BCCGN
British Columbia Clinical Genomics Network

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BCCGN Newsletter

January 2009

BCCGN News and Updates

BCCGN Year in Review

BCCGN was founded in September 2007 with the support of the Michael Smith Foundation for Health Research. The Network provides BC clinicians with access to the provinces state of the art genomics technologies and to experts in the field. With this help, BC clinicians are able to conduct research studies into the genetic basis of disease so as to benefit their patients and increase medical knowledge.
The Network got off to a good start. During its first year of operations staff and advisers were recruited, operations were set up and over ten clinicians were assisted to access genomics technologies and conduct research studies. These studies included a wide range of therapy areas spanning cardiovascular disease, autism and developmental, immunological, neurological and respiratory disorders.
For a list of BCCGN members and their studies click here

BCCGN Co-Founder Receives Award

BCCGN co-founder Michael Hayden MD PhD recently received the Canadian Institutes of Health Research's (CIHR) Michael Smith Prize in Health Research: Canada's Health Researcher of the Year award. CIHR grants this award annually to a Canadian researcher who has demonstrated outstanding commitment, innovation, creativity, achievement and leadership in health research. Dr. Hayden plans to use the award of $500,000 to support training in Global Health, Rare Diseases, Mental Health, and Biotechnology. Dr Hayden was also one of the five finalists for the Globe and Mail's 2008 Nation Builder.

For more information click here

Research in Focus - Epilepsy

BC physicians are beginning to apply genomics technology to address important and elusive clinical problems. One case in point is clinical investigator Dr. Michelle Demos who

contacted BCCGN with questions about how to study some of her patients using genomics technology.

Dr Demos, a neurologist, works with children who have epilepsy. In many cases the underlying cause of the condition is unknown and the seizures may be poorly controlled with the available medications. She wanted to search for deletions and duplications in the DNA of her patients, called copy number variants (CNV's) that could give clues about the genes and biological processes that were causing seizures and other symptoms in her patients.

The Network helped Dr Demos to design and conduct a pilot study for eight patients using array comparative genomic hybridization (ACGH) to detect copy number variants. This study resulted in the identification of three chromosomal rearrangements that may contain regions that map to possible genes of interest. Dr Demos intends to publish her data and is also applying for a grant so that she can conclude a much larger study of seventy patients.

By using this approach Dr Demos hopes to identify new epilepsy genes. This will improve the information that genetic counselors can give to families and may well reduce the number of investigations performed on patients and lead to new approaches to treatment and improved patient care.

Technology in Focus - High Throughput Genotyping

Genotyping is a genetic test that can be used to track how disease genes pass from one family member to another and to study the distribution of a disease gene in a population of patients. The technique looks for common genetic variations called single nucleotide polymorphisms (SNP's) that may be located close to a gene that has been altered and can therefore be used as a genetic marker. If there are several affected family members in a family, then the same SNP will follow the disease gene as it gets passed from one family member to another. Knowing which SNP is "linked" to the gene, and where that SNP is located in the genome can help determine the location of the disease gene. SNP genotyping can also be used to look for SNP's that associate with particular disease genotypes such as heart disease, Alzheimer's disease and diabetes using large numbers of unrelated individuals. Clinicians involved in studies that identify SNP's associated with a particular disease or risk can help achieve a greater understanding of the condition and better therapies for their patients

You can read more about the technology here
And you can down load a more detailed fact sheet here

BCCGN Activities - Recruitment

The Network is recruiting for a post doctoral fellow in genetic epidemiology to help BCCGN researchers with their studies. The position was advertised in September and we are now

interviewing the most promising candidates.

Physician Survey

BCCGN is conducting a survey of all physicians in BC to help us understand how many are engaged in research. We also wish to better understand the barriers to physician research so that we can develop strategies to help.

You can help us by filling out the physician survey here

Funding Updates

BCCGN researcher, Christele Du Souich received a 2008 Telethon Award of $28,581 for her pilot study on the genetics of behavioral and psychiatric disease. The study focuses on a multi-generational family where the carrier females have psychiatric disease and affected males have severe mental retardation and are aggressive and irritable. Christele hopes to identify and characterize the gene and related biological pathway(s) involved in this family's disorder.

For more information on 2008 Telethon Awards click here

Events Calendar

BCCGN completed 18 roadshow presentations during its first year and is currently looking to schedule presentations to additional groups of researchers and physicians. The Network is also planning its first annual conference for April 2009

For an up to date list of BCCGN events click here
Click here to see the BCCGN Roadshow Presentation
Contact us to schedule an event