



## 2008 Phenotyping Symposium III

The 2008 JHU Phenotyping Symposium will be February 19, 2008, in the Tilghman Auditorium with exhibits and posters in the Turner Concourse. Thanks to our sponsors, registration again is free but required for planning purposes. In the last 2 meetings (2006, 2007) we had more than 200 participants from the US and Canada. In addition to the new and larger venue, scientific and technical posters are invited this year, and there will be a phenotyping pathology slide conference on the following morning, Wednesday February 20, 9am –12 noon. For the preliminary program, on line registration, sponsorship and other information check <http://www.hopkinsmedicine.org/JHUphenotyping>

## 2008 Phenotyping Course

The 2008 Phenotyping course will run from January 9– March 6, 2008; Wednesdays and Thursdays, 2:30-4pm. This is course ME:680.712 in the graduate school of Johns Hopkins University School of Medicine. Eighteen lecture and laboratory sessions will focus on mouse biology, genetics, spontaneous and induced phenotypes, and basic and advanced phenotyping strategies. Enrollment is limited to 15 due to limited laboratory space. More information and preliminary schedule at :

<http://www.hopkinsmedicine.org/mcp/PHENOCORE/08phenocourseME680712.html>

## Fall Phenotyping Activities

Our faculty and trainees had a busy fall presenting on diverse phenotyping related topics in multiple venues.

At the AALAS meeting in Charlotte, NC, October 14-18, 2007, Dr. Brayton led the seminar: Phenotyping Cancer in Mice, with JHU presenters Dr. Brayton; Dr. Southard; Dr. Gabrielson; Dr. Watson; Dr. Watson led a seminar on The Research Impact of Environmental Variables, with JHU presenters Dr. Brayton; Dr. Watson; Dr. Gluckman presented on anesthesia for in vivo imaging — more at

<http://nationalmeeting.aalas.org/>

At the ACVP meeting in Savannah, GA, Dr. Gabrielson led the workshop on *in vivo* imaging, with JHU presenters Dr. Gabrielson and Dr. Pomper; Dr. Brayton was an invited speaker on Metabolic phenotyping; Dr. Southard received an award for her

poster: Vestibular syndrome due to brainstem infarction in Swiss mice. More at <http://acvp.org/>.

Dr. Brayton also presented on infectious diseases of mice at the Jackson Laboratory Workshop on the Pathology of Mouse Models of Human Diseases, <http://www.jax.org/courses/index.html>, and presented a full day seminar on laboratory animal pathology in the CL Davis satellite symposium for the Indian Association of Veterinary Pathology, in Tirupathi, India

Contact Nadine Forbes [nforbes1@jhmi.edu](mailto:nforbes1@jhmi.edu) to submit information about your recent phenotyping related activities or presentations to include in our newsletter and on our upcoming events website.

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### Upcoming Events

<http://www.hopkinsmedicine.org/mcp/PHENOCORE/UPcoming.html>

**February 19, 2008:**  
**Johns Hopkins Phenotyping Symposium**

III

# NEW EQUIPMENT and RESOURCES

**Coming soon:** Body composition analysis by QNMR in BRB; baseline SHIRPA type non invasive phenotyping in your mouse room, including clinical-physical exam, glucometry. For more information about equipment, tests, scheduling **contact [phenocore@jhmi.edu](mailto:phenocore@jhmi.edu)**

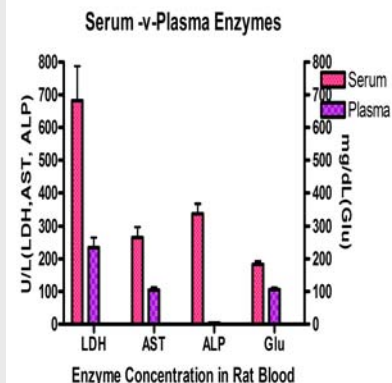
## CLIN PATH QUIZ

**From Last Newsletter:** In this study, blood from the same anatomic site was drawn from 20 rats. Half of the blood volume was placed in a serum separator tube (gel tube) for serum chemistry, and the other half was placed in a lavender top, potassium EDTA tube for CBC analysis. Within 2 hours of drawing blood, serum was separated by centrifugation of the gel tube. After CBC's, within 4 hours of drawing blood, plasma was separated from remaining blood in the lavender top tubes.

1. Why are LDH and AST values so much higher in serum compared to plasma specimens?
2. Why is ALP almost undetectable in plasma specimens?
3. Why is Glucose significantly lower in the plasma specimens?

### Answers

1. Serum specimens were noted to be mildly to markedly **red** (instead of clear) on submission. Hemolysis was suspected, and prompted testing of plasma. The plasma was clear (not hemolyzed). AST and LDH enzymes occur in hepatocytes, red blood cells and other cells. Elevated activity of these enzymes in serum or plasma may indicate damage to hepatocytes, but is not specific for liver damage. Elevated LDH, AST (and some other analytes) should be expected in hemolyzed specimens. Blood specimens should be obtained and handled carefully to minimize hemolysis.
2. Serum was extracted from blood collected into uncoated tubes. Plasma was extracted from blood collected into **potassium EDTA coated (lavender)** tubes. Magnesium (Mg) is required in the reaction and thus for assay of Alkaline Phosphatase (AP) activity. Potassium EDTA is an useful anticoagulant for CBC and other tests on whole blood. EDTA is a chelator, and removes Mg from the specimen, so Mg is inaccessible for the AP enzyme reaction. Use of the correct anticoagulant and tube is essential to obtaining useful clinical chemistry results.
3. Serum was separated from the blood within 2 hours of collection. Plasma specimens were separated (from whole blood specimens) about 2 hours after that. Glucose is consumed by cells, and declines (approximately 10% per hour) in samples that have not been separated from the cellular constituents of blood. Careful handling of specimens, including prompt separation of serum or plasma from blood, is important for some tests.



## Slide Conference

The Department of Molecular and Comparative Pathobiology and the Phenotyping Core host an **informal semi-monthly slide conference**, to emphasize recent interesting phenotyping and comparative pathology cases, and to provide a friendly and educational venue for colleagues within and outside of the JHU community to present and discuss interesting cases.

**To be added to our mailing list, or if you have slides or a case that you would like to present, contact [phenocore@jhmi.edu](mailto:phenocore@jhmi.edu).**

For more information and recent cases go to

<http://www.hopkinsmedicine.org/mcp/PHENOCORE/SlideConference.html>

**The next slide conference will be Tuesday December 18, 4-6PM, in 801 BRB.**

**Some recent cases (Sep 21, Oct 23, Nov 27 conferences):**

- Dr.'s Schultz, Poynton, Montali - Octopus - Branchitis, Ichthyobodo spp.
- Dr.'s Shaw, Montali - Sheepshead minnow - myxosporidiosis, spinal cord
- Dr.'s Southard, Montali, Brayton - Beta fish - iridophoroma
- Dr.'s Southard, Brayton - tm and C57BL/6? mice - hepatitis, splenitis, typhlitis, otitis, encephalitis; Salmonellosis, etc
- Dr.'s Kelley, Karim - C57BL/6? mice - Sarcoma, toe; histiocytic sarcoma, liver
- Dr.'s Kelley, Huso - Chinchilla - Pyelonephritis with Candida tropicalis isolated; Diabetes mellitus?
- Dr.'s Schultz, Montali - Macaca silenus - nephroblastoma
- Dr.'s Simons, Montali - Degu - Chronic glomerulonephritis nephropathy; Pancreatic insular amyloidosis, Diabetes mellitus
- Dr.'s Southard, Karim, Brayton - tm mice - Leukemia, lymphomas, circulating blasts, marrow and spleen involvement, solid tumors
- Dr. Bunte - mouse - Demodex muris
- Dr. Pierce - Cat - Tularemia in pet cat from MD

## What's Your Diagnosis?

**October 2007: Xenopus Mycobacteriosis**

For additional information and references. Go to .  
<http://www.hopkinsmedicine.org/mcp/phenotypingcore/newsletter.html>.

**December WHAT'S YOUR DIAGNOSIS ?**

**Tissue from a mouse.**

