

2016

# Health & Medical Sciences Abstracts

4<sup>th</sup> Annual International  
Conference on Health & Medical  
Sciences

2<sup>nd</sup> Annual International  
Conference on Public Health

2<sup>nd</sup> Annual International Forum  
on Health Inequality

2<sup>nd</sup> Annual International  
Symposium on Diabetes

2-5 May 2016, Athens, Greece

Edited by Gregory T. Papanikos

THE ATHENS INSTITUTE FOR EDUCATION AND RESEARCH





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## Preface

This abstract book includes all the summaries of the papers presented at the 4<sup>th</sup> *Annual International Conference on Health Sciences*, the 2<sup>nd</sup> *Annual International Conference on Public Health*, 2<sup>nd</sup> *Annual International Forum on Health Inequality* and the 2<sup>nd</sup> *Annual International Symposium on Diabetes*, 2-5 May 2016, organized by the Health Research Unit of the Athens Institute for Education and Research. In total there were 49 papers, coming from 28 different countries (Brazil, Bulgaria, Canada, China, Croatia, Egypt, France, Germany, Hungary, Iran, Italy, Japan, Kazakhstan, Kuwait, Libya, Nigeria, Oman, Romania, Russia, Saudi Arabia, Serbia, South Africa, South Korea, Thailand, Turkey, UAE, UK, and USA). The conferences were organized into thirteen sessions that included areas of Public Health & Health Inequality, Diabetes & Other Essays, Infections & Microbiology, Therapy, Psychology & Other Essays, and other related fields. As it is the publication policy of the Institute, the papers presented in this conference will be considered for publication in one of the books and/or journal of ATINER.

The Institute was established in 1995 as an independent academic organization with the mission to become a forum where academics and researchers from all over the world could meet in Athens and exchange ideas on their research and consider the future developments of their fields of study. Our mission is to make ATHENS a place where academics and researchers from all over the world meet to discuss the developments of their discipline and present their work. To serve this purpose, conferences are organized along the lines of well established and well defined scientific disciplines. In addition, interdisciplinary conferences are also organized because they serve the mission statement of the Institute. Since 1995, ATINER has organized more than 150 international conferences and has published over 100 books. Academically, the Institute is organized into four research divisions and nineteen research units. Each research unit organizes at least one annual conference and undertakes various small and large research projects.

I would like to thank all the participants, the members of the organizing and academic committee and most importantly the administration staff of ATINER for putting this conference together.

**Gregory T. Papanikos**  
**President**



**FINAL CONFERENCE PROGRAM**  
**4<sup>th</sup> Annual International Conference on Health Sciences**  
**2<sup>nd</sup> Annual International Conference on Public Health**  
**2<sup>nd</sup> Annual International Forum on Health Inequality**  
**2<sup>nd</sup> Annual International Symposium on Diabetes**

**PROGRAM**

**Conference Venue: Titania Hotel, 52 Panepistimiou Avenue, Athens, Greece**

**Monday 2 May 2016**

**08:00-08:30 Registration and Refreshments**

**08:30-09:00 Welcome & Opening Remarks (ROOM B-Mezzanine Floor)**

- Dr. Gregory T. Papanikos, President, ATINER.
- Dr. George Poulos, Vice-President of Research, ATINER & Emeritus Professor, University of South Africa, South Africa.

\*\*\*\*\*

**09:15-11:00 Session I (ROOM B-Mezzanine Floor):  
Public Health & Health Inequality I\***

**Chair:** Gregory T. Papanikos, President, ATINER.

1. Ingrid Kollak, Professor, Alice Salomon University of Applied Sciences, Germany, Anna Herzog, Research Assistant, Alice Salomon University of Applied Sciences, Germany & Marie Woepking, Research Assistant, Alice Salomon University of Applied Sciences, Germany. Tales+Dementia+Study – The Impact of Fairy Tale Telling on People with Dementia.
2. Brian Kavanagh, Ph.D. Candidate, The Open University, U.K. The Rise of Homonormativities and the Consequences for Gay Men's Understandings of their Risk of HIV Infection
3. \*Jennifer Mitchell, Ph.D. Candidate, University of Calgary, Canada, Erin Jones, Research Coordinator, University of Calgary, Canada & Bonnie Lashewicz, Assistant Professor, University of Calgary, Canada. Working Men's Mental Health: Understanding and Responding to Gender Specific Struggles.
4. Julian Maron, Ph.D. Student, Research Assistant, IFT Institut für Therapieforschung, Germany, Ludwig Kraus, Senior Researcher, IFT Institut für Therapieforschung, Germany, Elena Gomes de Matos, Ph.D. Student, IFT Institut für Therapieforschung, Germany, Oliver Pogarell, Senior Researcher, University of Munich, Germany & Daniela Piontek, Senior Researcher, IFT Institut für Therapieforschung, Germany. Exploring Educational Inequalities in Pharmaceutical Use: Is the Relation Mediated by Subjective Health? (HIN)
5. Judith Martin-Fernandez, Post-doc, Pierre Louis Institute of Epidemiology and Public Health, France, Sandrine Lioret, UMR1153 Epidemiology and Biostatistics Sorbonne Paris Cité Center (CRESS), France, Amandine Arnaud, Pierre Louis

**09:15-11:00 Session II (ROOM D-10<sup>th</sup> FLOOR):  
Diabetes & Other Essays**

**Chair:** George Poulos, Vice-President of Research, ATINER & Emeritus Professor, University of South Africa, South Africa.

1. \*Milenko Tanasijevic, Vice Chair for Clinical Pathology and Quality, Brigham and Women's Hospital, Associate Professor, Harvard Medical School, USA. Advanced Laboratory Diagnostics: Competitive and Strategic Positioning.
2. Yelena Bird, Assistant Professor, University of Saskatchewan, Canada. An Examination of the Association between Diabetes and Income (Especially among the Poor and Aboriginal Populations in Canada). (HSC)
3. \*Mohamed Elseweidy, Professor, Zagazig University, Egypt, Maha Abdou, Zagazig University, Egypt, Rawia Sarhan, Zagazig University, Egypt & Hebatollah Huseiny, Zagazig University, Egypt. Vitamin D as a Potential Inhibitor for Insulin Degrading Enzyme in Diabetic Rats. (DIA)

<p>Institute of Epidemiology and Public Health, France, Mathilde Roze, Pierre Louis Institute of Epidemiology and Public Health, France, Carme Caum, Pierre Louis Institute of Epidemiology and Public Health, France, Pierre Chauvin, Pierre Louis Institute of Epidemiology and Public Health, France &amp; Stéphanie Vandentorren, Pierre Louis Institute of Epidemiology and Public Health, France. Food Insecurity among Families Sheltered in Emergency Centers for Asylum-Seekers: The French ENFAMS Study. (HIN)</p> <p>6. *<u>Mingming Zhou</u>, Assistant Professor, University of Macau, Macau &amp; Wenting Wang, MSc Student, University of Macau, Macau. Short Form of Intercultural Sensitivity Scale C (ISS-15): Conceptual Framework and Scale Validation.</p> <p>7. *Richard Christy, Associate Professor, Wilfrid Laurier University, Canada. Quality of Societal Life and 21<sup>st</sup> Century Governance.</p>	
*This session is jointly offered with the Sociology Research Unit of ATINER	

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11:00-12:30 Session III (ROOM B-Mezzanine Floor): Public Health & Health Inequality II*	11:00-12:30 Session IV (ROOM D-10 <sup>th</sup> FLOOR): Infections and Microbiology
<b>Chair:</b> Ingrid Kollak, Professor, Alice Salomon University of Applied Sciences, Germany	<b>Chair:</b> * <u>Mohamed Elseweidy</u> , Professor, Zagazig University, Egypt,
<p>1. <u>Abolghassem Djazayeri</u>, Professor Emeritus, Tehran University of Medical Sciences, Iran &amp; Khadijeh Rahmani, Instructor, Shahid-Beheshti University, Iran. The Effects of a Regular Daily Milk Supplement on the Mental Growth and School Performance of Male Primary School Children in Tehran, Iran. (HIN)</p> <p>2. *David Achanfuo Yeboah, Professor, Abu Dhabi University, UAE. Towards a Framework for Sustainable Health Care. (PUH)</p> <p>3. Lawrence Sithole, Optometrist, University of South Africa, South Africa. An Overview of the National Health Insurance (NHI) and Its Possible Impact on Eye Health Care Services in South Africa. (PUH)</p> <p>4. <u>Angelina Maphula</u>, Lecturer, University of Venda, South Africa, James Takalani, Lecturer, University of Venda, South Africa, Rebecca Dillingham, Director, Center for Global Health, University of Virginia, USA, Rebecca Scharf, Developmental and Behavioral Pediatrics, University of Virginia, USA, Richard Guerrant, University of Virginia, USA &amp; Pascal Bessong, Professor of Microbiology, University of Venda, South Africa. Perceptions and Experiences among a South African Rural Population Participating in a Prospective Birth Cohort Study: Mal-ED, South Africa. (PUH)</p> <p>5. Folajinmi Oluwasina, Monitoring &amp; Evaluation, University of Ibadan, Nigeria &amp; AIDS Healthcare Foundation, Nigeria, Kate Ssamulla, Director, Monitoring and Evaluation-Africa Bureau, AIDS Healthcare Foundation, Uganda, Penninah Iutung, Bureau Chief- Africa, AIDS Healthcare Foundation, Uganda, Oluwakemi Gbadamosi, Snr Manager, PR and</p>	<p>1. Dragana Despot, MD, Institute for Biocides and Medical Ecology, Serbia, <u>Ivan Aleksic</u>, Biologist, Institute for Biocides and Medical Ecology, Serbia, Nebojša Tacevic, MD, Microbiologist, Institute for Biocides and Medical Ecology, Serbia &amp; Branislav Pešić, DVM, Institute for Biocides and Medical Ecology, Serbia. West Nile Virus Surveillance in Mosquitoes (<i>Culex pipiens</i>) Vectors. (PUH)</p> <p>2. Sanzhar Alybayev, Researcher, M. Aikimbayev's Kazakh Scientific Center for Quarantine and Zoonotic Diseases, Kazakhstan. Cholera Infection Risk Assessment of Some Regions of Kazakhstan by Study of Water Reservoirs for Presence of <i>Vibrio Cholerae</i>.</p> <p>3. <u>Engy El-Ghitany</u>, Assistant Professor, Alexandria University, High Institute of Public Health, Egypt, Ekram Abdel Wahab, Lecturer, Alexandria University, High Institute of Public Health, Egypt &amp; Azza Farghaly, Professor, Alexandria University, High Institute of Public Health, Egypt. Knowledge of Hepatitis C and Awareness of Infection in the Egyptian Community. (PUH)</p> <p>4. Arzu Malak, Namık Kemal University, School of Health, Nursing Department, Tekirdağ, Turkey, Mine Aydın Kurç, Namık Kemal University, Medical Faculty, Department of Medical Microbiology, Turkey, Dürmlül Gülen, Namık Kemal University, Medical Faculty, Department of Medical Microbiology, Turkey, Ayşe Demet Kaya, Okan University, Medical Faculty, Department of Medical Microbiology, Turkey, Nicel Taşdemir, Namık Kemal University, Medical Faculty, Department of Obstetrics and Gynecology, Turkey, Gamze Varol Saraçoğlu, Namık Kemal University, Medical Faculty, Department of Public Health, Turkey. Investigation on the Correlation between Vaginal Candidiasis and Individual Behavioral Factors of Patients.</p>

4<sup>th</sup> Annual International Conference on Health Sciences,  
2<sup>nd</sup> Annual International Conference on Public Health, Forum on Health Inequality,  
Symposium on Diabetes, 2-5 May 2016, Athens, Greece: Abstract Book

communications-Africa Bureau, AIDS Healthcare Foundation Kenya, Daniel Reijer, Global Director of Data and Analytics, AIDS Healthcare Foundation Kenya & Towolawi Adetayo, Country Program Manager, AIDS Healthcare Foundation, Nigeria. Factors Mitigating Access to HIV Treatment, Prevention and Care Services among Urban Poor in Nigeria: Lessons from AIDS Healthcare Foundation Impact.	
*This session is jointly offered with the Sociology Research Unit of ATINER	

**12:30-14:30 Urban Walk (Details during registration)**  
**14:30-15:30 Lunch**

<b>15:30-18:00 Session V (ROOM B-Mezzanine Floor): Organization and Public Health*</b>	<b>15:30-18:00 Session VI (ROOM D-10<sup>th</sup> FLOOR): Therapy, Psychology and Other Essays</b>
<b>Chair:</b> *David Achanfuo Yeboah, Professor, Abu Dhabi University, UAE.	<b>Chair:</b> George Poulos, Vice-President of Research, ATINER & Emeritus Professor, University of South Africa, South Africa.
<ol style="list-style-type: none"> <li>1. Fatma El Zahraa Abdel Rahman, Chief Admin Officer, Ahmadi Hospital, Kuwait Oil Company, Kuwait. Using Key Competencies to Manage Career Development &amp; Direction, via Mentoring Programme At Ahmadi Hospital, Kuwait Oil Company, 2014-2016. (PUH)</li> <li>2. Tim Morse, Senior Lecturer, Coventry University, U.K. Which Physical Assessment Skills Do Nurses Require, When Do They Use them and what are the Barriers to Their Use?</li> <li>3. John Moraros, Associate Professor, University of Saskatchewan, Canada. Lean Implementation in Saskatchewan Canada.</li> </ol>	<ol style="list-style-type: none"> <li>1. David Carter, Professor, University of Nebraska, USA. When Eric Berne Meets LENS.</li> <li>2. <u>Anthonie Gerber</u>, Senior Lecturer, University of the Free State, South Africa, Riaan Botes, Ph.D. Student, University of Gronigen, Netherlands, Erik Buskens, Professor, University Medical Center Gronigen, Netherlands, Annelize Vorster, Lecturer, University of the Free State, South Africa &amp; Amelle Mostert, Lecturer, University of the Free State, South Africa. A Cohort Study of Bloemfontein Elderly to Determine Health Related Quality of Life Andfunctionings.</li> <li>3. Amanda Lucchetti, Postdoctoral Fellow, Mayo Clinic, USA. Parent Competency and Family Impairment: An Effectiveness Study of Outcomes of Behavior Therapy for Children with Autism Spectrum Disorders in an Urban Community.</li> <li>4. Maria Elena Komodromou, Ph.D. Candidate, ISER University of Essex, U.K. Does Postpartum Depression Affect Employment?</li> <li>5. <u>Panagiota Rempelou</u>, Specialist of Internal Medicine, University of Padua and Hospital of Santorso, Italy, Edoardo Casiglia, University of Padua and Hospital of Santorso, Italy, Valérie Tikhonoff, University of Padua and Hospital of Padua, Italy, Margherita Giacomello, Italian Centre Clinical-Experimental Hypnosis, Turin, Italy, Antonio M. Lapenta, Italian Centre Clinical-Experimental Hypnosis, Turin, Italy, Francesco Finatti, University of Padua, Italy &amp; Augusto M. Rossi, Italian Centre Clinical-Experimental Hypnosis, Turin, Italy. Hypnotic Focused Analgesia Obtained through Body Dysmorphism Prevents Pain and its Cardiovascular Effects.</li> <li>6. <u>Uraivan Sirithammaphan</u>, Ph.D. Candidate / Lecturer, University of Hull, U.K. / Sirindhorn College of Public Health, Thailand, Fiona Cowdell, Reader, University of Hull, U.K. &amp; Kathleen Galvin, Professor, University of Brighton, U.K. Preventive Health Behaviours of Second-hand Clothing Sellers in Southern Thailand. (PUH)</li> </ol>
*This session is jointly offered with the Sociology Research Unit of ATINER	

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**18:00-20:00 Session VII (ROOM E-10<sup>th</sup> Floor): An International Symposium on Diabetes**

**Chair:** George Poulos, Vice-President of Research, ATINER & Emeritus Professor, University of South Africa, South Africa.

1. \*Lucia-Doina Popov, Head of Pathophysiology and Pharmacology Department, Institute of Cellular Biology and Pathology "N. Simionescu" of the Romanian Academy, Romania. Cardiomyocyte Mitochondrial Networking in Diabetes.
2. \*Fatima Regina Silva, Professor, Federal University of Santa Catarina, Brazil, Camila Pires Mendes, MSc Student, Federal University of Santa Catarina, Brazil, Bárbara Graziela Postal, MSc Student, Federal University of Santa Catarina, Brazil, Mayara Brich, Undergraduated Student, Federal University of Santa Catarina, Brazil, Ana Luiza Ludwig Moraes, Undergraduated Student, Federal University of Santa Catarina, Brazil, Allisson Jhonatan Gomes Castro, Ph.D., Pos-Doc Student, Federal University of Santa Catarina, Brazil, Patricia Devantier Neuenfeldt, Ph.D., Pos-Doc Student, Federal University of Santa Catarina, Brazil, Ricardo José Nunes, Professor, Federal University of Santa Catarina, Brazil & Marisa Jádna Silva Frederico, Ph.D., Pos-Doc Student, Federal University of Santa Catarina, Brazil. Mechanism of Action of New Associated Analogues Glibenclamide/Pioglitazone on Glucose Homeostasis.
3. Yasser Bustanji, Professor, University of Jordan, Jordan, Mohammad Hudaib, University of Jordan, Jordan, Hatim AlKhatib, University of Jordan, Jordan, Mohammad Mohammad, University of Jordan, Jordan & Ihab Almasri, Al-Azhar University, Gaza Strip. Identification of New Compounds from *Ginkgo Biloba* Extract as Potential Pancreatic and Hormone Sensitive Lipase Inhibitors for Management of Obesity. (PHA)
4. Andriana Margariti, Lecturer, Queen's University Belfast, UK. Restoring the Endothelial Cell Function in Diabetic Patients through the Novel and Powerful Approach of Cell Reprogramming.

**21:00-23:00 Greek Night and Dinner (Details during registration)**

**Tuesday 3 May 2016**

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**09:00-11:00 Session VIII (ROOM B-Mezzanine Floor): Health Inequalities and Quality of Health\***

**Chair:** John Moraros, Associate Professor, University of Saskatchewan, Canada.

1. Anita Rakic, Head of Laboratory, Teaching Public Health Institute of Split and Dalmatia County, Croatia. Impact of Microbiological Media on Quality Microbiological Finding. (PUH)
2. Anastasia Kalpakidou, Post-doctoral Research Associate / Trial Coordinator, University College London, U.K., Marta Buszewicz, Reader in Primary Care PCPH, University College London, U.K. & Irwin Nazareth, Professor in Primary Care PCPH, University College London, U.K. ToSCA - Trial of Sertraline versus Cognitive Behavioural Therapy for Generalised Anxiety.
3. \*Annamaria Uzzoli, Research Fellow, Centre for Economic and Regional Studies, Hungarian Academy of Sciences, Hungary. Changes of Health Inequalities in Space and Time in the Post-socialist Period of Hungary. (HIN) (Tuesday May 3, 2016)
4. \*Romona Devi Govender, Principal Specialist Family Medicine, University of KwaZulu-Natal, South Africa. Emergency Contraception: Disappointing as a Public Health Intervention in South Africa.

\*This session is jointly offered with the Sociology Research Unit of ATINER

**11:00-12:30 Session IX (ROOM D-10<sup>th</sup> Floor): Environment and Food**

**Chair:** \*Annamaria Uzzoli, Research Fellow, Centre for Economic and Regional Studies, Hungarian Academy of Sciences, Hungary,

1. Ahmed Alyami, Sr. Industrial Hygienist (CIH), Saudi Aramco, Saudi Arabia. Quantitative Assessment of Occupational Exposure to Gasoline Vapour at Petrol Stations.
2. Omar Chebbo, Lecturer, University of Sharjah, UAE, Marwa Isa Alhamadi, University of Sharjah, UAE, Maryam Jassim Alzaabi, University of Sharjah, UAE, Aysha Ali Alabdouli, University of Sharjah, UAE & Maitha Hamad ALRiyami, University of Sharjah, UAE. Kidney Function among Male Bodybuilders taking Protein Supplement.
3. Marinella Natali, Project Manager, Emilia-Romagna Regional Government, Italy, Liliana La Sala, Italian Ministry of Health, Italy, Adele Ballarini, Emilia-Romagna Regional Government, Italy, Maria Eleonora Soggiu, Università degli Studi di Torino, Italy, Loredana Musmeci, Università degli Studi di Torino, Italy, Mario Cirillo, Institute for Environmental Protection and Research, Italy, Sabrina Rieti, Institute for Environmental Protection and Research, Italy, Fabrizio Bianchi, Institute of Clinical Physiology, National Council of Research, Italy,

4<sup>th</sup> Annual International Conference on Health Sciences,  
2<sup>nd</sup> Annual International Conference on Public Health, Forum on Health Inequality,  
Symposium on Diabetes, 2-5 May 2016, Athens, Greece: Abstract Book

Nunzia Linzalone, Institute of Clinical Physiology, National Council of Research, Italy, Liliana Cori, Institute of Clinical Physiology, National Council of Research, Italy, Ennio Cadum, Regional Agency for the Protection of the Environment, Italy & Cristiano Piccinelli, Università degli Studi di Torino, Italy. Health Impact Assessment in Environmental Impact and Strategic Environmental Assessments in Italy: Guidelines and Tools for Evaluators and Proponents.

4. Majed AbuKhader, Associate Professor, Oman Medical College, Oman. Food Additives Content in Selected Snack Foods and Beverages and Public Perception of E-Numbers in Muscat, Oman. (PUH)

**12:30-13:30 Lunch**

**13:30-15:30 Session X (ROOM D-10<sup>th</sup> Floor): Cardiology, Cancer and Other Essays**

**Chair:** Jayoung Che, Associate Professor, Busan University of Foreign Studies, South Korea.

1. Bruno R. Cotter, Associate Professor, University of California, San Diego, USA, Gary S. Ma, University of California, San Diego, USA, Gabriella Strachan, University of California, San Diego, USA & Anthony N. DeMaria, University of California, San Diego, USA. Molecular Imaging and Mice: Myocardial Perfusion Using Myocardial Contrast Echocardiography (MCE).
2. \*Ilya Berishvili, Chief of TMR Department, Bakoulev Cardiovascular Scientific Center, Russia, Semenov M.Kh., Bakoulev Cardiovascular Scientific Center, Russia & Artuhina T.V., Bakoulev Cardiovascular Scientific Center, Russia. Advanced Myocardial Microcirculatory Support for Patients with Advanced CAD. Impact of Transmyocardial Laser Revascularization on Pathomorphological and Physiological Patterns of Myocardial Microcirculation.
3. \*Irina Camelia Chis, Lecturer, "Iuliu Hatieganu" University of Medicine and Pharmacy, Romania. Quercetin in Association with Moderate Exercise Training Restores Diabetes-Induced Vascular Damage in Rat Carotid Arteries. (DIA)

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**15:30-17:30 Session XI (ROOM D-10<sup>th</sup> Floor): Society and Health Issues**

**Chair:** \*Ilya Berishvili, Chief of TMR Department, Bakoulev Cardiovascular Scientific Center, Russia

1. Jayoung Che, Associate Professor, Busan University of Foreign Studies, South Korea. Relationship of Medical Practitioners and Consumers in S. Korea. (PUH)
2. Steven Oberhelman, Professor and Associate Dean, Texas A&M University, USA. Materia Medica in a Nineteenth-Century Cretan Healing Manual.

**17:30-19:00 Session XII (ROOM B-Mezzanine Floor): Data Analytics in Healthcare\***

**Chair:** Jayoung Che, Associate Professor, Busan University of Foreign Studies, South Korea.

1. Hamoud Bin Obaid, PhD Student University of Oklahoma, USA & Theodore Trafalis, Head, Industrial Engineering Research Unit, ATINER, Professor of Industrial and Systems Engineering & Director, Optimization & Intelligent Systems Laboratory, The University of Oklahoma, USA. Cyclic Physician Scheduling in Outpatient Clinics using Goal Programming.
2. \*Antonio Scala, Research Scientist, CNR - Institute of Complex Systems, Italy, Guido Caldarelli, Professor, IMT Alti Studi Lucca, Italy & Pietro Auconi, Medical Doctor, Private Practice of Orthodontics, Italy. Complex Networks for data-Driven Medicine. (Panel)
3. Adel M. Zeglam, Professor, Consultant Neurodevelopment Pediatrician, Tripoli University, Al-Khadra Teaching Hospital, Libya. Autistic Spectrum Disorder Today in Libya Five Years' Experience.

**17:30-19:00 Session XIII (ROOM D-10<sup>th</sup> Floor): Special Topics in Health and Medical Studies**

**Chair:** \*Romona Devi Govender, Principal Specialist Family Medicine, University of KwaZulu-Natal, South Africa.

1. Yuji Aoki, Director of Outpatient Department, National Hospital Organization Matsumoto Medical Center Matsumoto Hospital, Japan. Associations of Leukocyte Telomere Length, Serum Adiponectin and Dehydroepiandrosterone-sulfate with Performance Status in Japanese Centenarians. (Tuesday May 3, 2016)
2. Plamen Krastev, Assistant Professor, Medical University, Bulgaria, Zornitza Gorcheva, Assistant Professor, Medical University, Bulgaria, Tatyana Betova, Assistant Professor, Medical University, Bulgaria & Galya Stavreva, Associate Professor, Medical University, Bulgaria. Protective Effect of Monoammonium Glycyrhizinate on Experimental Colitis in Wistar Rats.

4<sup>th</sup> Annual International Conference on Health Sciences,  
2<sup>nd</sup> Annual International Conference on Public Health, Forum on Health Inequality,  
Symposium on Diabetes, 2-5 May 2016, Athens, Greece: Abstract Book

4. Janet Kurzynske, Professor, University of Kentucky, USA, Ann Vail, Professor, University of Kentucky, USA, Nicole Peritore, Senior Extension Specialist, University of Kentucky, USA, Margaret McGladrey, Assistant Dean, Research College of Public Health, University of Kentucky, USA & Janet Mullins, Professor, University of Kentucky, USA. Using a Socio-Ecological Framework for Community-Based Obesity Disparity Reduction Strategies.	
*This session is jointly offered with the Sociology Research Unit of ATINER	

20:30-22:00 Dinner (Details during registration)

<b>Wednesday 4 May 2016</b> <b>Cruise: (Details during registration)</b>
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<b>Thursday 5 May 2016</b> <b>Delphi Visit: (Details during registration)</b>
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**Fatma El Zahraa Abdel Rahman**  
Chief Admin Officer, Ahmadi Hospital, Kuwait Oil Company, Kuwait

## **Using Key Competencies to Manage Career Development & Direction, via Mentoring Programme At Ahmadi Hospital, Kuwait Oil Company, 2014-2016**

**Background:** As leaders, we have an obligation to help our future by training & mentoring tomorrow's leaders today, by using an effective mentoring programme. The leader has a vision & a plan, inspiring people around them to believe in & execute that plan. Leadership & mentoring of young employees is a way senior employees can help drive success of a corporation or an initiative. Serving in the role of a mentor reinforces that the mentor is a SME (subject matter expert), demonstrating leadership qualities by sharing this expertise. A mature organization has a certain culture about it that the experienced employee is comfortable with & knows how to navigate through. Best practice mentoring continually builds on the mentor's skills to help them better understand & communicate with their mentee, and to role model a continuous learning approach in their own career.

**Aims:** To share challenges faced, strategies implemented, methodologies used during the mentoring processes for four graduates (as KOC Future Talents), between 2014-2016; towards selecting, updating, reviewing & compiling the best "Healthcare Competencies Module, 2016-2018", starting by preparatory scheme; including implementation phase, reaching a sound overall Action Plan related to Hospital wide Professional Development.

**Methods:** Four KOC Future Talents (Medical Team) fully involved in all pertinent "Literature Review Related to Healthcare Competencies, Comparative Studies & Data Analysis" through regular Small Circle Meetings, by Subject Matter Experts, attending with Medical Focus Groups, which are formulated from various clinical & non - clinical, multidisciplinary staff, who provides depth & content validity selecting the most suitable diversified learning tools. Also, shadowing Data Entry Staff (using Oracle Application) in preparation for Online Gap Analysis Discussion (GAD) Sessions, attending with Department's &/ Division Heads & Subject Matter Experts all assessment sessions related to Personal Professional Development Plans.

**Results:** Four mentees will share within the "Professional Development Action Plan, 2016-2017" analysis, compilation & implementation, via Oracle Generated Reports.

**Conclusion:** Professional Development Action Plans 2016-2017 should be summarized, tabulated, defended before 31st January 2016, earning final approval for budget allocation & translated into cost.

**Majed AbuKhader**

Associate Professor, Oman Medical College, Oman

### **Food Additives Content in Selected Snack Foods and Beverages and Public Perception of E-Numbers in Muscat, Oman**

The aim of this study is to identify food additives content in selected snack foods and beverages; crisps, biscuits and fruit juices sold in Omani market and if they could pose any health risk. Moreover, a pilot survey was also conducted to assess public perception regarding E-numbers. The E-numbers printed in the ingredient label of 83 products sold in different supermarket outlets and 250 questionnaires distributed to public were recorded, collected respectively and subsequently analyzed. The results showed that the overall number of food additives used in the selected crisps, biscuits and fruit juices was 46 in which 22 of these additives are found in crisps. Among these additives citric acid is the most common type and used frequently in all products. Some of the additives used such as (mono) sodium glutamate and food colorings could pose a health risk upon excessive consumption. Lack of risk and benefit perception in the public regarding E-numbers which is correlated to the inadequate knowledge about E-numbers; 36% very good, 29% poor and 35% I don't know anything, is the main conclusion of the survey and requires further research. The synergistic effect of food additives on health due to the excessive content of additives in the selected products needs more attention.

**Ahmed Alyami**

Sr. Industrial Hygienist (CIH), Saudi Aramco, Saudi Arabia

## **Quantitative Assessment of Occupational Exposure to Gasoline Vapour at Petrol Stations**

Petrol station attendants' exposure to gasoline vapours while refuelling vehicles has raised health concerns, especially in tropical countries like Saudi Arabia. This is due to the increase of gasoline vaporisation by the predominantly hot temperatures and the increase risk of inhaling more vapours than its counterpart temperate countries. Furthermore, exposure during extended working hours (12 hr shifts), with no vapour recovery system and the handling of gasoline containing high percentage volumes of toxic substances (e.g. BTEX) have not been adequately addressed in the literature. Therefore, this work was designed and carried out to investigate the validity of this concern by assessing and quantifying full shift exposures to gasoline vapours during the refuelling process. Different exposure assessment methodologies were employed and evaluated for their suitability. The study assessed the exposures of 41 attendants via passive, active, and direct reading methods at twelve petrol stations of both high and low sales in the Eastern Province of Saudi Arabia. The study was conducted during the winter and summer months to test the seasonal variation of the exposure pattern: The effects of the quantity of gasoline sold, the locations of the stations, weather variations (e.g. wind speed, temperature, and humidity) were tested. Specially designed mini-weather stations and modified thermometers were utilized to accurately monitor sampling weather conditions. Forward-looking infrared (FLIR) thermal image cameras were utilised to visualise the size and movement behaviour of the vapour plumes during gasoline refuelling. The geometric means of the personal passive results for the BTEX were found to be relatively higher than those reported by the IARC, 2012 and Concawe, 2002 for Europe and North America.

**Sanzhar Alybayev**

Researcher, M. Aikimbayev's Kazakh Scientific Center for Quarantine  
and Zoonotic Diseases, Kazakhstan

### **Cholera Infection Risk Assessment of Some Regions of Kazakhstan by Study of Water Reservoirs for Presence of *Vibrio Cholerae***

Research of water reservoirs in urban and rural areas of West Kazakhstan, Mangystau, South Kazakhstan regions was carried out for detection of *V. cholerae*. The results will be used for differentiation of these regions by infection risk level for population. Samples of rivers, Caspian Sea, recreation water and sewage places were taken for the research.

Methods and materials. We used microbiological, genetic methods. For cartography, we used software of ArcGIS 10.1 and GPS. Sampling was carried on the base of retrospective data of cholera strains isolation places.

From 55 samples, 6 strains of *Vibrio cholerae* were isolated from the water reservoirs. The strains were not-toxic, and did not possess *ctxA*, *tcpA* genes. By phenotypic properties, all strains belonged to Heiberg group 1. On the base of social and ecological factors (pH, average annual air temperature) the studied water sources were classified by levels of favorable for survival of cholera microbe. Rivers of South Kazakhstan Region were more favorable places for survival of cholera agent. The rivers have pH from 7.0 to 8.0 and there is a favorable annual air temperature which provides a long circulation of cholera microbe. In South Kazakhstan Region there are social factors which help to spread cholera agent rapidly among population even if it is a minor cholera case. The social factors include not providing of safe drinking water, presence of cross-border irrigation network used for agricultural needs by population. Also, there are high migration activities between Kazakhstan and other countries of Central Asia.

The differentiation of studied regions by cholera infection risk levels will help to improve cholera epidemiological surveillance in these Kazakh regions that will help to protect population against cholera. The research has been continuing.

**Yuji Aoki**

Director of Outpatient Department, National Hospital Organization  
Matsumoto Medical Center Matsumoto Hospital, Japan

### **Associations of Leukocyte Telomere Length, Serum Adiponectin and Dehydroepiandrosterone-sulfate with Performance Status in Japanese Centenarians**

**Purpose:** Centenarians who have generally been spared major age-related diseases had better maintenance of telomere length, but studies on telomere length in centenarians are scarce. Here, leukocyte telomere length was assessed in association with performance status (PS), as well as adiponectin and dehydroepiandrosterone-sulfate (DHEA-S), in Japanese centenarians.

**Methods:** We visited 28 centenarians with their consent to the study. Twenty-three centenarians, whose leukocyte telomere length was able to be determined in postprandial blood samples, were studied. The subjects (5 men, 18 women; 101.6±1.9 years old) were classified according to PS 1 (nearly fully ambulatory), 2 (in bed less than 50 % of daytime), 3 (in bed greater than 50 %) to 4 (bedridden). Total telomeres were measured by the hybridization protection assay. Serum high-molecular-weight adiponectin and DHEA-S levels were measured with chemiluminescent enzyme immunoassay.

**Results:** Correlation coefficients among variables of PS 1 to 4 (n=2, 10, 6, and 5 in order), body mass index (BMI, 19.1±2.2), albumin (3.4±0.7 g/dl), adiponectin (10.3±4.5 µg/ml), DHEA-S (33.0±17.9 µmol/l) and telomere length (36,046±21,366 relative light units (rlu)) were significant between PS and albumin ( $r=-0.694$ ,  $p<0.01$ ), between telomere length and BMI ( $r=0.522$ ,  $p<0.05$ ), between adiponectin and BMI ( $r=-0.574$ ,  $p<0.01$ ), and between DHEA-S and albumin ( $r=0.530$ ,  $p<0.01$ ). When excluding two cancer-bearing centenarians (prostatic cancer and skin cancer) with short telomere length (9,015 and 6,478 rlu) who belonged to PS 1 and 2, telomere length turned out to significantly correlate with PS ( $r=-0.632$ ,  $p<0.01$ ).

**Conclusion:** Although the number of subjects in this study was small, it was intriguing that short leukocyte telomere length was found to be associated with poor performance status and possibly cancer development in centenarians. Serum adiponectin or DHEA-S level seemed to reflect fat mass or nutrition status. Leukocyte telomere length could be a useful biomarker or predictor of healthiness even in centenarians.

**Ilya Berishvili**

Chief of TMR Department, Bakoulev Cardiovascular Scientific Center,  
Russia

**Semenov M.Kh.**

Bakoulev Cardiovascular Scientific Center, Russia

&

**Artuhina T.V.**

Bakoulev Cardiovascular Scientific Center, Russia

### **Advanced Myocardial Microcirculatory Support for Patients with Advanced CAD. Impact of Transmyocardial Laser Revascularization on Pathomorphological and Physiological Patterns of Myocardial Microcirculation**

**Objective:** This study was undertaken to demonstrate that transmyocardial laser revascularization in patients with advanced CAD improves results of combined operations CABG+ TMR through reduction of vasoconstriction

**Methods:** We investigated vessels of coronary micro vascular network of patients with ENDCAD and analyzed the histological changes in two groups: in group of patients died after sole CABG (1-st group – 8 heart specimens) and group of patients died after combined operations CABG+TMR ( 2-nd group – 6 heart specimens). These data are compared with hospital results (deaths, MACE) in two large groups of patients with ENDCAD: with isolated CABG (1-st group –33 operations) and CABG+TMR ( 2-nd group – 87 operations), operated in 2011-2012.

**Results:** in all hearts after sole CABG was identified coronary arteriolar vasospasm that decreases coronary and bypass flow and thus increase the probability of thrombi formation. All cases after CABG+TMR revealed vasodilatation in lased areas. Reduction in the occurrence of vasospasm in cases with CABG+TMR can prevent graft and coronary occlusion. High indices of hospital mortality (12.1%) and morbidity (33.3%) in cases with sole CABG can be explained with coronary spasm in patients with advanced CAD. On the other hand, reduced hospital mortality (1.15%) and morbidity(2.3%) in the second group (CABG+TMR) can be explained by laser-influenced vasodilatation of distal coronary bed. Elevated resistance of the coronary bed hinders the effectiveness of the graft and myocardial blood flow(MBF).. We suggest, that intraoperative effectiveness of TMR based of denervation, dilatation of microvascular network of the myocardium and intraoperative improvement of perfusion.

**Conclusion:** elevated resistance of myocardial microcirculation (vasoconstriction) in patients with advanced CAD inhibit the effectiveness of the CABG. In cases with TMR effectiveness is most likely due to vasodilatation of vasoconstriction of myocardial microcirculation.

**Yelena Bird**

Assistant Professor, University of Saskatchewan, Canada

## **An Examination of the Association between Diabetes and Income (Especially among the Poor and Aboriginal Populations in Canada)**

**Introduction:** The possible influences of income as a risk factor in developing type 2 diabetes have not been sufficiently studied in Canada. The primary purpose of the present study was to determine the unadjusted and adjusted effect of income on type 2 diabetes. The secondary purpose was to determine the adjusted effect of income on its main disease intermediaries, high blood pressure and being overweight or obese, and its main behavioral risk factor of physical inactivity.

**Methods:** This is a cross-sectional, population-based study. Data was collected over four cycles of the Canadian Community Health Survey (CCHS). It was conducted by Statistics Canada and covered the time period of 2000-2008 in the province of Saskatchewan, Canada. In this study, four separate and distinct multivariate models were built to determine the independent effect of income on type 2 diabetes, high blood pressure, being overweight or obese, and physical inactivity.

**Results:** The total sample size was comprised of 27,090 residents from Saskatchewan. After statistically controlling for age, only six covariates were independently associated with type 2 diabetes prevalence including: having high blood pressure (OR=3.26), visible minority cultural status (OR=2.17), being overweight or obese (OR=1.97), being of male gender (OR=1.76), having a household income of \$29,999 per year (OR=1.63) and being physically inactive (OR=1.15).

**Conclusions:** In this study, household income was strongly and independently associated with type 2 diabetes prevalence, its main disease intermediaries, high blood pressure and being overweight or obese, and its main behavioral risk factor of physical inactivity. We suggest that income is an important but frequently overlooked risk factor for type 2 diabetes and worthy of further investigation, appropriate public debate and timely policy intervention.

**Yasser Bustanji**  
Professor, University of Jordan, Jordan  
**Mohammad Hudaib**  
University of Jordan, Jordan  
**Hatim AlKhatib**  
University of Jordan, Jordan  
**Mohammad Mohammad**  
University of Jordan, Jordan  
&  
**Ihhab Almasri**  
Al-Azhar University, Gaza Strip

### **Identification of New Compounds from *Ginkgo Biloba* Extract as Potential Pancreatic and Hormone Sensitive Lipase Inhibitors for Management of Obesity**

Obesity is a worldwide problem that is rapidly affecting both developed and developing countries. According to a recent report from the World Health Organization, it is estimated that worldwide more than 1 billion adults are overweight, at least 300 million of them clinically obese. *Ginkgo biloba* L. (Ginkgoaceae) has been used for medical purposes for centuries in traditional Chinese medicine. The standard extracts of *G. biloba* leaves are now more usually used as dietary supplements or phytomedicines in Western countries.

In this study the methanolic extract of *Ginkgo biloba* L. (Ginkgoaceae) was investigated as an inhibitor of pancreatic lipase (PL) and Hormone sensitive lipase (HSL) in an attempt to explain its hypolipidemic activity. The lipase activity was quantified by a colorimetric assay that measures the release of p-nitrophenol in well controlled studies.

In *vitro* assay of *G. biloba* leaves extract inhibited both PL and HSL in a dose dependent manner with micro molar activities. Further investigations were performed employing theoretical docking simulations and experimental testing to uncover the active constituents responsible for *G. biloba* antilipase activity. Different ginkgolides A, B, C, J, K L, and bilobalide were identified and tested for their potential PL and HSL inhibition.

Using molecular docking, terpene trilactones, including ginkgolides and bilobalide, were found to fit within the binding pocket of PL via several attractive interactions with key amino acids. Experimentally, ginkgolides A, B and bilobalide were found to inhibit PL significantly ( $IC_{50} = 22.9, 90.0$  and  $60.1 \mu\text{g/mL}$ , respectively). Moreover, these terpene trilactones could also inhibit the HSL in the same manner. Our findings demonstrated that the hypolipidemic effects of *G. biloba* extract can be attributed to the inhibition of PL by, at least in part, terpene trilactones. In conclusion, this work can be considered a new step towards the discovery of new natural safe hypolipidemic PL inhibitors.



**David Carter**  
Professor, University of Nebraska, USA

### **When Eric Berne Meets LENS**

The emerging field of neuro-analysis could combine two fundamentally different areas of study –Transactional Analysis and neuroscience – for a whole new way of understanding how the anxious client’s mind can be enhance using this combination of treatment approaches. Ten clients suffering from Generalized Anxiety Disorder were selected, five received Low Electro-magnetic Neurofeedback System (LENS) training, and five received LENS training and Transactional Analysis. This presentation will provide participants with the results of a Pre and Post Wellness Assessment after administering the therapy.

**Omar Chebbo**

Lecturer, University of Sharjah, UAE

**Marwa Isa Alhammadi**

University of Sharjah, UAE

**Maryam Jassim Alzaabi**

University of Sharjah, UAE

**Aysha Ali Alabdouli**

University of Sharjah, UAE

&

**Maitha Hamad ALRiyami**

University of Sharjah, UAE

## **Kidney Function among Male Bodybuilders taking Protein Supplement**

The kidneys are a pair of organs located on each side of the spine behind the peritoneal cavity. The kidneys are the main route by which nitrogenous end products are excreted. The loss of renal function, renal failure, is characterized by the increase of nitrogenous waste products in the blood.

The trend for some athletes to take protein supplements to increase their muscle mass is very popular these days. This trend should be of a great concern because high protein intake will lead to the increase of production of nitrogenous waste products, Urea, uric acid, and creatinine which must be filtered through the kidneys. We assumed that a high amount of nitrogenous end products produced due to the intake of protein supplement will promote renal damage by chronically increasing the glomerular pressure and hyper filtration. This research will assess the renal function of those who are taking protein supplement and compare their results with that of a control group of individuals who are on a regular diet.

**Irina Camelia Chis**

Lecturer, "Iuliu Hatieganu" University of Medicine and Pharmacy,  
Romania

### **Quercetin in Association with Moderate Exercise Training Restores Diabetes-Induced Vascular Damage in Rat Carotid Arteries**

Diabetes mellitus is a chronic endocrine-metabolic disorder associated with increased risk of cardiovascular diseases due to vascular dysfunction caused by an impairment of endothelium-dependent relaxation (EDR). Quercetin is a natural flavonoid with multiple pharmacological effects including reducing oxidative stress and improvement vascular function. Exercise training has the effect in restoring endothelial function to diabetics by inhibiting inflammation and oxidative/nitrosative stress and by restoring NO bioavailability in vessels wall. The aim of the present study was to investigate the synergistic effects of Quercetin and moderate exercise training in restoring diabetes-induced vascular damage in rat carotid arteries.

Diabetic rats that performed exercise training were subjected to a swimming training program (1 hour/day, 5 days/week, 5 weeks). The diabetic rats received Quercetin (30 mg/kg body weight/day) for 5 weeks. At the end of the study, were performed ultrasound (US) evaluation of carotid arteries and carotid arteries rings were isolated from all experimental rats. The US procedures aimed to obtain morphological (2D), vascular (color Doppler and pulsed Doppler) and angiospecific functional data (CEUS). The effect of Quercetin in association with moderate exercise training on carotid arteries elasticity and EDR in response to acetylcholine in isolated phenylephrine-precontracted arteries segments in the presence of indometacine was studied. In sedentary untreated diabetic rats EDR was significantly decreased - maximal relaxation (% of KCl) of carotid arteries and cause morphological and functional changes in carotid arteries. Quercetin in association with moderate exercise training restored normal EDR in carotid arteries segments and elasticity of carotid arteries from diabetic rats. These findings suggest that Quercetin in association with moderate exercise training protects vascular endothelial function in diabetic rats.

**Richard Christy**

Associate Professor, Wilfrid Laurier University, Canada

## **Quality of Societal Life and 21st Century Governance**

According to Max Weber traditional authority, charismatic authority and rational legal authority are the three types of legitimate authority in society. In a post-modern scientific, technological era rational legal authority dominates all social organizations including government. In his article "The Malaise of Modernity" Charles Taylor argues that "the primacy of instrumental reason results in a society without a sacred structure and everything in society is up for grabs." For Taylor every aspect of the cultural and social structure can be subject to debate and criticism including political structures and the "head of state". Canada is a constitutional monarchy in which traditional and bureaucratic authority are blended. How was traditional authority established in Canadian society? What if any role does traditional authority plays in contemporary Canadian society? Does traditional authority enhance and/or compliment rational legal authority of the Canadian nation state? What is the impact of traditional authority on the quality of life in post-modern societies?

**Bruno R. Cotter**

Associate Professor, University of California, San Diego, USA

**Gary S. Ma**

University of California, San Diego, USA

**Gabriella Strachan**

University of California, San Diego, USA

&

**Anthony N. DeMaria**

University of California, San Diego, USA

## **Molecular Imaging and Mice: Myocardial Perfusion Using Myocardial Contrast Echocardiography (MCE)**

**Background:** Regulation of myocardial blood flow (MBF) is altered by HTN, diabetes mellitus, hyperlipidemia. Adenosine has been used to measure maximal increase in blood flow available to the heart, i.e. coronary flow reserve (CFR). Genetically modified mice are useful tools to study pathways involved in the control of MBF. MCE allows the noninvasive quantification of MBF with continuous infusion of ultrasonic contrast agent. Aim of the study was to investigate whether or not MCE in closed chest was feasible using a tail vein at rest and after adenosine infusion.

**Methods:** 14 adult male C57BL/6 mice were anesthetized with I.M. injections of xylazine (0.01 mg/g) and ketamine (0.1 mg/g). A 27Gx0.5 Surflow® winged needle was inserted in tail vein for both contrast agent and adenosine. MCE, using parasternal long axis view, was performed with a linear transducer (15L8 MHz; Acuson Sequoia C512 system; Siemens) at MI of 0.24 with contrast pulse sequencing. Gains were adjusted to eliminate myocardial signal and were held constant. Definity® was diluted 1/10 and infused at 70µL/min. After baseline imaging, I.V. adenosine (150µg/kg/min, at 10µL/min was infused over 4 minutes and MCE images were repeated. ROI was placed in the anteroseptal wall and average signal intensity was measured automatically on each frame (Syngo ACQ, Siemens). A curve of signal intensity over time was obtained as an exponential function:  $y=A(1-e^{-\beta t})$ . 2 to 3 curves were averaged for each mouse under each condition.

**Results:** 11/14 mice tolerated the procedure well and survived.

33 replenishment curves at baseline and 32 after adenosine were obtained and analyzed (Fig. 1).

	Baseline Values	After adenosine
A	14.2±5.3	12.8±4.2 (p=ns)
β	0.41±0.2	0.76±0.3 (p<.0001)
Aβ	5.1±1.97	9.1±3.54 (p<.0001)

Increase in MBF after adenosine due to increase in blood flow velocity, without any change in myocardial blood volume.

Myocardial blood volume is mainly contained in the capillaries, which do not appear to be recruited by intracoronary adenosine infusion.

**Conclusion:** Our study shows that it is feasible to obtain time-intensity curves from MCE in closed chest mice using the peripheral vein, which can be used to estimate myocardial blood flow and CFR. Murine MCE can be used in future studies with genetically engineered mice to better understand the pathways involved in the regulation of myocardial blood flow.

**Dragana Despot**

MD, Institute for Biocides and Medical Ecology, Serbia

**Ivan Aleksic**

Biologist, Institute for Biocides and Medical Ecology, Serbia

**Nebojša Tacevic**

MD, Microbiologist, Institute for Biocides and Medical Ecology, Serbia

&

**Branislav Pešić**

DVM, Institute for Biocides and Medical Ecology, Serbia

### **West Nile Virus Surveillance in Mosquitoes (*Culex pipiens*) Vectors**

Sudden outbreak of WNV infection among human population in Serbia from August to October 2012, prompted us to investigate WNV presence in mosquito populations in Serbia. Through 2013, 2014 and 2015 years, Institute for Biocides and Medical Ecology realized the Project titled „WNV detection in mosquito populations from Serbia“. Project was funded by Serbian Ministry of Health. Number of mosquito traps varied throughout the years as the cities that mosquitoes were collected from. Two groups of cities were formed for collecting mosquitoes. First group were vulnerable cities in sense of their geographical position (proximity to major rivers, lakes, flooding areas...). The second group consisted of cities with suspected or confirmed WNV infection in humans. Sites where mosquito traps were positioned included river banks and ditches, woods, cemeteries, private gardens and parks. 85-90% sampled mosquitoes were *Cx. pipiens (pipiens)* complex. Other collected mosquitoes were from genera such as *Aedes*, *Anopheles*, *Culiseta* and *Ochlerotatus*. WNV RNA detection was done by RT-PCR in pooled mosquitoes' samples. During West Nile virus transmission seasons 2013, 2014 and 2015. year, percentage of cities with mosquitoes samples tested positive for presence of WNV was varied from 54%, 27% and 42% respectively. WNV was recovered only from *Cx. pipiens (pipiens)* mosquitoes and represent lineage 2 strain probably similar to strain that currently circulating in neighboring countries.

These results confirm role of *Cx. pipiens* as a main vectors for WNV in Serbia and highlight the risk of infection for human population, emphasizing the need for implementing comprehensive WNV surveillance program throughout the country.

**Romona Devi Govender**

Principal Specialist Family Medicine, University of KwaZulu-Natal,  
South Africa

**Emergency Contraception: Disappointing As a Public  
Health Intervention in South Africa**

Background: World Health Organization (WHO) estimates that 84 million unwanted pregnancies occur annually world-wide and many of these can be prevented with the use of emergency contraception. Emergency contraception is largely underutilized worldwide. Despite a progressive reproductive health policy and the legal re-scheduling of EC pills, the South African health institutions also need to create an enabling environment for the increased usage of emergency contraception (EC).

Aim: The aim of this study is to assess the awareness and knowledge of emergency contraception among women who present for choice on termination of pregnancy to a district hospital in KwaZulu-Natal, South Africa.

Methods: A cross sectional descriptive study was conducted over a period of 7 months. A sample of 217 patients voluntarily participated in the study. Data was collected using a validated and structured questionnaire and was analysed using SPSS.

Results: A total of 217 women completed the questionnaire. The ages of the respondents ranged from 16 to 52 years, with a mean age of 25.89 years. Ninety nine percent were black African, 87% of the sample was single, and 73.9% had secondary level education. Eighty six percent are from an urban environment. Forty four percent are unemployed and 38.1% attending school. About 70% of respondents had heard about ECs with 45% of them having heard about it from their peers and with about 41% having used an EC. The multivariate analysis indicated that respondents who were older (>25 years) and having a level of education higher than the secondary level were more likely to be aware of EC ( $p<0.05$ ).

Conclusion: This study showed that age is a strong predictor of use and having heard of ECs. Knowledge, access to and the use of emergency contraception are crucial if South Africa wants to reduce the prevalence of unwanted pregnancies following unprotected sexual intercourse and the number of legal abortions performed.

**Abolghassem Djazayeri**

Professor Emeritus, Tehran University of Medical Sciences, Iran

&

**Khadijeh Rahmani**

Instructor, Shahid-Beheshti University, Iran

## **The Effects of a Regular Daily Milk Supplement on the Mental Growth and School Performance of Male Primary School Children in Tehran, Iran**

**Objective:** This study was conducted to investigate the effects of a regular daily milk supplement on the mental growth and school performance of male primary school children in Tehran, Iran.

**Methods and Methods:** A total of 400 male primary school children with a similar (medium) socio-economic status, food consumption and body weights and heights, were assigned to either an experimental (drinking daily a 250-ml bottle of sterilized homogenized milk) or a control (receiving nothing) group. The following tests were performed on all children initially and after 4 months: Raven Colored Progressive Matrices test (RCPMT) and the Wechsler Intelligence Scale (WIS; verbal, non-verbal, total IQ) (the range of test scores: <80, 80-<90, 90-110, and >110). **Results:** 1. A statistically significant increase ( $\chi^2$ ,  $p<0.05$ ) in the proportion of experimental children (from 35.1% to 62.9%) with an RCPMTS of >110; 2. Significant increases in the proportions ( $\chi^2$ ,  $p<0.05$ ) of the experimental subjects with a WIS verbal, non-verbal, and total IQ test score of >110 from 0.3% to 10.1%, 0.7% to 26.3%, and 0.4% to 15.1%, respectively; 3. A significant increase in the mean GPA (out of 100) of  $90.5 \pm 5.1$  of the experimental children in the first quarter to  $98.4 \pm 3.5$  in the second quarter (t-test,  $p<0.05$ ). All other changes were statistically non-significant. **Conclusion:** Regular daily consumption of 250 ml milk can result in improvements in the mental growth and school performance of male primary school children.



**Engy El-Ghitany**

Assistant Professor, Alexandria University, High Institute of Public  
Health, Egypt

**Ekram Abdel Wahab**

Lecturer, Alexandria University, High Institute of Public Health, Egypt  
&

**Azza Farghaly**

Professor, Alexandria University, High Institute of Public Health, Egypt

**Knowledge of Hepatitis C and Awareness of Infection in  
the Egyptian Community**

*Background;* Continuous transmission of HCV infection in Egypt still exists. Prevention of primary HCV infection is a public health issue of major importance particularly through targeted HCV awareness efforts. Understanding the characteristics of persons who have deficient knowledge or are unaware of their infection can help target appropriate education and early detection strategy. The aim of this study was to assess the mode of transmission knowledge level and its determinants and show the level of awareness by describing how infection is first detected in Egyptian patients. *Methods;* A case-control study was performed in which 1024 cases and 1046 controls were asked an open-ended question regarding HCV mode of transmission. Cases were also interviewed about how they got aware of their infection. *Results;* two thirds of cases and controls had relevant knowledge and one third of them do not know how HCV is transmitted. Women and older controls were significantly more knowledgeable. The level of education was associated with relevant knowledge. Active diagnosis was barely looked for, while diagnosis after becoming symptomatic occurred in almost half of the cases. Participants who were accidentally aware of their HCV positive status were more likely to be males, older than 45 years, urban residents, engaged in high risk occupation, married, literate and lived abroad. *Conclusion;* HCV knowledge needs to be improved across the whole community with a special focus on reaching population with lower educational levels. An integrated national HCV screening strategy need to be adopted and directed to high risk groups to improve early detection.

**Mohamed Elseweidy**  
Professor, Zagazig University, Egypt  
**Maha Abdou**  
Zagazig University, Egypt  
**Rawia Sarhan**  
Zagazig University, Egypt  
&  
**Hebatollah Huseiny**  
Zagazig University, Egypt

## **Vitamin D as a Potential Inhibitor for Insulin Degrading Enzyme in Diabetic Rats**

Insulin Degrading Enzyme (IDE) controls Insulin through a degrading – dependent clearance mechanism in multiple tissues. It is a highly conserved Zinc metallopr- Oteinase which is abundant in brain, liver and muscle tissues of human. Present work aimed mainly to illustrate the effect of vitamin D on liver IDE activity.

For such reason Rats were fed High Fructose diet (HFD) for Six weeks. Insulin level, IDE activity, Insulin receptor signaling in pancreatic tissues (IrP), Glucagon and Lipogram profile were determined.

Administration of Vitamin D ( /kg ) for 6 weeks resulted in significant decrease of Glucose, Total and LDL cholesterol , TG , Glucagon , Insulin , liver IDE activity along with an increase in IrP and HDL-c as compared to diabetic control rats.

Conclusion: Taken in consideration that IDE may be a potential drug target for Diabetes mellitus treatment, Vitamin D may represent her a new promising agent for hyperlipidemia in consequent to uncontrolled hyperglycemia through its potential as inhibitor for insulin degrading enzyme

**Anthonie Gerber**

Senior Lecturer, University of the Free State, South Africa

**Riaan Botes**

Ph.D. Student, University of Gronigen, Netherlands

**Erik Buskens**

Professor, University Medical Center Gronigen, Netherlands

**Annelize Vorster**

Lecturer, University of the Free State, South Africa

&

**Arnelle Mostert**

Lecturer, University of the Free State, South Africa

## **A Cohort Study of Bloemfontein Elderly to Determine Health Related Quality of Life Andfunctionings**

**Background.** An ageing population has become an issue of global importance. According to statistics, the number of people aged 60 and older will outnumber children younger than five years by 2020. The aim of this study is to identify chronic and comorbid diseases that contribute to reduced quality of life (QoL) and functionings in elderly people living in nursing homes in Bloemfontein, Free State, South Africa.

**Methods.** This study used utility and capability-based questionnaires EQ-6D and a modified ICECAP-O, to identify chronic and comorbid diseases. An information leaflet was supplied to respondents, along with an informed consent form which they each signed and dated. The respondents participated voluntarily and anonymously in the completion of the questionnaires. Structured interviews were conducted. No algorithm for the EQ-6D questionnaire or ICECAP-O questionnaire is available for the South African population. Statistical Package for Social Science SPSS, version 16 was used to perform the sum score calculations. Data are presented using standard descriptive statistics.

**Results.** The total sample comprised of 104 elderly respondents: 72.1% females and 27.9% male with an average age of 77. They mostly suffered from two comorbid diseases, ranking between hypertension(68,8%), joint disease(46,2%), heart disease (22,1%), cancer (19,2%) and psychological disorders(18,3%). The EQ-6D questionnaire indicated that "pain" (48%) and "mobility" (36%) were the domains mostly affected in this population. The elderly with extreme problems reported all the domains to be equally affected, with the exception of "cognition" (29%).

**Conclusion.** Our results indicated that diseases result in pain and affect mobility and cognition in old age. Access to healthcare and services for older people involves recognition of the importance of health promotion and disease preventative activities throughout and should focus on maintaining independence, prevention and delay of disease and disability treatment. This includes improving quality of life in older people with existing disabilities.

**Anastasia Kalpakidou**

Post-doctoral Research Associate / Trial Coordinator, University  
College London, UK

**Marta Buszewicz**

Reader in Primary Care PCPH, University College London, UK  
&

**Irwin Nazareth**

Professor in Primary Care PCPH, University College London, UK

## **ToSCA - Trial of Sertraline versus Cognitive Behavioural Therapy for Generalised Anxiety**

**Background:** Generalised Anxiety Disorder (GAD) is common, associated with distressing symptoms and poor daily functioning and often imposes considerable financial burdens. The UK National Institute for Health and Clinical Excellence guidelines recommend low-intensity psychological therapies as the best initial treatment. However, it is uncertain whether pharmacological or psychological therapy provides the most effective longer-term treatment for those not responding to low-intensity therapies. ToSCA is a randomised controlled trial aiming to answer this question and calculate the cost-effectiveness of both approaches.

**Methods:** A target of 360 participants is being recruited via Increasing Access to Psychological Therapies (IAPT) services in England. Eligible adult participants, have a primary diagnosis of GAD as diagnosed on the Mini International Neuropsychiatric Interview (MINI), a positive score of 10+ on the GAD-7 questionnaire and have received and failed to respond to low-intensity treatment. After giving informed consent and fulfilling all the eligibility criteria, participants are randomised to either the antidepressant medication sertraline prescribed by their GP as per current clinical recommendations for a 12-month period or to 14-16 Cognitive Behaviour Therapy (CBT) sessions delivered by high-intensity IAPT psychological therapists.

**Outcomes:** The primary outcome is the Hospital Anxiety and Depression Scale (HADS-A) collected at 12 months. Secondary outcomes collected at the baseline and 12-month visits and via self-completed postal questionnaires at 3, 6 and 9 months include measures of the effects of anxiety, participant satisfaction with the intervention and health economic data. Health services data will be collected for the 6 months prior to baseline and the 12 months duration of the trial.

**Discussion:** This trial is innovative in terms of recruiting participants directly from UK IAPT services and is the first head-to-head trial of medication versus psychological therapy in GAD. We will present and discuss relevant issues around the methodology of the trial and recruitment in particular.

**Brian Kavanagh**

Ph.D. Candidate, The Open University, UK

## **The Rise of Homonormativities and the Consequences for Gay Men's Understandings of their Risk of HIV Infection**

The recent introduction of civil partnerships and gay marriage across numerous European countries has created a new "ideal-type" relationship structure, to which gay people can now aspire. This relationship structure has been reinforced by "cultural referents" and the positive images of gay coupledness presented across various media (Murray, 2012). However, there has been increasing concern within the communities that this shift towards homonormativities and the desire to appear as "good homosexuals" has led to the silencing of alternative voices (Croce, 2015). One of the consequences of this shift identified by Butler (2002) is that there may be a rise in moral judgements about those who do not wish to engage in the institution of marriage/civil partnership and a new hierarchy between legitimate and illegitimate sexual arrangements may be created. This research indicates that such hierarchies are appearing in the MSM communities in the UK, in which alternative transgressive discourses are being muted. The celebration of sexual diversity previously associated with these communities is being replaced by a rise in moral judgements about men who are more promiscuous and/or engaging in sexual risk-taking behaviours. As a result, an imagined *illegitimate other* who embodies these risk-taking behaviours is created, against which men can measure their own sexual activity. In doing so, these men sanitise their own risk-taking behaviours, which are often remarkably similar to those they have identified in the *illegitimate other*, and thus break the link between their own sexual behaviours and a heightened risk of HIV infection. This paper will discuss aspects of this othering process, the consequences for those working in the field of HIV and the changes needed to address these issues in sexual health interventions.

**Ingrid Kollak**

Professor, Alice Salomon University of Applied Sciences, Germany

**Anna Herzog**

Research Assistant, Alice Salomon University of Applied Sciences,  
Germany

&

**Marie Woepking**

Research Assistant, Alice Salomon University of Applied Sciences,  
Germany

## **Tales+Dementia+Study – The Impact of Fairy Tale Telling on People with Dementia**

The Tales+Dementia+Study is a study that accompanied the project “Once upon a time... FAIRY TALES AND DEMENTIA”, which offered fairy tale narratives for people with moderate to severe dementia. The project took place in five nursing homes in Berlin, Frankfurt/Main and Hamburg. The study was looking into the impact of the narratives on the participants’ well-being and define the quality characteristics for the setting as well as for the narrators to enhance further training programs.

Though psychosocial interventions were praised as useful for people with dementia (German Society for Psychiatry 2010) only little is known about appropriate concepts and settings. Therefore, qualitative research methods were used. During the intervention two cameras recorded the interaction between the auditors and the narrators and the communication within the group of participants. To understand the emotional and bodily expressions in addition to verbal expressions the data was analyzed from multiple perspectives. In the run-up for the intervention the team participated in regular situations in the nursing homes, interviewed health professional and studied the care documentation. With the help of this kind of fieldwork the team wanted to take part in the participants’ life in nursing homes, understand their expressions and ways to talk and interact with peers and health care professionals.

The collected data comprises 24 sessions with ten hours of video films and 160 pages of transcribed interviews. The material was analyzed and gave detailed information on 30 regular participants and allowed a comparison of their behavior during the sessions and during their daily living. Half of the observed people in the group (16) showed an active and interested behavior. They clapped hands, answered or gave comments to the narrator, looked at each other etc. Two participants seemed indifferent – they liked the intervention on one day and disliked it on another. Two were inactive and showed no emotions – though they always returned and wanted to participate, as nurses reported in the interviews. The other participants seemed to like the events but were lesser active. People with vocal disorders (continuous humming noises) were accepted and integrated in the group.

Participants who were characterized as apathetic, took actively part. Aggressive behavior was not visible.

The narrators were professionals who were trained for their task in nursing homes. They were able to positively validate (Feil 2010) all the participants' notions and were able to handle all kind of irritations. The events worked especially well in nursing home that welcomed the intervention from director to staff member and supported the intervention.

The M+D+S-report concluded that the observed fairy telling sessions enhanced the quality of life for people with dementia, defined by Bartholomeyczik et al. 2013 and enlarged the behavioral repertoire of people with dementia as defined by Becker et al. 2011.

The project and study were funded by the German Federal Ministry of Family Affairs, Senior Citizens, Women and Youth as well as by the Senate Department for Social Affairs and Health. Project duration February 2014 to August 2015.

**Maria Elena Komodromou**  
Ph.D. Candidate, ISER University of Essex, UK

## **Does Postpartum Depression Affect Employment?**

***Background*** Postpartum depression is considered a major public health problem. It is estimated that 8-15% of mothers suffer from postpartum depression in the UK. Empirical evidence on the effects of postpartum depression on maternal employment is however limited. ***Methods*** Using data from the Millennium Cohort Study (MCS) and a time span covering several periods (3 to 11 years after the birth) the present study explored the possible effects of PPD on maternal employment in the UK, expecting to gain an insight into the possible pathways or mechanisms through which PPD is likely to impact maternal employment outcomes, and thus fill the gap by obtaining a more comprehensive picture of the implications of mental disturbances on female wellbeing and employment outcomes. The direct and indirect effects (through marital status, future maternal mental and physical health outcomes and children's cognitive outcomes) of postpartum depression on maternal employment were explored. The direct and indirect effects of postpartum depression on maternal employment were decomposed using the Karlson, Holm, and Breen (KHB) decomposition method. This method disentangles the total effect of a variable on the outcome, in this case PPD on maternal employment, into a direct effect (the effect of PPD on maternal employment adjusting for a mediating variable i.e. marital status) and an indirect effect (the difference of the total and direct effect) for nested non-linear models, in this case the probit model. ***Measures of mental health*** The two measures of maternal mental health in MCS are the Malaise Inventory and the Kessler K6 scale. The first measure, Rutter Malaise Inventory was used as an indicator of PPD, since it was only asked at 9 months, the first sweep of the MCS. The second measure Kessler K6 scale is designed to be sensitive around the threshold for the clinically significant range of the distribution of nonspecific distress, in an effort to maximize the ability to discriminate between cases of serious mental illness from non-cases and was used as an indicator of maternal mental health problems in later years (3 to 7 years after the birth). ***Results*** This study finds a PPD effect on maternal employment at ages 3, 5, 7 and 11. The study also finds that the effect of PPD on maternal employment at ages 3, 5, 7, 11 is partially mediated through subsequent maternal mental health problems.



**Plamen Krastev**

Assistant Professor, Medical University, Bulgaria

**Zornitza Gorcheva**

Assistant Professor, Medical University, Bulgaria

**Tatyana Betova**

Assistant Professor, Medical University, Bulgaria

&

**Galya Stavreva**

Associate Professor, Medical University, Bulgaria

### **Protective Effect of Monoammonium Glycyrrhizinate on Experimental Colitis in Wistar Rats**

Glycyrrhizic acid is used as a natural sweetener, and utilized in cosmetics and pharmaceuticals. It is isolated from the roots and stolon of *Glycyrrhiza* species. It has been shown to possess multiple pharmacological effects – antiulcer, anti-inflammatory, antiallergic, antioxidant, antitumor, antidiabetic, and hepatoprotective.

**Methods:** The intestinal anti-inflammatory activity of monoammonium glycyrrhizinate (MAG), a commercially used salt of glycyrrhizic acid was assessed in 2,4-dinitrobenzenesulfonic acid hydrate (DNBS)-induced colitis in 36 Wistar rats (30 mg in 0.25 ml of 50% ethanol, administered intrarectally). Animals received MAG (100 or 200 mg/kg) i.p. for 6 days, starting 1 day before colitis induction. On day 6 colonic tissues were excised and scored for macroscopic and histological damage. Microscopic changes were assessed by light microscopy on hematoxylin/eosin-stained histological slides.

**Results:** DNBS and MAG 100 decreased significantly body weight (from 238.75±7.9 g to 206.25±6.09 g,  $p=0.04$ ; from 254.61±4.21 g to 220.38±6.80 g,  $p<0.01$ , respectively). Rats treated with MAG 200 showed greater food intake and weight gain than DNBS and MAG 100 groups. MAG 200 demonstrated a significant anti-inflammatory activity related to its ability to reduce colonic macroscopic damages: MAG 200 score was 1.63±0.59, MAG 100 score – 3.58±0.63 and DNBS score – 3.87±0.60;  $p<0.05$ . All other assessed macroscopic parameters were significantly improved in animals treated with MAG at a dose of 200 mg/kg. The microscopic tests showed that MAG 200 group had significantly lower score compared with MAG 100 and DNBS groups.

**Conclusion:** These findings indicate that MAG at a dose of 200 mg inhibits significantly colonic inflammatory damages in a rat model of inflammatory bowel disease.

**Janet Kurzynske**

Professor, University of Kentucky, USA

**Ann Vail**

Professor, University of Kentucky, USA

**Nicole Peritore**

Senior Extension Specialist, University of Kentucky, USA

**Margaret McGladrey**

Assistant Dean, Research College of Public Health, University of  
Kentucky, USA

&

**Janet Mullins**

Professor, University of Kentucky, USA

## **Using a Socio-Ecological Framework for Community-Based Obesity Disparity Reduction Strategies**

Since 1980, obesity rates have more than doubled worldwide and the United States of America is the most obese country worldwide. Most public health professionals believe this escalation is due in part to the increased availability of calorie-dense, inexpensive foods, and reduced job related and leisure time physical activity. Using the socio-ecological model, researchers at the University of Kentucky are working with the state's six most obese counties, where adult obesity rates are greater than 40 percent. These counties are rural, with high levels of poverty and chronic disease. Despite the rural nature of these counties, the residents do not live in isolation. The socio-ecological model depicts the various levels of influence on individual behavior: interpersonal, institutional and organizational, community, environment, and systems. Given the interacting influences affecting eating and physical activity behaviors, unique strategies at multiple levels of the socio-ecological model were chosen for use. Evidence-based interventions and environmental strategies are being employed to support individual behavior change for people across the life course and to foster development of locally driven solutions. The first step in developing intervention strategies was engaging in formal coalition-building activities to identify and mobilize community assets, build collective capacity, and promote initiatives to address obesity. Researchers provided data and evidence-based resources to support the coalitions' work to strengthen local foods systems and to create physical activity opportunities in the built environment. To date, the six targeted Kentucky counties have developed multi-sectoral coalitions and discussed community assets. Coalitions have selected and initiated contextually appropriate implementation of evidence- or practice- based interventions to make the healthy choice the easy choice. This presentation will detail coalition-building approaches, community assets, strategies, outcome evaluation data, and progress. This project is funded by the Centers for Disease Control and Prevention.

**Amanda Lucchetti**  
Postdoctoral Fellow, Mayo Clinic, USA

**Parent Competency and Family Impairment:  
An Effectiveness Study of Outcomes of Behavior Therapy  
for Children with Autism Spectrum Disorders in an Urban  
Community**

Children with autism spectrum disorders (ASD) may exhibit problematic behaviors related to symptoms of ASD, which can be addressed through outpatient behavior therapy. In-home or intensive therapy can be costly; as such, a less intensive, center-based program with high parental involvement can be an accessible model for many families. This study reviews the effectiveness of this model, specifically with regard to parental competency and family impairment. Further, the relationship between parental experiences and child behavioral outcomes is examined.

Twenty-six children (88% male) with ASD ranging from 3 years to 12 years in age ( $M = 5$  years,  $SD = 29.52$  months) and their parents participated in weekly outpatient behavioral therapy. The sample was a combination of English- ( $n = 22$ ) and Spanish-speaking children ( $n = 4$ ) with either private or public (government-funded) insurance. Setting was a community-based medical center in a large urban city in the Midwestern United States. Therapy duration ranged from 9 to 46 sessions ( $M = 18.65$ ,  $SD = 10.44$ ).

Results indicated that parents reported improved competency ( $t(25) = -2.90$ ,  $p < .01$ ) and a nonsignificant decrease in family impairment ( $t(25) = 1.02$ ,  $p = .32$ ) post-therapy. Child maladaptive behaviors decreased following participation ( $t(25) = 2.62$ ,  $p = .015$ ). There was no significant relationship between changes in competency or impairment with behavioral changes.

Implications for this program include that participation in an accessible model of behavior therapy led to meaningful changes in both the children and their parents. Limitations include variability in how data were collected, which resulted in missing or incomplete data. Future research should clarify the relationship between parental competency and family impairment with behavioral changes and highlight additional factors related to overall family changes in accessible models of behavior therapy for children with ASD.

**Arzu Malak**

Research Assistant, Namik Kemal University, Turkey

**Mine Aydin Kurç**

Namik Kemal University, Turkey

**Dumrul Gülen**

Namik Kemal University, Turkey

**Ayşe Demet Kaya**

Professor, Okan University, Turkey

**Nicel Taşdemir**

Namik Kemal University, Turkey

**Gamze Varol Saracoglu**

Namik Kemal University, Turkey

## **Investigation on the Correlation between Vaginal Candidiasis and Individual Behavioral Factors of Patients**

**Purpose:** Abnormal vaginal discharge is the most common complaints of women. Infectious agents including fungi may lead discharge. This study was planned with the aim of evaluating the role of *Candida* spp. in patients with abnormal discharge and investigating the individual behavioral factors related with the infection.

**Materials and Methods:** Eighty-seven patients with the complaints of abnormal vaginal discharge -who accepted to participate the study- were taken in the study group. A questionnaire composed of twenty-six questions about socio-demographic characteristics of patients and several independent variables that can cause vaginal discharge (presence of chronic disease, pregnancy, continuous pad use, contraceptive methods, daily pads, drug use, etc) was applied.

Vaginal specimens were cultured onto Sabouraud Dextrose Agar and stained by Grams stain. Growth of yeasts and/or presence of blastospores by microscopic evaluation were accepted as vaginal candidiasis.

In this study, descriptive statistical analysis (mean, standard deviation, percentage, etc.) and comparative analysis (Student's t, chi-square, correlation) were applied. All statistical analyzes were evaluated in 95% confidence intervals.

**Results:** Fungal growth was obtained in 16 (18.4%) samples out of 87 patients. Of five pregnant patients fungal isolation rate was 60%. All of the isolates were the members of *Candida* genus.

The presence of fungal growth and correlation with each of the independent variable were evaluated. None of the variables, except pregnancy ( $p=0.041$ ) were found to be correlated with fungal growth ( $p>0.05$ ).

**Conclusion:** Our results showed fungi to be an important cause of abnormal vaginal discharge. Although some risk factors related with vaginal mycoses were evaluated, a significant correlation was found only with pregnancy. Making relevant controlled studies on larger groups will enable to obtain more accurate evidences to evaluate the correlation. Under these circumstances we can conclude by emphasizing the importance of education of genital hygiene, particularly for pregnant and other risk groups.

**Angelina Maphula**

Lecturer, University of Venda, South Africa

**James Takalani**

Lecturer, University of Venda, South Africa

**Rebecca Dillingham**

Director, Center for Global Health, University of Virginia, USA

**Rebecca Scharf**

Developmental and Behavioral Pediatrics, University of Virginia, USA

**Richard Guerrant**

University of Virginia, USA

&

**Pascal Bessong**

Professor of Microbiology, University of Venda, South Africa

### **Perceptions and Experiences among a South African Rural Population Participating in a Prospective Birth Cohort Study: Mal-ED, South Africa**

Understanding participants' perceptions and experiences as research volunteers is critical to improving the effectiveness of human participants and strengthening public trust in biomedical research. Few studies have assessed experiences, quality and efficiency of the entire clinical research process from the participant's perspective. The objective of this study was to explore how participants in the MAL-ED South Africa site perceived their experiences as partakers in a two-year birth cohort study. MAL-ED is Interactions of Malnutrition and Enteric Disease: Consequences for Child Development (MAL-ED) Birth Cohort Study (a longitudinal birth cohort study in eight study sites around the world). Qualitative exploratory design was used to gain in-depth understanding of the views of study participants. Thirty one female primary caregivers were purposively selected for interviews to explore their experiences as research participants engaged on daily basis with study staff. Face-to-face semi-structured interviews were conducted in a private place for each interviewee in the local language (Tshivenda). Data was transcribed and translated to English. Qualitative thematic-content was used for data analysis. Recorded information was compared with transcribed data to avoid omissions. The study found that caregivers were motivated to stay in the study because of the opportunity for their child to be in contact with investigators who may detect health problems or disorders in the child. Participants found it very important that their children enjoyed their visits to the clinic for assessment. These visits revealed skills that caregivers were not aware their children possess. They also appreciated that they learned a lot with regard to food variation, measuring the amount of food given to the child and considering time interval to feed their children. The most difficult experience was witnessing blood draw from their children. They expressed being overwhelmed during the study because of underestimating the intensity

of their involvement. Nevertheless they were full of enthusiasm for the study. Participants indicated that study staff had made a sincere effort to create a pleasant atmosphere, and also emphasised that staff did not put pressure on them or the child to complete a specific task. Some of the participants criticised what they considered to be an unreasonable waiting time in connection with their scheduled visits to the clinic. One of the main findings was that caregivers considered participation in Mal-ED to be the best possible choice for their children.

**Andriana Margariti**  
Lecturer, Queen's University Belfast, UK

**Restoring the Endothelial Cell Function in Diabetic  
Patients through the Novel and Powerful Approach  
of Cell Reprogramming**

**Julian Maron**

Ph.D. Student, Research Assistant, IFT Institut für Therapieforschung,  
Germany

**Ludwig Kraus**

Senior Researcher, IFT Institut für Therapieforschung, Germany

**Elena Gomes de Matos**

Ph.D. Student, IFT Institut für Therapieforschung, Germany

**Oliver Pogarell**

Senior Researcher, University of Munich, Germany

&

**Daniela Piontek**

Senior Researcher, IFT Institut für Therapieforschung, Germany

## **Exploring Educational Inequalities in Pharmaceutical Use: Is the Relation Mediated by Subjective Health?**

**Introduction:** This study investigates pathways from educational level to use of analgesics and sedatives by assessing a generalized structural equation model (GSEM), considering subjective physical (PH) and mental health (MH) status as potential mediators. The model posits that well-educated people's lower pharmaceutical use, as compared to the poorly educated, is associated with their better health status.

**Methods:** Data were taken from the 2012 German Epidemiological Survey of Substance Abuse. The study sample comprised n=9084 individuals of the general population aged 18–64 years. Direct and indirect effects of educational level (three groups based on International Standard Classification of Education) on weekly use of analgesics and sedatives (at least once a week in past 30 days) were examined by applying a generalized structural equation model (GSEM). Potential mediators were subjective physical and mental health, measured via 5-point Likert scale and re-categorized as dichotomous variable (good- vs. less-than-good-health), respectively. Age (continuous), sex (male, female), chronic disease (yes, no), marital status (married, unmarried), income (net per capita household income; quintiles), occupational status (five groups), regional distribution (West Germany, East Germany) and interview mode (CATI, PAPI, online questionnaire) were considered as covariates. The described GSEM is illustrated in Figure 1 (covariates are not shown).

**Results & Discussion:** [No results at present.] It is hypothesized that 1) the (direct) effect of education on pharmaceutical use is mediated by the health status, 2.a) physical health plays a more important role in the relation of education and analgesics use (as compared to sedatives use), and 2.b) mental health plays a more important role in the relation of education and sedatives (as compared to analgesics use). Results will be discussed in light of whether subjective health indicators as mediator between SES and pharmaceutical use can substantially contribute to our understanding of health-related inequalities.



**Judith Martin-Fernandez**

Post-doc, Pierre Louis Institute of Epidemiology and Public Health,  
France

**Sandrine Lioret**

UMR1153 Epidemiology and Biostatistics Sorbonne Paris Cité Center  
(CRESS), France

**Amandine Arnaud**

Pierre Louis Institute of Epidemiology and Public Health, France

**Mathilde Roze**

Pierre Louis Institute of Epidemiology and Public Health, France

**Carne Caum**

Pierre Louis Institute of Epidemiology and Public Health, France

**Pierre Chauvin**

Pierre Louis Institute of Epidemiology and Public Health, France  
&

**Stéphanie Vandentorren**

Pierre Louis Institute of Epidemiology and Public Health, France

**Food Insecurity among Families Sheltered in Emergency  
Centers for Asylum-Seekers: The French ENFAMS Study**

**Jennifer Mitchell**

Ph.D. Candidate, University of Calgary, Canada

**Erin Jones**

Research Coordinator, University of Calgary, Canada

&

**Bonnie Lashewicz**

Assistant Professor, University of Calgary, Canada

## **Working Men's Mental Health: Understanding and Responding to Gender Specific Struggles**

The purpose of our paper is to contribute to understanding and responding to mental health struggles faced by working men in Canada. Men are socialized to be composed and self-reliant and correspondingly, often hesitate to acknowledge, and seek help for problems, particularly problems entailing symptoms that are not readily observable. Further, the mental health of working men is playing out as part of unpredictable economies and rapidly changing trends in work-family interfaces. Amidst such complexities, researchers have charted incidence and prevalence of mental health conditions such as depression and tracked economic costs of depression in terms such as workplace absenteeism and "presenteeism". Yet we know little about the subjective experiences of working men in relation to workplace factors that harm versus help mental health. In this paper we present qualitative findings from three focus groups (n=17) and 15 semi-structured one-on-one interviews with working men, supervisors and employee assistance/human resource representatives.

We anchor our examination by bringing together critical gender theory and critical disability studies theory. As such, we view "masculinities" as dynamic and enacted amidst privileged discourses of "normal" and "healthy". Accordingly, we use concepts of masculinities and stigma to guide our review of existing literature and subsequent analysis of data. We present findings of two main themes: mental health struggles as "hiding valued traits" and, mental health struggles as "abstract and stigmatizing". Four sub-themes under mental health struggles as abstract and stigmatizing theme include 1- "struggles not to be named" and 2- "struggles as an affront to masculinity", as well as 3- "focusing on function" in the face of struggles, and finally, 4- mental health as an "orphan in the health care system". We conclude with discussion of "where men turn" for mental health support and how employers and policy makers can promote mental health for working men.

**John Moraros**

Associate Professor, University of Saskatchewan, Canada

## **Lean Implementation in Saskatchewan Canada**

**Purpose:** Lean management is a widely accepted quality improvement methodology initially used in the automotive and manufacturing industries but recently expanded to the healthcare sector. However, there is conflicting evidence on the effectiveness of Lean. This systematic literature review seeks to independently assess the effect of Lean on worker and patient satisfaction, health and process outcomes and financial costs.

**Data sources:** We conducted a systematic literature review of Medline, PubMed, Cochrane Library, CINAHL, Web of Science, ABI/Inform, ERIC, EMBASE and SCOPUS.

**Study selection:** Publicly available articles were included if they examined a Lean intervention and included quantitative data.

**Data extraction:** Methodological quality was assessed using validated critical appraisal checklists. Data collected by the Saskatchewan Health Quality Council and the Saskatchewan Union of Nurses were included for analysis.

**Results:** Our electronic search identified 21 articles that passed methodological quality review. Among the accepted studies, four were concerned with health outcomes, three included both health and process outcomes, and fourteen included process outcomes. This review found that Lean has: a) no statistically significant association with patient satisfaction and health outcomes, b) a negative association with financial costs and worker satisfaction and c) potential benefits on process outcomes like patient flow.

**Conclusion:** While there is published evidence to suggest that Lean leads to quality improvements in healthcare, the findings of this review do not support this claim. More rigorous, higher quality and better conducted scientific research is required to definitively ascertain the impact and effectiveness of Lean in health care settings.

**Tim Morse**  
Senior Lecturer, Coventry University, U.K

## **Which Physical Assessment Skills Do Nurses Require, When Do They Use them and what are the Barriers to Their Use?**

It has been recognised that nurses that have knowledge of physical assessment skills can improve patient outcome, but what range of skills and when they are taught has long been debated. For some years, the issue of teaching physical assessment skills to pre-registration nurses has been researched, especially in the USA and Australasia. It has been demonstrated (Secrest *et al* 2005; Giddens 2007; Giddens and Eddy 2009; Birks *et al* 2013; Birks *et al* 2014) that student nurses should be taught a smaller range of physical assessment skills, as very few are actually practiced when they qualify. Two connected reasons for this could be the method of how the skills are taught and subsequently practiced, as students.

In the UK, there has not been any research in to the way physical assessment skills are taught in pre-registration nursing programs or what is then practiced clinically; only some of the recognised range of physical assessment skills are taught to student nurses. However, it is becoming more apparent that as nursing practice evolves; the nurses require a wider range of physical assessment skills as they progress within their careers. As professional boundaries blur, nurses need to broaden the skills they possess, learning from other professionals and taking on the skills that they utilise. These additional skills are sought through courses/ modules once they have qualified as registered nurses, and the need to learn and practice them becomes more relevant.

The time has come for the way that physical assessment skills are taught and practiced in educational institutions, and the barriers to practicing these skills clinically needs to be explored. It is suggested that nurses feel more confident and competent in using these physical assessment skills if they are put in to context with the knowledge they possess, as these are seen as the main barriers to their use. The presentation will draw upon current literature to highlight the possible shortcomings in how nurses are taught physical assessment skills and how they are practiced, and what strategies can be used to improve them.

**Marinella Natali**

Project Manager, Emilia-Romagna Regional Government, Italy

**Liliana La Sala**

Italian Ministry of Health, Italy

**Adele Ballarini**

Emilia-Romagna Regional Government, Italy

**Maria Eleonora Soggiu**

Università degli Studi di Torino, Italy

**Loredana Musmeci**

Università degli Studi di Torino, Italy

**Mario Cirillo**

Institute for Environmental Protection and Research, Italy

**Sabrina Rieti**

Institute for Environmental Protection and Research, Italy

**Fabrizio Bianchi**

Institute of Clinical Physiology, National Council of Research, Italy

**Nunzia Linzalone**

Institute of Clinical Physiology, National Council of Research, Italy

**Liliana Cori**

Institute of Clinical Physiology, National Council of Research, Italy

Ennio Cadum

Regional Agency for the Protection of the Environment, Italy

&

**Cristiano Piccinelli**

Università degli Studi di Torino, Italy

## **Health Impact Assessment in Environmental Impact and Strategic Environmental Assessments in Italy: Guidelines and Tools for Evaluators and Proponents**

Although Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) approaches include the aim of protecting health, in the Italian context significant technical and methodological gaps are present when assessing health systematically. Health Impact Assessment (HIA) is still poorly integrated into the decision-making process, screening and monitoring phases are only occasionally implemented, and operational details are not well-defined. At the Italian national level, the definition of guidelines and tools for HIA, also in relation with EIA and SEA, is of great interest. For this reason in 2013 the Italian Ministry of Health funded the national project "HIA Guidelines tools for HIA (t4HIA)" that addresses the need to provide guidance and tools for both public health professionals and proponents of the projects evaluated, for the assessment of health impacts. As for the evaluators, thanks to the previous national project "VISPA", a Rapid HIA model has been tested and reviewed. VISPA project tried to give a

concrete response to the need to improve the health evaluation process, through the integration in the evaluation process of some typical elements of HIA. The project involves 12 different t4HIA regional partners (11 regions and the Autonomous Province) and aims to extend the knowledge and use of VISPA tools for evaluators of all those partners, in addition to developing a computerized version of the tools. As for the proponents, the project's objective is to provide a guideline to support the preparation of the health component within the SEA and EIA procedures. The "tools" for evaluators and applicants, so developed, tested and validated, with the methodological support of Ispra, ISS (National Health Institute) and IFC-CNR (National Research Council), will be consistent with the experience in the country as part of the SEA and EIA, with HIA applications conducted nationally and internationally, including recent developments in terms of damage assessment procedures (VDS). The final construction of the tools is carried out in partnership with stakeholders at the

national level (eg. Environmental groups, consultants and engineers, posing, etc ...), with the scientific coordination of IFC-CNR.

**Hamoud Bin Obaid**

Ph.D. Student University of Oklahoma, USA

&

**Theodore Trafalis**

Head, Industrial Engineering Research Unit, ATINER, Professor of  
Industrial and Systems Engineering & Director, Optimization &  
Intelligent Systems Laboratory, The University of Oklahoma, USA

**Cyclic Physician Scheduling in Outpatient Clinics using  
Goal Programming**

**Folajinmi Oluwasina**

Monitoring & Evaluation, University of Ibadan, Nigeria & AIDS  
Healthcare Foundation, Nigeria

**Kate Ssamulla**

Director, Monitoring and Evaluation-Africa Bureau, AIDS Healthcare  
Foundation, Uganda

**Penninah Iutung**

Bureau Chief- Africa, AIDS Healthcare Foundation, Uganda

**Oluwakemi Gbadamosi**

Snr Manager, PR and communications-Africa Bureau, AIDS Healthcare  
Foundation Kenya

**Daniel Reijer**

Global Director of Data and Analytics, AIDS Healthcare Foundation  
Kenya

&

**Towolawi Adetayo**

Country Program Manager, AIDS Healthcare Foundation, Nigeria

**Factors Mitigating Access to HIV Treatment, Prevention  
and Care Services among Urban Poor in Nigeria: Lessons  
from AIDS Healthcare Foundation Impact**

Nigeria currently has the second highest number of person living with HIV/AIDs in the world with numerous factors that impede the implementation of quality HIV/AIDS programmes. Bridging the gap, AIDS Healthcare Foundation (AHF) provided emerging strategies with evidence-based outcomes to enhance quality and comprehensive HIV/AIDS treatment, care, Prevention and HIV counseling and testing (HCT) uptake in Gbajimba, Benue State .

**Methods:** A Cross-sectional descriptive study was adopted to build partnership between the government and urban leaders were formed through strong advocacy. Advocacy was approached from a conceptual framework which includes technical and political contents, stimulating a discussion on the role of government and civil society organizations in promoting greater involvement and ownership of the program. AIDs Healthcare Foundation (AHF) priority areas were selected to set up an advocacy agenda.

**Results:** Through strong advocacy, Aids Healthcare Foundation has successfully carried out HIV counseling and testing the urban areas of the state. Most of these council wards had no prior access to HIV testing. Advocacy and mobilization has resulted in massive community support, with resources provided by community members for many activities. Uptake of HIV services has increased drastically from 10% to 69% within 3years reaching over 104,155 urban poor. 54% were male while 46% females have been tested



through facility based and urban outreaches. 6% tested HIV positive and 5% were initiated on antiretroviral therapy.

**Conclusion:** A discussion about the role of government and civil society organizations is a fundamental matter for the development of advocacy efforts on the provision of quality HIV testing and care services among urban poor. Advocacy strategies and activities are relevant in promoting the uptake of HIV services, while providing a better environment for the development of programs and activities. Advocacy strategies can modify government's action by making them become participating members in HIV/AIDS related issues and contributing to reduce vulnerability.

**Lucia-Doina Popov**

Head of Pathophysiology and Pharmacology Department, Institute of  
Cellular Biology and Pathology “N. Simionescu” of the Romanian  
Academy, Romania

**Cardiomyocyte Mitochondrial Networking in Diabetes**

The transient physical connectivity of **intracellular** organelles gathers a particular attention nowadays as it generates a dynamically continuous network that allows organelles content exchange and signals transfer according to the cellular metabolic requirements. Evidence for such interactions in diabetic cardiomyocytes (CMs) and identification of molecules involved are now under intensive research anticipating contractile dysfunction alleviation in cardiomyopathy. The aim of this disclosure is to link electron microscopy evidence on organelles networking within diabetic left ventricular CMs to the newly identified molecules/mechanisms beyond it. The issues examined are: (i) the intermitochondrial communication, demonstrated in adjacent mitochondria by the extensive connectivity (“kissing”) of their outer membranes (OMMs) and by cristae organization into coordinated pairs, while distal organelles contact is accomplished by elongated nanotubular protrusions (“nanotunneling”); together, these form the structural basis for transfer of electrochemical signals and exchange of OMMs components or matrix proteins; (ii) the mitochondrion - nucleus interaction encompass a plethora of aspects, such as the close relationship between their genomes, codification of mitochondrial proteins by the nuclear genome, the common intervention in preserving cellular energetics homeostasis, and the control of stress-induced mitochondrial dysfunction by activation of “retrograde signaling” (attribute of mitochondrial “quality control” function) and by stimulated transcription of specific nuclear genes that produce adaptive changes in mitochondrial protein levels; (iii) the OMM is physically tethered to the endoplasmic/ sarcoplasmic reticulum, mediating lipid transport between the two membranes, and assisting fragmentation (“fission”) of dysfunctional mitochondria followed by removal of malfunctioning part (by “mitophagy”), and maintenance of a “healthy” mitochondrial population. Together, mitochondrial networking within CMs may encourage the transfer of “healthy” autologous mitochondria into dysfunctional CMs (i.e. the **intercellular** organelle transfer); such “mitochondrial therapy” portrays a novel regenerative strategy to replenish mitochondrial mass and to preserve myocardial energetics in diabetic cardiomyopathy.

**Anita Rakic**

Head of Laboratory, Teaching Public Health Institute of Split and  
Dalmatia County, Croatia

## **Impact of Microbiological Media on Quality Microbiological Finding**

The contemporary society, pressured by globalization, requires accurate and reliable but above all comparable results. An important tool to achieve comparability is ensurance of result traceability. The goal of each diagnostic microbiological laboratory, whose work is based on methods of cultivation of bacteria, is to set up fast and reliable microbiological diagnosis. In bacteriology, cultivation and reproduction of MM is the foundation of direct proof of bacteria from samples so the accuracy in preparation of the MM is imperative. Testing laboratories determine control procedures of MM prepared from dehydrated base as well as the ways to control technological processes of preparation according to DIN EN ISO 11133:2014. To prepare MM dehydrated bases that are produced in accordance with the wording of the pharmacopoeia (EP, USP) and reference to international standards (ISO, APHA) are used. The physical parameters that are controlled by the MM are: the pH value, the thickness of the plates, filling volume, color, clarity, consistency. The microbiological parameters that are controlled include sterility and productivity and selectivity of the certified reference material (CRM). CRM contain microorganisms of stable characteristics that are typical for a particular microbial species, and is suitable for proving the effectiveness of a particular MM and was purchased from internationally acknowledged collections. Quality microbiological media is one of the most important factors in the work of microbiological laboratories for bacteriological diagnosis. A proper implementation of the technological process of preparing is one of the key requirements in the system of implementation of quality control of the MM. The ISO/IEC 17025 international standard require from laboratories to evaluate the measurement uncertainties of their results. An excessive measurement uncertainty calls into question the possibility of making the right decision based on these results (it refers to making a precise diagnosis or estimating therapeutic efficacy).

**Panagiota Rempelou**

Specialist of Internal Medicine, University of Padua and Hospital of  
Santorso, Italy

**Edoardo Casiglia**

University of Padua and Hospital of Santorso, Italy

**Valerie Tikhonoff**

University of Padua and Hospital of Padua, Italy

**Margherita Giacomello**

Italian Centre Clinical-Experimental Hypnosis, Turin, Italy

**Antonio M. Lapenta**

Italian Centre Clinical-Experimental Hypnosis, Turin, Italy

**Francesco Finatti**

University of Padua, Italy

&

**Augusto M. Rossi**

Italian Centre Clinical-Experimental Hypnosis, Turin, Italy

## **Hypnotic Focused Analgesia Obtained through Body Dysmorphism Prevents Pain and its Cardiovascular Effects**

**Objective.** Hypnotic focused analgesia (HFA), corresponding to pharmacological local anesthesia, can be obtained through suggestion of analgesia given in hypnosis. Aim of the present work is to demonstrate that HFA can also be obtained suggesting in hypnosis that a body segment does not belong to the body (dysmorphism), without any suggestions of analgesia.

**Design and methods:** Eight highly hypnotizable healthy volunteers underwent in basal conditions a painful procedure represented by a cold pressor test (CPT) by immersing left hand in icy water until the maximum tolerable pain was reached. Subjects were free to extract the hand from water, so interrupting pain, but were asked to resist as much as possible. The same procedure was repeated during hypnotic suggestion of body dysmorphism with hallucination of absence of left hand. Pain was quantified by a 0-to-10 visual scale, and pain tolerance via the time of free permanence in icy water. Both in pre-hypnotic conditions and during hypnotic dysmorphism, systolic peripheral resistance was monitored.

**Results and conclusions:** In comparison to pre-hypnotic basal conditions, the maximum perceived pain was 92.5% lower after 1 minute CPT and 87.5% lower at maximum tolerance. In 62% of cases complete analgesia was reached. Pain tolerance mirrored this trend, increasing by 315% in hypnotic dysmorphism in comparison to pre-hypnotic conditions.

Before hypnosis, the algic stimulus produced a reflex increase of resistance (+4% at 1 minute, +14.5% at the maximum pain). During hypnotic dysmorphism, no increase of resistance was observed.

Mere hypnotic body dysmorphism without any suggestions of analgesia therefore reduces and in the majority of cases nullifies the perception of pain,

also increasing pain tolerance. As the cardiovascular reflexes triggered by pain are also abolished, dysmorphic hypnotic HFA represents not only a subjective consequence of mental dissociation but a real block of the painful stimulus.

**Antonio Scala**

Research Scientist, CNR - Institute of Complex Systems, Italy

**Guido Caldarelli**

Professor, IMT Alti Studi Lucca, Italy

&

**Pietro Auconi**

Medical Doctor, Private Practice of Orthodontics, Italy

## **Complex Networks for data-Driven Medicine**

Big Data is impacting and will impact even most sectors of our life's. In particular, the healthcare industry could be revolutionized by Big Data analytics since it could improve its operational efficiencies, could help predict disease epidemics and plan responses, enhance the monitoring of clinical trials and in general optimize healthcare spending [1-2]. Starting from examples from orthodontic data [3-5], we will show how applying complex networks' analysis help to visualise.

**Fatima Regina Silva**

Professor, Federal University of Santa Catarina, Brazil

**Camila Pires Mendes**

MSc Student, Federal University of Santa Catarina, Brazil

**Bárbara Graziela Postal**

MSc Student, Federal University of Santa Catarina, Brazil

**Mayara Brich**

Undergraduated Student, Federal University of Santa Catarina, Brazil

**Ana Luiza Ludwig Moraes**

Undergraduated Student, Federal University of Santa Catarina, Brazil

**Allisson Jhonatan Gomes Castro**

Ph.D., Pos-Doc Student, Federal University of Santa Catarina, Brazil

**Patricia Devantier Neuenfeldt**

Ph.D., PosDoc Student, Federal University of Santa Catarina, Brazil

**Ricardo José Nunes**

Professor, Federal University of Santa Catarina, Brazil

&

**Marisa Jádna Silva Frederico**

Ph.D., Pos-Doc Student, Federal University of Santa Catarina, Brazil

## **Mechanism of Action of New Associated Analogues Glibenclamide/Pioglitazone on Glucose Homeostasis**

The sulfonylurea glibenclamide is one of the most used compounds to control the hyperglycemia in diabetic patients. Pioglitazone a thiazolidinedione excels in controlling diabetes mellitus by increasing insulin sensitivity in insulin-dependent peripheral organs. **Objective:** To study the secretagogue activity of new analogue JO4, supported by the junction of glibenclamide structure associated with the portion of pioglitazone, on antidiabetic activity. **Methods:** Male adult Wistar rats fasted for 16 h were treated with JO4 (1 and 10 mg/kg, i.p). After 30 min of treatment rats received a glucose overload (4 g/kg, i.p), blood was collected at zero time, 15, 30, 60 and 180 min for glucose measurements. The serum insulin as well as in vitro insulin secretion was measured with/without JO4. Isolated pancreatic islets were incubated for 60 min in HEPES-KRb with  $^{45}\text{Ca}^{2+}$  a 37 ° C, pH 7.4 with  $\text{O}_2:\text{CO}_2$  (95:5 v/v). It was studied the effect and the mechanism of action of JO4 ( $10^{-6}$ ,  $10^{-9}$  and  $10^{-12}$  M) on  $^{45}\text{Ca}^{2+}$  influx in islets with/without agonist/antagonists of ionic channels or protein kinases (CEUA PP00479). **Results:** JO4 improved glucose tolerance and stimulated insulin secretion at 15, 30 and 60 min. In addition, JO4 stimulated in vitro insulin secretion after 30 min of incubation in isolated pancreatic islets. JO4 stimulated calcium influx that was enhanced in the presence of glibenclamide. The diazoxide and nifedipine inhibited the effect of JO4. However, flunarizine did not change the effect of JO4. Thapsigargin and dantrolene did not alter the

effect of JO4. On the other hand, H89 and RO310432 blocked the stimulatory effect of JO4 in calcium influx. **Conclusion:** These results show the potential role of JO4 as an insulin secretagogue by acting through the K<sup>+</sup>/ATP channels, CCDV. Beyond, PKA and PKC seem to downstream the signal transduction of JO4 for insulin secretion and glucose homeostasis. **Financial support:** CNPq, CAPES-PPGBQA/UFSC.



**Uraiwan Sirithammaphan**

Ph.D. Candidate / Lecturer, University of Hull, U.K. / Sirindhorn  
College of Public Health, Thailand

**Fiona Cowdell**

Reader, University of Hull, U.K.

&

**Kathleen Galvin**

Professor, University of Brighton, U.K

## **Preventive Health Behaviours of Second-hand Clothing Sellers in Southern Thailand**

This study was conducted with clothing sellers at the big four second-hand clothing markets in Mueang district, Yala province, Southern Thailand. The study aim was to explore preventive health behaviours of sellers; these included work behaviours to prevent respiratory, musculoskeletal, skin and eye problems as well as accidents or injuries. This study focused on health belief model (HBM) as the theoretical framework adopted in the field of occupational health and safety.

Data was gathered using ethnographic interviews and participant observation. Together with the primary methods of data collection, note taking (fieldnotes, fieldwork personal journal) and photographs were employed. Data were collected from 27 participants aged 18 and over who had been working as this job at least 6 months and were willing to share their time, experiences, and knowledge. Ethnographic data analysis consisted of domain analysis, taxonomic analysis, componential analysis, and theme analysis, based on the principle of HBM theory was utilised.

The study findings revealed that the six key concepts of HBM influenced both positive and negative behaviours to prevent occupational health problems among the second-hand clothing sellers in southern Thailand. It is remarkable that the most important component influencing positive behaviours is "Cues to action" and the most important component influencing negative behaviours is "Perceived barriers".

This result, as a consequence, directs occupational safety and health authorities to consider options in dealing with occupational health problems as well as safety promotions at the workplace, not only for the second-hand clothing sellers but also for other workers having similar working conditions or environments, in the more comprehensive and effective way.

**Lawrence Sithole**

Optometrist, University of South Africa, South Africa

## **An Overview of the National Health Insurance (NHI) and Its Possible Impact on Eye Health Care Services in South Africa**

The National Health Insurance (NHI) is an important development that underpins democracy in South Africa. It seeks to redress the inequalities of public health care delivery by implementing transformative policies with the aim of forming an inclusive public health care coverage for the entire population in South Africa with more emphasis on health promotion. The implementation of this initiative has created some hope among primary eye health care professionals such as optometrists that their profession may finally be given the recognition it presumably deserves. Although the government is contemplating introducing a new directorate for eye health care issues and the formulation of an advisory committee to the Minister of Health on eye health care issues, the extent to which eye health care will be incorporated into the NHI is currently not clear. It is believed that the white paper policy on NHI will shed some light on these issues. Unfortunately, current indications are that the initiative has to overcome serious challenges such as poor infrastructure, budgetary constraints and lack of interest from other health care professionals. Furthermore, issues of corruption may also need to be addressed if the NHI is to be implemented successfully. Despite these challenges, the NHI remains a positive proposition for universal health coverage for the people of South Africa and there is hope that primary eye care providers such as optometrists and other eye care professionals will also play more of a major role in the NHI than they currently do in the public health care system.

**Milenko Tanasijevic**

Vice Chair for Clinical Pathology and Quality, Brigham and Women's  
Hospital, Associate Professor, Harvard Medical School, USA

**Advanced Laboratory Diagnostics: Competitive and  
Strategic Positioning**

The combined clinical laboratories of the Brigham and Women's Hospital and the Dana Farber Cancer Institute produce > 10 MM tests per year for a gross revenue in excess of 500 MM USD. Our agenda for growth includes an ambitious transformation from routine to advanced laboratory diagnostics, including cutting age, next-generation genomics testing and personalized medicine. The proposed talk will outline the key competitive and strategic positioning elements for building a successful advanced laboratory diagnostics program using our own experience as a case study. We will trace the growth of our program from formulation of vision and goals, through capitalization, infrastructure build out, growth of our menu, formation of key multidisciplinary (pathology-clinical) teams to presentation of financial outcomes. In addition, considerable time will be spent discussing the program sustainability and key challenges such as market disruption by direct-to-consumer marketing on part of new entrants, uncertain reimbursement landscape and the ever-growing regulatory burden.

**Annamaria Uzzoli**

Research Fellow, Centre for Economic and Regional Studies,  
Hungarian Academy of Sciences, Hungary

## **Changes of Health Inequalities in Space and Time in the Post-socialist Period of Hungary**

The marked deterioration in the health of the Hungarian population has been going on since the middle of the 1960s. The general health status is worse than justified by the level of economic development. From 1989 essential political, economic and social changes took place in East-Central Europe as well as in Hungary. The social effects of this transformation such as the acute problems of unemployment and poverty among low-income population groups have gone together with a “health recession”. Jointly the role of the epidemiological, the demographic and the recent economic crisis have shown some unique trends in the Hungarian health indicators over recent years.

The main aim of the paper is to describe health conditions through health inequalities in Hungary, and it is still worth explaining how the health situation has changed in terms of space and time in the last 25 years. The territorial range of the paper includes the level of the Hungarian counties and micro-regions. The examined period covered by the begins of the 1990s until the year of 2012 which can give a hand to define health effects of the transition as well as the consequences of the recent crisis on health. The statistical analysis is based on the use of mortality and life expectancy indicators.

The Hungarian health indicators have been reflecting a particularly unfavourable tendency for a number of decades. The mortality statistics sadly qualify the country for the international vanguard. The unfavourable health is characterised partly by mortality and morbidity data which are outstandingly high in the international comparison, and mainly by the high occurrence of risk factors.

**David Achanfuo Yeboah**  
Professor, Abu Dhabi University, UAE

## **Towards a Framework for Sustainable Health Care**

This study examines sustainability in health care delivery and provides a framework for developing and achieving sustainability in health care. The study analyzes both quantitative and qualitative data to postulate that sustainable health care should be based on a number of factors including resources, planning, consultation and partnership with stakeholders, community factors etc. The study emphasizes the point that the notion that sustainability in health care is based just on finance is a myth. The study argues that sustainable health should be based on a number of key factors including those mentioned above. . These factors, the study concludes, transcend social (including demographic and educational factors), cultural, economic and political factors. The study contends that the existing socio-cultural, economic and political institutions in the community have the potential to support the achievement of sustainable health care and should be explored. It is the conclusion of the study that sustainability in health care is achievable but that the planning, provision and management of health care are of utmost importance.

**Adel M. Zeglam**

Professor, Consultant Neurodevelopment Pediatrician, Tripoli  
University, Al-Khadra Teaching Hospital, Libya

**Autistic Spectrum Disorder Today in Libya Five Years'  
Experience**

**ABSTRACT:** Hospital based study of all children referred to Neurodevelopment Clinic of Al-Khadra Hospital, Tripoli, Libya (NDC-KH) between year 2010 and 2014 with the diagnosis of either Speech or Language delay (SALD), or behavioral difficulties.

**AIMS:** 1. To estimate and compare the prevalence of autistic spectrum disorders in children attending the Neurodevelopment Clinic of Al- Khadra Hospital (NDC-KH) with SALD or behavioral difficulties between January 2010 and December 2014.

2. To help policy planners and service providers get on with the task of improving the funding, type and quality of services required for these children and their families living in our community.

**METHODS:** A comparison review of ASD diagnoses was made among children attending the NDC-KH with SALD between the years 2010 and 2014.

**RESULTS:** The total number of children seen in Paediatrics Out-patient Department (POPD) between year 2010 and 2014 were 306748 out of whom 2809 children were referred for ASD assessment and whose ages "ranged from younger than 2 years to 10 years of age". ASD were diagnosed in 73% (2041 children) which gives the prevalence of 7:1000.

**CONCLUSION:** The prevalence of the problem is probably higher and probably similar to that seen in USA and UK. No data were available from the Arab countries or other developing counties. Autism is an important differential diagnosis of any language disorder "and behavioral difficulties". We highlights the need for accurate incidence and prevalence estimates in order to adequately plan for the current and future needs of people with an ASD thereby enabling them to maximize their potential to participate in their communities. Although our findings are preliminary, hospital based and the first to be conducted in Libya, they indicate the need for decision-makers to plan services and research the problem of ASDs countrywide.

**Hong Zhou**

Associate Professor, Peking University, China

**Baoxue Yang**

Professor, Peking University, China

**Jihui Chen**

Shanghai Jiao Tong University, China

&

**Dali Luo**

Professor, Capital Medical University, China

### **Low Molecular Weight Fucoidan ameliorates diabetic Nephropathy Via Inhibiting Epithelial-Mesenchymal Transition And Fibrotic Processes**

Diabetic nephropathy (DN) is one of the most serious microvascular complications of diabetes and may lead to end-stage renal disease (ESRD) and chronic renal failure. The aim of this study was to determine whether low-molecular-weight fucoidan (LMWF) can reduce harmful transforming growth factor  $\beta$  (TGF- $\beta$ )-mediated renal fibrosis in DN using *in vitro* and *in vivo* experimental models. The experimental results showed that LMWF significantly reversed TGF- $\beta$ 1-induced epithelial-mesenchymal transition (EMT) and dose-dependently inhibited accumulation of extracellular matrix proteins, including connective tissue growth factor (CTGF) and fibronectin (FN). It was found that LMWF significantly reduced blood urea nitrogen and blood creatinine in both type 1 and type 2 diabetic rat models. H&E, PAS and Masson's trichrome staining of kidney tissue showed LMWF significantly reduced renal interstitial fibrosis. Treatment with LMWF significantly increased E-cadherin expression and reduced  $\alpha$ -SMA, CTGF and FN expression in both type 1 and type 2 diabetic rat models. LMWF also decreased the phosphorylation of Akt, ERK1/2, p38 and Smad3 *in vitro* and *in vivo*. These data suggest that LMWF may protect kidney from dysfunction and fibrogenesis by inhibiting TGF- $\beta$  pathway and have the potential benefit to slow down the progression of DN.