, and oral antibiotic within 4 months were also excluded in the trial.

Subjects were randomly assigned to two groups. The probiotic group received "TS6 probiotic" twice a day (100×10^9 CFUs/day), while the placebo group received identically sachet without probiotic for 12 weeks. TS6 probiotic is the synbiotic containing 6 species (*Lactobacillus acidophilus, Lactobacillus casei, Bifidobacterium longum, Bifidobacterium infantis, Bifidobacterium bifigum, Lactococcus lactis*) and one prebiotic (Oligosaccharide). Both groups were also received topical 2.5% benzoyl peroxide (Benzac®) and 1% clindamycin lotion (Clinda-M®) applied twice daily.

Lesion count (inflamed lesions, comedones, and total lesions) and digital photograph were performed at baseline and during follow-up visits 2, 4, 8, and 12 weeks from the treatment initiation. The sebum score at forehead, both cheeks and chin were assessed by Sebumeter at baseline and 12th week. Post-acne redness (PAR) were estimated by Mexameter MX18 at baseline and 12th week. The statistical analysis within group used pair T-test whereas in between groups using T-test.

FINDINGS

Twenty-five female patients completed the study. Thirteen patients were in the probiotic group (mean age 29.2 ± 4.0) and twelve patients were in the placebo group (mean age 27.8 ± 4.5).

Table 1

Subject characteristics at baseline

n=25	Probiotic (n=13)	Placebo (n=12)	p-value > 0.05
Age (years)	29.2 ± 4.0	27.8 ± 4.5	0.45
Inflamed lesion count	17	14	0.33
Comedone count	48	39	0.50
Total lesion count	65	52	0.39
Mild acne, n (%)	5 (38.5%)	5 (41.7%)	
Moderate acne n, (%)	8 (61.5%)	7 (58.3%)	
Sebum score			
- Forehead	79	60	0.34
- Rt. Cheek	59	41	0.09
- Lt. Cheek	63	40	0.02
- Chin	76	93	0.37
Erythema index	400	393	0.81

Both of the probiotic group and the placebo group showed significant decrease in inflamed lesion counts at 2nd week (p = 0.002 and p = 0.015) with no difference between two groups (p = 0.31). Percentage reduction of inflamed lesion counts in the probiotic group was higher than in the placebo group in every follow-up visits (at 2nd week were 35.3% and 28.6%, at 4th week were 47.1% and 35.7%, at 8th week were 70.6% and 50%, and at 12th week were 76.5% and 64.3%, respectively).

Table 2

Comparison of % reduction of inflamed lesion counts between the probiotic and the placebo.

Inflamed lesion counts / week	Probiotic			Placebo			p-value intergroup
	% Reduction	p-value*	p-value**	% Reduction	p-value*	p-value**	
2	35.3%	**0.002**	**0.002**	28.6%	**0.015**	**0.015**	0.31
4	47.1%	**0.000**	0.071	35.7%	**0.004**	0.240	0.40
8	70.6%	**0.000**	**0.004**	50.0%	**0.003**	0.109	0.18
12	76.5%	**0.000**	0.088	64.3%	**0.000**	0.096	0.19

(*) compared to baseline ; (**) compared to previous visit ; **bold text** showed significant (p-value < 0.05)

Both of the probiotic group and the placebo group showed significant comedones depletion at 8th week (p = 0.004 and p = 0.048) with no difference between two groups (p = 0.40). Comedones in the placebo group increased in first 2 weeks (2.6%) and gradually decreased by week 4 to week 12, whereas comedones in the probiotic groups have reduced in every weeks since the beginning. Percentage reduction of comedones in the probiotic group was higher than in the placebo group in every follow-up visits (at 2nd week were 8.3% and -2.6%, at 4th week were 14.6% and 10.3%, at 8th week were 33.3% and 23.1%, and at 12th week were 50% and 41%, respectively).

Table 3

Comparison of % reduction of comedones between the probiotic and the placebo.

Comedones / week	Probiotic			Placebo			p-value intergroup
	% Reduction	p-value*	p-value**	% Reduction	p-value*	p-value**	
2	8.3%	0.226	0.226	-2.6%	0.299	0.299	0.37
4	14.6%	0.073	0.064	10.3%	0.118	0.058	0.29
8	33.3%	**0.004**	**0.002**	23.1%	**0.048**	**0.036**	0.40
12	50.0%	**0.002**	**0.008**	41.0%	**0.022**	**0.015**	0.47

(*) compared to baseline ; (**) compared to previous visit ; **bold text** showed significant (p-value < 0.05)

Both of the probiotic group and the placebo group showed significant improvement in total lesion counts at 4th week (p = 0.005 and p = 0.024) with no difference between two groups (p = 0.28). Percentage reduction of total lesion counts in the probiotic group was higher than in the placebo group in every follow-up visits (at 2nd week were 15.4% and 3.8%, at 4th week were 23.1% and 17.3%, at 8th week were 43.1% and 28.8%, and at 12th week were 58.5% and 46.2%, respectively).

Table 4

Comparison of % reduction of total lesion counts between the probiotic and the placebo.

Total lesion counts / week	Probiotic			Placebo			p-value intergroup
	% Reduction	p-value*	p-value**	% Reduction	p-value*	p-value**	
2	15.4%	0.051	0.051	3.8%	0.222	0.222	0.34
4	23.1%	**0.005**	**0.008**	17.3%	**0.024**	**0.046**	0.28
8	43.1%	**0.000**	**0.000**	28.8%	**0.008**	**0.016**	0.50
12	58.5%	**0.000**	**0.005**	46.2%	**0.005**	**0.017**	0.46

(*) compared to baseline ; (**) compared to previous visit ; **bold text** showed significant (p-value < 0.05)

At 12th week, sebum score of forehead, both cheeks and chin areas in the probiotic group were reduced, though insignificantly. Probiotic probably showed benefits on sebum production, but have to extend the course of treatment to prove the significant results.

Table 5

Comparison of sebum score of all forehead, both cheeks and chin area at baseline and 12th week between the probiotic and the placebo

Forehead	Baseline	12th week	Δ	p-value btw. group.	p-value intergroup
Probiotic	79	70	-9	0.30	0.33
Placebo	60	79	19	0.02	
Rt. Cheek	Baseline	12th week	Δ	p-value btw. group.	p-value intergroup
Probiotic	59	50	-9	0.20	0.10
Placebo	41	38	-3	0.35	
Lt. Cheek	Baseline	12th week	Δ	p-value btw. group.	p-value intergroup
Probiotic	63	47	-16	0.08	0.44
Placebo	40	45	5	0.22	
Chin	Baseline	12th week	Δ	p-value btw. group.	p-value intergroup
Probiotic	76	66	-10	0.26	0.22
Placebo	93	78	-15	0.10	

At 12th week, the erythema index of the PAR in both groups reduced significantly ($p < 0.01$, $p < 0.01$) with no difference between two groups. Implying that probiotic have no benefit on the PAR compared to the control group.

Table 6

Comparison of % reduction of post acne redness score by Mexameter MX18 between the probiotic and the placebo

Group	Baseline	12th week	% Reduction	p-value btw. group.	p-value intergroup
Probiotic	400	321	19.0%	< 0.01	0.48
Placebo	393	320	18.7%	< 0.01	

Five participants (38.5%) in the probiotic group experienced an increased in the frequency of defecation. No participants complaint about any side effects after probiotic administration.

DISCUSSIONS

Compare to Jung *et la* study, Forty five female patients with mild to moderate acne were divided into 3 groups. Group A received only probiotic supplementation (*L. acidophilus, L. delbrueckii spp., bulgaricus,* and *B. bifidum),* group B received only minocyclin, and group C received both probiotic and minocyclin. All participants applied 5% benzoyl peroxide cream in 12 weeks. The research found that group A (only probiotic) had significant reduction in comedones and total lesions at the 4th week, and had significant reduction in inflamed lesions at 8th week, whereas the TS6 study found that the inflamed lesions had significant reduction at 2nd week, comedones had reduction at 8th week, and total lesions had reduction at 4th week. This reason can be explained by the different in topical acne treatments applying of two studies. The TS6 study used two topical acne medications (2.5% benzoyl peroxide and 1% clindamycin lotion), but the Jung study applied only one medication (5% benzoyl peroxide). Clindamycin lotion had ability to kill *P.acne* and had anti-inflammation effect. When applying 1% clindamycin lotion together with 2.5% benzoyl peroxide in TS6 study, the inflamed lesions had the significant reduction faster than only 5% benzoyl peroxide cream in Jung study. And because of the concentration, 5% benzoyl peroxide using in Jung study had the significant reduction in comedones faster than 2.5% benzoyl peroxide using in TS6 study.

By supplementing TS6 probiotic with the standard topical regimens in mild to moderate acne vulgaris had no significant difference in inflamed lesion counts, comedones and total lesion counts comparing to the topical treatment alone. But percent reduction of inflamed lesion counts, comedones and total lesion counts in the probiotic group were higher than the control group in every follow-up visits. However, further studies including the duration of treatment, an appropriate amount of probiotic per day or the specific microorganisms of probiotic should be conducted.

RECOMMENADATIONS

1. The further trial should extend the duration of the study so that it may show the statistical difference in reduction of inflamed lesions, comedones, and total lesions between the probiotic group and the placebo group.

2. Because of the unknown amount of the probiotic using in acne treatment, the further study should increase amount of probiotic and compare with 3 sachets per day or 4 sachets per day to show the different results.

3. Should also compare to the other species of the probiotic treating in acne vulgaris.

4. The further study should administrate oral probiotic emphasized on the specific group, such as the moderate acne group or the severe acne group.

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The Efficacy of Court - Type Thai Massage (CTTM) in Healing Pressure Ulcer

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ABTRACT

Background: Pressure ulcer (PC) is one of the major health problems in the hospital. Patients with impaired mobility are potentially at risk of developing a pressure ulcer. PC represents a major burden of sickness for families, hospitals and countries as it requires high treatment cost. This study aimed to explore the court-type Thai massage (CTTM) procedure that could promote the healing of PC. According to Thai Traditional medicine theory, there are signal points that the massage will deliver blood and nerve supply to the tissue seal organs, resulted in the wound healing process benefit. This study applied this theory to provide treatment to patients with PC.

Objective: To investigate the effectiveness of court-type Thai massage (CTTM) on the promotion of PC healing.

Study design: The randomized cross-over controlled trail was performed in 20 patients with stage 2-3 PC in elderly care centers in Bangkok and Nonthaburi. The patients were divided into 2 groups. The first group received CTTM six times, three times a week for 14 days and the no treatment period was 28 days after the first phase. The second group stated with 21 days of no treatment period and followed by CTTM for 21 days as first group. Then received CTTM six times, three times a week for 14 days after no treatment period. The healing effect was measured by Bates Jensen Wound Assessment treatment (BWAT) at day 0, 7, 14, 21, 28, 35 and 42. T-test was employed to compare healing effect between two groups whereas paired t-test was done to measure before-after effects in healing.

Study result: The first group had the higher healing scores significantly ($p=0.000$) in the first period which had treatment but it was not different during day 7-14 and 14-42 ($p= 0.187, 0.654$ respectively). In the second group, the healing was higher

significantly during day 21-28 and 28-35 (p= 0.012, 0.028 respectively) which had treatment period. Like the first group, the healing was not significant in day 0-21 (p= 0.069). The result showed that CTTM help to speed up the healing of PC.

Conclusion: CTTM help promoting healing of PC regardless of time proving CTTM because the stimulation of major signal points would reduce muscle stretch and improve blood circulation.

Key words: Court-Type Thai Massage, Pressure Ulcer, BWAT

Source and Significance of The Problem

Pressure sore or Pressure ulcer is an injury to the skin and the subcutaneous skin caused by pressure on the bone button. This is a major problem, which is found in hospitals and is often found in patients who are restricted in activities and movements. The main goal of wound care is to promoting the healing process of wound. The researcher are looking for other alternative medical treatments to apply in the health care of patients together. In this research, the Thai traditional medicine, which was used was court-type Thai massage based on the principles of Thai traditional medicine that could help stimulate blood circulation and lymphatic system in order to improve the blood supply to the organs and the tissues so that they can get enough nutrients. Massage can help stimulate the release of Endorphine and Enkephalin , which also reduce the pain.

Purpose of The Study

To study the effectiveness of court-type traditional Thai massage in the relief of pressure ulcer or pressure sore.

Expected Benefits

Receive the guidelines for the health care of patients with pressure sores using the court-type Thai traditional massage method in order to help with the healing process of pressure ulcers, reduce pain, reduce the chance of infection if the wound heals faster, and reduce the costs of patients' health care.

Scope of The Study

This research is an experimental research with a randomized cross-over controlled trial, which was conducted in 20 volunteers with 2nd-3rd levels of pressure ulcers in the elderly care centres in Bangkok and Nonthaburi by using the Bates-Jensen Wound Assessment Tool (BWAT) to collect data.

Experimental Procedures

1) The researcher had sought out to obtain a research ethics certificate.

2) The researcher had recruited 20 volunteers with 2nd-3rd levels of pressure ulcers in the elderly care centres in Bangkok and Nonthaburi provinces. The samples were purposive sampling and were divided into two groups. Volunteers signed their consents to participate in this research project.

3) The 1st group of volunteers was given a massage during the week at Day 7 and 14 and the 2nd group received 6 sessions of massage during Day 28 and 35 (3 times a week). Both groups would be examined on the progress of would healing once a week in Day 0, 7, 14, 21, 28, 35, and 42 with the same examination for the observation of wound healing progress by using the Bates-Jensen Wound Assessment Tool -BWAT and the comparisons of BWAT was employed to compare the results between two groups of volunteers through statistical t-test and the statistical pair t-test was employed to compare the results within a group of volunteers.

4) Volunteers from both groups would receive one hour of court-type Thai massage for their entire bodies along

5) The researcher recorded the photos each week, assessing the wound healing progress.

Conclusion of General Information

Most of the samples were females, which was at 70% of all volunteers and the rest; 30% were males. Most of the volunteers were in the age range between 81-90 years old which was equal to 45% and the age range between 91-100 years was the least percentage which was at 5%; who appeared to be 93 years old. The average score of the pressure level before the start of the experiment was at the 2nd level, which was at 80% and the 3rd level which accounted for 20%.

Summary of Wound Healing Progress and Outcome Discussions

1. To conclude the experiment, the hypothesis were tested by using the pair t-test for comparisons in the week of massage in the two groups of 6 times; the massage was done three times a week for one hour each time. It was found that between day 0 and 7 when the experiments were imposed on the 1st group, there was statistical significance found at 0.05 level, which had the p-value equal to 0.000. It showed no differences and on day 7 and 14 (p-value = 0.187). During day 14-28 when volunteers didn't received any massage session, it was found that the would healing progress showed no difference of the statistical significance at 0.05 level (p-value =0.654).

In the 2nd group between day 21 and 28 and day 28 and 35 were found to improve wound healing and showed some differences, which the statistical significance at 0.05 level (p-value =0.012, 0.028, respectively). In the period from 0-21, it was found that the wound healing was not significantly better at 0.05 level (p-value = 0.069). This showed that in the week that patients getting a court-typed massage did help with the pressure ulcer symptoms of patients as a court-typed massage was done by using the thumbs pressing down on various parts of the body to help the muscle relax and help the blood to flow better through the blood vessels in the temporary areas that received the pressure. When lifting the hands up, the blood would flow through those certain areas that were pressed. This helped enhance the blood circulation and helped repair wounded areas. Pressing and squeezing stimulated the muscles, relieved tension, and increased blood flow to the tissues, resulting in better healing of the wound compared to the untreated weeks.

2. The conclusion of the hypothesis was done as the hypothesis were tested using a pair-t-test to compare weeks without massage. In the 1st group, between 14 and 21, 21, 28, 28, 35 and day 35 and 42 showed no difference in wound healing which had the statistical significance level at 0.05 (p-value = 0.530, 0.070, 0.853, and 0.425, respectively). In the 2nd group, between day 0 and 7, day 7 and14, and day 14 and 21 showed no difference in wound healing which had the statistical significance level at 0.05 (p-value = 0.770, 0.217, 0.121, respectively). This implied that in the weeks that patients did not receive a massage. The wound healing was not improved and the results were not statistically significant.

3. The conclusions of the hypothesis, which was tested using a pair-t-test to compare the weeks without long-term massage when the absence of stimulation by massage

showed that in the 1st group in day 42; patients in both group didn't receive a massage. The results in both group showed no statistically significant difference at level 0.05 (p-value = 0.682). This indicated that a court-typed Thai massage could improve the wound healing progress and no matter when the massage starts, the healing progress will be better in the week that patients receive a massage.

5. Summary of the results of the 1st group and the 2nd group:

Group 1: The wound healing improved in the first week that patients received a massage and the wound healing progress was likely to continue to improve compared to before the trial (Day 0) with each week. The lesions were significantly different at 0.05.

Group 2: The wound healing improved in the week of massage and likely to be better due to the statistical significance in wound healing was significantly different at 0.05 on day 42 after receiving the massage.

Suggestions

1. Due to the literature review, it was found that the effectiveness of a court-typed Thai massage helps cure of pressure ulcers; this has not been studied seriously before. The researcher was interested in Thai traditional medicine and found that a massage can help in stimulating blood circulation. Therefore, the interest in studying about a court-typed massage on patients had occurred and had been studied to compare the effectiveness of a court-typed Thai massage on wound healing and to improve the effectiveness of patients' health care. The researcher's opinions towards this research are as follows:

1) The effectiveness of massage is related to the number of times a week of massage, such as how many times patients should be massaged in a week or within months so that the healing progress of wound will change significantly better and will be the most beneficial so that the plan of health care for patients with pressure ulcers can be done more effectively.

2) The effectiveness of the massage is related to the duration of the massage per session, such as how long patients should be massaged for during the duration of the massage. In this study, acupuncture was used as the basis for determining the duration of treatment for a court-typed Thai massage, which could be further develop to more

appropriate form for the most benefits in planning the health care for patients with pressure ulcers with a court-typed Thai massage treatment.

2. The researcher can provide the basic information for setting up guidelines for the health care of patients with pressure ulcers to increase the choices of patients in hospitals or at homes as appropriate.

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Comparison Effect of Black Glutinous Rice and Black Non-Glutinous Rice on Blood Glucose and Insulin Levels in People with Normal Blood Glucose

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ABSTRACT

Diabetes is a serious health problem for people around the world, and it is increasing with significant medical and economic consequences due to patients developing chronic complications. Postprandial glycemic control is very important in preventing diabetes and slowing its complications.

One study found that 66% of diabetic patients mainly consumed glutinous rice and those patients had higher HbA1c than those who mainly consumed white non-glutinous rice. The aim of this study was to compare the effect of black glutinous rice and black non-glutinous rice on blood glucose and insulin levels in people with normal blood glucose also to explore the behavior and satisfaction of consuming rice. This information would be used to develop advice on rice consumption.

This was an open-label randomized crossover study. Sixteen subjects, having normal blood glucose levels, randomly ate 90 kcal of black glutinous rice or black non-glutinous rice. Blood samples were collected for analysis of glucose and insulin levels 4 times, including fasting, 30, 60 and 120 minutes.

Statistical analysis was performed by paired T-test and incremental area under the curve (iAUC). The results showed that there was no statistically significant difference of changes in blood glucose and insulin levels between the black glutinous and black non-glutinous rice groups. I recommend eating black glutinous rice or black non-glutinous rice as a food exchange while considering the proportion of food to be consumed.

Result from the questionnaire showed that, rice, the subjects consume the most in daily life is white non-glutinous rice (75%). The second is white glutinous rice (18.75%). The third is brown non-glutinous rice (6.25%). The subjects prefer black glutinous rice rather than black non-glutinous rice in taste, feeling their hunger satisfied after eating, and the time between feeling hungry again. In contrast, they prefer black non-glutinous rice to black glutinous rice in terms of ease of supply, price and cooking methods.

INTRODUCTION

Diabetes is a serious health problem for people around the world, and it is increasing with significant medical and economic consequences due to patients developing chronic complications. Postprandial glycemic control is very important in preventing diabetes and slowing its complications.

One study found that 66% of diabetic patients mainly consumed glutinous rice and those patients had higher HbA1c than those who mainly consumed white non-glutinous rice. The aim of this study was to compare the effect of black glutinous rice and black non-glutinous rice on blood glucose and insulin levels in people with normal blood glucose also to explore the behavior and satisfaction of consuming rice. This information would be used to develop advice on rice consumption.

LITERATURE REVIEWS

I. Natapong Kosachunhanun et al. (2003). Comparing the effect of sticky rice and white rice on glycemic control in type 2 diabetic subjects. The study from Faculty of Medicine, Chiang Mai University found that 66% of diabetic patients mainly consumed glutinous rice. And those patients had higher HbA1c levels than those who mainly consumed white non-glutinous rice.

II. The study of amylose and amylopectin content in rice (Sunee et al, 2015) found that Hom Nil rice contains 24.1 g amylose per 100 g of raw rice and 75.9 g amylopectin per 100 g of raw rice. Black glutinous rice contains 7.4 g amylose per 100 g of raw rice and 92.6 g amylopectin per 100 g of raw rice.

III. (Seki et al, 2005) High fiber content: Reduce intestinal glucose absorption , blood glucose increases less than consuming white rice

IV. Food synergy: the key to healthy diet. (Jacobs and Tapsell, 2007) The properties of vitamins , minerals and antioxidants that work together in many mechanisms (food synergy) which controls blood glucose level.

METHODS

This was an open-label randomized crossover study. Sixteen subjects , having normal blood glucose levels at OPD of Mit Maitree Medical Clinics , randomly assigned for 2 groups. The first group ate 90 kcal of black glutinous rice and then switched having 90 kcal of black non-glutinous rice in the next two weeks, while another group ate black non-glutinous rice first and then switched having black glutinous rice.

The different types of rice have different nutrients. In this study had selected the rice with similar nutrients and phytochemicals. For black non-glutinous rice , use cooked Hom-nil rice 65 g which is 90 kcal and black glutinous rice, use cooked Neaw Dum 35 g.

Blood samples were collected for analysis of glucose and insulin levels 4 times, including fasting, 30, 60 and 120 minutes.

The subjects received a control meal for dinner before the experimental days, which was brown rice and fried chicken with basil and scald vegetables. The meal provides energy 310 kcal, carbohydrate 35 g, protein 37 g and fat 2.5 g.

The study analyzed statistical data using R program version 3.4.3. For statistical analyzing of the glucose and insulin levels after having each rice at the same time by using the student's paired T-test and analyzing the incremental area under the curve (iAUC) of blood glucose and insulin levels after having rice.

FINDINGS

This study started from April the 7th , 2018, to June 26th , 2018. There were 22 recruited subjects. Three people were excluded because of the DTX is greater than or equal to 100 mg%. And three people could not stay until finishing the whole process. Total number of the subjects were 16 people.

Table 1. Baseline characteristics of the subjects

Baseline characteristics of the subjects	
Age (year)	25.9 ± 4.2
Sex	
Male (person)	4 (25)
Female (person)	12 (75)
Body weight (kg)	60.0 ± 13.7
Height (cm)	162.1 ± 8.6
Body Mass Index (kg/m^2)	22.6 ± 3.3
Systolic blood pressure (mmHg)	106.7 ± 9.7
Diastolic blood pressure (mmHg)	64.6 ± 10.5
Heart rate (beat per minute)	75.5 ± 11.9
Underlying disease (person)	0
History of drug use (person)	0
Food allergy (person)	2 (12.5)
Supplements/Herbs (person)	0
Dextrostrip (mg/dL)	87.0 ± 7.6

All health parameters of the subjects are in normal levels. (Table 1)

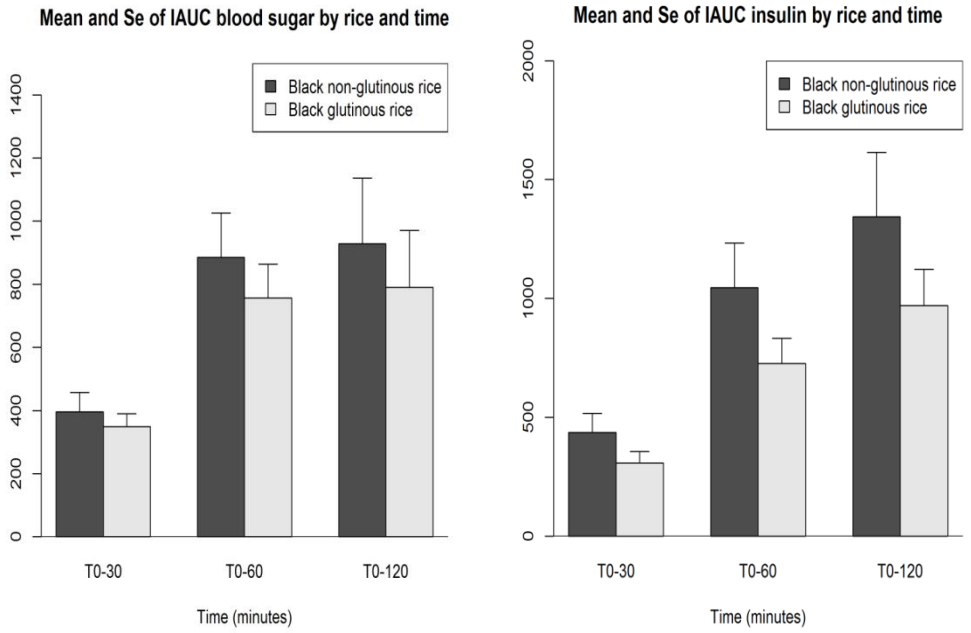
Table 2. Mean of blood glucose and insulin levels comparing between black non-glutinous rice and black glutinous rice while fasting after meal 30, 60, and 120 minutes

	Black non-glutinous rice Mean (SD)	**Black glutinous rice Mean (SD)**	**P-value**
Blood glucose			
Fasting	82.1 (6.3)	86.1 (5.1)	0.034*
Postprandial 30 min	108.5 (17.7)	109.3 (12.5)	0.873
Postprandial 60 min	88.2 (15.3)	90 (11.8)	0.699
Postprandial 120 min	77.4 (8.4)	83.3 (5.1)	0.014*
Insulin levels			
Fasting	8.4 (0.4)	7.3 (2.1)	0.243
Postprandial 30 min	37.6 (24.2)	27.8 (13.3)	0.143
Postprandial 60 min	19.9 (15.4)	14.6 (4.3)	0.070
Postprandial 120 min	6.9 (4.4)	8.2 (5.1)	0.251

Note : * means statistically significant ($P < 0.05$)

The blood glucose before and after having meal at 120 minutes of both groups; there were significant differences. While there were no significant differences on blood insulin levels at all periods of 2 groups. (Table 2)

Figure 1. Incremental area under blood glucose curve, iAUC and incremental area under insulin curve



There was no significant difference of incremental area under blood glucose curves after having rice of both groups. And there was no significant difference of incremental area under insulin curves after having rice of both groups. (Figure 1)

Table 3. Number and percentage of the most common types of rice to be consumed in daily life.

Type of rice	Number (%)
white non-glutinous rice	12 (75)
brown non-glutinous rice	1 (6.25)
white glutinous rice	3 (18.75)
black glutinous rice	0

The result from the questionnaire which showed that, rice, the subjects consume the most in daily life is white non-glutinous rice (75%). The second is white glutinous rice (18.75%). The third is brown non-glutinous rice (6.25%). (Table 3)

Table 4. Rice consumption satisfaction.

	Black non-glutinous rice Mean (SD)	**Black glutinous rice Mean (SD)**
Taste, color, smell	4.1 (0.6)	4.3 (0.9)
feeling their hunger satisfied after eating	3.9 (1)	4.2 (0.9)
the time between feeling hungry again	3.2 (0.9)	3.6 (1.1)
ease of supply	4.4 (0.9)	3.4 (1)
price	4 (0.7)	3.6 (0.7)
cooking methods	3.9 (0.9)	3.4 (1)
Average	3.9 (0.5)	3.8 (0.6)

Note : the scores ranged from 1-5, 1 = least satisfied 5 = most satisfied.

The subjects prefer black glutinous rice rather than black non-glutinous rice in taste, feeling their hunger satisfied after eating, and the time between feeling hungry again. In contrast, they prefer black non-glutinous rice to black glutinous rice in terms of ease of supply, price and cooking methods but the averages of scores are similar. (Table 4)

DISCUSSIONS

When considering the blood glucose levels, they were found that the blood glucose levels of two groups were different before having meal. Which should not be different because it is the baseline level of the same subjects. (Table 2)

The subjects were asked about the types and the amount of food which they had consumed differently during the week before the experiments and found that, 6 subjects ate some foods that may affect blood glucose levels : 3 subjects drank soft drinks , 1 subject ate white sticky rice , 1 subject ate Thai desserts and 1 subject ate sweet fruits. When comparing with the experimental results found that, the difference of mean blood glucose levels on fasting of these six subjects was 11.17 mg / dL. This can be explained why the baseline glucose levels were different. And the difference at this point will affect to the glucose levels at other periods as on postprandial at 120 minutes.

Table 5. Mean differences and Percentage differences of the blood glucose level of each period and the fasting glucose levels

Blood glucose	**Black non-glutinous rice Mean (SD)**	**Mean difference (%)**	**Black glutinous rice Mean (SD)**	**Mean difference (%)**
Fasting	82.1 (6.3)		86.1 (5.1)	
Postprandial 30 min	108.5 (17.7)	26.4 (32.16)	109.3 (12.5)	23.2 (26.95)
60 min	88.2 (15.3)	6.1 (7.43)	90 (11.8)	3.9 (4.53)
120 min	77.4 (8.4)	4.7 (5.72)	83.3 (5.1)	2.8 (3.25)

The mean differences and percentage differences of both groups were similar. Moreover, the differences of black glutinous rice were even less than the black non-glutinous rice. (Table 5)

It cohered with the iAUC of glucose which there was no significant difference. (Figure 1) This statistical analysis eliminates the unequal baseline problems. And it can be described as the theory that the blood glucose levels of normal people after meal is reduced to the baseline at the 2 hours.

From the study of amylose and amylopectin content in rice (Sunee et al, 2015), glutinous rice is likely increase higher blood glucose levels than non-glutinous rice as in many studies in white rice. But the same attribute of black rice are ; High fiber content which reducing intestinal glucose absorption, so, blood glucose increases less than consuming white rice (Seki et al, 2005) and the attribute of many vitamins, minerals and antioxidants that work together in many mechanisms are called food synergy which controls blood glucose level. (Jacobs and Tapsell, 2007) It can be explained why this research shows that having both black glutinous rice and black non-glutinous rice have no different effect to blood glucose and insulin levels.

CONCLUSION

In conclusion, having black non-glutinous rice and black glutinous rice in the same amount of energy have no effect on blood glucose levels. The insulin levels were not significant difference in two groups. The iAUC of insulin of both groups were not significant difference. It can be concluded that having black non-glutinous rice and black glutinous rice in the same amount of energy have no effect to insulin levels.

RECOMMENDATIONS

1. Further studies in pre-diabetic or diabetic patients.
2. Long-term studies should be done to determine the blood glucose levels, insulin levels and other parameters of long-term consumption of rice such as HbA1c and serum lipids.
3. It should be further explore that people who mostly consume glutinous rice, and focus on how much energy that they get, more or less compared to the normal proportion should be eaten.

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A Study of Oral Turmaric Power on The Level of Marker of Chronic Inflammation and Glycosylated Hemoglobin

Jareeporn Pokpirom, and Patana Tengumnuay

Abstract

Now a day chronic diseases are the big problem in the world. And we know that the underlying cause is chronic inflammation. Turmaric is the herbal that used to help in treatment of many diseases for a long time. Curcumin is the active ingredient in Turmaric that we have known for inhibit many inflammatory pathway so that it can help to prevent chronic inflammation and chronic diseases

We have studied on the consumption of the Turmeric power, for the result in the decreasing level of chronic inflammation (hs-CRP) and Glycosylated hemoglobin (HbA1c). The result show that consuming the Turmeric powder with the enhancement formula which stimulated the absorption rate (added some black peppers in the ratio of 20:1) in the 12 weeks' time; it actually help to reduce hs-CRP and HbA1c but didn't increase on the liver enzyme (no increased of the SGPT level).

The study process was called a Prospective Clinical Trial. It was done by observing and studying on a sample group in of 46 people with the Metabolic Syndrome who lived in Suratthani Province area. The sample group was given to consume the Turmeric powder for 12 weeks continuously. They were tested on the level of their hs-CRP, HbA1c and SGPT in blood before and after the consumption of the Turmeric; the results were analyzed by the Pair-T-Test statistic.

The result after studying show that after consuming the Turmeric power for the 12 weeks, the hs-CRP and HbA1c levels in blood of the sample group were decreased significantly ($p< 0.05$) but didn't increase in the level of liver enzyme. In additional, SGPT level had also decreased significantly.

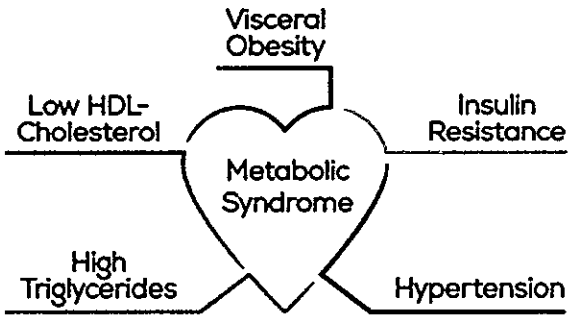
Key words : Turmaric, Curcumin, hs-CRP, HbA1c,SGPT

Introduction

Now a day world population are faced from chronic diseases like Hypertention, Cardiovascular diseases, Stroke, Diabetes, GI problem, Alzheimer, Arthritis, Chronic lung diseases , Immune diseases and Cancers etc. We know that the causes of these diseases are influence from chronic inflammation or oxidative stress that come from modern life style and bad food we have consumed. (Reuter,S.,et al., 2010, Schraufstatter,I.,et al.,1988) According to WHO in the year 2005 around 60% of world population died from chronic diseases. (Global status report on non-communicable diseases 2014) From the report of minister of health of Thailand in the year 2012 to 2015 found that the rate of Heart disease in Thailand

increase continuously. In the year 2014 about 58,681 patients died from heart and vessel diseases and in the year 2015 about 130,942 patients went to emergency room with Heart disease.(National Institues of Heath News, Post Today 14th Feb,2016)

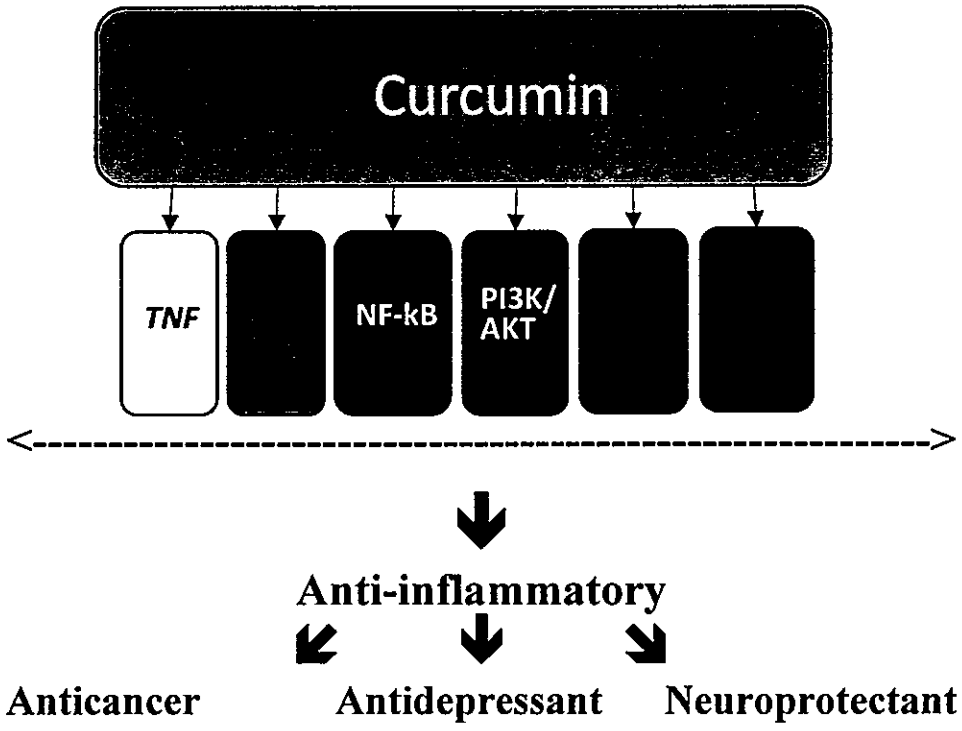
Metabolic syndrome is the condition in the start of abnormalities that can progress to chronic diseases especially Cardiovascular disease and Diabetes if we do not take care for prevention. In this group rather high hs-CRP and HbA1c that are the markers of chronic inflammation can be found. So that we used this group for the samples of this study.

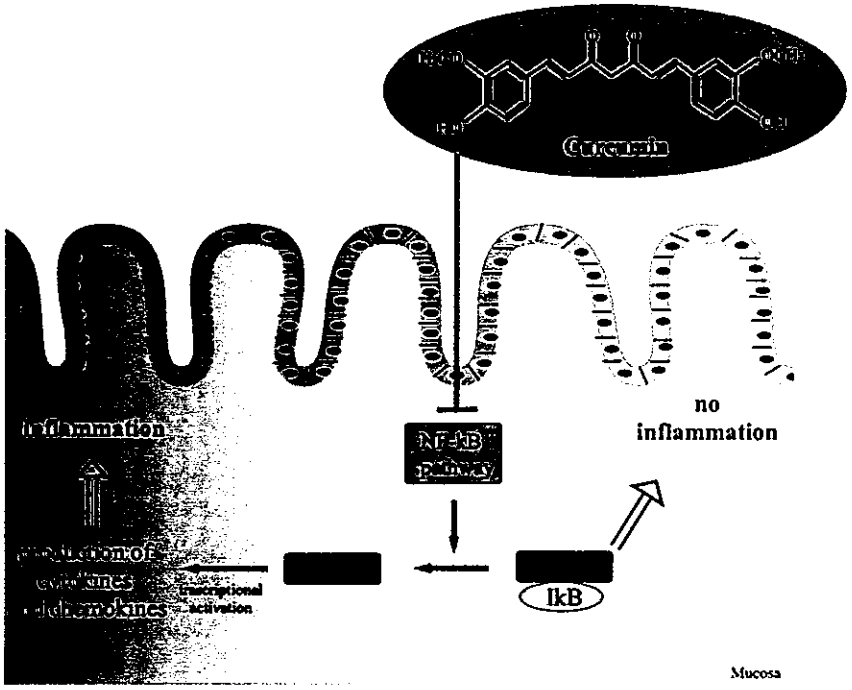


He, Y., et al, 2015

Literature review

Turmaric is the usefulness plant for ancient medication in the world. It composes of many nutrients,many vitamins and minerals, espicially Curcuminoid mainly is Curcumin that can prevent oxidative stress and anti- inflammation through many pathway esp. NF-kB pathway. So it can prevent many chronic diseases. Many studies in both vitro and vivo for Curcumin show the positive results of Curcumin on anti-cancer, anti-depressant, neuroprotectant, anti-virus, antiamyloid, anti-artritis, anti-oxidative stress and anti-inflammation with less side effects.(He,Y.,et al.,2015)





Turmaric or Curcuma Longa Linn; is a local herb in Asian countries such as Thai, Chinese, India and others. It has the root under the ground, in Ginger family, dark yellow color and has a particular smell. It is used often for cooking, dye yellow color and ancient medication. For a long time that Turmaric used as a Herb for treatment of GI problem mainly and so now. There are many studies of Cucumin for antioxidative stress and anti-

inflammation to prevent and co-treatment of chronic diseases with less serious side effects.

However the disadvantage of Curcumin is the poor bioavailability because of the poor absorption from hydrophobic property, rapid metabolism and short biological half life from Glucuronidation and Sulfation for detoxification in liver. So current studies have solved this problem by many methods such as adding something to enhance bioavailability like Piperine or green tea or in the form of Curcumin extraction or nano-micelle technology for good absorption. And in oral form should take with meal that contained good oil.(Anand,P.,et al.,2007, Sehgal,A.,etal.,2011, Shoba,G.,et al.,1998)

Normally Turmaric contain 5-7 % of Curcumin; so pure oral Turmaric should more than 3.6 gm./day for clinically benefit. (Sharma,R.A.,et al.,2004) However, there is 13.34% Curcumin in Turmaric that is located in Amphoe Ban Ta Khun Surattani Thailand that used in this study. (examed by Center for Medical science 11 Suratthani ,February 2018)

There are some samples of the studies about Curcumin on inflammatory markers like;

1. Panahi Y.et al. : Study antioxidant and anti-inflammatory of Curcuminoid 1 gm.-Piperine 10 mg. combination per day on 59 samples metabolic syndrome compared with 58 samples metabolic syndrome on placebo for 8 weeks monitored level of SOD,MDA and CRP. The result show decreasing CRP and MDA and increasing SOD. (Panahi,Y.et al.,2015)

2.The study of Sahebkar A.: meta-analysis review from Pubmed/Medline and SCOPUS in 6 studies for decreasing CRP of bioavailability-inproved preparation Curcuminoids 172 samples compared with placebo 170 samples for more than 4 weeks.The result shows CRP decreased significantly in Curcuminoid group.(Sahebkar,A.,2014)

3. The study of de Meloa,ISV et al.: systemic review and meta-analysis of randomized controlled trials 11 studies,study on Curcumin, combined Curcuminoids or Turmaric extract for decreasing FBS and HbA1c. The results show the decreasing of FBS and HbA1c significantly.(de Meloa,ISV.et al.,2017)

4. The study of ZHANG Qing-bin et al.: study for Curcumin on hs-CRP and lipid in cardiovascular patients. Randomized controlled trial study in 64 cardiovascular patients devided into 2 groups, first group 34 samples on Curcumin capsule 100 mg. tid. after meal and second group 30 samples on Atovastatin 10 mg.OD., study for 6 weeks and monitoring before and after of TC,TG,LDL,HDL and hs-CRP. The result show that in both groups can decrease the level of hs-CRP and increase HDL. TG decreased more in Curcumin group but TC and LDL decreased more in Atovastatin group.(ZHANG Qing-bin. et al.,2007)

This study aimed to evaluate whether oral Turmaric powder can decrease the level of hs- CRP, HbA1c and do not increase SGPT level. To develope and emphasize Turmaric in a form that easy to prepare and lower cost, easy to consume and efficient to lower chronic inflammation and prevent chronic disease.

Methods

The study was approved by the Ethics committee, Facculty of Regenerative Medicine, Dhurakij Pundit University. No.002/61

This prospective clinical trial collected samples from population that come to the Hospital in Suratthani Province for health checking from February to May 2018 and agreed to participate in this study. Inclusion criterias were samples age more than 18 years old with Metabolic X syndrome , composed 3 out of 5 from modify NCEP ATP III 2001 criteria. Those are belly fat or BMI more than 25, blood TG equal or more than 150 mg%, blood HDL less than or equal 40 mg% in men and 50 mg% in women, blood pressure equal or more than 130/85 mmHg and FBS more than 100 mg%. Exclusion criterias were inclusion samples who pregnancy or breast feeding, SGPT more than 60 mg%, discontinuous consume Turmaric, allergy from Turmaric or Piperine, had any sickness that effect the level of hs- CRP, Hb A1c or SGPT, had any disease that cause coagulopathy or loss follow up. There are 46 samples were collected according to including criterias from population then briefly informed and consent. Blood test before the study were performed for indicators (hs CRP,HbA1c and SGPT) and the datas were saved in record form. The samples were received oral Turmaric for 2 capsules and 3 times per day with meals every day for 12 weeks. We used Turmaric planted in Amphoe Bantakhun Suratthani Thailand that contained high Curcumin (13.34%) mixed with Piperine (black peper) and produced by the Pharmacist from Thachang Hospital in Suratthani Province. One capsule contained 400 mg. Turmaric and 20 mg. Piperine. The samples were followed up monthly to see any side effects. When the study was completed for consumed Turmaric 12 weeks, 34 samples from 46 samples (12 samples were excluded) haved blood test for indicators again. The datas were collected and analized with Pair T-test statistic to compare the value before and after of inflammatory indicators then summary and report.

Finding

Table 1. show sex and number of inclusion samples

Sex	Number	Percent
male	4	8.7
female	42	91.3
total	46	100

Table 2. Shows the numbers and genders of the samples who lasted until the end of the study

Sex	Number	Percent
male	3	8.82
female	31	91.18
total	34	100

In metabolic syndrome, sample group found more in women than men

Table 3. Shows the factors of exclusion samples

Exclusions	Number	Percent
Side effect	5	41.7

Did not follow up	2	16.6
Sickness within 1-2 weeks before the final of the study	5	41.7
total	12	100

There are 5 samples (11% of total samples) leaved the study because of a lot of bloating that may be come from high fiber of Turmaric, and 5 samples fall in sickness that may be interfere for value of the indicators nearly the end of the study, so be excluded from the study.

There are 9 samples (20%) gained body weight about 1-3 kg. (but didn't leave the study), that may be from good digestion and eating a lot, solved by improving life style for eating and exercise.

Table 4. Shows the number of the samples into age groups

Age range (year)	Number	Percent
25 – 35	7	20.6
36 – 45	10	29.4
46 – 55	17	50
Total	34	100

Incidence of Metabolic-x syndrome increased fluctuate with advance age.

Table 5. Shows the mean of hs-CRP, HbA1c and SGPT before and after the study

Indicator	Mean (d)	Number of samples (n)	Std. Deviation	Std. Error Mean
hs-CRP before	3.6594	34	3.28856	.56398
hs-CRP after	2.7994	34	3.05985	.52476
HbA1cbefore	5.5794	34	.67679	.11607
HbA1c after	5.4941	34	.70321	.12060
SGPT before	23.5294	34	10.23729	1.75568
SGPT after	20.7941	34	9.38012	1.60868

The mean of hs-CRP, HbA1c and SGPT before and after the study shows in table 5. That decreasing of 3 markers

Table 6. Show the analyzed results of hypothesis

Indicator	Number of samples (n)	Mean (d)	Std. Deviation	t	p-value* (1-tailed)
hs-CRP before – after	34	.8600	1.72465	2.908	.003
HbA1c before– after	34	.08529	.18279	2.721	.005
SGPT before – after	34	2.73529	6.45407	2.471	.009

* p-value less than 0.05 = significant decrease

The result of hypothesis from analyzed with Pair T- test found that consuming oral Turmaric for 12 weeks can decrease inflammation indicator (hs-CRP), glycosylated hemoglobin (HbA1c) and liver enzyme (SGPT) significantly in statistic at P-value <0.05

Discussions

The prospective clinical trial study about consuming oral Turmaric 2400 mg.with piperine 120 mg per day (2 capsules 3 times a day) for 12 weeks in metabolic syndrome samples group on chronic inflammation indicator (hs-CRP), glycosylated hemoglobin (Hb A1c) and liver enzyme (SGPT) shows the results that decreasing of hs-CRP and Hb A1c on statistic significantly and do not increase SGPT significantly that we worried for liver damage from Turmaric that is Herb metabolized in liver. But in the opposite side, it can decrease SGPT significantly on statistic that showing may be positive result of turmeric for liver. This study show the result corresponding with previous studies of Panahi Y.et al., Sahebkar A.et al. and ZHANG Qing-bin et al. that studied for hs-CRP and the study of de Meloa,ISV.et al. for HbA1c that oral Curcumin or Turmeric can decrease those indicators.

The disadvantage of this study ; because of no placebo group , although the result is corresponding with the hypothesis that the decreasing of hs-CRP,HbA1c and SGPT significantly compared between before and after of the study. Nevertheless there are other factors that may be influence for those indicators like behavior about eating lifestyle or exercise. So it is credible if there is the placebo group in the design of the future study. And for the most usefulness in clinical, the next future study should be design in the patient that both having the diseases and high level of the indicators to compare before and after in consuming Turmaric or Curcumin.

The highlight of this study : Turmaric that used in this study contained high Curcumin and available in Suratthani Province in the southern of Thailand, accustomed for southern people using for cooking. So if we use for preventing chronic disease that is the big problem for population worldwide, it shoud be great. Another more; we used Piperine (black

pepper,the common herb) that is the great property to enhance bioavailability of Curcumin. Both Curcumin and Piperine in this proportion are easy to prepare for use. They are less side effects , common plant using at home.

Recommendations

1. It should be advantage if there are control group in the design of the further study.
2. For decreasing the side effects for using in long term of Curcumin from the area we used in this study (contained high Curcumin) and also the good result of anti-inflammation, the next design study may decreasing amount of Turmaric.

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The effect of oral Nystatin drug to urine indicant level in dysbiosis

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Abstract

Introduction

Changes in the composition of gut microflora are associated with an increase in chronic diseases. Urinary indican is one of the most common and easily assessable markers of intestinal dysbiosis. Candida albicans is the most common type of fungus in the gut and also one of the intestinal dysbiosis causes. The use of Nystatin to decrease Candida albicans is safe, less expensive and side effects.

Method

48 persons, 25-50 years old who were suspected to be intestinal dysbiosis required to answer the dysbiosis questionnaire until 30 subjects were selected by inclusion criteria. Nystatin was prescribed for all subjects twice a day continuously until repeated indican test at the end of the second and fourth week respectively.

Results

The results showed that was 96.67 percent of the negative result improvement in both second and fourth week, respectively. The negative result of the second and third tests was compared with the first test, both p-value < .001 respectively, but the second test compared with the third test showed it was not statistically significant.

Conclusion

Nystatin is likely to be beneficial for decreasing the urinary indican level. Candida albicans removal may relate to the improvement of the gut ecosystem.

Keywords : Nystatin, urinary indican, dysbiosis

The effect of Nystatin on urinary indican level in Dysbiosis

1. Introduction

Thailand has little available informative sources of intestinal dysbiosis. Most likely, dysbiosis is not prioritized as a common medical checked-up system, so the effects of dysbiosis are still unintentionally negligible. For supporting and improving an important medical evidence, we decided to study the effect of nystatin to urinary indican level in dysbiosis.

The digestive tract is an important human health system, there is normal flora in each part. [1] Microorganisms in the intestinal tract are living normally together as a microbiota. There are more than 99 % bacteria.[2] Urinary indican is one of the most common and easily assessable markers of intestinal dysbiosis.[3] There are thousands of different bacteria in the intestinal microbiota.[4]

Growing evidence shows that dysbiosis of the gut microbiota is associated with the pathogenesis of both intestinal and extra-intestinal disorders. Intestinal disorders include inflammatory bowel disease, irritable bowel syndrome (IBS), and coeliac disease, while extra-intestinal disorders include allergy, asthma, metabolic syndrome, cardiovascular disease, and obesity [5], systemic inflammation has been associated with autoimmune diseases, such as type 1 diabetes (T1D).[6,7] The common causes are unhealthy lifestyle affecting firstly [8] and also antibiotics, psychological and physical stress, and dietary factors etc. which contribute to intestinal dysbiosis [9], so clinicians would do well dealing with the causes of this condition.

Candida spp. is found in about 70 percent of all fungal colonies in the gut. [10] Candida albicans, the most abundant found in the fungal population in intestinal microbiota [11], the most common cause of fungal infections [12,13] leading to a range of life-threatening invasive to non-life-threatening mucocutaneous diseases. The yeast overgrowth is caused by the presence of the excessive number of Candida albicans. It can form a biofilm which destroys tissues and induce the immune system. Its colonization in the GI tract may impair mucosal barrier defense against gram-negative bacteria. The clinical role of gut antifungal prophylaxis in protecting against gut-derived gram-negative sepsis is speculative.[14] Yeast infections of the intestinal mucosa are uncertain clinical significance and their possible connection to irritable bowel syndrome. Mucosal yeast infections are treated with topically active polyene antimycotic drugs.[2] It is also the cause of many important

symptoms such as chronic fatigue syndrome, insomnia, allergy or rash by unknown cause. Non-immunocompromised subjects may cause unexplained GI symptoms.[15]

Nystatin is a polyene antifungal agents, safe and efficacious, the most commonly used to treat Candida albicans in the gastrointestinal tract[16,17]but it has a very little effect on other microbes in the body. Nystatin is not absorbed from the gastrointestinal tract when orally administered.[18] Therefore, the topical use of nystatin is considered the most common route of administration in dentistry, as systemic exposure is minimal. .[19] It is suitable for the treatment of yeast infections and not killing the beneficial bacteria in the intestinal tract. Polyene is less expensive and side effects than fluconazole, which can be absorbed by the azole derivative.[16] Nystatin is superior to placebo in reducing localized and systemic symptoms in individuals with presumed fungus hypersensitivity as selected by a 7-item questionnaire. This superiority is probably enhanced even further by a sugar-and yeast-free diet.[20] Topically active antimycotics (such as nystatin preparations) are available for the treatment of superficial infections of the orogastrointestinal tract. Modulation of intestinal microflora with probiotics can suppress Candida colonization.[2] Oral nystatin prophylaxis efficiently prevented Candida spp. colonization in ICU patients at low risk of developing invasive candidiasis.[21]

Urinary indican (indoxyl sulfate) is produced by the reaction of bacteria to the intestines, a urinary marker of dysbiosis.[22] Most are eliminated through the feces, the rest is absorbed, detoxified and secreted by urine. Using urinary indican as an initial assessment is very convenient and the cost is affordable.[3] Large shifts in bacterial populations induced by the artificial sweetener saccharin have also been demonstrated by changes in indican excretion.[23] There is no age adjustment for reference limits is necessary since excretion has been shown to be constant for young and elderly control subjects.[24] The test sensitivity may be enhanced by oral loading 5 gram of tryptophan.[25] Case Studies Records from patients who had a urine indican ordered were examined for provisional diagnosis. There was 83 percent (15 out of 18) of those tested were positive.[26] There are not many standardized inspection facilities, so most of the treatments and follow-up are based on evidence from the patient's signs and symptoms. D-Arabinitol, a metabolite of most pathogenic Candida species [22,27], a substance that can be detected in the urine from the chemistry

of candida yeast. D-Arabinitol levels in urine increased in patients with invasive candidiasis. In addition, the measurement of serum level is one of the diagnostic criteria for invasive candidiasis[28,29] and urinary levels of the sugar alcohol, D-arabinitol, used as a reliable biomarker for invasive candidiasis which has reliable scientific support. [27,29] We have focused on the decreasing way of intestinal Candida albicans as a concept in urinary indican monitoring and evaluation. For furthermore of advanced study and opportunities for dysbiosis patients to be treated and prevented unintended consequences that can lead to serious complications.

2. Material and Method

2.1 Ethics

The study was performed in accordance with the recommendations of local ethics committee from Dhurakit Pundit University (110/1-4 Prachachuen Road, Laksi, Bangkok 10210, Thailand) www.dpu.ac.th. All subjects provided written informed consent in accordance with the Declaration of Helsinki, The Belmont Report, CIOMS Guildline and International conference on harmonization in good clinical practice or ICH-GCP. The protocol was approved by (Process number 002/60EX)

2.2 Subject selection and allocation

The purpose of this study is to evaluate the effect of Nystatin on urinary indican as the pre-experimental study. 49 persons, 25-50 years old both male and female, who suspected to be intestinal dysbiosis were required to answer the dysbiosis questionnaire. Those who attained the required score, more than 80 and 120 points in males and females respectively, were classified as a "possible dysbiosis" continued to attend the urinary indican testing. There were 48 persons who passed the required scores and went onto take the urinary indican testing, the 9 remaining of 48 persons did not take urinary indican testing due to their individual limitations. So 39 persons who could take the urinary indican testing. So there were only 30 subjects included in the study and divided into 2 groups. Urinary indican testing reported as a colorimetric display of indican concentrations ranging from level 0,1,2,3 and 4 respectively (negative to maximum). We selected only those who had positive results in level 2,3 and 4 could be included in the study and level 0 and

1 could be negligible. 15 persons of level 3 and 4 positive urinary indican classified as "High group", and 15 persons of level 2 positive urinary indican classified as "Low group". 3 persons were level 1, and 6 persons were level 0. These were both classified as "Negative group".

2.3 Clinical assessment

Medical condition history attention was focused on pharmacological therapy, underlying disease.

Inclusion Criteria

1. The results of 25-50 years old male and female subjects who passed the dysbiosis questionnaire scoring and the urinary indican testing are shown in level 2 3 and 4 of Indican Color Chart respectively.

2. The exclusions were congenital dieseases, underlying diseases and gastrointestinal diseases which needed to be treated with continuous medications, volunteers without the following conditions: digestive and absorption disorders, hypochlorhydria, cancer, concurrent intestinal fungal infection, bowel obstruction, irritable bowel syndrome (IBD), irritable bowel syndrome (IBS), diverticulitis, diverticulosis.

3. No treatment by antibiotics, NSAIDs, other anti-inflammatory drugs, immunosuppressants, steroids, antacids at least 1 month before the first urinary indican testing.

4. No probiotics at least 7 days before the testing and also during the trial.

5. No history of Nystatin allergic reaction.

6. No intake of tryptophan-contained supplements. (False positives may be found)

Exclusion Criteria

1. Subjects who had got adverse reactions from intake of nystatin.

2. Subjects had to be treated by admittance to a hospital, antibiotics, anti-inflammatory drugs, steroids, antacids, during the study period.

3.Subjects who did not cooperate, participate and continuously intake nystatin for more than 24 hours.

2.4 Indoxyl sulfate urinary determination

Urinary indican level evaluation is based on the amount of color intensity measured by a certified standardized test kit sourced from the certified Cellfix company limited in Bangkok Thailand. Fresh urine samples were collected in the morning after fasting overnight, 2 ml of urine were mixed with 2 ml of Obermeyer reactant and the mixture was allowed to stand for 5 minutes at room temperature. The product of this reaction is indigo, which is intensely blue. Then 2 ml of chloroform were added and mixed together for 10 minutes in order to separate the lower colored layer from the oily phase. Urinary indican testing reported as a colorimetric display of indican concentrations ranging from level 0,1,2,3 and 4 respectively (negative to maximum).

2.5 Nystatin

Nystatin, the product of T.O. Chemicals (1979) Co.,Ltd. Bangkok Thailand, is only one provider in Thailand. 500,000 international unit of oral suspension was prescribed for all subjects twice a day in morning and evening continuously until repeated urinary indican testing at the end of the second and fourth week respectively. During the study period, all subjects were tested a total of 3 times.

2.6 Statistics

Non-sensitive data of all the subjects were entered into a password-protected database. Indican levels are the ordinal scale variable. The statistic analysis performed using a nonparametric test as appropriate. Percent of improvement were reports of comparison between before and after trials from the total number of samples (n) due to the urinary indican level is an ordinal scale.

-The Cochran Q test statistics was performed to analyze the difference of the ratio of negative results among 3 times of urinary indican tests.

-McNemar test was performed to analyze the difference of negative urinary indican results in each comparison of the first testing (prior to intake of nystatin) to the second and third testing respectively and also the second testing compared to the third testing.

-Chi-square test Fisher Exact Test was performed to compare the ratio of negative results between the high and low group.

-The statistical analysis of data was carried out using SPSS software.

-The value of $p < 0.05$ was set as the limit of statistical significance.

3. Results

A study of the effects of urinary indican levels before and after taking Nystatin. Percentage of improvement is calculated from the total number of samples (n) due to the urinary indican level as an ordinal scale.

Table 1 The results of all three urinary indican tests of all 30 subjects in Low and High groups.

Results of all tests	Low group n=15 (%)	High group n=15 (%)	Total n=30 (%)
The first test			
Negative	-	-	-
Positive	15 (50)	15 (50)	30 (100)
The second test			
Negative	15 (50)	14 (46.67)	29 (96.67)
Positive	-	1 (3.33)	1 (3.33)
The third test			
Negative	15 (50)	14 (46.67)	29 (96.67)
Positive	-	1 (3.33)	1 (3.33)

Data are reported as percent of improvement

The first test is "prior Nystatin trial", The second test is "after 2 weeks of Nystatin trial", The third test is "after 4 weeks of Nystatin trial".

Statistical Analysis

1) The result from the Cochran Q test: At least one time of testing that was significantly different of the proportion of negative urinary indican results at p-value < 0.05.

2) The result from the Mc Nemar test: The prior trial of negative urinary indican result was compared with the second and third testing, p-value = .000 respectively, these showed that the proportion of the negative results were statistically significant at p-value < 0.05 but on the second

testing compared with the third testing showed there was p-value = 1.00.

3) The result from the Chi-square test Fisher Exact Test, the proportion of negative results between high and low group compared, the result of the second and third testing were not statistically significant, p-value = 1.00

The study showed that at least two weeks of nystatin intake twice a day until after the second and fourth week could significantly decrease urinary indican level in dysbiosis. However, the effect in the fourth week compared to the second week was not statistically significant. The negative urinary indican level results between low and high group compared even in the second and fourth week also showed there were not statistically significant.

4. Conclusion

It is likely to be beneficial on a cost-effective scale when we add Nystatin as one of dysbiosis treatment as the concept of Candida albicans removal and decreasing the level of urinary indican in dysbiosis. Urinary indican testing is a safe, comfortable, and inexpensive procedure for dysbiosis screening, thus it may be one of the first choice indicators for dysbiosis. Additional and combined treatments are always recommended for individual and effective management of dysbiosis.

5. Discussion

Urinary indican (indoxyl sulfate), is produced by the reaction of bacteria to the intestines, a urinary marker of dysbiosis[22], performed as an initial assessment, very convenient and the cost is affordable.[3] Factors that may affect urinary indican levels such as digestive and absorption disorders, (e.g. oral loading of tryptophan [25][30], Antibiotics [31], cancer of gastrointestinal tract, bowel obstruction, small intestinal obstruction, diverticula, fistulae, surgical blind loop, previous ileo-caecal resections and/or motility disorders [32], irritable bowel disease [33]) If we exclude all mentioned factors that can induce positive urinary indican but the testing still showed positive, we may consider the intestinal yeast overgrowth to be one of the remaining possible cause leading to the positive result. The effect of the urinary indican levels may be linked to many serious complications such as the progression of chronic renal failure [34], glomerular necrosis in uremic patients, a potent co-carcinogen

for the urinary bladder in animal models [35], sporadic colorectal carcinoma (CRC). [36]

The concept of decreasing the number of pathogenic microorganisms, the most common cause of fungal infections is Candida albicans [12][13], the most abundant found in the fungal population in intestinal microbiota. [11] Nystatin, is the most commonly used to treat Candida albicans in the gastrointestinal tract, may lead to improvement in the gut ecosystem, is safe and efficacious [16][17], is not absorbed from the gastrointestinal tract when orally administered.[18]

However, this is a preliminary, pre-experimental study, and how to confirm whether Candida albicans has been decreased may be additionally investigated. A standardized laboratory examination is necessary to solve the overgrowth of intestinal Candida albicans such as urine D-arabinitol, urine organic marker of invasive candidiasis. [22][27][29] None of the previous studies have addressed the effect of Nystatin on urinary indican level and alteration in gut microbiota associated with dysbiosis.

Further studies on fecal microbiota are warranted to investigate the potential role of gut dysbiosis [3] and the most accessible source of the GI microbiota. [37] SIgA is the most abundant antibody molecule on mucosal surfaces of humans and most other mammals [38][39][40], while the gold standard for diagnosing small intestinal bacterial overgrowth is still microbial investigation of jejunal aspirates. [27][41] Therapy for any type of dysbiosis should be integrated to solve all causes, symptoms and complications, and individuals.

6. Conflict of Interest Statement

- The authors declare that the study was no conflict of interest and not supported by any other foundation.

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