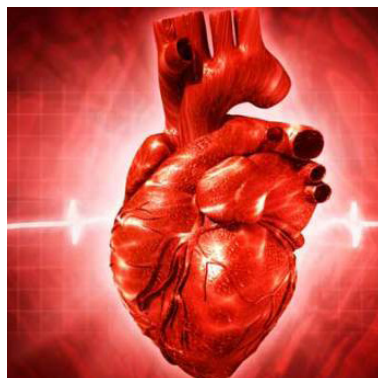


# Workshop

## *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

## Acupuncture plus moving cupping therapy for Insomnia in cardiovascular diseases: A systematic review and meta-analysis

**Guang Chen**

China Academy of Chinese Medical Sciences, China

**Background:** Insomnia is a very common health issue among populations of cardiovascular diseases. Moving Cupping Therapy is a kind of TCM external therapies widely used to treat insomnia and it could increase the effectiveness of acupuncture.

**Objective:** The purpose of this review is to assess the effectiveness and safety of Acupuncture and moving cupping combined therapy for patients with Insomnia in cardiovascular diseases.

**Methods:** We searched the following databases: MEDLINE, EMBASE, the Cochrane Library, China National Knowledge Infrastructure (CNKI), Wan Fang database, and the Chinese Scientific Journal Database (VIP). Parallel randomized controlled trials on acupuncture plus moving cupping therapy for insomnia were included. A meta-analysis was conducted following the recommendations in the Cochrane Handbook of Systematic Reviews of Interventions.

**Results:** We included 11 trials involving 866 patients. The quality of the included studies was generally poor. The results of the meta-analysis showed that the effective rate after treatment of

manual acupuncture plus moving cupping was higher than that after western medicine treatment only and manual acupuncture only. On the other hand, one trial reported manual acupuncture plus moving cupping was superior to western medicine in improving the PSQI scores. Another trial favored manual acupuncture plus moving cupping over manual acupuncture alone also in improving the PSQI scores.

**Conclusions:** There appears to be some benefit from the use of manual acupuncture plus moving cupping. However, due to poor methodological quality, we could not draw confirmative conclusions regarding the beneficial effect of using manual acupuncture plus moving cupping.

### Speaker Biography

Guang Chen, from Beijing University of Chinese Medicine and China Academy of Chinese Medical Sciences. His research mainly focus on the R&D of Chinese herbal medicine in treatment of cardiovascular diseases, genetic and epigenetic mechanism of Chinese herbal medicine and cell targeting Aptamers for Nanotheranostics using Cell-SELEX.

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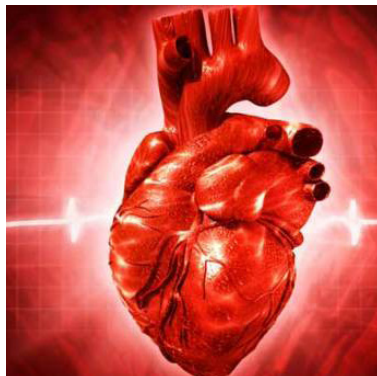


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# Scientific Tracks & Sessions

## October 29, 2018

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## Ultra-processed food consumption and incident frailty: A prospective cohort study of older adults

Helena Sandoval-Insausti

Universidad Autónoma de Madrid-IdiPaz, Spain

**Background:** Ultra-processed food intake has been associated with chronic diseases. The aim of this study was to assess the relationship between ultra-processed food intake and incident frailty in community-dwelling older adults.

**Methods:** Prospective cohort study with 1,822 individuals aged 60 who were recruited in 2008-2010 in Spain. At baseline, food consumption was obtained using a validated computerized face-to-face dietary history and classified according to the nature and extent of its processing following the NOVA classification. In 2012, incident frailty was ascertained based on Fried's criteria. Logistic regression was used to obtain odds ratios (OR) and their 95% confidence interval (95% CI). Models were adjusted for main confounders.

**Results:** After a mean follow-up of 3.5 years, 132 cases of frailty were identified. In the fully adjusted analyses, the ORs (95% CI) of frailty risk across quartiles of ultra-processed food intake, expressed as percentage of total energy, were: 1.00, 1.52 (0.78-2.96), 2.98 (1.62-5.50), and 3.67 (2.00-6.73); *p* linear-trend: <0.001. Similar results were obtained when ultra-processed food intake was expressed as gram per day/weight of each

subject (g/kg). Nutrients from ultra-processed foods were calculated. The highest quartile of intake of total proteins, animal proteins, carbohydrates, simple sugars, polysaccharides, total fatty acids, monounsaturated fatty acids, saturated fatty acids and polyunsaturated fatty acids were significantly associated with frailty when compared with the lowest one. Regarding food groups, the highest versus the lowest tertiles of intake of yogurts and fermented milks, and other non-alcoholic drinks were also significantly related to incident frailty.

**Conclusions:** Higher intake of ultra-processed food was associated with an important increase of frailty risk.

### Speaker Biography

Helena Sandoval-Insausti is Medical Doctor, Master of Public Health and since February 2016, Doctoral candidate in Public Health. She is visiting researcher at the Nutrition Department of Harvard T.H. Chan School of Public Health since August 2017. She has worked widely in nutrition and aging with ENRICA cohort with more than 3000 participants. She is winner 2017 Best Epidemiology Article Award of the Spanish Society of Epidemiology and winner 2018 Best MD Internship of Madrid, Spain.

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## Mini invasive cardiac surgery program in low resource setting is it worth the pain

Ravi Baral

Tribhuvan University, Nepal

**Background:** Mini-invasive cardiac surgery has become a routine in most centres worldwide but still is not much popular in our part of world in view of high cost involved. Suture less heart valve and mini invasive instruments costs have become a most limiting factor for use of mini-thoracotomy in heart surgeries. We in our center have reexplored use of the conventional valve and instruments to start mini invasive heart surgery and staged procurement of the instruments for the sustainability and cost effectiveness of the program.

**Method:** It is a review of a prospectively collected data of patient undergoing Minimal invasive heart surgery over three years period. We have done over hundred cases of mini ASD repair, used conventional mechanical heart valve in aortic and mitral position.

**Result:** Total 120 ASD closure has been performed from right anterior mini thoracotomy over three years. We have performed 30 cases of AVR in over 18 months period and we have recently started MVR from mini thoracotomy approach and had performed 1 MVR. We have used slightly bigger thoracotomy of 8 cm length to begin with the use of conventional instruments,

later changed with smaller incision of 5cm. Average aortic cross clamp time and pump run was 30 minutes and 43 minutes for ASD, 67 minutes and 92 minutes for AVR and 96 minutes and 145 minutes. One of the AVR patient got reexplored from the same incision for bleeding, 5 patients had peripheral cannulation site complications. Our hospital has recently procured a set of mini invasive instruments and our program will become viable as more and more colleagues are interested in performing mini invasive heart surgery.

**Conclusion:** Mini invasive heart surgery is feasible with conventional instruments and conventional valve. For the viable mini invasive program institutional commitment in terms of infrastructure development and expertise development is the prime.

### Speaker Biography

Ravi Baral is a young and vibrant cardiac surgeon working in a position of an assistant professor of cardiothoracic and vascular surgery, in the university hospital. He has completed his Mch in cardiothoracic and vascular surgery in the year 2015. He has a special interest in aortic surgery and mini-invasive cardiac surgery. He has performed more than 60 cases of mini atrial septal defect surgeries before moving into more complex valvular surgeries through a mini-invasive approach.

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### Standardization of fermentation conditions for production of fruit wine from Jamun

**Amandeep Singh and Gurvinder Singh Kocher**  
Punjab Agricultural University, India

Fruit wines are un-distilled alcoholic beverages which are made from various fruits such as jamun, grapes, peaches, plums etc. Wine as fruit based fermented and un-distilled product contains most of the nutrients present in the raw fruit. The nutritive value of wine is more due to release of amino acids and other nutrients by yeast during fermentation. The jamun fruits (*Syzygium cumini*) are used to make wine due to its short shelf life and availability period.

Moreover, jamun fruits are also rich source of antioxidants, anthocyanin, phytochemicals and polyphenols so have numerous health benefits. It is effective in the treatment of diabetes mellitus, inflammation, ulcers and diarrhea. The aim of present work was to develop a healthy fermented drink by using two jamun varieties Desi (local) and Raw with four different yeast strains of *Saccharomyces cerevisiae* (D7,11815, A2, PY1). Two different must types T1 (jamun juice), T2(jamun juice with

pulp & seed powder) were prepared and fermentation of the above treatments at lab scale (300ml) were optimized w.r.t Brix (18°B), inoculum size (5%) & diammonium hydrogen phosphate (100mg) (by Response Surface Method) using selected strain of yeast (D7). The prepared samples were analysed for reducing sugars, total sugars, titrable acidity, total soluble solids (TSS), pH, anthocyanins, polyphenols, tannins and in vitro antioxidant potential. The selected jamun wine were bottled and studied for different physicochemical parameters, organoleptic analysis and shelf life. All the results obtained were statistically analysed.

#### Speaker Biography

Amandeep Singh is pursuing MS (Master of Science) in microbiology at Punjab Agricultural University, Ludhiana. His research problem is Standardisation of fermentation conditions for production of fruit wine from jamun. He had completed his Bachelor of Science from the same university in 2016.

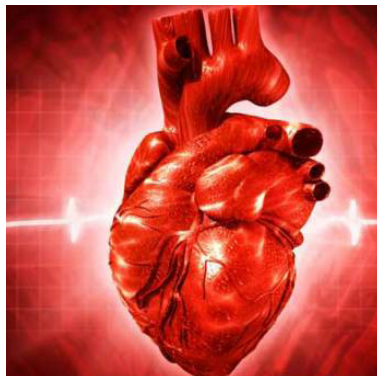
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# Scientific Tracks & Sessions October 30, 2018

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## Ca<sup>2+</sup>/Calmodulin-dependent kinase II delta B is essential for Cardiomyocyte Hypertrophy and complement factors gene expression, after TLR-4 stimulation *in vitro*

**Marcela Sorelli Carneiro Ramos**  
Federal University of ABC, Brazil

**Background:** The immune system leads to interface between several other systems and tissues including cardiovascular system. Cardiac response may be initiated by Toll-like receptors (TLRs) [pathogen-related molecular (PAMPs) or damage-related (DAMPs)], through the complement system (SC) or by both combined responses. In the inflammatory process, C3a component of SC is released in large amounts and binds to the C3aR receptor, which we have already known that is influenced by the activation of TLRs, inducing the transcription of inflammatory factors through the translocation of nuclear transcription factor kappa B (NF- $\kappa$ B) to the nucleus.

**Aims:** The aim of this study was to evaluate the participation of the complement system in the development of TLR4-induced cardiac hypertrophy through CamKII $\delta$  pathway in primary culture of cardiomyocytes.

**Methods:** Cells obtained by primary culture of cardiomyocytes from neonates Wistar rats. There were three main treatments: control cells untreated, cells treated with TLR4 agonists (HSP60 and LPS) and cells treated with siRNA of CamKII $\delta$  prior to the TLR4 agonists treatment. Real time PCR were utilized to analyze gene expression of markers of cardiac hypertrophy, complement components, inflammatory cytokines and NF- $\kappa$ B.

**Results:** The mRNA expression of cardiac hypertrophy biomarkers (BNP and alpha-actin) showed a significantly increase when cardiomyocytes were treated only with LPS and HSP60 ( $p < 0.05$ ). It was reverted when the CamKII $\delta$  was silenced. The same pattern was observed in the complement system components:


C3 and Cfb mRNA expression were increased after TLR4-agonists treatments however it was attenuated after CamKII $\delta$  silencing when compared to control groups. Even though the NF- $\kappa$ B mRNA levels are significantly increase after the LPS and HSP60 treatment, we could observe an attenuation after the CamKII $\delta$  silencing but it did not revert the expression to similar to control group ( $p < 0.05$ ). Concerning the inflammatory cytokines (IL-6 and TNF- $\alpha$ ), they have a significantly increase compared to control groups ( $p < 0.05$ ), however it did not change with the siRNA treatment.

**Conclusion:** We show that stress stimulus induced by HSP60 promotes cardiomyocyte hypertrophy, accompanied by initiation of inflammatory response via complement system. Whereas silencing CaMKII $\delta$  is sufficient to prevent the hypertrophic growth and it is not to prevent the inflammation. Findings presented here complement actual understanding on CaMKII mechanisms behind inflammation mediated cardiomyopathies.

### 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 hormone-induced cardiac hypertrophy, as well the effect of thyroxine on global gene expression modulation. Nowadays, the research line aim 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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**Development of nutritious shelf stable cereal bar - An alternating approach to snacks****Ramandeep Kaur**

Punjab Agricultural University, India

In recent years, public food associations around the world have been increasingly worried about the population nutritional needs. They are promoting a nutritious and wholesome diet to reduce the occurrence of nutritional deficiency disorders. Moreover, consumers are demanding healthy and convenient products. In view of these, cereal bars offer an alternative source of snacks being high in fibre, protein and other essential compounds. The aim of present work was to develop a shelf stable healthy cereal bar high in protein, and a major supplier of energy by utilising quinoa (40%), brown rice (35%), flaxseed (10%), dry fruits (such as raisins, dried figs (10%) and almonds (5%). Honey (50%) was added as a sweetener and binding agent. Shelf stability of prepared cereal bars were assessed at ambient conditions for 120 days in High-density polyethylene (HDPE) and aluminium laminates packages. Proximate composition, bioactive compounds, texture analysis as well as changes in peroxide value

(PV), free fatty acid value (FFA), sensory parameters during storage under ambient conditions were studied. All the results obtained were statistically analysed. Chemical changes in bar under different packaging materials during storage shown that, the bar remained stable and acceptable for entire storage period of 120 days at ambient conditions irrespective of the packaging materials used. All the results obtained were statistically analysed.

**Speaker Biography**

Ramandeep Kaur is a second year PhD scholar in food technology at Punjab Agricultural University, India. She also completed her MS (Master of Science) from the same institute in the year 2016. Her research problem during MS was based on Development of gluten free cereal bar for gluten intolerant population utilising quinoa as major ingredient. Based on it, she had publication in JFST (Journal of food Science and Technology).

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