Welcome
This is the first edition of the 2011 Laboratory Medicine newsletter aimed at external laboratory users. Its purpose is to bring you information on developments in laboratory medicine at St. James’s Hospital. We would be delighted with your feedback on issues you would like us to address in the newsletter. We hope you find it useful. Comments or suggestions can be sent to either e-mail address below:

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Laboratory Medicine Department at St. James’s Hospital is a fully Accredited Laboratory Service
All laboratory services provided on the SJH campus are accredited and have continually retained that status since 2008. The latest series of surveillance visits throughout 2010 & 2011 has confirmed the accreditation status of all departments.

Developments in IT infrastructure

New Laboratory Information Management System (LIMS)
St. James’s laboratory is part of a group of laboratories involved in a national procurement of a new LIMS system to meet the clinical and future business needs of its service. It will enhance the provision of end-to-end connectivity of the service with the user benefitting the patient in their journey through primary, secondary and tertiary care. This process has now started but it will be in but it will be another 12 months before it is ready to go to tender.

Sample Tracking & Tracing from Referring Laboratories (LIS2LIS)
This project is well underway and will allow the electronic transfer of laboratory requests from the referring laboratory to SJH laboratory as well as the return of reports electronically. Part of this project is a sample tracking system, which facilitates the tracking of samples until delivered to the recipient laboratory. Once received into the laboratory a message is sent to the referring laboratory confirming that step has been achieved successfully.

Benefits for St. James’s Hospital
- Manage the sample shipment between the referring laboratory and St. James
  - This will ensure that a complete audit trail is present for each sample being sent for analysis to St. James.
  - The audit trail is present in both St. James and the referring laboratory.
- Automated data entry at request entry will support demographic and sample detail capture using a 2D bar coding.
- Reduction in the number of duplicate external laboratory patients on the LIS.
- Laboratory test/examination reporting of ‘Delta’ check flags will work more consistently and correctly, simply because all results for the patient are filed together.

Benefits for the Referring Laboratory
- Patient demographic data is consistent and correct
- Data quality is much improved due to automated data entry in St. James’s
- The result reporting will function much better as all results for the patient will be filed in the Laboratory system correctly.
- Integration of results to external laboratory information system will be
streamlined, as demographic data will be consistent.

- Sample tracking advantages, above, will also accrue to external laboratory.

One major hospital laboratory has fully connected in this way and is running very successfully. Four other hospital laboratories are in progress of being linked up and will be fully operational by end of May 2011. It is intended to increase the number of users with this connectivity gradually over the next two years.

### Service Developments

#### Extended Working Day

The laboratory extended its working day Monday to Friday from 8am-8pm from the 1st of March 2011. Laboratory Staff have been the first group in the health services to formally agree the modernisation programme under the Public Services Agreement 2011-2015 (Croke Park Agreement).

This means that on call does not start until 8pm and work is processed routinely up to that time.

#### Laboratory User Website

The Laboratory updated its section of the St. James’s website in July of this year (www.stjames.ie/labmed) and now includes information on all aspects of the test/examination repertoire carried out in each department. In addition, it has information on contact numbers for advice, and links to other relevant websites also. Information on post mortems/autopsies is also accessible from the hospital website at www.stjames.ie.

#### Development of a Consolidated Automated Core Laboratory Facility

In 2009, the laboratory management embarked on an ambitious programme to develop a consolidated core automated laboratory facility combining the disciplines of haematology and biochemistry and some immunology investigations. This facility is annexed to a central reception area for the receipting, sorting, labeling and data entry onto LIMS of sample requests.

This facility was completed in 2010 and is now fully operational.

Core Automated Blood Science Laboratory
Departmental Updates

Biochemistry

Single Specimen Type
As part of the automated core laboratory facility, the laboratory is discontinuing the routine use of the green (Lithium Heparin) tube and is to be replaced by the current red capped tube, which is also in use in the hospital. This means we will have one tube type in the laboratory except for glucose and other special tests. The transition has not taken place yet on the EPR and reminders will be issued when that happens. There will be one exception, such as, when patients are on heparin therapy, it is best to use the green Li. Heparin tube for routine biochemistry tests.

Specimens for Methotrexate Levels
Manufacturer’s guidelines for the transport of specimens for measurement of Methotrexate levels include a requirement that specimens be protected from light. All specimens should be wrapped in tinfoil or other opaque material prior to transport to St. James’s Hospital laboratory.

Irish Mycobacteria Reference Laboratory (IMRL)
The IMRL is providing a molecular typing service for *Mycobacterium tuberculosis* complex isolates. The method employed, 24 MIRU-VNTR typing, has recently been adopted by the ECDC (European Centre for Disease Prevention and Control) and is now the international standardised molecular typing method for *Mycobacterium tuberculosis* complex isolates. MIRU-VNTR results are displayed as a 24 digit number that can be used to compare isolates for similarity or difference. This method is also useful in providing the Lineage of isolates, e.g. Beijing Strain. Molecular typing is crucial in assisting epidemiological investigations in outbreak scenarios and in cases of suspected laboratory cross-contamination.

Biobanking Update
The SJH Cancer Biobank, supported by Biobank Ireland and St. James’s Hospital, continues to make progress. Over 1,600 samples from 250 patients have been biobanked for use in future patient-focused research with the potential for new diagnostics and better treatments. Quality control for DNA, RNA and proteins has been carried out by Blanaid Mee, and Kevin O’Flynn has joined the biobank to facilitate this. Active preparation is underway to have Cork and Galway join Biobank Ireland’s Irish Biobank Network. Three patient groups visited the SJH Biobank in 2010. Biobank Ireland won a commendation for Best Hospital Project at the Irish Healthcare Awards in October 2010. The Health Research Group (SFI, HRB, IDA, EI, HEA) now charged with implementing and funding biobanking nationally, heard a formal presentation by Professor Eoin Gaffney on growing and sustaining the Biobank Network. A government funding commitment will be essential for sustaining Ireland’s biobank network, as in 20 other countries.