

## Tools of Human Investigation I Course Schedule, Fall, 2008

### Wednesday, September 17, 2008

- 8:30 - 9:30 AM            **Introduction** – Hasan Bazari, M.D., Program Director, MGH Internal Medicine Residency Program; Deborah Wexler, M.D., M.Sc. Associate Program Director for Clinical Research
- 9:40 - 10:40 AM        **Pathways to Oncogenesis** - David Barbie, M.D., MGH/DFCI. Instructor in Medicine, Harvard Medical School.
- Reading: Hahn WC, Weinberg RA. Rules for making human tumor cells. NEJM 2002;347(20):1593-603.
- 10:50 - 11:50 AM       **Clinical Trials** – David Nathan, M.D., Director, Diabetes Center and General Clinical Research Center, MGH; Professor of Medicine, Harvard Medical School

### Thursday, September 18, 2008

- 8:00 – 9:00 AM            **Grand Rounds – O’Keeffe Auditorium -1st floor Blake Building**
- 9:40 - 10:40 AM        **Physiological Studies** – Janet Hall, M.D., Assistant in Medicine & Associate Chief, Reproductive Endocrine Unit, MGH; Professor of Medicine, Harvard Medical School; Vice President for Clinical Science, The Endocrine Society
- Reading: Ottowitz WE, Dougherty DD, Fischman AJ, Hall JE. [18F]2-fluoro-2-deoxy-D-glucose positron emission tomography demonstration of estrogen negative and positive feedback on luteinizing hormone secretion in women. JCEM 2008;93(8):3208-14.
- 10:50 - 11:50 AM       **Biostatistics I: Data and Inference - Eric A. Macklin, PhD**, Instructor of Medicine, Harvard Medical School, Assistant in Biostatistics, MGH Biostatistics Center
- Reading: Carlin JB, Doyle LW: 2: Describing and displaying data. Journal of Paediatrics and Child Health 2000;36(3):270-4.  
*Ibid*, 3: Basic concepts of statistical reasoning: standard errors and confidence intervals. Journal of Paediatrics and Child Health 2000;36(5):502-5.  
*Ibid*, 4: Basic concepts of statistical reasoning: hypothesis tests and the t-test. Journal of Paediatrics and Child Health 2001;37(1):72-7.

### Friday, September 19, 2008

- 8:30 - 9:30 AM            **Epidemiological Study Design** – James Meigs, M.D., M.P.H., Assistant in Medicine, MGH; Associate Professor of Medicine, Harvard Medical School.
- Reading: Sattar N, Gaw A, Scherbakova O, et al. Metabolic syndrome with and without C-reactive protein as a predictor of coronary heart disease and diabetes in the West of Scotland Coronary Prevention Study. Circulation 2003;108(4):414-9.
- 9:40 - 10:40 AM        **Introduction to Genetics & Molecular Biology** - Mason Freeman, MD, Associate Professor of Medicine, Harvard Medical School. Chief, Lipid Metabolism Unit.

Reading: Schuelke M, Wagner KR, Stolz LE, et al. Myostatin mutation associated with gross muscle hypertrophy in a child. NEJM 2004;350(26):2682-8.

10:50 - 11:50 AM

**Principles of Drug Development** - Lou Brenner, M.D., M.B.A. – Senior Vice President, Advanced Magnetix, Inc

**Monday, September 22, 2008**

8:30 - 9:30 AM

**The Human Genome & Complex Genetic Traits** – David Altshuler, M.D., Director, Program in Medical and Population Genetics, Broad Institute of Harvard & MIT; Center for Human Genetic Research, Department of Molecular Biology and Diabetes Unit, MGH; Associate Professor of Genetics & Medicine, Harvard Medical School

Reading: Guttmacher AE, Collins FS. Genomic medicine--a primer. NEJM 2002;347(19):1512-20.

9:40 - 10:40 AM

**Cost Effectiveness** – Rochelle Walensky, M.D., M.P.H., Division of Infectious Disease, MGH; Assistant Professor of Medicine, Harvard Medical School

Reading:

Review: Russell LB, Gold MR, Siegel JE, Daniels N, Weinstein MC. The role of cost-effectiveness analysis in health and medicine. JAMA 1996;276(14):1172-7.

Example: Paltiel AD, Weinstein MC, Kimmel AD, et al. Expanded screening for HIV in the United States--an analysis of cost-effectiveness. NEJM 2005;352(6):586-95.

10:50 - 11:50 AM

**Assessment of Biomarkers**– Thomas Wang, M.D. Assistant Professor in Medicine, Harvard Medical School, Cardiology

Reading:

Review: Gerszten RE, Wang TJ. The search for new cardiovascular biomarkers. Nature 2008;451(7181):949-52.

Point: Wang TJ, Gona P, Larson MG, et al. Multiple biomarkers for the prediction of first major cardiovascular events and death. NEJM 2006;355(25):2631-9.

Counterpoint: Ridker PM, Buring JE, Rifai N, Cook NR. Development and validation of improved algorithms for the assessment of global cardiovascular risk in women: the Reynolds Risk Score. JAMA 2007;297(6):611-9.

**Tuesday, September 23, 2008**

8:30 - 9:30 AM

**Stem Cell Research** –Eyal Attar, M.D., Instructor in Medicine, Harvard Medical School

9:40 - 10:40 AM

**Teaching EBM in the Clinical Setting: Evidence Based Clinical Practice** – Alberto Puig, M.D., Ph.D. Inpatient Clinician Educator Service, Massachusetts General Hospital; Assistant Professor of Medicine, Harvard Medical School

10:50 - 11:50 AM

**Biostats II: Linear and Logistic Regression** -- Deborah Wexler, M.D., M.Sc., Assistant Professor of Medicine, Harvard Medical School, Associate Program Director for Career Development, MGH Diabetes Unit

Reading: Katz MH. Multivariable analysis: a primer for readers of medical research. Ann Intern Med 2003;138(8):644-50.

Other worthwhile reads:

Assmann SF, Pocock SJ, Enos LE, Kasten LE. Subgroup analysis and other (mis)uses of baseline data in clinical trials. Lancet 2000;355(9209):1064-9.

Goodman SN. Toward evidence-based medical statistics. 1: The P value fallacy. Ann Intern Med 1999;130(12):995-1004.

### Wednesday, September 24, 2008

- 8:30 - 9:30 AM            **Pharmacogenetics** – **Jose Florez, M.D., Ph.D.**, *Instructor in Medicine, Harvard Medical School, Molecular Biology/Diabetes Unit*
- Reading: Pearson TA, Manolio TA. How to interpret a genome-wide association study. JAMA 2008;299(11):1335-44.
- 9:40 - 10:40 AM            **History of Parathyroid Hormone Research at MGH**– **John T. Potts, Jr., M.D.**, *Jackson Distinguished Professor of Clinical Medicine, MGH and Harvard Medical School; Emeritus Physician-in-Chief and Director of Research, MGH*
- 10:50 - 11:50 AM            **Risk Adjustment for Measuring Health Care Outcomes.** **Lisa Iezzoni, M.D.**, *Professor of Medicine, Harvard Medical School, Associate Director, Institute for Health Policy, Massachusetts General Hospital*

### Thursday, September 25, 2008

- 8:00 - 9:00 AM            **Grand Rounds – O’Keeffe Auditorium -1st floor Blake Building**
- 10:30 AM- 12:00 PM            **Broader Application of Monogenic Traits** – **J. Carl Pallais, M.D., M.P.H.** *Instructor in Medicine, Harvard Medical School, Clinician Educator Service, Director of Genetics Curriculum Development*
- Reading: Link E, Parish S, Armitage J, et al. SLCO1B1 variants and statin-induced myopathy--a genomewide study. NEJM 2008;359(8):789-99.

### Friday, September 26, 2008

- 8:30 - 9:30 AM            **Genetics of Cardiomyopathy** – **Calum MacRae, M.D., Ph.D.** *Assistant Professor in Medicine, Harvard Medical School, Cardiology*
- 9:40 - 10:40 AM            **Ethics, Informed Consent & the IRB** – **Elizabeth Hohmann, M.D.**, *Associate Professor of Medicine and Infectious Diseases, MGH; Chair and Director, Partner's Human Research Committees (IRBs)*
- 10:50 - 11:50 AM            **How to Select a Mentor** – **William Crowley, M.D.**, *Professor of Medicine, Reproductive Endocrine Unit, MGH.*

### Monday, September 29, 2008

- 8:30 - 9:30 AM            **Proteomics** – **Robert Gerszten, M.D.**, *Associate Professor of Medicine, Harvard Medical School; Cardiology Division and Center for Immunology and Inflammatory Diseases.*
- Reading: Lewis GD, Asnani A, Gerszten RE. Application of metabolomics to cardiovascular biomarker and pathway discovery. JACC 2008;52(2):117-23.
- 9:40 - 10:40 AM            **Cohort Studies in Clinical Research** - **Andrew Chan, M.D.** - *Assistant Professor in Medicine, Harvard Medical School*
- Reading: Zhang SM, Buring JE, Lee IM, Cook NR, Ridker PM. C-reactive protein levels are not associated with increased risk for colorectal cancer in women. Ann Intern Med 2005;142:425-32.
- Chan AT, Ogino S, Fuchs CS. Aspirin and the risk of colorectal cancer in relation to the expression of COX-2. N Engl J Med 2007;356:2131-42.

10:50 - 11:50 AM

**Cell Biology Approach to Investigating Human Disease** – Henry Kronenberg,  
M.D., *Chief, Endocrine Unit, MGH; Professor of Medicine, Harvard Medical School*

Reading: Stewart AF, Horst R, Deftos LJ, Cadman EC, Lang R, Broadus AE.  
Biochemical evaluation of patients with cancer-associated hypercalcemia: evidence for  
humoral and nonhumoral groups. NEJM 1980;303(24):1377-83.

**Tuesday, September 30, 2008**

**9:30 AM – 12:00 PM**

**THI Resident Presentation**  
**Potts Conference Room, Bigelow 8**