



# CUDOS 2018

## Doha-Qatar

CUDOS 2018

*Childhood Diabetes: From Novel Discoveries to Clinical Practice*

22-24<sup>th</sup> September, 2018

Qatar National Convention Centre, Doha, Qatar

CUDOS (Conference on Understanding molecular mechanisms in cardiovascular biology, Diabetes, Obesity and Stroke) meetings series aim to target areas of human health related to underlying mechanisms of metabolic disease, disease biomarkers and therapeutic options. This year, we focus on childhood diabetes, aiming to bring together a three-day conference with talks specifically discussing the current research innovation in diabetes technologies and treatment strategies for mothers and children with or at risk of diabetes. The conference brings together a wealth of international research expertise whilst identifying key research strengths and capabilities relevant to developing future research programs in understanding the health of women and children with type 1 diabetes.

**AT THE END OF THE CONFERENCE, THE PARTICIPANTS WILL BE ABLE TO:**

- Identify, discuss and understand the research priorities for Type 1 diabetes in Qatar
- Facilitate research development in understanding the environmental determinant of Type 1 diabetes
- Encourages collaboration and communication between academia, clinicians, government and non-profit research funding agencies, commercial organisations and the type 1 diabetes community
- Understand the potential in development of newer technologies for a cure to childhood obesity and Type 1 diabetes.

**CUDOS 2018 TARGET AUDIENCE**

- Physician
- Pharmacist
- Nurse
- Medical Scientist/Researcher/ Trainee

**SPC STATEMENT**

The Scientific Planning Committee has reviewed all disclosed financial relationships of speakers, moderators, facilitators and/or authors in advance of this CPD activity and has implemented procedures to manage any potential or real conflicts of interest.

# Program Agenda

## Conference Day-I

### Saturday 22<sup>nd</sup> September 2018

	<b>Registration 7:00-12:00 PM</b>
7:00 -8:00 AM	<b>Exhibitors and Sponsors Welcome Reception</b> Conference Exhibition Hall-QNCC
<b>8:00-9:00 AM</b>	<p><b>DAY-I- SESSION-I: Conference Opening General Session and Keynote Opening Lecture</b></p> <p><b><i>The Common Objectives of this Opening Session is to:</i></b></p> <ul style="list-style-type: none"> <li>• Motivate, Educate, Entertain and Engage the Target Audience</li> <li>• Set the Ton of the CUDOS 2018 Comprehensive Program</li> <li>• Create a Memorable Experience and Educational-Scientific Atmosphere</li> <li>• Share Important Information with the Audience</li> </ul> <p><b><i>Learning Objectives: at the end of this session, the participants will be able to:</i></b></p> <ul style="list-style-type: none"> <li>• Learn about the healthcare reform and innovation in Qatar</li> <li>• Learn about the major advances in the area of public health in Qatar</li> <li>• Learn briefly about the active research programs at Sidra medicine</li> <li>• Understand the learning and professional development at Sidra medicine</li> <li>• Learn about the history of the conference series and the objectives of being directed toward children care for this year</li> </ul>
<b>Conference Host</b>	<b>Mr. Ahmed Al-Shaibi, Sidra Medicine</b>
8:00-8:15 AM	Sidra Medicine- Care for Women’s and Children <b>Professor the Lord Darzi of Denham</b> Vice Chair of the Board of Governors for Sidra Medicine
8:15-8:30 AM	Innovative Research in Reducing Diabetes Burden in Qatar <b>Sheikh Dr. Mohammed Bin Hamad Bin J. Al-Thani</b> Director of Public Health Department, Ministry of public Health, Qatar
8:30-8:40 AM	Research Advances at Sidra Medicine <b>Professor Christof von Kalle</b> Chief Research Officer, Sidra Research Branch, Sidra Medicine, Qatar
8:40-8:50 AM	Learning and Development at Sidra Medicine <b>Dr. Kholode Al-Obaidili</b> Chief Learning Officer, Sidra Medicine, Qatar

8:50-9:00 AM	The CUDOS Conference Series Educational Objectives <b>Dr. Ammira-Sarah Akil</b> Sidra Research Branch, Conference Chair and Organizer, Sidra Medicine, Qatar
9:00- 9:40 AM	<b>Conference Keynote Opening Lecture:</b> A perspective on the state of Diabetes Mellitus in Children and Adolescents: 25 years after Completion of the Diabetes Control and Complications Trial (DCCT).  <b>Learning Objectives: at the end of this lecture, the participants will be able to:</b> <ul style="list-style-type: none"> <li>• Learn about the DCCT trial design and also the follow up plan</li> <li>• Learn whether the complications of type 1 diabetes can be prevented or delayed including cardiovascular diseases (CVD)</li> <li>• Learn an overview about the diabetes mellitus complications and clinical status of diabetes in children and adolescents</li> </ul>
<b>Moderator</b>	<b>Professor Christof von Kalle (Sidra Medicine)</b>
Speaker	<b>Professor Joseph Wolfsdorf</b> President, International Society for Pediatric and Adolescent Diabetes (ISPAD) Director of Diabetes Program, Boston Children Hospital, Boston, MA, USA
9:40- 11:55 AM	<b>DAY-I- SESSION-II: Genetics and Environmental Triggers and Determinants of Type 1 Diabetes</b> <b>Learning Objectives: at the end of this session, the participants will be able to:</b> <ul style="list-style-type: none"> <li>• Learn the specific role of genetic susceptibility in determining the overall clinical presentation of type 1 diabetes</li> <li>• Study the role of the environmental factors in triggering and driving pancreatic cell destruction in type 1 diabetes</li> <li>• Find out the link between the genetics and the environment that might lead to discover a new therapeutic options to control diabetes type-1</li> </ul>
<b>Moderators</b>	<b>Professor Ibrahim Janahi and Dr. Davide Bedognetti (Sidra Medicine)</b>
9:40-10:20 AM	Type 1 diabetes genetics: Lost in translation? <b>KEYNOTE LECTURE: Professor Flemming Pociot</b> Steno Diabetes Center, Herlev and Gentofte Hospital and Copenhagen Diabetes Research Center Copenhagen, Denmark
10:20-10:35 AM	Prevalence of Type 1 Diabetes in Qatar <b>SPECIAL LECTURE: Dr. Abdulla Al Hamaq</b> Executive Director, Qatar Diabetes Association, Qatar
<b>10:35-11:05 AM</b>	<b>Sponsors/exhibitors Interactive Refreshment Break</b>
11: 05-11:25 AM	<b>DAY-I-SESSION-II Cont.</b> Environmental Triggers of Type 1 Diabetes <b>Dr. Ammira-Sarah Akil</b> Research Branch, Human Genetics department, Sidra Medicine, Doha, Qatar

11:25-11:55 AM	<p>Exploring the Developmental Origins of Type 1 Diabetes  Head of Pediatrics and Reproductive health, women’s and children’s hospital, University of Adelaide, Adelaide, Australia</p> <p><b>EXPERTS LECTURE: Professor Jenny Couper</b>  <i>Skype video call, facilitated by Dr. Megan Penno, the National Project Manager for the Environmental Determinants of Islet Autoimmunity (ENDIA) study, University of Adelaide, Australia</i></p>
12:00-01:00 PM	<b>Sponsors/Exhibitors Interactive Lunch Break and Poster Viewing Session</b>
1:00- 3:05 PM	<p><b>DAY-I- SESSION-III: Clinical Diabetes, Acute and Chronic Complications</b>  <b>Learning Objectives: at the end of this session, the participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• Understand the complex nature of clinical diabetes and to determine the complications of childhood diabetes and the factors that influence them</li> <li>• Learn about novel data discoveries that might uncover relationships that not previously recognized</li> <li>• Learn the effects of risk factors such as overweight, obesity and genetic predisposition on blood hypertension and also on the treatment options in the diabetic children</li> <li>• Understand the importance of early targeted treatment including diet to control and prevent the sever outcomes of diabetes complications</li> <li>• Recommend and promote the optimal cardiovascular health in all children and youth</li> </ul>
<b>Moderators</b>	<b>Professor Khalid Hussain and Dr. Abubakr Imam (Sidra Medicine)</b>
1:00-1:40 PM	<p><b>KEYNOTE LECTURE:</b> Microvascular and Macrovascular Complications of Diabetes  <b>Professor Abdul Badi Abou Samra</b>  Chairman, Department of Medicine, Hamad Medical Corporation, Director, Qatar Metabolic Institute, Hamad Medical Corporation</p>
1:40-2:10 PM	<p><b>SPECIAL LECTURE:</b> Hypertension in Obese and Diabetic Children  <b>Dr. Ibrahim Shatat</b>  Medical Director–Nephrology and Hypertension Unit, Pediatrics Department, Sidra Medicine, Qatar</p>
2:10-2:35 PM	<p>Genetics and Epigenetics of Diabetic Complications  <b>Professor Ronald Ma</b>  Department of Medicine and therapeutics, faculty of Medicine, the Chinese University of Hong Kong</p>
2:35-3:05PM	<p>Childhood Obesity: Complications and New Challenges in Treatment  <b>Dr. Elvira Verduci</b>  Institute of Pediatrics, University of Milan, Milano, Italy</p>
3:05- 3:30 PM	<p><b>DAY-I- SESSION-IV: Young Qatari Investigators in the Medical Sciences-Track 1</b>  <b>Learning Objectives:</b></p> <ul style="list-style-type: none"> <li>• To encourage young Qatari scientists in expanding their science skills and developing research pathways that meets Qatar’s long-term development goals.</li> <li>• Motivating the young investigators toward enthusiastic education in medical research toward building Qatar’s knowledge-based health system.</li> <li>• To announce too the public, the diversity of the research areas and multiplicity of the research projects running at Sidra Medicine</li> </ul>

<b>Moderator</b>	<b>Dr. Souhaila Al Khodor (Sidra Medicine)</b>
3:05-3:12 PM	Poly-Malformative Cohort Sequencing Study <b>Dr. Aljazi Al-Maraghi</b> Post-Doctoral Fellow, Human Genetics, Research Branch, Sidra Medicine
3:12-3:19 PM	Determining the key dendritic cell factors required for the induction of the allergic response <b>Khalid Al Lakhen</b> Graduate Associate, Asthma and Allergy Lab Department, Research Branch, Sidra Medicine
3:19- 3:26 PM	C2H2-type zinc finger proteins in neurodevelopmental disorders <b>Njoud Al-Naama</b> Research Specialist II, Human Genetics, Research Branch, Sidra Medicine
<b>3:30-4:00 PM</b>	<b>Sponsors/Exhibitors Interactive Refreshment Break</b>
<b>4:00- 5:50 PM</b>	<b>DAY-I SESSION-V: Care of Children and Adolescents with Diabetes</b> <b>Learning Objectives: at the end of this session, the participants will be able to:</b> <ul style="list-style-type: none"> <li>• Understand and learn the critical role of diabetes care providers cooperatively dealing with children and families whom affected with diabetes</li> <li>• Learn the way of accomplishing excellent clinical and psychological outcomes for children with diabetes</li> <li>• Establish a step towards a more patient centered approach and effective self management to delivery of care for children with diabetes</li> <li>• Understand the effectiveness of a diabetes education and self management approaches for children with diabetes which should be part of routine therapy for all patients with type 1 diabetes</li> <li>• Learn how different feeding patterns at early life are associated with the risk of type 1 diabetes developing later</li> </ul>
<b>Moderators</b>	<b>Deputy Chief Nurse Deborah Kelly, Dr. Sharda Udassi, and Fareeda Umar (Sidra Medicine)</b>
4:00-4:30PM	<b>SPECIAL LECTURE: Why Psychology Matters in Diabetes</b> <b>Professor Deborah Christie</b> University College London Hospitals UCLH, London, UK
4:30-4:55PM	<b>EXPERT LECTURE: The Impact of Maternal Obesity on Offspring Outcomes-Can we Intervene?</b> <b>Professor Margaret Morris</b> Head, Environmental determinants of obesity group, University of New South Wales, Sydney, Australia
4:55-5:20 PM	Structured Education in Diabetes Technologies <b>Judith Campbell</b> Nurse Practitioner, Pediatric Endocrinology Department, Sidra Medicine, Qatar
5:20-5:50 PM	Diet and Diabetes <b>Hannah Fisher</b> Registered Dietitian, Clinical Nutrition and Dietetics department, Sidra Medicine, Qatar
<b>5:50-6:00 PM</b>	<b>CLOSING REMARKS- CONFERENCE DAY-I</b> <b>Dr. Ammira-Sarah Akil</b>

## Conference Day-II Sunday 23<sup>rd</sup> September 2018

<b>7:00-12:00 PM Registration</b>	
<b>7:00 -8:00 AM</b>	<b>Meet and Greet with the Conference Exhibitors and Sponsors Conference Exhibition Hall-QNCC</b>
<b>8:00- 8:15 AM</b>	<p><b>Diabetes Education initiatives at Sidra: Integrating Health Promotion in Diabetes Management Education: A Pilot Program</b></p> <p><b>Learning Objectives: at the end of this lecture, the participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• Learn about the importance of utilizing health promotion models and theories in the planning, implementation and evaluation of diabetes education programs</li> <li>• Determine the effectiveness of diabetes education on diabetes-related hospitalizations, knowledge, quality of life and other psychological outcomes for kids with diabetes and their families</li> <li>• Demonstrate the important role of health promoters in diabetes education and support for patients and their families</li> <li>• Improve the health of Qatar’s population that have been set to align with Qatar National Vision 2030.</li> </ul>
<b>Moderator</b>	<b>Dr. Ramzi Temanni (Sidra Medicine)</b>
Speakers	<p><b>Aziza Mahmoud</b> Manager – Health Promotion Division, Sidra Medicine, Qatar</p> <p><b>Fatima Al-Maslamani</b> Health Promoter, Sidra Medicine, Qatar</p>
<b>8:15-8:45 AM</b>	<p><b>SPECIAL OPENING- CONFERENCE DAY II</b></p> <p>The Role of Patient in Diabetes Research: JDRF, the Largest International Type 1 Diabetes Research Funder</p> <p><b>Learning Objectives: at the end of this session, the participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• Learn about the central role of diabetic patients in the advancement of diabetes medical research. The speaker is a real example on that</li> <li>• Learn about how people with type 1 diabetes can live their lives without limits</li> <li>• Learn about the role of JDRF as a global juvenile diabetes research funding agency</li> <li>• Touch base on the area of diabetes technologies including t artificial pancreas and automated insulin-delivery systems</li> </ul>

<b>Moderator</b>	<b>Dr. Goran Petrovski (Sidra Medicine)</b>
Speaker	<b>Dr. Aaron Kowalski</b> Juvenile Diabetes Research Foundation Chief Mission Officer, New York, USA
<b>8:45-11:15 PM</b>	<p><b>DAY-II- SESSION- I: New Technologies, Clinical Trails and Therapeutic Approaches for the Management of Childhood Diabetes.</b></p> <p><b>Learning Objectives: at the end of this session, the participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• Learn about new technologies and recent products for the treatment, monitoring, diagnosis, and prevention of childhood diabetes and its complications</li> <li>• Learn and discuss the gaps in the current understanding and knowledge regarding the pathophysiology and clinical presentation of early non-autoimmune diabetes</li> <li>• Learn about the risk factors for childhood diabetes in Qatar including the hereditary role, parental obesity</li> <li>• Demonstrate how, by incorporating technology into diabetes care, we can improve the quality of patient’s life.</li> <li>• Learn about the recent clinical trail on controlling the cardiovascular diseases risk in adults with type 1 diabetes</li> </ul>
<b>Moderators</b>	<b>Professor Khaled Machaka (WCMC-Q) and Dr. Younes Mokrab (Sidra Medicine)</b>
8:45-9:25 AM	<p><b>KEYNOTE LECTURE:</b> Genetics of Early onset non-autoimmune Diabetes – Insights into Improved Diagnostic and Treatment Strategies</p> <p><b>Professor Torben Hansen</b> Scientific Director, Novo Nordisk Foundation Centre, University of Copenhagen, Denmark</p>
9:25-9:55 AM	<p><b>SPECIAL LECTURE:</b> Tackling Obesity in Qatar</p> <p><b>Professor Shahrad Taheri</b> Consultant Endocrinology, Hamad Medical Corporation and Assistant Dean for Clinical Investigations, Weill Cornell Medicine- Qatar</p>
9:55-10:20 AM	<p>Clinical Implementation on Technology in Type 1 Diabetes</p> <p><b>Professor Goran Petrovski</b> Diabetes consultant, Pediatric Endocrinology, Sidra Medicine, Qatar</p>
<b>10:20-10:50 AM</b>	<b>Sponsors/exhibitors Interactive Refreshment Break</b>
10:50 -11:15 AM	<p>Metformin Use in Type 1 diabetes, including results of the REMOVAL TRIAL</p> <p><b>Professor Alicia Jenkins</b> NHMRC Clinical Trials Centre, Sydney Medical School, University of Sydney, Australia</p>
<b>11:15-11:45 AM</b>	<p><b>EXPERT LECTURE:</b> Working Towards the Artificial Pancreas: Using Hybrid Closed Loop Insulin Delivery in Clinical Practice</p> <p><b>Learning Objectives: at the end of this lecture, the participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• Study and evaluate the effect of using the hybrid closed loop technology on the disease outcomes comparing with the standard diabetes therapy</li> <li>• Learn about the advantages vs, the disadvantages of using the hybrid closed loop technology including patient age and safety</li> </ul>

	<ul style="list-style-type: none"> <li>Discuss the possibility of technology, transfer and start a similar trail in Qatar toward the goal of improving the care of people with type 1 diabetes.</li> </ul>
<b>Moderator</b>	<b>Professor Mamoun Elawad (Sidra Medicine)</b>
Speaker	<b>Professor Anders L. Carlson</b> Medical Director, International Diabetes Center (IDC), Park Nicollet Health Services, Minnesota, USA
<b>11:45-12:15PM</b>	<p><b>SPECIAL LECTURE: Biomarkers and Mechanisms of <math>\beta</math> cell Stress in Type 1 Diabetes</b></p> <p><b>Learning Objectives: at the end of this lecture, the participants will be able to:</b></p> <ul style="list-style-type: none"> <li>Learn about novel biomarkers discoveries and the potential therapeutic strategies for type 1 diabetes</li> <li>Investigate the future directions in the biomarkers discovery field and the role of “omics” data</li> <li>Understand the methodology and the biomarkers signatures minimizing behind discovering a potential therapeutic or monitoring biomarkers</li> <li>Understand the procedure of using the biomarkers in identifying individuals at high risk of developing B-cell dysfunction</li> </ul>
<b>Moderator</b>	<b>Dr. Sara Tomei (Sidra Medicine)</b>
Speaker	<b>Professor Carmella Evans-Molina</b> Director of islet physiology Core, Diabetes Research Centre, Indiana University, USA
<b>12:15-1:15 pm</b>	<b>Sponsors/Exhibitors Interactive Lunch Break and Poster Viewing Session</b>
<b>1:15-2:15 PM</b>	<p><b>DAY-II- SESSION-II: Ask the Expert - Roundtable Discussion: Pancreatic Islet Cellular Therapy Project in Qatar</b></p> <p><b>Learning Objectives: at the end of this session, the participants will be able to:</b></p> <ul style="list-style-type: none"> <li>Learn about the current state-of-the-art efforts aiming to generate a sustainable source of functional human insulin-producing islet cells for cell transplantation as a treatment option in Qatar</li> <li>Understand the function of beta-cell at the molecular level which will likely ease the development of techniques to manufacture beta-cells from stem cells.</li> <li>Learn the protocols for the purification of human pancreatic beta-cells from whole- organ and also culturing them</li> <li>Be up to date with the rapid advances in modern-device technology, immune modulation and generation of functional pancreatic beta cells that soon might be a therapeutic avenue for the treatment of diabetic patients.</li> </ul>
<b>Moderator</b>	<b>Dr. Marios Kambouris (Sidra Medicine)</b>
Chairman	<b>Chairman and Presenter: Professor Abdul Badi Abou Samra</b> Chairman, Department of Medicine, Hamad Medical Corporation and Director, Qatar Metabolic Institute, Hamad Medical Corporation
	<b>Panelist: Professor Ronald Ma</b> Department of Medicine and therapeutics, faculty of Medicine, the Chinese University of Hong Kong



	<p><b>Panelist: A/ Professor Anand Hardikar</b> Group leader, Diabetes and Islet Biology, NHMRC Clinical Trials Centre, University of Sydney, Australia</p>
	<p><b>Panelist Professor Bruce Verchere</b> Departments of Surgery and Pathology &amp; Laboratory, University of British Columbia (UBC), Vancouver, Canada</p>
	<p><b>Panelist: Professor Timothy Barrett</b> Program Director for the Wellcome Trust Clinical Research Facility, Birmingham Children’s Hospital, UK</p>
<b>02:15- 3:00 PM</b>	<p><b>DAY-II- SESSION-III: Young Qatari Investigators in the Medical Sciences-Track 2</b> <b>Learning Objectives:</b></p> <ul style="list-style-type: none"> <li>• To help creating the new generation of scientists and inventors to build Qatar’s knowledge-based economy and perceive the goals of Qatar National Vision 2030</li> <li>• To help the young investigators developing skills, confidence and engage them in an exciting learning experience</li> <li>• To learn about the research projects and researchers at Sidra medicine</li> </ul>
<b>Moderator</b>	<b>Dr. Naser ElKum (Sidra Medicine)</b>
02:15-02:22 PM	<p>Understanding Early Onset Monogenic Obesity in Children <b>Reem Hasnah</b> Graduate Associate, Endocrinology Department, Sidra Medicine</p>
02:22-02:29 PM	<p>Whole Genome Sequencing of Families with Rare Diseases in Qatar <b>Alya Al- Kurbi</b> Graduate Associate, Human Genetics, Research Branch, Sidra Medicine</p>
02:29-02:36 PM	<p>Research Methods to Study Human Gut Microbiome Profile <b>Omair Al Nuaimi</b> Graduate Associate, Immunology, inflammation and Metabolism, Research Branch, Sidra Medicine</p>
02:36 -02:43 PM	<p>Genetic Characterization of Hearing Loss Patients in Qatar <b>Moza Al-Kowari</b> Research Specialist, Maternal Fetal Care, Research Branch, Sidra Medicine</p>
02:43- 2:50 PM	<p>Automated and Manual Nucleic Acids Extraction Methods to Support Genomic Research at Sidra Medicine <b>Muna Al Hashmi</b> Research Specialist III, Omics Core Unit, Research Branch, Sidra Medicine</p>
<b>2:50- 3:20 PM</b>	<b>Sponsors/Exhibitors Interactive Refreshment Break</b>
<b>3:20-4:00 PM</b>	<p><b>KEYNOTE-SPECIAL LECTURE – Advanced Childhood Care in QATAR</b> Percutaneous Valve Implantation for Patients with Defected Pulmonary Valves</p> <p><b>Learning Objectives: at the end of this session, the participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• Learn about the significant advances and new technologies implemented by researchers and clinicians at Sidra Medicine with the aim of improving the health of Qatar’s population, existing and future generations and in coordination and to successfully achieve with Qatar National Vision 2030.</li> </ul>

	<ul style="list-style-type: none"> <li>Learn about the benefits of this type of treatments for patients with congenital heart disease</li> <li>Understand the challenges related to many aspects when using this technique such as patient selection.</li> </ul>
<b>Moderator</b>	<b>Dr. Damien Chaussabel (Sidra Medicine)</b>
Speaker	<b>Professor Ziyad Hijazi</b> Chair of the Department of Pediatrics, Sidra Medicine, Qatar
<b>4:00- 5:50 PM</b>	<p><b>DAY-II- SESSION- IV: Prevention of Childhood Diabetes and its Complications</b></p> <p><b>Learning Objectives: at the end of this session, the participants will be able to:</b></p> <ul style="list-style-type: none"> <li>Learn why preventing diabetes and its complications from developing is so important especially in high-risk individuals and patients with type 1 diabetes.</li> <li>Highlight the importance of educational interventions of several factors such as diet and exercise that can help prevent the incidence of type 1 diabetes or its complications</li> <li>Understand the role of maternal health on the disease outcomes</li> <li>Learn about the prevention types, primary, secondary and tertiary and the current efforts of controlling them</li> <li>Raise public awareness of the healthy lifestyle and habits as a major factor to control the disease</li> </ul>
<b>Moderators</b>	<b>Professor Khalid Machaca (WCMC-Q) and Professor Anthony Akobeng (Sidra Medicine)</b>
4:00-4:40 PM	<p><b>KEYNOTE LECTURE: Primary Prevention of Childhood Diabetes: Promises and Challenges</b></p> <p><b>Professor Mikael Knip</b> Professor of Pediatrics, Chief Physician, Children's Hospital, University of Helsinki, Finland</p>
4:40-5:05 PM	<p>Ongoing Efforts and Types of Prevention of Childhood Diabetes</p> <p><b>Dr. Ahmed El Awwa</b> Attending Physician, Children's Clinical Management Group, Division of Endocrinology, Sidra Medicine, Qatar</p>
5:05-5:30 PM	<p>Diabetes and Pregnancy</p> <p><b>Professor Badreldeen Ahmed</b> Director, Feto Maternal Medical Centre, professor of gynecology, Weill-Cornell Medical College, Qatar</p>
5:30-5:55 PM	<p>The Triple Interaction Diet-Microbiome-Epigenetic in Type 1 Diabetes</p> <p><b>Dr. Annalisa Terranegra</b> Investigator in Nutritional Genomics and Metabolism, Research Branch, Sidra Medicine, Qatar</p>
<b>5:55- 6:00 PM</b>	<p><b>CLOSING REMARKS- CONFERENCE DAY-II</b></p> <p><b>Dr. Ammira-Sarah Akil</b></p>

## Conference Day-III

### Monday 24<sup>th</sup> September 2018

<b>7:00-12:00 PM Registration</b>	
<b>7:00 -8:00 AM</b>	<b>Meet and Greet with the Conference Exhibitors and Sponsors</b> <b>Conference Exhibition Hall-QNCC</b>
<b>8:00-8:15 AM</b>	<b>OPENING- CONFERENCE DAY III</b> <b>SPECIAL LECTURE: TASMU SMART QATAR Healthcare Sector Focus</b> <b>Learning Objectives: at the end of this session, the participants will be able to:</b> <ul style="list-style-type: none"> <li>• Learn about the objectives of TASMU program and the digital society</li> <li>• Share with the conference attendee, the national challenges of the five sectors of TASMU program</li> <li>• Understand the role of TASMU in accelerating the achievements of pillars of Qatar National Vision 2030.</li> <li>• Demonstrate the objectives of healthcare sector of TASMU program</li> </ul>
<b>Moderators</b>	<b>Dr. Stephan Lorenz and Dr. Ammira-Sarah Akil</b>
<b>Speaker</b>	<b>HE. Ms. Reem Al-Mansoori</b> Assistant Undersecretary, Digital Society Development Sector, TASMU program, Ministry of Transport and Communications, Qatar
<b>8:15- 10:15 AM</b> <i>then from,</i> <b>10:45-11:10 AM</b>	<b>DAY-III- SESSION-I: Molecular Mechanisms and Clinical Pathophysiology of Childhood Diabetes</b> <b>Learning Objectives: at the end of this session, the participants will be able to:</b> <ul style="list-style-type: none"> <li>• Investigate and understand the specific molecular mechanisms and susceptibility determinants by which, certain genetic factors can influence the diseases risk and outcomes</li> <li>• Improve in depth our understanding of the molecular pathology pathways of various types of diabetes in children and the role played by the main susceptibility factors</li> <li>• Learn about the rare forms of diabetes in children that become more frequent and how to clinically managing them</li> <li>• Demonstrate the new simple tests that became available for determining the genetic risk and also to distinguish between type 1 and type 2 diabetes.</li> <li>• Learn about the role of nutrition as an environmental factor affecting the genetics and epigenetics changes in childhood diabetes</li> </ul>
<b>Moderators</b>	<b>Dr. Jean-Charles Grivel, Dr. Ussama Abdul Mutal and Dr. Eric Kilpatrick (Sidra Medicine)</b>
<b>8:15-8:55 AM</b>	Early Life Stages of Diabetes: Experience from Pune Cohort over Three Generations, India <b>KEYNOTE LECTURE:</b> Professor Chittaranjan S Yajnik Director, Diabetes Unit, KEM Hospital Research Centre, Pune, India

8:55-9:20 AM	Molecular Basis of Rare Types of Diabetes Mellitus <b>KEYNOTE LECTURE: Professor Khalid Hussain</b> Division Chief of Pediatric Endocrinology and Program Director for Research for the Children's Clinical Management Group, Sidra Medicine, Qatar
9:20-9:45 AM	Clinical Management of Rare Forms of Diabetes Mellitus <b>SPECIAL LECTURE: Professor Timothy Barrett</b> Program Director for Wellcome Trust Clinical Research Facility, University of Birmingham and Birmingham Children's Hospital, Birmingham, United Kingdom
9:45-10:15 AM	Childhood Diabetes, Genetics, Epigenetics and Nutrition <b>SPECIAL LECTURE: Professor José M Ordovás</b> Director, Nutrition and Genomics Laboratory, Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy, Human Nutrition Research Centre on Ageing - Tufts University, Boston, USA
10:15-10:45 AM	<b>Sponsors/exhibitors Interactive Refreshment Break</b>
10:45-11:10 AM	<b>SESSION-I (cont.)</b> Clinical and Research Uses of Genetic Risk Scores in Type 1 Diabetes <b>Dr. Richard Oram</b> Diabetes UK Harry Keen Fellow and Clinical Senior Lecturer, University of Exeter Medical School, Exeter, UK.
11:10-12:30 PM	<b>DAY-III- SESSION-II: Experts Opinion</b> –The Future of Precision Medicine at Sidra: Research-Pathology and Clinical and views <b>Learning Objectives: at the end of this session, the participants will be able to:</b> <ul style="list-style-type: none"> <li>• Raise awareness of personalized healthcare approaches and to understand the benefits that could bring to Qatar</li> <li>• Understand the challenges specific to Qatar in terms of implementing the personalized medicine</li> <li>• Discuss the cutting-edge advances in the field of precision medicine</li> <li>• Encourage and foster multi-national collaborations to build further Qatar's position as regional leader in the field of precision medicine</li> <li>• Announce to the public, the ongoing research and clinical studies in implementing personalized medicine in childhood and adulthood, fetomaternal and early life in Qatar</li> </ul>
<b>Moderators</b>	<b>Professor Justin Konje and Professor Christof von Kalle (Sidra Medicine)</b>
	<b>Presentation Title:</b> Solving Rare and Complex Pediatric Disorders in the Genomic ERA: The Qatari Experience <b>Professor Ibrahim Janahi-</b> Division Chief of Pulmonology, Chair of Medical Education, Sidra Medicine, Qatar <b>Dr. Khalid Fakhro-</b> Director, Human Genetics, Research Branch, Sidra Medicine, Qatar <b>Dr. Marios Kambouris-</b> Senior Attending Physician, Pathology department, Sidra Medicine, Qatar
12:30-1:30PM	<b>Sponsors/Exhibitors Interactive Lunch Break and Poster Viewing Session</b>

<b>1:30-3:30 PM</b>	<p><b>DAY-III- SESSION-III: Pancreatic Islet Biology and Insulin Secretion</b></p> <p><b>Learning Objectives: at the end of this session, the participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• Learn about the role of pancreatic islets cells in insulin secretion and then diabetes control</li> <li>• Understand the recent advances in the cellular mechanisms of predicting the progression to type 1 diabetes</li> <li>• Highlight interesting study designs and data interpretation approaches in order to advance experimental proposals directed on the molecular and physiological foundation of human islet cell dysfunction in childhood diabetes</li> <li>• Think about technology transfer in terms of adopting human pancreatic islet primary cell research in Qatar</li> </ul>
<b>Moderators</b>	<b>Professor Xavier Estivill, Dr. Abeer Fadda and Professor Rusung Tan (Sidra Medicine )</b>
1:30 -2:10 PM	Development and validation of biomarkers for prediction of Type 1 diabetes <b>KEYNOTE LECTURE: A/ Professor Anand Hardikar</b> Head of Diabetes and Islet Biology Group at the NHMRC Clinical Trials Centre, University of Sydney, Australia
2:10-2:40 PM	Insights into Cause and Consequences of Beta Cell Dysfunction in Diabetes <b>SPECIAL LECTURE: Professor Bruce Verchere</b> Departments of Surgery and Pathology & Laboratory Medicine, University of British Columbia, Vancouver, Canada
2:40-3:05 PM	Immune-Regulatory Properties of Human Pancreatic Islet-Derived Progenitor Cells <b>Dr. Mugdha Joglekar</b> NHMRC Clinical Trials Centre, University of Sydney, Australia
3:05-3:30 PM	Circulating MicroRNAs in Obese Children-Novel Biomarkers of Obesity-Associated Metabolic Risk <b>Professor Louise Dalgaard</b> Department of Natural Science and Environment, Roskilde University, Denmark
<b>3:30- 4:00 PM</b>	<b>Sponsors/exhibitors Interactive Refreshment Break</b>
<b>4:00- 4:30 PM</b>	<p><b>DAY-III- SESSION-IV: Young Qatari Investigators in the Medical Sciences-Track 3</b></p> <p><b>Learning objectives:</b></p> <ul style="list-style-type: none"> <li>• To learn why public engagement and participation in scientific events is important for career and personal development</li> <li>• To enhance the presentation skills and develop personal confidence</li> <li>• Networking with some of the world best scientists and researchers</li> <li>• Identify future areas of research collaboration and development.</li> </ul>
<b>Moderator</b>	<b>Dr. Chiara Cugno (Sidra Medicine)</b>
4:00-4:07 PM	Significance and utility of Graph Based Pan-Genomes for Population level genetics <b>Mohammed Ibrahim Janahi</b>

	Research Specialist II, Biology and Immunology Unit, Research Branch, Sidra Medicine
4:07-4:14 PM	Genetic Analysis of Eye Disorders in the Qatari Population <b>Omayma Al Saei</b> Technologist II - Maternal Fetal Care, Research Branch, Sidra Medicine
4:14-4:21 PM	The genetic Basis of Hypogonadism Hypogonadotropic <b>Asma Al-Naama</b> Graduate Associate- Human Genetics, Research Branch, Sidra Medicine
4:21- 4:30 PM	Stem Cell Core Facility at Sidra Medicine Research <b>Sharefa Al-Mannai</b> Research Specialist II, Deep phenotyping core facility, Research Branch, Sidra Medicine
<b>4:30- 5:30 PM</b>	<b>DAY-III- SESSION V: CLOSING LECTURES</b> <b>Learning Objectives: at the end of this session, the participants will be able to:</b> <ul style="list-style-type: none"> <li>• Develop knowledge, skills and attitudes and create a research environment which enable research institutions to set objectives, achieve results and solve problems.</li> <li>• Learn the importance of the partnership with external partners to create collaborative research projects</li> <li>• Focus on developing university students' thinking and provide the opportunities considering the universities the main source of new knowledge, innovative thinking and skills development on such societal needs.</li> <li>• Learn about CUDOS 2019 theme and objectives</li> </ul>
<b>Moderator</b>	<b>Professor Ziyad Hijazi (Sidra Medicine)</b>
Speaker-I 4:30-5:00 PM	Building Research Capacity to Answer Important Questions <b>Professor Tony Keech</b> Deputy Director of the NHMRC Clinical Trials Centre, Sydney Medical School, University of Sydney, Australia
Speaker-II 5:00-5:30 PM	Next Meeting of the CUDOS Series <b>Professor Christof von Kalle</b> Chief Research Officer, Sidra Research Department, Sidra Medicine, Qatar
<b>5:30 5:40 PM</b>	<b>AWARDS ANNOUNCEMENT</b> <b>Professor Christof von Kalle and Dr. Ammira-Sarah Akil</b>
<b>5:40-6:00 PM</b>	<b>CONFERENCE CLOSING REMARKS, SUMMARY &amp; FAREWELL</b> <b>Dr. Ammira-Sarah Akil</b>