

# LabConnect

BARNES - JEWISH HOSPITAL DEPARTMENT OF LABORATORIES

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Laboratory Test Catalog Website: <http://bjhlab.testcatalog.org/>

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## LABORATORY INFORMATION

### Quantitative *JAK2* V617F Mutation Testing

The Molecular Diagnostics Laboratory (MDL) began to offer quantitative testing for the *JAK2* V617F mutation on January 25, 2016. The *JAK2* V617F mutation is the most prevalent mutation in *BCR/ABL1*-negative myeloproliferative neoplasms (MPNs). The *JAK2* gene encodes the Janus kinase 2 non-receptor tyrosine kinase; a somatic G to T point mutation at position 1849 in exon 14 causes an amino acid substitution of phenylalanine for valine at position 617. This recurrent mutation causes constitutive activation of the kinase and is associated with uncontrolled blood cell growth. *JAK2* V617F/G1849T mutations occur in ~95-98% of patients with polycythemia vera (PV), ~55% with essential thrombocythemia (ET) and ~65% with primary myelofibrosis (PMF), all of which are *BCR/ABL1*-negative MPNs.

The current clinical utility of testing for the *JAK2* V617F mutation is three-fold: (1) diagnostic, (2) prognostic, and (3) theranostic.

1. The WHO lists the presence of the *JAK2* V617F mutation as one of the major diagnostic criteria for *BCR-ABL*-negative MPNs.
2. Presence of the mutant V617F allele has been associated with thrombosis in ET. A high mutant allele burden (>50%) has been associated with increased risk of developing post-PV myelofibrosis.
3. Presence of the mutant V617F allele indicates that a *JAK2* inhibitor may be therapeutic. Quantitative *JAK2* V617F testing can also be used to monitor disease in patients with myelofibrosis who have undergone allogeneic stem cell transplantation.

Quantitative testing for *JAK2* V617F is performed by real-time quantitative PCR using fluorescently-labeled primers specific for the reference or mutant allele. An increase in fluorescence is directly proportional to target amplification, and allows a sensitivity of  $\geq 0.1\%$  mutant allele. The assay will be performed on Tuesdays, with a 5-7 business day turn-around-time. The CPT code is 81270

### Southern Blots Discontinuation

Due to advances in methodology, the MDL stopped performing Southern blot assays as of February 1, 2016. Southern blotting has multiple disadvantages, including the use of radioisotopes, long (3-4 week) turn-around-time, requirement for relatively large amounts of DNA, and lower sensitivity compared to newer methods, such as methylation-sensitive multiple ligation-dependent probe amplification (MS-MLPA).

Three genetic tests will be affected by this change. The MDL will replace its current PCR/Southern reflex testing for Fragile X Syndrome with a PCR-based method

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## LABORATORY INFORMATION

capable of detecting *FMR1* repeat lengths in the pre-mutation and full mutation ranges, eliminating the need for Southern blot testing. Two other tests, for Prader-Willi and Angelman Syndromes and for Beckwith-Wiedemann Syndrome, will no longer be performed by the MDL. Testing for these syndromes is available from Mayo Medical Laboratories using MS-MLPA.

Questions about these changes may be directed to Jacqueline Payton, M.D., Ph.D., Medical Director of the Molecular Diagnostics Laboratory, 362-5935, [jpayton@wustl.edu](mailto:jpayton@wustl.edu)

### Change in Method for Cryptococcal Antigen Detection in Blood and CSF Specimens

In May 2016, the BJH Clinical Microbiology Laboratory will implement a lateral flow assay (IMMY, Inc.) for the qualitative and semi-quantitative detection of cryptococcal antigen (CrAg) in CSF and blood specimens. This method detects both *Cryptococcus neoformans* and *Cryptococcus gattii* and will replace the CrAg latex agglutination method currently in use at BJH.

The CrAg assay will be performed Monday-Sunday and results will be reported within 24 hours of receipt in the microbiology lab. If the specimen is positive for CrAg, titration of the specimen will be performed using serial dilutions of the specimen. Titers will be reported from less than 1:5 to greater than or equal to 1:2560. Of note, the dilution series and range is different from the previous assay, in which titers were reported from less than 1:2 to greater than or equal to 1:2048. In-house validation of the qualitative method showed 100% correlation with the previous method. A comparison of titers between the two methods showed good agreement for serum ( $R^2 = 0.99$ ) and CSF ( $R^2 = 0.80$ ).

Notably, false negative reactions may occur with hemolyzed samples due to high background. Repeat testing of patients with a prior positive result within one year will not be performed, as CrAg may remain positive in these patients for up to one year. If CrAg testing is requested on CSF, fungal culture will be set up on the specimen in addition to antigen testing.

If you have any questions, please contact Carey-Ann Burnham, PhD, Medical Director of Microbiology at [cburnham@path.wustl.edu](mailto:cburnham@path.wustl.edu) or the Laboratory Medicine Resident on-call for microbiology at 314-747-1320.

### BJH Chemistry and Hematology Laboratories move to the BJC Institute of Health Building

Over the past 9 months, components of BJH pathology and laboratory services have been moving from the south campus to “state of the art” facilities on floors 3, 4, and 5 in the BJC Institute of Health (IOH) building. To date, the moves have gone extremely well with minimal or no disruption of service: (surgical pathology, cytology, molecular diagnostics, HLA, microbiology, flow cytometry, immunology).

The Hematology lab moved March 29<sup>th</sup> and the Chemistry lab moved April 5<sup>th</sup> into the combined Core laboratory on the 4<sup>th</sup> floor IOH. The main Blood Bank will remain on 2<sup>nd</sup> floor south campus until further notice.

The move to the IOH creates some major changes. Please note the following:

- Outpatient specimen receiving moves to a new location in the Institute of Health (IOH). The courier services are aware of the new location and delivery area.
- There is no planned interruption of service
- Laboratory customer service contact information remains the same

New instrumentation requires changes to some chemistry and hematology reference ranges and results. Details about these changes can be found at this link:

<https://pathportal.wustl.edu/sharedfiles>

Every effort has been made to ensure appropriate service levels during the move process.

Questions can be directed to: Lab Customer Service 314-362-1470

## LABORATORY INFORMATION / HOLIDAY SCHEDULES

### Laboratory Testing Compliance Notice

As a participant in a federally funded healthcare program, the BJH Department of Laboratories is required to send an annual notice to its physician clients advising that if they order tests for Medicare or Medicaid beneficiaries, they should only order those tests that are medically necessary for each patient. Any physician who orders medically unnecessary tests may be subject to civil penalties. The department of laboratories recently sent a letter to each physician about this notice. The letter includes attachments further detailing profiles, reflex and confirmatory testing and CPT codes. The notice may also be found in the BJH laboratory electronic test catalog under General Information at: <http://bjhlab.testcatalog.org>. If you have additional questions, contact the BJH Laboratory Customer Service at 314-747-2716.

### Laboratory Courier

Laboratory Express has been BJH Courier Service for off campus locations since November of 2015 and we are interested in your feedback. If your office would benefit from additional scheduled pick-ups please contact the Customer Service office at 314-362-1470 to make arrangements for any schedule changes.

### HLA Laboratory Receives Teamwork Award

The National Kidney Registry is honoring the Barnes-Jewish Hospital HLA Laboratory with the **NKR Excellence in Teamwork Award 2016**. This highly prestigious award is presented to centers that have gone above and beyond to facilitate paired kidney exchanges. This year, 22 centers will be presented with this award to recognize their role in the longest kidney swap in 2016. The exceptional work conducted by the BJH HLA Laboratory played a role in an effort that allowed a total of 28 people to receive a lifesaving kidney transplant.

Congratulations to the HLA Laboratory on your well-deserved award!!

### Holiday Schedules

In observance of the upcoming holidays, courier and patient testing area schedules will be adjusted as follows:

#### HOLIDAY COURIER SCHEDULE

Scheduled courier service will not be provided on Monday May 30<sup>th</sup>, Monday July 4<sup>th</sup>, and Monday September 5<sup>th</sup>.

Scheduled service will resume Tuesday May 31<sup>st</sup>, Tuesday July 5<sup>th</sup>, and Tuesday September 6<sup>th</sup>. If your facility needs courier service on these dates, please call Laboratory Customer Service at 314-362-1470 to schedule.

#### PATIENT TESTING AREA SCHEDULE

The patient testing areas located at the Center for Advanced Medicine on 3, 5, and 8, Outpatient

Laboratory on south campus, the Highlands Laboratory and the Center for Outpatient Health will observe the following holiday schedule.

**CAM 3, 5, and 8** - Closed Monday May 30<sup>th</sup>, Monday July 4<sup>th</sup>, and Monday September 5<sup>th</sup>

**Outpatient Laboratory South Campus** - Closed Monday May 30<sup>th</sup>, Monday July 4<sup>th</sup>, and Monday September 5<sup>th</sup>

**Highlands Laboratory** - Closed Monday May 30<sup>th</sup>, Monday July 4<sup>th</sup>, and Monday September 5<sup>th</sup>

**Center for Outpatient Health** - Closed Monday May 30<sup>th</sup>, Monday July 4<sup>th</sup>, and Monday September 5<sup>th</sup>.

**Regularly scheduled hours for the patient testing areas are:**

- **Express Testing CAM3 - North Campus:**

6:30 a.m. to 6:00 p.m. Monday through Friday

8:30 a.m. to 12:30 p.m. Saturday

- **Express Testing CAM5 - North Campus:**

8:30 a.m. to 5:00 p.m. Monday through Friday

- **Express Testing CAM8 - North Campus:**

8:30 a.m. to 4:30 p.m. Monday, Tuesday, Thursday and Friday

7:30 a.m. to 4:00 p.m. Wednesday

- **Outpatient Laboratory - South Campus:**

8:00 a.m. to 2:00 p.m. Monday through Friday

- **Center for Outpatient Health:**

8:00 a.m. to 4:30 p.m. Monday through Friday

## Receive LabConnect via Email

If you want to convert to receiving the newsletter electronically, please contact BJH Laboratory Customer Service at 314-362-1470 or send your request to [BJH-LabCustServ@bjc.org](mailto:BJH-LabCustServ@bjc.org).

Please write newsletter as the keyword in the subject line and provide the following information: name of practice or facility, 5-digit account code from your requisition, contact name, phone number, and e-mail address of recipient.

## CUSTOMER SERVICE INFORMATION Phone and Fax Numbers

Barnes-Jewish Hospital Laboratory considers it a privilege to provide quality laboratory services to your facility. To respond to your questions and laboratory needs, the Customer Service office is staffed with laboratory professionals twenty-four hours a day, seven days a week, including all holidays.

Important phone numbers for Customer Service are:

**Phone: 314-362-1470 Fax: 314-362-5735**

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LabConnect

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