

# British Columbia Cancer Agency Centre for Lymphoid Cancer *Newsletter* *Lymphoma ♦ Leukemia ♦ Myeloma*

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*dedicated to curing the lymphoid cancers*

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This issue of the newsletter will highlight the important work done by our pathology team here at the *Centre for the Lymphoid Cancer* and the BCCA.

### Congratulations!

Three members of the CLC team have been included in *The World's Most Influential Scientific Minds 2014* publication by Thomson Reuters: Drs Joseph Connors and Randy Gascoyne for Clinical Medicine and Marco Marra for Molecular Biology and Genetics. This publication recognizes influential leaders in the sciences who are on the cutting edge of their fields and performing and publishing work recognized by their peers as vital to the advancement of science. It is based on both the number and quality of their scientific publications and placed them in the top 20 scientists in Canada. Over the past ten years, this team has been at the forefront of genomic analysis and its ever-increasing role in the diagnosis and treatment of cancer. We're excited and honored to have their achievements recognized with this impressive award.



### Researcher in the spotlight: Dr. Farinha



Meet Dr. Pedro Farinha, a staff pathologist at the BCCA and an important new member of the CLC pathology team. He has a MD, PhD originally from Portugal. From early in his medical residency he developed a major interest in hematological malignancies with a focus on combining routine diagnostic practice with translational research. As a result he did a rotation with the BCCA's Lymphoma Tumor Group in 2001. After completing his anatomic pathology residency training in 2003 in Lisbon, to further his research interests he came back to British Columbia for a hematopathology fellowship in Dr. Randy Gascoyne's lab. This resulted in a PhD thesis completed in Lisbon in 2012. His research interests have focused on different lymphoma types with a goal to understanding the mechanisms of lymphoma progression, transformation and prognostic biomarkers, specifically those related to the tumor microenvironment. Dr. Farinha has been involved in studies of transformation of follicular lymphoma to diffuse large B-cell lymphoma and cytogenetics, molecular genetics and gene expression profiling and correlation with the immune response. In the coming years he will continue to integrate his efforts on the lymphoma pathology diagnostic service with our translational research studies here at the BCCA Centre for Lymphoid Cancer.

## **Lymphoma Pathology in BC – A dedicated team of specialists**

Central review of all cases of suspected lymphoid cancer is essential for accurate diagnosis. In BC a small team of dedicated lymphoma pathologists is responsible for this work, including Drs Randy Gascoyne, Graham Slack, Pedro Farinha, Brian Skinnider, Malcolm Hayes and Andrew Weng at the Vancouver Cancer Centre (VCC), Mukesh Chhanabhai at Surrey Memorial Hospital and Brian Berry at the Royal Jubilee hospital in Victoria. The latter three individuals are the only credentialed lymphoma pathologists outside of Vancouver who are actively involved in the systematic review of lymphoma pathology specimens. The group reviews all suspected lymphoma biopsies in BC and many lymphoma consult cases from across the rest of Canada. A complete test menu at the VCC allows the group to accurately diagnose and classify these complicated cancers including flow cytometry dedicated exclusively to lymphoid malignancies, molecular genetic testing including polymerase chain reaction (PCR) and fluorescent in-situ hybridization (FISH) and sophisticated immunohistochemical analysis. The consult service is freely available to all practicing pathologists in BC. This extensive testing is judiciously employed by the lymphoma pathology team, utilizing these varied assays to firmly establish a diagnosis using modern classification. Since the 1980s BC consulting pathologists have sent cases from their home hospitals all over BC for input to provide a final diagnosis verified and validated by the lymphoma pathologists at the BCCA. The group prides itself on a rapid turnaround providing timely and accurate diagnoses seamlessly and efficiently, benefitting both patients and clinical practitioners. As a bonus, this large volume of clinical material is essential for our teaching programs, which include trainees and visiting hematopathologists from around the world. This systematic lymphoid cancer pathology review program is integral to all BCCA clinical, teaching and research efforts and the very active lymphoma research program of the Centre for Lymphoid Cancer (CLC).

All lymphoma pathology data are recorded in a secure and confidential computerized database directly linked to clinical and outcome data, thus,

providing a quality assurance database for the BCCA Lymphoma Tumor Group to assess the effectiveness of the lymphoid cancer treatment program in BC. This infrastructure has enabled CLC investigators to produce a large body of scholarly work, directly linking accurate diagnosis to measures of response to uniform therapies and clinical outcomes. The primary purpose of the database is to guide treatment policy formulation for lymphoid cancer in BC but it has also had far reaching ramifications for lymphoid cancer patients around the world. Insights derived from population-based registry studies here in BC have translated into differences in diagnostic strategies and therapies for lymphoma patients everywhere. In aggregate, our group has produced more than 400 peer-reviewed manuscripts in the field of lymphoid cancers that span a spectrum from clinical correlative papers through to next generation genome sequencing efforts. Many have been published in high impact journals such as *Nature*, *Nature Genetics*, *Nature Medicine*, *Nature Reviews Cancer* and *the New England Journal of Medicine*. A close collaboration with the Michael Smith Genome Sciences Centre has firmly established the BCCA as one of the leading lymphoma genomics centers in the world. In fact, recent discoveries from BC have already led to the design and use of novel targeted therapies. Overall, the lymphoma pathology team has been an essential piece of the CLC, with all members striving to achieve the goal of realizing personalized precision medicine and ultimately improving the lives of all patients with lymphoid cancer.

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