

Joint Event on



**2<sup>nd</sup> WORLD OBESITY CONGRESS**

&

International Conference on

**DIABETES AND ENDOCRINOLOGY**

&

**2<sup>nd</sup> WORLD VACCINES AND  
IMMUNOLOGY CONGRESS**

October 15-16, 2018 | Tokyo, Japan

**DAY 1**

**Scientific Tracks & Abstracts**

# Day 1

# SESSIONS

October 15, 2018

Vaccination and Immunisation | Childhood Obesity | Diabetes and Endocrinology

## Session Introduction

### Session Chair

**Vaclav Bunc**  
Charles University  
Czech Republic

### Session Co-chair

**Orlando Leite de  
Carvalho**  
The Santa Marcelina  
Hospital, Brazil

- Title: Health information technology and cardiovascular health of diabetes patients**  
Eduardo J Simoes, University of Missouri School of Medicine, USA
- Title: Clinical effect and research of low carbohydrate diet (LCD) for obesity and diabetes**  
Hiroshi Bando, Tokushima University, Japan
- Title: The relationship between diabetic risk factors, diabetic complications and salt intake**  
Shuang Han, Harbin Medical University, China
- Title: Vaccination against yellow fever in a patient on immunobiological with diagnosis of Psoriatic arthritis**  
Patricia Avila Fabrini, Santhè Clinic, Brazil
- Title: Effect of physical exercise on adiposity and aerobic fitness in middle age men differing in body mass**  
Vaclav Bunc, Charles University, Czech Republic
- Title: The access to produce compatible viral vaccines for individuality**  
Tirasak Pasharawipas, Rangsit University, Thailand
- Title: Childhood obesity**  
Horia Al Mawlawi, Prince Sultan Military Medical Centre, Saudi Arabia

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October 15-16, 2018 | Tokyo, Japan

Eduardo J Simoes et al., Biomed Res 2018, Volume 29 | DOI: 10.4066/biomedicalresearch-C5-013

### HEALTH INFORMATION TECHNOLOGY AND CARDIOVASCULAR HEALTH OF DIABETES PATIENTS

**Eduardo J Simoes, Yilin Yoshida, Jesus Soares, Mihail Popescu,  
S D Nielson and Susan A Boren**

University of Missouri School of Medicine, USA

**Background:** Cardiovascular disease (CVD) is the most frequent cause of morbidity and mortality in type 2 diabetes (T2D) patients. Effective control of blood pressure, lipid profiles and weight can reduce cardiovascular complications significantly. Health information technologies (HITs) in the management of diabetes, appears effective in reducing HbA1c, however, their effect on T2D patients' cardiovascular health has not been well evaluated.

**Objective:** We used meta-analysis to identify a common effect of HIT on CVD management across randomized control trails (RCT).

**Methods:** We systematically searched Medline, Cumulative Index of Nursing and Allied Health Literature and the Cochrane Library for peer reviewed RCTs that studied the effect of HITs (i.e. mobile phone-based applications, web-based applications, SMS/Text and others) on systolic blood pressure (SBP), diastolic blood pressure (DBP), HDL, LDL and triglycerides. We hand searched reference lists of eligible articles and reviewed articles to identify missed articles. To address the concern that the trials' effect on CVD outcomes may be a mixed product of HITs and standard treatment (e.g. medication regimens and/or lifestyle therapies), we restricted analysis to studies that compared effects between HITs intervention plus standard care and standard care. We analyzed data using random effects meta-analytic models.

**Results:** We included in the final analyses six eligible studies (six estimates) with measurement of SBP, five (five estimates) of DBP, five (five estimates) of HDL, four (four estimates) of LDL and five (five estimates) of triglycerides. HITs are associated with significant reductions in SBP, DBP and LDL. Standardized mean differences were  $-0.58$ , 95% CI  $(-1.06, -0.10)$ ,  $-0.70$   $(-1.34, -0.07)$  and  $-0.30$   $(-0.47, -0.14)$ , respectively.

**Conclusions:** HIT are effective in CVD management, especially in blood pressure control and LDL management for T2D patients. HIT should be promoted for the prevention of diabetes complication, especially among T2D patients whose CVD health is not properly managed.

### BIOGRAPHY

Eduardo J Simoes has completed his MD from University of Pernambuco, Brazil, his MSc from University of London, England and MPH from Emory University, USA. He is the Chair and Distinguished Professor of University of Missouri, USA. He has over 120 publications that have been cited 4691 times (Google Scholar), and his publication H-index are 33 (Google Scholar) and 27 (Scopus). He has been serving as an editorial board member of five reputed journals.

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Hiroshi Bando, Biomed Res 2018, Volume 29 | DOI: 10.4066/biomedicalresearch-C5-013

### CLINICAL EFFECT AND RESEARCH OF LOW CARBOHYDRATE DIET (LCD) FOR OBESITY AND DIABETES

#### Hiroshi Bando

Tokushima University, Japan

There have been various discussion concerning Calorie Restriction (CR) and Low Carbohydrate Diet (LCD) for years. Author and colleagues have treated lots of patients with metabolic syndrome such as obesity and type-2 diabetes mellitus (T2DM) for LCD. We have investigated clinical research related to CR and LCD, including ketone bodies (KB), Morbus (M) value, insulinogenic index (IGI) in the field of diabetes and metabolic medicine. As to clinical effect of LCD for weight reduction, we have data of 2699 cases. Reduction ratio and percentage was that 10% and more than 10% in 25.6%, 5.0-9.9% in 32.0%, 2.5-4.9% in 21.2%, totally 78.8% in 2.5% and more than 2.5%. LCD showed clinical effect in 2 weeks. We have utilized specific protocol with the meal of CR and LCD, in which the content of carbohydrate is 60% and 12%, respectively. Patients were provided CR on day 1, 2 and LCD on day 3-14. Several biomarkers related to glucose variability were investigated and several studies were reported so far. They included daily profile of blood glucose, average blood glucose, M value, triglyceride, HDL-C, LDL-C, RLP-C, atherogenic index (T-C-HDL/HDL), TG/HDL value, uric acid, 3-hydroxybutyric acid (3-OHBA), acetoacetic acid (AcAc), insulinogenic index (IGI) and response of C-peptide for CR meal, and so on. Findings from the effect of LCD are as follows: Subjects were patients with Type 2 diabetes mellitus (T2DM), admitted for 14 days and given diabetic evaluation protocol. Mean HbA1c was  $8.0 \pm 1.7\%$ . Median data day two vs. four were 208 vs. 147 mg/dL in average glucose, 146 vs. 21 in M value and 123 vs. 94.5 mg/day in urinary C-peptide. Consequently, LCD showed clinical effect of reducing weight and decreasing blood glucose and M value. We will continue and develop clinical practice and research concerning CD and LCD furthermore.

### BIOGRAPHY

Hiroshi Bando is a Physician with specialties in diabetes, primary care medicine and life style-related disease. He has over 2000 Japanese publication articles, 30 books, 80 English medical publications, 800 lectures. He was the Chairman of Annual Congress of 8th Japanese Primary Care Association (2017) and Editor of several medical journals on diabetes, endocrinology and metabolism. He has been the Chairman of Shikoku Island division of Integrative Medicine Japan and was the chairman of annual Congress of 9th Japanese Music Therapy Association (2009). He is also a pianist and won the silver prize in 3rd European International Piano Concours in Japan (EIPC) (2012).

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### THE RELATIONSHIP BETWEEN DIABETIC RISK FACTORS, DIABETIC COMPLICATIONS AND SALT INTAKE

**Shuang Han**

Harbin Medical University, China

The relationship between salt and hypertension is the focus of a large amount of research, there are few reviews of the relationship between salt and diabetes, despite the increasing incidence of diabetes. By searching PubMed and the Cochrane Library, we summarized the relationships between diabetic risk factors, diabetic complications and salt intake. The pathophysiological mechanisms underlying the effects of salt on diabetes risk factors and diabetic complications are also discussed. Our findings should assist experts and scholars to understand the current research of salt intake and to pay more attention to the prevention and treatment of related diseases caused by excessive salt intake; guide treatment for patients with diabetes mellitus; and provide a reference for government departments to formulate a reasonable salt restriction policy. We also recommend future research directions.

### BIOGRAPHY

Shuang Han is a Doctor in first affiliated hospital of Harbin Medical University, China. She is an Endocrinologist who is devoted to the research of diabetes. She devoted all her passion and energy to education, scientific research and clinical work and made great contributions to human health. The relationship between salt intake and the complications of diabetes has been further studied, which laid a solid foundation for the prevention and treatment of diabetic complications.

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Patricia Avila Fabrini, Biomed Res 2018, Volume 29 | DOI: 10.4066/biomedicalresearch-C5-013

### VACCINATION AGAINST YELLOW FEVER IN A PATIENT ON IMMUNOBIOLOGICAL WITH DIAGNOSIS OF PSORIATIC ARTHRITIS

**Patricia Avila Fabrini**

Santhè Clinic, Brazil

Patients with psoriatic arthritis and other immunomediated chronic diseases present a risk of infection greater than the normal population. The increased risk is due to the disease, as well as the drug therapy employed. Vaccination is one way to prevent infectious diseases. It is effective in reducing morbidity and mortality in patients with rheumatologic diseases undergoing immunobiological treatment. Vaccines made from dead viruses and bacterias are indicated in this group of patients. However, vaccines containing bacterias or live virus such as yellow fever vaccine, are contra indicated because they have the potential to cause uncontrollable infection. We describe a case of a patient in use of immunobiological drug who received yellow fever vaccine without medical consent, the side effects observed, potential risks and management of this patient by Santhe's staff.

### BIOGRAPHY

Patricia Avila Fabrini has an in fusional center in Belo Horizonte, Minas Gerais, Brazil. She has her expertise in immunobiological drugs and in her center of treatment, she also has a vaccination center for the safety use of these drugs that acts in the immune systems of patients.

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Vaclav Bunc, Biomed Res 2018, Volume 29 | DOI: 10.4066/biomedicalresearch-C5-013

### EFFECT OF PHYSICAL EXERCISE ON ADIPOSITY AND AEROBIC FITNESS IN MIDDLE AGE MEN DIFFERING IN BODY MASS

**Vaclav Bunc**

Charles University, Czech Republic

Overweight and/or obesity is a growing problem over the world. Alongside a range of health problems associated with increased body mass (BM) – adiposity and reducing of fitness level it is an important limiting factor for realization of regular physical exercise and quality of life. The study goal was to assess the effect of movement intervention in women differing in the BM. Study was carried out in 45 men with normal BM (mean age=43.7±3.6 years; BM=78.3±3.9 kg; height=177.5±4.6cm; %BF=23.1±2.1%), 46 overweight men (42.0±2.9; 89.9±3.1; 178.1±4.0; 28.9±2.2%) and 38 obese men (43.8±3.0; 97.4±4.6; 178.3±3.2; 32.1±3.4%). All these subjects were without regularly movement training before the starting of intervention. Body composition was assessed by bioimpedance method using prediction equations that are valid for the Czech middle-aged women population, functional variables were assessed on a treadmill. The energy content of weekly movement program for men with normal BM ranged from 1090 kcal to 2350 kcal (mean 1600±350 kcal) in males with overweight from 1338 kcal to 2180 kcal (1790±270 kcal) and in obese men from 1710 kcal to 2340 kcal (1980±330 kcal). Reduction in %BF ranged from 15.6% in obese to 16.4% in normal BM of starting value, ECM/BCM relationship decreased from 11.0% in subjects with normal BM to 12.2% in obese, and in VO<sub>2</sub>peak increased from 14.3% in normal BM to 16.7% in obese. In middle aged men differing in BM are absolute changes in adiposity and aerobic fitness like a result of imposed movement intervention substantively and statistically significant. On the contrary, differences in percentages of pre-intervention values are non-significant. We can conclude that an exercise program with a similar energy content, form and intensity causes the similar changes in adiposity and in motor and functional performance in men, differing in BM.

### BIOGRAPHY

Vaclav Bunc, Vice dean for Sciences Faculty of Physical Education and Sports, Charles University Prague, Czech Republic. His main topics are: using of bio cybernetics by evaluation of physical fitness, exercise physiology, functional and physical testing in laboratory and field, body composition, BIA methods, moving regimes for prevention in patients. Author more than 400 items in scientific Journals, more than 150 in international journals, practically the same number of publications as co-author and serving as an editorial board member of repute. Referee of scientific papers with topics of physical fitness, exercise physiology and biomedical engineering. He is a member of Czech and International scientific societies, together is a lector of Ph.D. study on Charles University and University of Graz. He is the Head of many research projects and author of great numbers of research reports with topics of exercise physiology (from children to seniors, athletes and non-trained subjects, healthy subjects and/or patients).

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Tirasak Pasharawipas, Biomed Res 2018, Volume 29 | DOI: 10.4066/biomedicalresearch-C5-013

### THE ACCESS TO PRODUCE COMPATIBLE VIRAL VACCINES FOR INDIVIDUALITY

**Tirasak Pasharawipas**

Rangsit University, Thailand

There is a question why viral vaccines cannot be effective for everybody. This is a question that we need to revise our knowledge and manipulate in the right direction for the viral vaccine production. To prevent a viral infection, a body must produce a protective antibody to prevent the viral particle to attach the viral receptor on a target cell. Theoretically, adaptive immunity needs induction not only by an antigen but also our cellular molecule called major histocompatibility complex (MHC) to form a complex molecule with its appropriate epitope to activate a specific receptor of T cell. There are two classes of MHC molecules called class I and class II. MHC class I is required for inducing cytotoxic T cell while MHC class II is for helper T cell. Helper T cell plays a key role to induce an effective stage of acquired immunity including a specific protective antibody. To produce the viral-specific antibody, MHC class II plays a key role to induce helper T cell and then B cell to synthesize a specific antibody. Since the MHC gene alleles are highly polymorphic so the possibility that individuals have the same gene alleles might be one in a million which, mostly, can be found in those who are an identical twin. Accordingly, a subunit viral vaccine, which contains a limit number of epitopes, would reduce a capacity of an antigen presenting cell, such as a dendritic cell, to process some epitopes to induce the helper T cell clones. Subsequently, in some people, the corresponding B cell clones cannot synthesize the specific antibody to neutralize the infectious viral particle. Accordingly, this presentation will present the novel approach to develop the viral vaccine for everybody.

### BIOGRAPHY

Tirasak Pasharawipas has completed his PhD from Faculty of Microbiology, Mahidol University, Bangkok, Thailand. He has his postdoctoral training at NeuroVirology and Cancer Biology Center, Temple University, Philadelphia. At present, he is a full Professor in Microbiology and Immunology, Rangsit University, Thailand. His scientific fields mainly focus in viral and cellular interaction, bacteriophage and viral diseases in invertebrate animals. However, his research interests expand to viral vaccines, autoimmune disease and cancer biology including the relationship of MHC molecules to some specific diseases and viral vaccines. He enjoys being a reviewer for several journals and an advisor to develop young medical scientists with the wish that they would co-operate and succeed to solve all the problematic diseases, now and then, in a proper way with genuine scientific thinking.

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### CHILDHOOD OBESITY

#### Horia Al Mawlawi

Prince Sultan Military Medical Centre, Saudi Arabia

**C**hildhood obesity is a major public health crisis nationally and internationally. The prevalence of childhood obesity has increased over few years in all pediatric age group in both sexes. Approximately 22 million children under 5 years of age are overweight across the world. The number of overweight children and adolescents has doubled in the last 2 to 3 decades in the world.

World Health Organization on childhood obesity find 41 million children under 5 years either obese or overweight as of 2014. However, more than 90% of cases are idiopathic and less than 10% are associated with hormonal or genetic causes. The idiopathic mainly caused by imbalance between calorie intake and calories utilized. High calorie density and fat content of modern diet and lack of physical activity is associated with increased risk of obesity.

Comorbidities associated with obesity and overweight are similar in children as in adult population. Elevated blood pressure, dyslipidemia and high prevalence of insulin resistance and type 2 diabetes appear as frequent complication in the overweight and obese pediatric population. Approaches in the prevention and treatment of childhood overweight and obesity are urgently required including first health diet and physical activity when lifestyle modification is insufficient to reach weight loss and complication of obesity affect child health pharmacotherapy is recommended if age more than 10 years. Bariatric surgery is reserved for carefully selected sub group of young children with obesity related co-morbid condition threaten the child health where lifestyle and medication have been evaluated but found not to be effective.

### BIOGRAPHY

Horia Al Mawlawi has Bachelor Degree 1982-1983 from King Abdulaziz University, Jeddah, Saudi Arabia. Was Arab Board in Pediatric 1966, National Guard Hospital, Riyadh, KSA. Horia had got Pediatric Endocrinology and Diabetes Fellowship 2000 in King Faisal Specialist Hospital and Research Center in Riyadh. Has been Consultant Pediatric Endocrinologist and Head of Endocrinology Division from 2000-2010, RMH and Director of Fellowship training program of endocrinology 2010-2013. Consultant Pediatric Endocrinologist and Director of Fellowship training program of endocrinology 2014-2017. Had published 3 pages for different causes of child obesity.

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**DAY 2**

**Scientific Tracks & Abstracts**

# Day 2

# SESSIONS

October 16, 2018

Gynecology and Obstetrics | Diabetes Case Study and Research | Vaccine Development and Production | Diet and Nutrition

## Session Introduction

### Session Chair

**Davud A Devrishov**  
Moscow State Academy  
of Veterinary Medicine and  
Biotechnology-MVA K. I.  
Skryabin, Russia

### Session Co-chair

**Tirasak Pasharawipas**  
Rangsit University, Thailand

- Title: Prevalence of gestational diabetes mellitus and its risk factors: Bangladesh perspective**  
Nusrat Sultana, Bangabandhu Sheikh Mujib Medical University, Bangladesh
- Title: Polycystic ovarian syndrome: Association with metabolic abnormalities**  
Hurjahan Banu, Bangabandhu Sheikh Mujib Medical University, Bangladesh
- Title: A prospective, open-label, randomized, controlled, multi-center, clinical trial to evaluate the immunogenicity, safety and efficacy of wockhardt's biosimilar insulin glargine (glaritus®) with reference insulin glargine (lantus®) in type 2 diabetes mellitus**  
Agam Shah, Wockhardt Ltd, India
- Title: The benefit and mechanism of coffee's content for reducing weight gain**  
Rosa Lelyana, Diponegoro University, Indonesia
- Title: Virus like particles and nucleoparticles as a vaccine candidates**  
Gerardo Guillén, Center for Genetic Engineering and Biotechnology, Cuba

## Video Presentation

- Title: Successfully activating positive behaviors of the stakeholders involved in vaccine purchasing and usage through technological advances**  
Pierre A Morgon, MRGN Advisors, Switzerland
- Title: Relationship between weight and glucose using math-physical medicine**  
Gerald C Hsu, EclairMD Foundation, USA

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### PREVALENCE OF GESTATIONAL DIABETES MELLITUS AND ITS RISK FACTORS: BANGLADESH PERSPECTIVE

**Nusrat Sultana**

Bangabandhu Sheikh Mujib Medical University, Bangladesh

**G**estational diabetes mellitus (GDM) defined as diabetes diagnosed in the second and third trimesters of pregnancy has emerged as a global public health concern. The global prevalence of GDM varies widely from 1% to 28%, depending on population characters (ethnicity, body mass index (BMI), maternal age, family history of diabetes), method of screening and diagnostic criteria. There is higher prevalence of GDM observed in Eastern and South Eastern Asia given the changed socioeconomic condition and nutritional status. When ethnic/racial variability is the concern, Asians are high risk group. In Bangabandhu Sheikh Mujib Medical University (BSMMU), several studies on GDM were done to see the prevalence utilizing different diagnostic methods. Prevalence of GDM at BSMMU was 36% by WHO-1999 criterion while it was 32% by O'Sullivan, carried out on the same population (n=385). A second study on 320 pregnant mothers found the frequency of 32% by WHO-2013 criterion and 31% by WHO-1999 criterion. Another study by using WHO-2013 method found a frequency of 29% (n=204). All the studies revealed a common finding of maternal obesity, increased age and family history of diabetes as risk factors. We also studied some biomarkers like high sensitivity C reactive protein, TNF- $\alpha$ , fibrinogen levels in GDM mothers and found its association with occurrence of GDM. We also studied hormonal profiles like human placental lactogen and prolactin and found no significant association for GDM. Study on different insulin indices showed significant difference between GDM and normal mothers. The alarming frequency of GDM warrants further exploration.

### BIOGRAPHY

Nusrat Sultana is working as Assistant Professor in the Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU). She obtained her fellowship (FCPS) in Internal Medicine from Bangladesh College of Physicians and Surgeons in the year 2010 and MD in Endocrinology and Metabolism (EM) from BSMMU in 2014. She has more than 25 scientific papers published in different national and international journals. Her major research areas are GDM and diabetes in young (under 30) population.

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### POLYCYSTIC OVARIAN SYNDROME: ASSOCIATION WITH METABOLIC ABNORMALITIES

**Hurjahan Banu, Sukanti-Shah, Tania-Sultana, Moriom-Zamila  
and Hasanat MA**

Bangabandhu Sheikh Mujib Medical University, Bangladesh

**P**athophysiology and management issues of PCOS are still far from clear. PCOS has many clinical phenotypes and associated with several metabolic perturbations. There are controversies about the prevalence of insulin resistance and metabolic derangements among PCOS phenotypes. We have observed wide variation of these issues among the common phenotypic variants of PCOS. Menstrual irregularity and metabolic profile as well as insulin resistance may also be related in PCOS. Hyperandrogenemia including total testosterone, free androgen index, testosterone to dihydrotestosterone ratio may be altered as to be useful for the prediction of metabolic abnormalities in PCOS. We have studied the glycemic status and metabolic disorders in women with PCOS. Women with PCOS have statistically significant higher level of fasting insulin, fasting glucose/fasting insulin ratio, HOMA-IR, total cholesterol and triglyceride. Frequency of prediabetes, insulin resistance and metabolic syndrome are also significantly higher in women with PCOS. Therefore, evaluation of metabolic status is necessary for all women with PCOS.

### BIOGRAPHY

Hurjahan Banu is working in the PCOS study group, holding a FCPS degree in Endocrinology is currently working as post graduate fellow and permanent Staff Researcher in the Department of Endocrinology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh. Her research interests are in PCOS and infertility, obesity, diabetes and thyroid disorders. She has published few articles in national and international journals.

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### A PROSPECTIVE, OPEN-LABEL, RANDOMIZED, CONTROLLED, MULTI-CENTRE, CLINICAL TRIAL TO EVALUATE THE IMMUNOGENICITY, SAFETY AND EFFICACY OF WOCKHARDT'S BIOSIMILAR INSULIN GLARGINE (GLARITUS®) WITH REFERENCE INSULIN GLARGINE (LANTUS®) IN TYPE 2 DIABETES MELLITUS

Agam Shah<sup>1</sup>, Jain R<sup>1</sup>, Ajmani AK<sup>2</sup>, Sharma SK<sup>3</sup>, Mukhopadhyay P<sup>4</sup>, Chhaya G<sup>5</sup>, Supe PD<sup>6</sup>, Pavithran V<sup>7</sup> and Bora H<sup>8</sup>

<sup>1</sup>Wockhardt Ltd., India

<sup>2</sup>BL Kapoor Hospital, India

<sup>3</sup>Diabetes, Thyroid and Endocrine Centre, India

<sup>4</sup>Institute of Post Graduate Medical Education and Research, India

<sup>5</sup>Sanjivani Superspeciality Hospital, India

<sup>6</sup>Supe Heart & Diabetes Hospital and Research Centre, India

<sup>7</sup>KVM Hospital, India

<sup>8</sup>Down Town Hospital, India

**Introduction:** Insulin glargine provides a peak-less glucose lowering profile and a prolonged duration of action that permits once daily dosing. Biosimilar insulin analogues are compared on immunogenicity, safety and efficacy to the reference biological product.

**Objective:** Primary objective is to evaluate percent change in anti-insulin antibody [AIA] to glargine in Glaritus® or Lantus® treatment arms from baseline to six months. Secondary objective is to evaluate the change in HbA1c and safety in both arms at six months as well as immunogenic response and safety in Glaritus® arm at 12 months.

**Methods:** This is a prospective, open-label, randomized, controlled, multi-centre study in 180 type 2 diabetes mellitus (T2DM) patients inadequately controlled on oral hypoglycaemic agents. Eligible patients were randomized to either Glaritus® for 12 months or Lantus® for six months. Treatment was started at 10 units once daily, which was subsequently adjusted according to the subject's glycaemic control. This is an interim analysis of the six months data from the ongoing study.

**Results:** Out of 90 patients each randomized to Glaritus® and Lantus® arms across 10 sites, 76 (84.4%) and 68 (75.6%) patients completed six months treatment, respectively. There was no significant difference in percent change in AIA titre between the groups at six months (least square [LS] mean difference [95% CI]: 3.4% [-15.1%, 21.9%], p=0.7181). In terms of reduction in HbA1c at six months, the difference between two arms was not significant (LS mean

diff [95% CI]: -0.1 [-0.3, 0.1], p=0.2283) and the upper margin of 95% CI was <0.4% (non-inferiority margin). Overall incidence of adverse events was comparable between the groups with intensity being mild (36/37) and outcome resolved (32/37) for most patients.

**Conclusion:** Glaritus® was found to be non-inferior to Lantus® in glycaemic control and comparable in immunogenic response and safety in T2DM treatment over six months.

### BIOGRAPHY

Agam Shah has rich professional experience of nearly 15 years in clinical development, medical affairs and academics. He has been an avid Clinical Research Physician with numerous scientific publication and presentations to his name. He has comprehensive experience of clinical development of biosimilars, complex generics and vaccine products.

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Rosa Lelyana, Biomed Res 2018, Volume 29 | DOI: 10.4066/biomedicalresearch-C5-013

### THE BENEFIT AND MECHANISM OF COFFEE'S CONTENT FOR REDUCING WEIGHT GAIN

**Rosa Lelyana**

Diponegoro University, Indonesia

Obesity is one of the metabolic disorders associated with excessive energy intake rather than energy expenditure and is still one of the problems of the world community. Over the past few years, some obese people have been treated for obesity, but the treatment has not been optimal, and some have failed. There is lack of information about the benefit of coffee consumption. This review study discusses the mechanism and the benefit of coffee consumption. Some research results indicate that coffee influences weight loss because of the working effect of caffeine as a stimulant. An epidemiological study also found results that coffee consumption will reduce weight gain in obese men. Caffeine is a major stimulant of coffee and is associated with weight loss and reduced risk of developing metabolic syndrome. A recent study in Japan found that coffee polyphenols can increase energy metabolism and reduce lipogenesis through downregulating regulatory sterol element protein binding elements and similarities in molecules that will lead to suppression of fat accumulation. Coffee consumption helps lipid metabolism by increasing thermogenesis as part of increased fat oxidation. Research conducted on animal models of rodent through long-term studies shows that caffeine reduces adipose pad size and the number of adipocyte cells. Coffee consumption will help you lose weight.

### BIOGRAPHY

Rosa Lelyana completed medical school in 1997 and graduated S2 is less than 2 years of research in the field of coffee. She is a member of the ACS (American Chemical Society) on request since 2014. In 2011 she received an award from the Dean of the Faculty of Medicine and University lecturer Diponegoro as one of the best level textbook authors of university medical faculty level Diponegoro.

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## 2<sup>nd</sup> WORLD OBESITY CONGRESS

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International Conference on

## DIABETES AND ENDOCRINOLOGY

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## 2<sup>nd</sup> WORLD VACCINES AND IMMUNOLOGY CONGRESS

October 15-16, 2018 | Tokyo, Japan

Gerardo Guillén et al., Biomed Res 2018, Volume 29 | DOI: 10.4066/biomedicalresearch-C5-013

### VIRUS LIKE PARTICLES AND NUCLEOPARTICLES AS A VACCINE CANDIDATE

**Gerardo Guillén, Aguilar JC, Hermida L, Gil L, Penton E and Iglesias E**

Center for Genetic Engineering and Biotechnology, Cuba

The existing vaccines are mainly limited to the microorganisms we can culture and produce and/or to those whose killing is mediated by humoral response (antibody mediated). It has been more difficult to develop vaccines capable to induce functional cellular response needed to prevent or cure chronic diseases. New strategies should be considered in the improvement of cell-based immune responses to prevent and control the infections and eventually clear the virus. This work present preclinical and clinical results with vaccine candidates against dengue virus, HBV and HIV based on virus like particles (VLPs) and virus like nucleoparticles (VLNs) able to stimulate mucosal as well as systemic immunity. Particles based on envelope or nucleocapsid viral proteins induce a strong immune response after mucosal or systemic administration in mice, non-human primates and humans. In addition, the immune response obtained was biased in a Th1 sense.

### BIOGRAPHY

Gerardo Guillén is a Biomedical Research Director at the Center for Genetic Engineering and Biotechnology (CIGB) in Havana, have more than 170 papers and 44 patents published on vaccinology, biotechnology, infectious diseases and pharmaceutical development. He has been honored with 47 annual awards of Cuban Academy of Science for scientific results, the Third World Academy of Science award on Biology, the CJ Finlay Medal of the Cuban State Council, awarded for upstanding results on Science and the patent award of the World Office of Intellectual Property. He is also the member of several editorial boards. He is the member of the Scientific Expert Committees of the BioCubaFarma, the CIGB and the Center for Tropical Medicine IPK.

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### SUCCESSFULLY ACTIVATING POSITIVE BEHAVIORS OF THE STAKEHOLDERS INVOLVED IN VACCINE PURCHASING AND USAGE THROUGH TECHNOLOGICAL ADVANCES

#### Pierre A Morgon

MRGN Advisors, Switzerland

The vaccine segment is anticipated to be one of the fastest growing one of the healthcare industry and several leading firms have stepped up vaccine investments in recent years. Unlike therapeutic agents, vaccines are administered to healthy individuals only once or very infrequently during a life time. Vaccines generate well-documented positive externalities, yet their poor awareness and acceptability among vaccine end-users may contribute to resurgence of transmissible diseases and consequently trigger governmental interventions such as mandating vaccination. In addition to technical and clinical development per the highest quality standards, bringing new vaccines to market requires carefully orchestrated programs targeting the multiple types of stakeholders along the entire value chain and addressing their respective purchasing behavioral drivers. Against a backdrop of anti-vaccination buzz and vaccine fatigue, successful global launch and sustainable usage of a vaccine requires the development of a multi-pronged strategy addressing all aspects in relation to acceptability (e.g. the motivation to immunize despite the quasi-disappearance of the disease), accessibility (e.g. supply chain services), availability (e.g. mechanisms ensuring reliability of supply) and affordability (e.g. tiered pricing policy taking country differences in per capita income into account). Leveraging novel technological advances can positively influence the ability to activate these levers successfully.

### BIOGRAPHY

Pierre A Morgon is a Chief Executive Officer of MRGN Advisors, a consultancy advising CEOs and investors in the healthcare sector, and regional partner for Switzerland at Mérieux Développement, an evergreen investment fund. He is also holding the following board positions: Chairman of the Board of Virometix, Non-Executive Director to the Board of Theradiag, Non-Executive Director to the Board of Eurocine Vaccines, Non-Executive Director to the Board of Vaccitech and Non-Executive Director to the Board of Univercells. He holds a Doctorate of Pharmacy, a master in Business Law and a MBA.

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### RELATIONSHIP BETWEEN WEIGHT AND GLUCOSE USING MATH-PHYSICAL MEDICINE

**Gerald C Hsu**

EclaireMD Foundation, USA

**Background & Aim:** This paper investigates the relationship between weight and glucose based on 9,855 data covering three years or 1,095 days (9/4/2015-9/3/ 2018) of one type 2 diabetes (T2D) patient's data.

**Method:** Health conditions comparison (2012 vs. 2018): weight: 210 lbs. vs. 170 lbs. BMI: 31 vs. 24.7 daily postprandial glucose (PPG): 280 mg/dL vs. 115 mg/dL A1C: 10.0% vs. 6.5%. This diabetes research project of eight years and 20,000 hours combined utilized advanced mathematics, finite element modeling, signal processing, optical physics, big data analytics, statistics, and artificial intelligence.

**Results:** Among the five fasting plasma glucose's (FPG) influential factors, weight is the most dominant one, contributing ~85%. Weight and FPG have a high correlation of 68% -82%. In spatial analysis, 94% of the total collected data is covered by a +/- 20% band around a skewed line. This relationship band stretched from point A (24.6, 100) to point B (26.6, 140) on a map with coordinates of x=BMI and y=glucose. However, among the PPG's 19 influential factors, weight is not the dominating factor. Instead, the combined effect of carbs/sugar intake and post-meal exercise contributes 79% of PPG formation. Weather temperature counts for ~10% and the other factors impact 11%. Weight and PPG have a low correlation (between 3% and 36%). In spatial analysis, 95% of the total collected data covers by a +/- 20% band centering around a horizontal PPG line of 118 mg/dL.

**Conclusion:** The results show that 94% of FPG data are directly related to weight according to a fixed slope. However, 95% of PPG data are kept within a horizontal range from 94 mg/dL to 142 mg/dL due to carbs/sugar intake and post-meal exercise, but not by weight.

### BIOGRAPHY

Gerald C Hsu has received an honorary PhD in Mathematics and majored in engineering at MIT. He attended different universities over 17 years and studied seven academic disciplines. He has spent 20,000 hours in T2D research. First, he studied six metabolic diseases and food nutrition during 2010-2013, then conducted research during 2014-2018.

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