Match Day 2020 a Great Success for Pathology!

By: Suzanne Thibodeaux, MD PhD

We are excited to share our list of trainees who will be joining us in the Department of Pathology and Immunology for their residency training in July 2020.

Welcome to all!

<table>
<thead>
<tr>
<th>Name</th>
<th>Training Institution</th>
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<tr>
<td>Safee Ahmed</td>
<td>Isra University, Pakistan</td>
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<tr>
<td>Guilherme Almeida</td>
<td>Universidade Federal de Juiz de Fora, Brazil</td>
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<td>Pooja Khonde</td>
<td>Topiqla National Medical College, India</td>
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<td>Patrick Morse</td>
<td>University of Missouri, Columbia</td>
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<td>Anatomic Pathology/Physician Scientist Training Pathway Track</td>
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<td>Alexander Wein</td>
<td>Emory University</td>
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<td>Amanda Wong</td>
<td>University of Michigan</td>
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<td>Anatomic Pathology/Neuropathology/Physician Scientist Training Pathway Track</td>
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<td>Kaleigh Roberts</td>
<td>Northwestern University</td>
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<td>Clinical Pathology/Physician Scientist Training Pathway Track</td>
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<td>Nicholas Borcherding</td>
<td>University of Iowa</td>
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<td>Saravanan Raju</td>
<td>Washington University in St. Louis</td>
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<td>Anatomic Pathology</td>
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<td>Kasey Kruetz</td>
<td>University of Texas Southwestern</td>
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<td>Clinical Pathology</td>
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<td>Vahid Azimi</td>
<td>Oregon Health and Science University</td>
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Upcoming Improvements to Blood Culture Testing: Change to a 4-day Incubation

by Eric Ransom, PhD, and Carey-Ann Burnham, PhD

Based on detailed review of internal data, the central BJC microbiology laboratory at Barnes-Jewish Hospital is reducing the total incubation time for blood cultures from five days to four days. This will enable the reporting of negative cultures one day earlier, facilitating de-escalation of antimicrobial regimens and expediting discharge for instances where negative culture results are awaited. The four-day incubation will also improve clinically relevant results by reducing detection of contaminants.

To support this change in process, the results of 158,710 submitted blood culture bottles were evaluated. The number of positive bottles was 13,917 (8.8%). A time-to-positivity histogram demonstrates the overwhelming majority of bottles flagged positive within four days (Figure 1). Similar histogram distributions are observed for some specific microorganisms, including Staphylococcus aureus and Pseudomonas aeruginosa in Figures 2 and 3, respectively. In contrast, Figure 4 demonstrates the time-to-positivity profile of a common contaminant, Cutibacterium (formerly Propionibacterium) species. These data highlight the importance of having the appropriate incubation period to optimize detection of pathogens and reduce the recovery of contaminants.

Review of the medical record of patients with blood cultures that became positive at 4 or more days of incubation (n=178, or 0.1% of all blood culture bottles) revealed most results (143) had no clinical impact. When clinical action was taken, the impact was more likely to be not favorable (i.e. delay in discharge, unnecessary additional test ordering, and time spent in follow up for telephone wellness checks of discharged patients) rather than a positive impact (i.e. appropriate drug coverage adjustment).

Implementation of the four day incubation is predicted to expedite a final negative result for >65,000 cultures annually. If clinically indicated, extension of the blood culture incubation to five days can be requested by contacting the microbiology laboratory (314-362-3898). If you have questions about this process change, please contact the microbiology laboratory at 314-362-3898 or Carey-Ann Burnham, PhD, Medical Director of Clinical Microbiology at cburnham@wustl.edu.

(figures on next page)
Histograms demonstrating the time to positivity for all blood cultures examined and for some specific microorganisms.
2018-2019 Awardees for Outstanding LGM Grand Rounds Presentation

This award is given to a trainee or trainees giving a Grand Rounds presentation to the Division of Laboratory and Genomic Medicine for the first time. The winner(s) are decided by the LGM faculty.

Winning presentations feature a ground-breaking and controversial topic in laboratory medicine, critical evaluation of current literature, analysis of impact on local practice, and recommendations for addressing the potential opportunities and risks introduced.

This year, a tie was declared due to the high quality of both speakers’ presentations:

Kaitlin Mitchell, PhD
Fellow, Medical & Public Health Microbiology
Ivan Gonzalez, MD
Resident, Anatomic Pathology/Clinical Pathology

Clinical Chemistry Fellows Provide Learning Opportunity about Careers in Pathology

The Health Professions Fair was held in the gymnasium of the Olin Residence Hall at Washington University School of Medicine in February.

Clinical Chemistry fellows Melissa Budelier, PhD and Caroline Franks, PhD presented a poster on Clinical & Anatomical Pathology careers, and the educational pathways to get there.

Many thanks for providing the chance students in St. Louis to learn about the profession of pathology!
Brian Edelson Receives Samuel R. Goldstein Leadership Award in Medical Student Education

Brian T. Edelson, MD, PhD, Assistant Professor of Pathology and Immunology in the Division of Laboratory and Genomic Medicine, was presented with the Samuel R. Goldstein Leadership Award in Medical Student Education award to honor his dedication to teaching, overseeing and improving the immunology course in the medical school curriculum.

The Samuel R. Goldstein Leadership Awards in Medical Student Education are awarded to educators in the School of Medicine to recognize outstanding teaching.

Dr. Edelson has a track record of teaching excellence, having received Distinguished Service Teaching awards from Washington University in St. Louis School of Medicine four times!

Congratulations to Dr. Edelson!

Jack Ladenson named National Academy of Inventors Fellow

Jack H. Ladenson, PhD, Oree M. Carroll and Lillian B. Ladenson Professor of Clinical Chemistry, was named a 2019 National Academy of Inventors Fellow.

Dr. Ladenson is widely known for development of FDA approved laboratory tests that aid in the rapid diagnosis of heart attacks by detecting troponin produced by damaged myocardium. Detection of the protein troponin in blood has become part of the diagnostic criteria of myocardial infarction.

Dr. Ladenson has received numerous accolades, including the American Association for Clinical Chemistry (AACC) Award for Outstanding Contributions to Clinical Chemistry in a Selected Area of Research; the Inaugural Chancellor’s Award for Innovation and Entrepreneurship; the International Federation of Clinical Chemistry (IFCC) Distinguished Award for Contributions to Cardiovascular Diagnostics, to name a few.

Congratulations to Dr. Ladenson!
Ann Gronowski Selected for 2020 AACC Academy Award for Outstanding Contributions to Clinical Chemistry in a Selected Area of Research

by Carey-Ann Burnham, PhD

Ann M. Gronowski, PhD, Vice Chair of Faculty Affairs and Development for Pathology & Immunology, and Professor of Pathology & Immunology and of Obstetrics & Gynecology, has been selected as the 2020 American Association for Clinical Chemistry (AACC) Academy Award for Outstanding Contributions to Clinical Chemistry in a Selected Area of Research. This award recognizes especially meritorious research contributions by an individual in a specific area of clinical chemistry. Recipients of this clinical chemists have achieved national and international status for their pioneering efforts in an area of research considered fundamental to the science and are considered among the world's foremost experts in that specific discipline.

Dr. Gronowski’s research focuses on laboratory diagnostics for endocrinology and reproductive physiology, with an emphasis on maternal-fetal medicine.

Her research on human chorionic gonadotropin (hCG) has four key contributions:

1. establishing hCG beta core fragment as a cause of false negatives in certain point of care devices,

2. determining the temporal rise and fall of hCG beta core fragment in pregnancy, and thus the timeframe in which it has potential to interfere in pregnancy tests,

3. illustrating the mechanism of the analytical interference, and

4. developing strategies to mitigate the analytical interference.

Dr. Gronowski has been invited to speak around the globe on this topic, and her work has been utilized by the in vitro diagnostics industry, contributing to improvements in the design of hCG lateral flow devices used every day in routine clinical care. Dr. Gronowski is also active in research on ethics in laboratory medicine, and has published on ethics, professionalism, and error disclosure.

In addition to her research accomplishments, Dr. Gronowski is the Medical Director of clinical chemistry, serology and immunology at Barnes-Jewish Hospital and the co-director of the clinical chemistry fellowship training program.

Dr. Gronowski contributes to our medical center in many other ways, especially in supporting development of junior faculty and female scientists. At Washington University, Gronowski established Women in Pathology, a women’s professional development group that addresses topics related to career development and work-life balance. She also has been extremely active in the Washington University Academic Women’s Network since 1996, serving over the years as its pre-clinical counselor, president and liaison to the Executive Committee Faculty Council. Nationally, she has held numerous leadership roles, including serving as president of the American Association of Clinical Chemistry in 2011.

Congratulations to Dr. Gronowski!