

# IAP 2013

## Biology at the Interface

Series hosted by Prof. Iain Cheeseman

### Reading & Writing Biology — & Beyond

George Church, Department of Genetics, Harvard Medical School  
Wednesday, Jan 9, 11:00 am – 12:00 pm, Whitehead Auditorium

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### Functional Validation of New Targets in Cancer using Covalent Kinase Inhibitors

Nathaniel Gray, Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School  
Monday, Jan 14, 11:00 am – 12:00 pm, Whitehead Auditorium

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### Structure and stability of genomes

Job Dekker, Department of Biochemistry & Molecular Pharmacology, UMass Worcester  
Wednesday, Jan 16, 11:00 am – 12:00 pm Whitehead Auditorium

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### Anticipating sudden transitions in biological populations: Cooperation, cheating, and collapse

Jeff Gore, Department of Physics, MIT  
Monday, Jan 28, 11:00 am – 12:00 pm, Whitehead Auditorium

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### Timekeeping with a Three-Protein Circadian Clock

Erin O'Shea, HHMI and Department of Molecular and Cellular Biology, Harvard University  
Wednesday, Jan 30, 11:00 am – 12:00 pm, Whitehead Auditorium

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## How to: Bootcamps and Survival Guides for Your Scientific Adventure

## **The New Professor Experience**

Tuesday, Jan 8, 1:00 – 3:00 pm, 68-181

Adam Martin, Assistant Professor, MIT  
Matt Vander Heiden, Assistant Professor, MIT  
Brett Pellock, Assistant Professor, Providence College  
Michelle Meyer, Assistant Professor, Boston College  
David Pincus, Fellow, Whitehead Institute

What are the biggest challenges when setting up a lab? What things turned out to be easier than expected? What is it like teaching and hiring lab members? Come learn from some faculty about what it's like to be a "new professor", and some of the thrills and challenges of starting a new lab.

Organized by: Paul Fields

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## **Finding the Right Postdoc**

Monday, Jan 14, 2:00 – 4:00 pm, 68-181

Tyler Jacks: Director, Koch Institute for Integrative Cancer Research, David H. Koch Professor of Biology  
Francis J. Martin, Postdoctoral Fellow, Novartis  
Justin Pritchard, Postdoctoral Fellow, Harvard University  
Renee George, Postdoctoral Associate, Whitehead Institute

Not sure if you want to do an industry or an academic postdoc? Want to know how to find a postdoc? What do people look for when hiring a postdoc? Come find out all this and more!

Organized by: Dave Phizicky and David Benjamin

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## **Thriving at MIT: Your guide to the many campus and departmental resources available for an enjoyable graduate or postdoctoral career**

Wednesday, Jan 23, 1:00 – 3:00 pm, 68-181

Frank Solomon, Professor of Biology, Department of Biology  
Tejas Kalastavadi, 2011-2012 Vice-President of the MIT Post-Doctoral Association, Postdoctoral Fellow in the Biology Department  
Hannah Blitzblau, President of the Whitehead Postdoctoral Association, Postdoctoral Fellow in the Whitehead Institute  
Susanna (Zan) Barry, Senior Program Manager, Community Wellness at MIT Medical  
Josh Arribere, Member of the BioREFS, Graduate Student in the Biology Department

When you're stressed about lab or life in general, do you ever wonder what's available to you to help you de-stress your life? Or even if you're not stressed, want some more information about how to improve different aspects of your mental and physical well-being? If so, come and listen to these knowledgeable panel members discuss how to make your time at MIT more enjoyable.

Organized by: BioREFS

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## **Next steps: A Sampling of Careers in Science**

### **A Career in the Biotechnology Industry**

Tuesday, Jan 15, 1:00 – 3:00 pm, 68-181

Phillip Sharp, Professor, MIT, co-founder of Biogen, Alnylam and Magen  
Teresa Compton, Vice President Translational Sciences and Virology, Biogen Idec  
Alessandra Di Bacco, Associate Director, Millennium Pharmaceuticals  
Alexandra Huhlov, Principal Scientist, Merrimack Pharmaceuticals

Are you considering a job in industry, or perhaps starting your own company? What are the main differences between academic and industry labs? Join us for an exciting Q&A session with a panel of scientists who belong to different areas of industry, and find out whether industry is right for you.

Organized by: Sherry Lee and Xiaofei Gao

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### **A Career in Consulting / Venture Capital**

Wednesday, Jan 16, 1:00 – 3:00 pm, 68-181

Robert Weisskoff, PhD, Partner, Fidelity Biosciences  
Sebastian Kraves, PhD, Management Consultant, BCG  
Ricardo Brau, PhD, Engagement Manager, L.E.K. Consulting  
Jessica Church, PhD, Senior Consultant, Decision Resources

The business of Biology is booming! This seminar features capitalists, who finance biological enterprises and consultants, who suggest the best way to merge Biology with business. Come listen and speak with PhDs who have made the transition from bench work to the business world.

Organized by: Paul Fields

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### **Intellectual Property and Patent Law**

Thursday, Jan 17, 1:00 – 3:00 pm, 68-181

Duncan Greenhalgh, Partner, Goodwin Procter  
Nicholas Mitrokosta, Partner, Goodwin Procter  
Kristin Konzak, Patent attorney, Novartis Institutes for BioMedical Research  
Jennifer Griffin, Technology Licensing Associate, MIT Technology Licensing Office

Commercializing the science that we do and ensuring that is done fairly is an important part of the scientific mission. Come learn from the different perspectives of PhDs who have pursued law-related career paths in the biotech industry, law firms, and academia. What opportunities exist for scientists in law-related professions? What are these careers like and are they right for you?

Organized by: Sherry Lee

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## **Science Writing and the Spread of a Scientific Idea**

Thursday, Jan 24, 1:00 – 2:30 pm, 68-181

Seth Mnookin, Co-Director, MIT Graduate Program in Science Writing, Author of *The Panic Virus*  
Will Knight, Online Editor, MIT Technology Review  
Anne Knowlton, Cell Press Scientific Editor, *Current Biology* and *Developmental Cell*  
Priya Prakash Budde, Reviews Editor, *Journal of Cell Biology*

Once experiments are completed and the paper submitted, how is that information communicated within a field--and to a larger audience? Come explore the diverse ways science is communicated outside the lab--in journalism, publishing, and industry.

Organized by David Kern and Zahra Hirji

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## **Finding a Faculty Position**

Monday, Jan 28, 1:00 – 2:30 pm, 68-181

Melissa Kosinski-Collins, Associate Professor of Biology, Brandeis University  
Celeste Peterson, Assistant Professor of Biology, Suffolk University  
Harvey Lodish, Professor of Biology, MIT  
Matthew Shoulders, Assistant Professor of Chemistry, MIT

Looking for a professorship is a daunting process. What type of institution is right for you? Where do you find information? What do search committees look for? What should you do at an interview? Come find out from faculty at different institutions and career stages who have experienced all aspects of the process.

Organized by: Wendy Niedelman and Xiaofei Gao

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## **Government and Policy: Decisions beyond laboratories.**

Wednesday, Jan 30, 1:00 – 3:00 pm, 68-181

Mary Yebba, Public Affairs Specialist, U.S. FDA.  
Patrick Wen, Career Director, Science Policy Initiative, MIT  
Jeffrey Rolands, Special Agent, FBI

A scientist's critical evaluation is not limited to the lab bench. Come and find out how scientists can employ their expertise in federal policies and the decision making process, the major determinants of our research infrastructure. Join the discussion!

Organized by: Grace Chen and Sandhya Sanduja

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## **Education and Outreach: Helping the next generation of scientists**

Thursday, Jan 31, 1:00 – 3:00 pm, 76-156

Leah Okamura, recent graduate of the Page lab, Instructor, MIT  
Michelle LaBonte, Instructor, Wellesley College  
Patrick Williamson, Professor, Amherst College  
Mandana Sassanfar, Instructor and Director of diversity and science outreach, MIT

Do you love teaching and helping people learn? How do I become involved in teaching and outreach? Can there be a balance between running a successful lab and mentoring? Come find out!

Organized by: Grace Chen, Sandhya Sanduja, and Dave Phizicky

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## **Repair of Basic Laboratory Equipment**

Charles Moses  
Wednesday, Jan 16, 5:30 – 7:30 p.m., room 68-674

No enrollment limit, no advance sign up  
Prereq: none

Sponsored by Graduate Women in Science.

Engineer Charles Moses will conduct a course on repair of laboratory equipment, geared toward but not limited to beginners. Equipment will include: electrophoresis units, spectrophotometers, motors on shakers and centrifuges, etc. General topics will also include: assessing the tools required to disassemble, fix and reassemble a piece of equipment; tool quality; and rational disassembly of equipment when the function of some component is not known. Bring broken equipment on which to practice. Session starts at 5:30 p.m. in 68-674.

Contact: Brenda Minesinger, 68-647, x3-4721, [bminesin@mit.edu](mailto:bminesin@mit.edu) or CT Moses, [chastmoses@yahoo.com](mailto:chastmoses@yahoo.com)

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## **For Credit**

**7.391: Introduction to Molecular Biology Techniques**

See "[\*The Art of Microbiology\*](#)" from the MIT News office (IAP 2012).

Instructors: Dr. Mandana Sassanfar, Dr. Brenda Minesinger, Lorraine Ling

Topics of current or special interest. This intensive "boot-camp" style course will provide hands-on instruction in basic molecular biological techniques including isolation and quantification of nucleic acid and protein, agarose and SDS-PAGE gel electrophoresis, PCR, microbiology, and bioinformatics. In addition students will learn more elaborate techniques such as ultracentrifugation and electron microscopy to purify and view virus particles. Emphasis will be on real-world application and experimentation in preparation for a more successful UROP experience. Priority will be given to freshmen with no prior research experience. Interested students must fill out an application form (see below) and email it to Dr. Minesinger (bminesin [at] mit.edu). Deadline 12/13/12. You will be notified by 12/18/12 whether you are enrolled in the class.

**Jan 14-18, 22-25, 28, 12:30 – 5:00pm, 68-089**

Enter departmental lottery by: December 13, 2012

Do not preregister on Websis.

Limited to 12 participants. No listeners.

Prereq: 7.01x or AP Biology-*This course is not a substitute for 7.02*

Level: U 6 units Graded P/D/F Can be repeated for credit

Fee: \$65.00

[Download Application](#) (linked .doc file)

Contacts:

- Dr. Mandana Sassanfar, 68-270A, x2-4371, mandana [at] mit.edu
- Dr. Brenda Minesinger, 68-647 x3-4721, bminesin [at] mit.edu