

# Keynote Forum October 29, 2018

# Cardiology & Nutrition Health 2018







Joint Event 3<sup>rd</sup> World Congress on

## Cardiology

&

16<sup>th</sup> International Conference on

Nutrition and Fitness

October 29-30, 2018 | London, UK

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## Paula Quatromoni David Proctor

Boston University, USA

### Two voices: Recovery from disordered eating as told by an elite male athlete and his sports nutritionist

his talk will feature an elite male runner who experienced a restrictive eating disorder during his collegiate track career at an American Division 1 university, presenting alongside the sports nutritionist who treated him. The athlete will share his perspective and experiences of the disorder that affected his health, emotional wellbeing, and physical abilities to train, compete and recover from sports injuries. The nutritionist will discuss the therapeutic approach and innovative strategies used to restore the athlete's health, improve his relationship with food, and help him to achieve success in his sport through proper fueling and wellness of body and mind. Our goals are to raise awareness of eating disorders in sport and address stereotypes and stigma that serve as barriers to early identification and intervention. This presentation will be engaging for audience members by integrating the voices of the athlete and the clinician into one dynamic discussion. Rarely is this collaborative sharing accomplished in a professional training venue, and even more rarely is a male athlete featured in the eating

disorder recovery discussion. David's personal insight and willingness to share his story create a unique opportunity for a compelling discussion that nutrition, athletic training and sports medicine professionals working in collegiate athletics will benefit from. David is a four-time Olympic trials competitor who is currently training and competing with the UK national team. Transitioning trough his collegiate experience, David's application of new knowledge, life skills and shifts in attitudes and behaviors have been keys to both his professional career and his adult life. This presentation allows us to explore an eating disorder recover journey that spans more than five years and culminates in a success story.

#### **Speaker Biography**

Paula Quatromoni is an Associate Professor of Nutrition and Chair, at Boston University; she is also a Senior Consultant to the Nutrition programs at Walden Behavioural Care, an eating disorder treatment organization. She is widely published, including in the field of eating disorders in sport.

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# Marcela Sorelli Carneiro Ramos

Federal University of ABC, Brazil

Cardiorenal Syndrome: The long road from Kidney to Heart

The number of individuals with kidney disease increases every year and is a major concern in several countries. Once the kidney is not functioning properly, with a deficit in glomerular filtration rate, several hemodynamic factors are altered, and toxins and molecules start to accumulate in the bloodstream. Among others, several cytokines and chemokines increase during kidney disease, consequently impairing other organs function and leading to renal and cardiac diseases. In this sense, Cardiorenal Syndrome (CRS) is characterized by different clinical conditions with an overlap of cardiac and renal dysfunctions. One subtype of this pathology involves cardiac hypertrophy and cardiac failure after acute renal injury (AKI). AKI frequently leads to the development of chronic kidney disease and may be associated with ischemia followed by reperfusion (I/R). The knowledge of the cellular

mechanisms involved in CRS are not fully known but permeate molecular, cellular and functional factors. In this sense, the present conference aims to contextualize this topic as well as to present some results regarding the participation of the immune system in the cardiovascular alterations observed in the CRS.

#### **Speaker Biography**

Marcela Sorelli Carneiro Ramos is graduated in Biomedicine (2001), completed a PhD (2006) and Post-Doctoral (2008) in the Department of Cell Biology and Development of the Institute of Biomedical Sciences of the University of São Paulo. The research developed in this period, addressed the role of the Renin-Angiotensin System in the thyroid hormoneinduced cardiac hypertrophy, as well the effect of thyroxine on global gene expression modulation. Nowadays, the research line aims to study the impact of the inflammatory response and immune system on the cardiovascular changes observed in the cardiorenal syndrome. She is an Associate Professor at the Federal University of ABC and has experience in cell and molecular biology, cardiovascular physiology, inflammation and renal failure.

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Premanidhi Panda

Dr Panda Diabetes Center, India

Type 2 Diabetes is reversible

Introduction: Very low-calorie diets (VLCD) generally contain about 800 calories per day, or even less. Its usually plan for obesity. But author apply to Type 2 Diabetes from 2015-17 Obese & Non-Obese variety. Out of 500 Patient in his study he gave only one-two Roti or one cup of rice, one to two Egg White or 2pieces of fish or 6pieces of chicken plus dal, butta, chana or rajma plus green vegetables plus Palak plus 5-10 petals of garlic plus one onion per day, 2cucumber per day, two tomato per day plus one lemon per day. In the Breakfast limited to 1-2 oats idle mixed with arugula is an extremely healthy and nutritious cruciferous vegetable that many people have never heard of also called salad rocket or garden rocket, it has a distinctive and delicious peppery flavor to its soft green leaves and goes particularly well in fresh salads or 1/2Cup of Upama Vegetable or Biri and Suji Pitha, Kalara Pizza (Chakuli) along with one Avocado per week, or 1/2Hybrid Guava or 8Almonds per day Plus 4Cups of Coffee per day controls diabetes very perfectly. He never advised for artificial sweetener. He has never found any Side effects of the diet include fatigue, mild nausea, constipation, or diarrhea and dizziness. Discussion: He advised for one Chapati per Meal, one chapati has only 80 to 110 calories depending on size, but it has 3.5 grams of protein, half a gram of total fat, no saturated or trans-fat, no cholesterol, but it has vitamin A, B1, B2, B3, calcium, iron and fiber. Egg white is the name for the clear

liquid contained within an egg contains only 17calorie, no cholesterol. One fish Rohu contains in 100gms 97 calories in a 1 piece serving of Rohu Fish. Calorie breakdown: 12% fat, 0% carbs, 88% protein. 110 calories in 100 grams of Skinless Chicken Breast. There are 65 calories in 100 grams of Mixed Vegetables (Without Salt, Frozen, Drained, Cooked, Boiled). There are 160 calories in 100 grams of Avocados.

Guava also helps in regulating metabolism which leads to weight loss, it contains 68 calories in 100 grams of Guava. Calorie breakdown: 11% fat, 75% carbs, 13% protein.

10 Almonds Contains 70 Calorie. One ounce(30ml) of scotch whiskey contains about 64-80 calories. I used to advice 20unce per week of alcohol is allowed. VLCD lowers glucose production by: 1) decreasing the conversion of lactate and amino acids into glucose; 2) decreasing the rate of liver glycogen conversion to glucose; and 3) decreasing fat content, which in turn improves the liver's response to insulin. These positive effects of the VLCD were observed in just three days. Using this approach to comprehensively interrogate liver carbohydrate and fat metabolism, we showed that it is a combination of three mechanisms that is responsible for the rapid reversal of hyperglycemia following a very low-calorie diet. He found only with little dose of oral Hypoglycemic drug (OHD) can achieve very good control of blood glucose. He has used Glimiperide, Metformin, Pioglitazone in combination. In some patient he has used Voglibose, Metformin and Glimiperide in combination. In many of the patient he has stopped use of Insulin along with VLCD.

**Conclusion:** Patient with VLCD can reverse Type 2 Diabetes or maintain with little OHD very well due to reduce fat in Pancreas thus through diet can re-start the normal production of insulin, reversing Type 2 diabetes. This reversal with little OHD or without Medicine can help the patient Diabetes, obesity, high blood pressure and heart attack free life.

#### Speaker Biography

Premanidhi Panda has completed his M.B.B.S at the age of 24 years from Berhampur University, India and postdoctoral studies from Utkal University. He is the director of Dr Panda Diabetes Institute, India, a premier Diabetes Hospital cum research centre, India. He has worked in TISCO Hospital, India, Benghazi Medical (Libya), Medwin Hospital with Repute. He has been awarded as India's Best Doctor Award: 2013(Diabetes) by Medgate Today Survey. He has been Awarded MRCP, FRCP by Royal College of Physician and Surgeon of America in the year 2011. He has published more than 20 papers in reputed journals and serving as an editorial board member of repute. He has been awarded several National & International Awards for his contributions. He is the only Indian Executive Member of World Diabetes congress. He is an honored with Honorary Professor & Brand Ambassador to IMA 2017 for four years by IMA.

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# Patricia Y B Talbert

Howard University, United States

Nutritional health and the impact of food deserts: Exploratory case study

utritional health issues continue to impact the underserved Nutritional near insues continue to my population and communities of colour greater compared to their counterparts. Individuals are living without basic needs such as housing, economic prosperity, community health, and social services, but equally important, people continue to not have access to healthy food and nutritional services consequently living in food desert locations. Food deserts are defined as parts of the country vapid of fresh fruit, vegetables, and other healthful whole foods, usually found in impoverished areas. This is largely due to a lack of grocery stores, farmer's markets, and healthy food providers. The United States Department of Agriculture has outlined a cohesive map of our nation's food deserts and this information is being used to implement projects. This exploratory case study with the adopted conceptual framework program evaluation viewed empirical information and data to search both within the United States and the United Kingdom to see how developed initiatives and projects are being developed to infuse economic support into areas that need it the most.

#### **Speaker Biography**

Patricia Y B Talbert began her vocation in public health working to empower communities regarding the importance of preventative diseases, promoting healthy lifestyles, and working on health disparities initiatives. While serving in the community, she began working in higher education. She has worked as an educator, academic mentor, researcher, consultant, and held multiple leadership positions. She established the centre for Professional Academic Consulting, LLC, which is dedicated to supporting institutions promote academic excellence by obtaining and maintaining accreditation, and she is currently the Associate Dean of Academic Affairs and Administration at Howard University in Washington, DC–United States.

She holds a Bachelor's degree in Ethnic Studies and Human Services Administration from Metropolitan State University, a Master's degree in Higher Education Administration with emphasis on Accreditation from St. Cloud State University, a Master's degree in Public Health and Doctor of Philosophy in Public Health with specialization in Community Health Promotion and Education from Walden University. She is certified as a Health Education Specialist, Public Health Administrator, Wellness Practitioner, and Public Health Nutritionist. Her research interests lie in public health, ranging from behavioural modification to exploring health disparities with a focus on social and physical determinants of health.

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## Kaj Winther

University of Copenhagen, Denmark

Can fitness in younger and elderly human volunteers be improved by Rose hip (Rosa canina L)?

**Introduction:** Pain and muscle stiffness is a problem in younger athletes and in middle aged and elderly users of fitness centers, especially the day after strenuous exercise. During the winter season cold episodes can also diminish quality of life and training capacity and aging can cause osteoarthritis, reducing quality of life and joint movement.

**Aim:** This investigation aimed to test if a herbal remedy, Hyben-Vital, based on a subspecies of Rosa canina L (Rocacea) alleviate pain and musclestiffness in a variety of human volunteers and also reduce the severity of the common cold during the winter season.

**Methods:** One placebo controlled, randomized trial (n=120) aimed to test if 2.5g Rose hip daily for 6 months (shells only) might alleviate symptoms and occurrence of cold episodes. Another study of similar design (n=120) tested the impact of 5g Rose hip seeds and shells on pain and stiffness of the hip and knee in patients suffering osteoarthritis. A final open study (n=18) tested the impact of seeds and shells on muscle pain and stiffness in a group of younger Cross-fitters.

**Results:** Rose hip reduced the number of cold about 20% and a significant reduction (p<0.045) was observed in the

severity of symptoms reported from cold. In addition, the volunteers reported less stiffness of their muscles (p<0.040). Middle aged and elderly also reported less stiffness in their muscles and a reduction of pain in their joints (p<0.035 and p<0.046, respectively). The Cross-fitter's reported a significant reduction in pain and stiffness of muscles and joints (p<0.040) the day after strenuous exercise and an improvement in the quality of life is because of Rose hip treatment.

**Conclusion:** The data suggest that the present version of Rose hip can alleviate symptoms from cold and it's also reduced pain and stiffness in joints and muscles.

#### **Speaker Biography**

Kaj Winther has specialized in Clinical Biochemistry. After working on the circadian variation of myocardial infarction at the Harvard Medical School, Boston, he started to show more and more interest in herbal remedies and their impact on different diseases including inflammation. He was the director of Clinical Biochemistry at University Hospitals in Copenhagen. Since 2015 he serves as an affiliated professor at the Department of Nutrition, Exercise and Sports, University of Copenhagen, Denmark.

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# **Ofer Binah**

Technion-Israel Institute of Technology, Israel

Molecular characterization and functional properties of induced pluripotent stem cells-derived cardiomyocytes from healthy and diseased individuals. Models for investigating inherited cardiac diseases

**Introduction:** Duchenne Muscular Dystrophy (DMD) caused by mutations in the DMD gene encoding the dystrophin protein, is an X-linked disease affecting boys and teenagers and rarely adult heterozygous females. DMD is characterized by progressive muscle degeneration and weakness, loss of ambulation and death by the late 20's or early 30's. Dilated cardiomyopathy (DCM) is a major cause of morbidity and mortality in DMD patients.

**Hypothesis:** Induced pluripotent stem cell-derived cardiomyocytes (iPSC-CMs) generated from the DMD patients exhibit intracellular [Ca2+]i handling and mechanical abnormalities. Our goal was to decipher the mechanical and molecular mechanisms underlying the abnormal [Ca2+]i handling and contraction in DMD patients.

**Methods:** Dystrophin-mutated iPSC-CMs were generated from male and female DMD patients. To test the hypothesis, [Ca2+]i transients and contractions were recorded from stimulated iPSC-CMs clusters using fura-2 fluorescence and video edge detector, in the absence and presence of the  $\beta$ -adrenergic agonist isoproterenol, which increases SR Ca2+ release through PKA-regulated Ryanodine (RyR2) channels. Specifically, we measured the inotropic response to 10-9-10-6 M of isoproterenol using the IonOptix calcium and contractility system. In addition, metabolic indices were evaluated using liquid chromatography followed by mass spectrometry and Seahorse XF analyser.

**Results:** Our experiments showed a concentration-dependent positive inotropic and lusitropic effects in healthy iPSC-CMs, on both [Ca2+] i transient and contraction parameters. In contrast, compared to healthy iPSC-CMs, the female and male DMD iPSC-CMs displayed a markedly depressed inotropic response to isoproterenol. To decipher the underlying mechanism, we

determined SR Ca2+ release and capacity in DMD iPSC-CMs by means of a brief application of caffeine (10 mM) which serves as an opener of the RyR2 channel. In control iPSC-CMs, caffeine caused an abrupt increase in [Ca2+]i, followed by a gradual decline in [Ca2+]i level. In marked contrast to control iPSC-CMs, the male DMD iPSC-CMs exhibited a much shorter response to caffeine, while only 50% of the female DMD iPSC-CMs displayed abnormal [Ca2+]i handling in response to caffeine. The caffeineinduced Ca2+ signal area of DMD iPSC-CMs (male and 50% of female) was smaller than control. In addition, the caffeineinduced Ca2+ signal amplitude of DMD iPSC-CM (female) was significantly smaller than control. In addition, Seahorse XF analyser demonstrated decreased oxidative phosphorylation accompanied by a correlated increase in glycolysis in DMD iPSC-CMs. Accordingly, mass spectrometry analysis showed a dramatic fall in phosphocreatine levels in DMD iPSC-CMs.

**Conclusion:** DMD iPSC-CMs exhibit an attenuated  $\beta$ -adrenergic inotropic response, metabolic deficits and reduced energy stores.

#### **Speaker Biography**

Ofer Binah is Chair of Physiology, Biophysics and Systems Biology, at the Ruth & Bruce Rappaport Faculty of Medicine, Technion, Israel. He is a cardiac physiologist working for the past 33 years on research topics related to cellular electrophysiology, mechanics, signalling pathways and arrhythmias. In addition, he investigated the cellular mechanisms whereby cytotoxic Tlymphocytes destroy cardiomyocytes in the course of heart transplant rejection and inflammatory heart diseases. Since 2001 he is investigating the functional properties of human embryonic stem cell-derived cardiomyocytes, and have published several papers in this area. Over 10 years ago he has begun investigating iPSC-derived cardiomyocytes generated from both dermal fibroblasts and keratinocytes, from healthy volunteers and from patients with inherited cardiac pathologies, including inherited arrhythmias and cardiomyopathies such as Duchenne Muscular Dystrophy.

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