GenOMICS Today and Tomorrows Medicine

Proceedings of 2010 Conference

BCCGN Conference 2010 Open Remarks and Keynote Address

After brief introduction, renowned author and playwright James Reston Jr. shares his personal story about being the father of a child with an unknown genetic disorder. At the age of 18 months, his daughter Hillary suffered a mysterious series of fevers, which turned the smart, active child into a mentally handicapped and seriously physically ill toddler. James discusses the impact of endless visits with specialists, tests and laboratory experimentation, as well as the non-stop quest for answers regarding Hillary's condition.

Sequencing in 2010; from Kilobases to Terabases

Sequencing has become even more powerful and efficient in recent years. This session given by Dr Richard Moore, Sequencing Group Leader, BCCA, aims to explain the latest sequencing technologies, as well as the clinical utility of modern sequencing platforms. Practical clinical examples are utilized to illustrate the power of the technology.

NeurogenOMICS - Exome sequencing for intellectual disability

The basics of high-throughput whole exome sequencing is explained in this session by Dr Jan Friedman and participants gain an understanding of the strengths and limitations of using "brute force" whole exome sequencing to find mendelian disease genes. Preliminary results of a study looking at genes responsible for intellectual disability are presented.

Parental perspectives of receiving a diagnosis for their child's intellectual disability

Nancy Makela BSC RN Research Nurse talks about a qualitative study on the impact of microArray Genomic Hybridization results on parents' perspectives and experiences related to receiving a diagnosis for their child's intellectual disability. She also explains the process that parents undergo in adjusting to their child's condition, as well as some of the reasons that parents choose to pursue a diagnosis for their child's condition.

Debate Resolution: Direct-to-consumer testing allows individual autonomy and empowerment

This debate explores the benefits and concerns of direct-to-consumer genetic testing as raised by both the main proponents who are the companies involved and opponents which include most medical professionals. Participants also learn about the current array of testing choices being offered on the internet, as well as the data on which they are based and the types of results which they generate. Participants in the debate were Dr. Millan Patel and Dr. Timothy Triche MD.

PharmacogenOMICS - Applications to HIV therapy

There has been a rapid uptake of genetic testing in HIV therapy relative to other diseases. In this session is Dr. Harrigan discusses the role of viral genetic testing in monitoring HIV therapy effectiveness and resistance and helps participants understand the role of patient testing in preventing HIV therapy side-effects.

Barriers for integrating genomics and personalized medicine into clinical practice.

In this session, Medhi Najafzadeh discusses the current beliefs and level of awareness of physicians and clinical geneticists with regard to future applications of personalized medicine in medical practice.

He also explores physicians' perceptions of the most important barriers to using personalized medicine in their practice.

NutrigenOMICS - How lifestyle choices interact with genetic disease

Genetic Epidemiologist Mojgan Yazdanpanah discusses how nutrition influences monogenetic and complex diseases, as well as how new pathways involved in complex diseases can be identified with the application of high-throughput genomic tools in nutrition/environment research. She also explains how the interplay of genes and environment play a role in the development of common diseases and how this information may lead to personalized dietary and lifestyle recommendations.