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“Functional Genomics and Beyond: Nature Via Nurture”

12th – 14th December 2016

Qatar National Convention Center

Monday, 12th December, 2016

Day 1 Session 1 National/International Genome Project Updates

- 07:00 – 08:00 Registration and refreshments
- 08:00 – 08:05 **Welcome Note**
Ena Wang, M.D.
Division Chief Translational Medicine, Sidra Medical and Research Center, Qatar
- 08:05—08:10 **Opening Remarks**
Hadi Abderahim, M.D., Ph.D., MBA
Strategy Lead, Healthcare and Biomedical
Qatar foundation, Qatar
- Moderator **Rusung Tan, M.D. Ph.D. FRCPC**
Chair of Pathology, Sidra Medical and Research Centre
Professor of Pathology & Laboratory Medicine
Weill Cornell Medical College-Qatar
- 08:10 – 08:45 **Key Note Speaker**
Qatar Genome Programme; Opportunities and Challenges
Asmaa Ali J F Althani, Ph.D.,
Chair of the Qatar Genome Programme Committee
Dean of College of Health Sciences, Qatar University, Qatar
- 08:45 – 9:15 The International Human Epigenome Consortium (IHEC): a model for coordination in epigenetic



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Eric Marcotte, Ph.D., Associate Director of the Regenerative Medicine and Nanomedicine Initiative (RMNI) of the Canadian Institutes of Health Research (CIHR), Canada

09:15 – 09:45 The Saudi Genome Project: What Have We Learned?
Fowzan Alkuraya, M.D., King Faisal Specialist Hospital and Research Center, Kingdom of Saudi Arabia

09:45 – 10:15 Implementing genomics in clinical practice in Canada
Catalina Lopez Correa, M.D., Ph.D., Chief Scientific Officer & Vice President, Genome British Columbia, Canada

10:15- 10:30 Coffee break

Day 1 Session 1 **Continuation of day 1 session 1**
National/International Genome Project Updates

Moderator **Justin C. Konje, M.D., FRCOG, MBA**
Divisional Chief, Center for Excellence in Reproductive Sciences
Department of Obstetrics & Gynecology, Sidra Medical and Research Center, Qatar

10:30 – 11:05 **Key Note Speaker**
Nature Genetics and hot topics
Myles Axton, Ph.D., Chief Editor , Nature Genetics, USA

11:05 – 11:35 The Irish Genome Initiative
Sean Ennis, Ph.D., Director of the UCD Academic Centre of Rare Diseases, School of Medicine and Medical Science, Ireland

11:35 – 12:05 The Sardinian Genome Project
Francesco Cucca, M.D.(honors) Director Institute for Genetics & Biomedical Research (IRGB), The National Research Council (CNR), University of Sassari, Italy

12:05 – 13:05 Lunch break and poster view

Day 1 Session 2 **Constitutional disorders, early detection and advanced therapy**

Moderator **Myles Axton, Ph.D.**, Chief Editor , Nature Genetics, USA

13:05 – 13:40 **Key Note Speaker**
The Qatari Genome: Implications for Genetic Therapies and Personalized Medicine



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Ronald G. Crystal, M.D., Department of Genetic Medicine Research,
Weill Cornell Medical College, USA

13:40– 14:10 Challenges for cell and gene therapy for Hemophilia A
Antonia Follenzi, Ph.D., M.D., Associate Professor- Gene Therapy of
Hemophilia, Novara University, Italy

14:10 – 14:40 Discovering the molecular etiology of disease leads to effective
treatments
Bernice Lo, Ph.D., Principal Investigator, Sidra Medical and Research
Center, Qatar

14:40 – 15:10 New discoveries in human monogenic diseases reveal critical
functions of the NF- κ B pathway
Qian Zhang, Ph.D., Principal Investigator, Sidra Medical and
Research Center, Qatar

15:10- 15:25 Coffee break

Day 1 Session 2 **Continuation of day 1 Session 2**
Constitutional disorders, early detection and advanced therapy

Moderator **Patrick Tang, M.D., Ph.D., FRCPC**
Division Chief, Pathology Sciences, Department of Pathology, Sidra
Medical and Research Center, Qatar

15:25 – 16:00 **Key Note Speaker**
Genomics of rare disorders in Qatar
Khalid Fakhro, Ph.D., Principal Investigator, Sidra Medical and
Research Center, Qatar

16:00 – 16:30 Genetic basis of pediatric brain disease: Causes and treatments from
special populations.
Joseph G Gleeson, M.D., Investigator, Howard Hughes Medical
Institute, Department of Neurosciences, Institute for Genomic
Medicine, Rady Children’s Hospital, University of California, USA

16:30 – 17:00 Hematopoietic stem cell gene therapy for inherited diseases
Alessandro Aiuti, M.D., Ph.D., San Raffaele Telethon Institute for
Gene Therapy, Italy

17:00 – 17:30 Molecular discoveries of mendelian disorders in middle eastern
patients by clinical whole-exome sequencing
Tawfeg Ben Omran, M.D., FRCPC, FCCMG
Head Clinical and Metabolic Genetics,



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Department of Pediatrics, Hamad Medical Corporation, Qatar

17:30—17:35

Closing remarks of day 1

Patrick Tang, M.D., Ph.D., FRCPC

Division Chief, Pathology Sciences, Department of Pathology, Sidra
Medical and Research Center, Qatar



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Tuesday, 13th December, 2016

Day 2 Session 1

Nutritional and environmental genetics

07:00 – 08:00

Registration and refreshments

08:00 – 08:05

Welcome note

Marios Kambouris, Ph.D. FACMGG, Acting Chief, Pathology-Genetics at Sidra Medical and Research Center, Qatar

Moderator

Marios Kambouris, Ph.D. FACMGG, Acting Chief, Pathology-Genetics at Sidra Medical and Research Center, Qatar

08:05 – 08:40

Key Note Speaker

Mitochondrial DNA and its health relevance

Douglas C Wallace, Ph.D., Director, Center for Mitochondrial and Epigenomic Medicine Children’s Hospital of Philadelphia, USA

08:40 – 09:10

Success of advanced technology for identification of disease risk for therapy intervention

C. Thomas Caskey, M.D., FACP, FACMG, FRSC

Professor of Molecular and Human Genetics, Baylor College of Medicine

09:10 – 09:40

Gut Microbiome and Geographical Variation

Muhammad Yasir, Ph.D., King Abdul-Aziz University, Kingdom Of Saudi Arabia

09:40- 10:10

Physical exercise reduces the expression of RANTES and its CCR5 receptor in the adipose tissue of obese humans

Lotfi Chouchane, Ph.D. Professor of Genetic Medicine

Professor of Microbiology and Immunology, Weill Cornell Medical College, Qatar

10:10 -10:25

Coffee break



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Continuation of day 2 Session 1 Nutritional and environmental genetics

Moderator **Khalid Al-Ansari, M.D., FRCPC, FAAP(PEM)**
Chief, Division of Emergency Medicine, Sidra Medical and Research Center, Qatar

10:25 – 11:30 **Key Note Speaker**
Nature versus Nurture in autoimmune diseases: the Sardinian exception
Francesco Cucca, M.D.(honours) Director Institute for Genetics & Biomedical Research (IRGB), The National Research Council (CNR) University of Sassari, Italy

11:30 – 12:00 Genomic analysis of neurodegeneration
John A. Hardy, Ph.D., FMedSci, FRS, Institute of Neurology, UCL Department of Molecular Neuroscience and Reta Lila Weston Laboratories, United Kingdom

12:00 – 12:30 Functional genomic studies of breast cancer
Allal Ouhitit, Ph.D., Mph, Department of Biological and Environmental Science, College of Arts and Sciences, Qatar University

12:30 – 13:30 Lunch Break and Poster review

Day 2 Session 2 **New Insights into disease/new technology**

Moderator **Khalid Hussain, Ph.D.**,
Division Chief - Endocrinology
Vice Chair for Research, Department of Pediatrics Medicine, Sidra Medical & Research Center, Qatar

13:30 – 14:05 **Key Note Speaker**
Genomic Analysis to Personalize Cancer Treatment
Steven J.M. Jones Ph.D., Professor, FRSC, FCAHS Co-Director & Head, Bioinformatics Genome Sciences Centre, British Columbia Cancer Research Centre, Canada

14:05 – 14:35 New advances in Non-invasive prenatal testing-from research and clinical view
Fang Chen, Executive Vice Director- Maternal and Child Health



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Institute, Beijing Genomics Institute, China

14:35 – 15:05 Bioinformatics in translational research
Puthen Jithesh, Ph.D., Principal Investigator, Sidra Medical and Research Center, Qatar

15:05 – 15:35 Precision Medicine – different approaches to shared challenges
Tonya Masherry, MBA, Market Development Manager for Population & Medical Genomics, Illumina, USA

15:35 – 15:50 Coffee Break

Day 2 Session 2 Continuation of day 2 Session 2
New Insights into disease/new technology

Moderator **Damien Chaussabel, Ph.D.**
Director, Systems Biology Department, Sidra Medical and Research Center, Qatar

15:50 – 16:25 **Key Note Speaker**
Insights into lymphocyte regulation by studying humans with inherited immune deficiencies
Helen Su, M.D., Ph.D., Chief Human Immunological Disease Unit, Laboratory of Host Defenses, National Institute of Health, USA

16:25 – 16:55 Bridging Exome and Whole Genome—CNV Boosted Exome Sequencing
Wei Liu, Ph.D., Director of Clinical Genomic Lab, Sidra Medical and Research Center, Qatar

16:55 – 17:25 New Born Screening in Qatar
Ghassan Abdoh, Ph.D., Senior Consultant of Pediatric Neonatal & Head of HMC's Newborn Screening Program
Hamad Medical Corporation, Qatar

Oral Abstarct Presentation

17:25 – 17:40 Epigenetic regulation and microbiome modulation in genetic predetermined conditions'
Susu Zughaier, PhD
Assistant Professor, Department of Microbiology & Immunology
Emory University School of Medicine, USA



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17:40—17:55

The medical revolution of nanotechnology: insight on graphene immunogenomic interactions for medical applications

Lucia Gemma Delogu, Ph.D., Assistant Professor, University of Sassari, Italy

17:55 – 18:00

Closing Remarks for Day 2

Ena Wang, M.D.

Division Chief Translational Medicine, Sidra Medical and Research Center, Qatar