

Notice to Internal Medicine Residents Re:  
Opportunity for Sub-specialization in Medical Biochemistry at UBC (July, 2014)

Background:

What is Medical Biochemistry?

Medical Biochemistry is the branch of pathology that is most closely aligned with the specialty of internal medicine. As chemical pathologists, medical biochemists oversee the diagnostic, prognostic and monitoring chemistry tests that are performed on patient blood, urine, CSF and other fluid samples that are performed on a daily basis in hospital and private laboratories. Our responsibilities include every element of the test utilization process from test selection, oversight of sample collection and handling, analytical quality assurance, and test reporting with appropriate reference interval and other interpretive guidance. Further, where new testing is needed but not readily available, medical biochemists oversee test development.

What has changed to make Medical Biochemistry an Option for Internal Medicine Trainees?

In 2012, the specialty training requirements for medical biochemistry changed. The new training requirements stipulate that the trainee should do three years of internal medicine prior to beginning two years of chemistry laboratory based subspecialty training. Further, the internal medicine specialty has now recognized the two year medical biochemistry training as subspecialty training that can be counted towards the completion of the internal medicine specialty training requirements ie internal medicine residents who complete two years of medical biochemistry may be dually certified in internal medicine and medical biochemistry.

What are the job opportunities for Medical Biochemists with Internal Medicine Certification?

There is not a clear answer to this question. Currently there are few medical biochemists practicing in Canada. Most are in BC (10 – 15), Edmonton (2), Hamilton (5), Toronto (3), Quebec (50 – 100), and elsewhere (5 – 10). Aside from Quebec, all medical biochemists practice in large urban centers. With the revised training requirements and the opportunity for dual certification, there is an expectation that medical biochemists will find roles split between laboratory supervision and clinical internal medicine practice that will complement the needs of smaller centers in Prince George, Kelowna, and other mid sized cities in Canada. As no such trainees have graduated, the success of this proposed role for the newly trained medical biochemists is uncertain.

Which internal medicine residents should consider medical biochemistry?

Those who have a strong background in chemistry from undergraduate or graduate studies and who have an interest in forging a new role for a novel type of specialist. The medical biochemist has the opportunity to oversee a large component of patient testing. From this perspective, a medical biochemist has the best view of important aspects of clinical practice including trends in test utilization, expected test values, incipient errors in lab testing, extremely abnormal test results, and inter-test correlations. This information can be fed to colleagues local and afar to educate and inform clinical practice. A resident who enjoys advocating for patients can have a great impact on their colleagues practice by utilizing these powerful resources to optimize the diagnostic testing process. If unsure, consider doing a 4 - 8 week elective at St Paul's Hospital to gain practical insight into the role of the laboratory based medical biochemist.

#### What are the two years of Medical Biochemistry subspecialty training?

Two years of subspecialty training designed to enable trainees to become experts in all aspects of chemistry and chemistry testing related to the practice of internal medicine. The content of training encompasses:

- a) analytical techniques with regard to test principles and method design, evaluation, implementation and quality control.
- b) test interpretation considering analytic and clinical explanations for abnormal test results
- c) clinical training pertaining to management of patients with disorders of lipid metabolism, diabetes mellitus, and other common endocrine disorders.

#### When can I apply to Medical Biochemistry at UBC?

You can apply anytime. Medical biochemistry advertises one PGY 1 position every year on average. Those accepted will start with 3 years of internal medicine with a 4 week medical biochemistry laboratory elective included each year. However, internal medicine residents can, in principle, transfer into medical biochemistry at any time in their first 3 years of internal medicine so long as there is an open spot. Contact Dr Mattman for more information.

#### Where can I find more information?

Please see our website:

<http://pathology.ubc.ca/educational-programs/residency-training/medical-biochemistry/>

and contact Dr Mattman or one of the other doctors listed below to further discuss medical biochemistry or to obtain a tour of the chemistry laboratory.

#### **Residency Training Committee Members for UBC Medical Biochemistry**

Dr Andre Mattman, MD, FRCPC

604 806 8190 (St Paul's Hospital)

Dr Daniel Holmes, MD, FRCPC

604 806 8919 (St Paul's Hospital)

Dr Li Wang, MD, FRCPC

604 875 2918 (Children's & Women's HCC of BC)

Dr Arun Garg, MD, FRCPC

604 520 4330 (Royal Columbian Hospital)

Program Administrator Kimberly Way

604 875 4892