Research Resources at Partners Hospitals

Barbara E. Bierer, M.D.
SVP Research, BWH
bbierer@partners.org
(617) 732-8990

Rick Bringhurst, M.D.
SVP Research, MGH
rbringhurst@partners.org
(617) 724-8549
Agenda

- BWH
- MGH
- PHS
- HMS

- Communication
- Clinical Research
- Support Services
- Cores
- Career Development

How do I get the help I need? What resources are available? How do I find a mentor?
Communication

The BWH Research Email Series includes five e-newsletters that target the following communities:

- **the Research Connection**, which contains announcements, events, and notices relevant to BWH research
- postdoctoral and research fellows
- clinical researchers
- BRI Research Center-specific notices
- Friday funding opportunities

- And as news
  - Public Affairs Kit

The BWH Biomedical Research Institute (BRI) sends periodic announcements about news, funding opportunities, event and seminar information to researchers within specific scientific disciplines.

Wednesday, September 15, 2010

Breast Cancer Genetics: Current Challenges

The Center for Human Genetics at the BRI invites clinicians and researchers to attend the following discussion on Breast Cancer Genetics: Current Challenges.

Dr. Judy Garber, M.D., MPH
Director, Cancer Risk and Prevention Program, Dana-Farber Cancer Institute
Associate Professor of Medicine, Harvard Medical School

Breast Cancer Genetics: Current Challenges

Thursday, September 23, 2010
6:00 - 8:00 PM
Shapiro Board Room, Shapiro Cardiovascular Center, 70 Francis Street

Light dinner will be served. CME credits available. Please RSVP to the BRI program manager, at aswaminathan@partners.org.

*The Shapiro Boardroom is located in the new Carl J. and Ruth Shapiro Cardiovascular Center at 70 Francis Street across the street from the 75 Francis Street hospital. Upon entering the building at the street level, walk straight to the 4th floor; the Boardroom is in the tool on the right.

What are your Research Interests?
The following categories correspond to subject-specific notices

1. Preclinical Models: Yes
2. Cancer: Yes
3. Cardiovascular/Endocrine Diseases: Yes
4. Clinical Research: Yes
5. Human Genetics: Yes
6. Infection/Immunologic Diseases: Yes
7. Imaging: Yes
8. Musculoskeletal: Yes
9. Neurosciences: Yes
10. Stem Cell, Regenerative Medicine, Tissue Engineering: Yes
11. Technology in Medicine: Yes
12. Women's Health Research: Yes
Other Funding Opportunities on the Intranet

The Research Intranet:
http://bwhbri.partners.org

- Departments, labs and studies directory

A directory of all investigative groups at BWH. The Directory links to relevant department, center, laboratory, or project websites

- Research Resources

- Research Compliance
BWH Find a Researcher

• Modeled after Find a Doctor on BWH website
• Will improve visibility of BWH research

Includes:
• Publications
• Summary of research
• Education
• Honors and Awards
• Lab members
• Collaborators
• Keywords
• Dept and BRI Affiliations
• Research Study Links
• Links to Physician Profile
Research Needs - Centers and Programs

- Promote interdisciplinary and interdepartmental research opportunities.
- Match resource allocation with scientific vision.
- Create programs in new areas of collaborative science.

<table>
<thead>
<tr>
<th>BRI PROGRAMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioinformatics</td>
</tr>
<tr>
<td>Biomedical Imaging</td>
</tr>
<tr>
<td>Clinical Investigation</td>
</tr>
<tr>
<td>Pre-Clinical Models</td>
</tr>
<tr>
<td>Technology and Innovation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BRI RESEARCH CENTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
</tr>
<tr>
<td>Cardiovascular, Diabetes and Metabolic Disorders</td>
</tr>
<tr>
<td>Center for Human Genetics at the BRI</td>
</tr>
<tr>
<td>Connors-BRI Center for Research on Women’s Health and Gender Biology</td>
</tr>
<tr>
<td>Infectious and Immunologic Diseases</td>
</tr>
<tr>
<td>Musculoskeletal</td>
</tr>
<tr>
<td>Neurosciences</td>
</tr>
<tr>
<td>Stem Cell, Regenerative Medicine and Tissue Engineering</td>
</tr>
</tbody>
</table>

http://www.brighamandwomens.org/research/centers.aspx
2010 STRATEGIC THEMES AND PRIORITIES
ADDRESSING HEALTH DISPARITIES

Policy (internal and external) and administration

Resources - imaging, bioinformatics, crimson, clinical information access (RPDR), sample access, cohorts

Communication - external (patients are partners in personalized medicine) and continuing internal communication

People - training, awards, recognition, new faculty, bridge fund

http://bwhbri.partners.org
http://www.brighamandwomens.org/research/default.aspx
BWH Core Lab Services

- Clinical Research:
  - CCI Biostatistical Consulting Services
  - CCI Clinical Trials Center
  - CCI Human Genetics Consult Service
  - CCI Laboratory and Specimen Processing
  - CCI Nursing Standard Services
  - CCI Metabolic Phenotyping Core (Nutrition)
  - CCI Research Coordinator Network
  - CCI Translational Technology Research Program
  - Crimson Biospecimen Banking
  - Tissue and Blood Repository
  - Tumor Imaging Metrics Core
- Antibody Core Facility
- DNA Sequencing Core
- Flow Cytometry Core
- Imaging
- Cell Culture and Microscopy Core
- Confocal Microscopy Core
- Transgenic Core
- CFAR Virology Core

http://www.partners.org/researchcores/home.asp
Web pages on BRI Site

• BRISC:  http://bwhbri.partners.org/brisc/homepage.asp – slides all BRISC meetings are at this location as well as future schedules

• BWH Research Space Management Group: http://bwhbri.partners.org/RSMG/default.asp

• BWH Research Compliance: http://bwhbri.partners.org/Research_Compliance/default.aspx


• CCI Web: http://www.brighamandwomens.org/research/cci/

• Harvard Catalyst: http://www.catalyst.harvard.edu/home.html

• ORC Web: http://bwhbri.partners.org/oprc/

• Research Connection email sign-up: http://bwhbri.partners.org/ResearchConnection/Subscribe.asp

• Research Connection Live Lunch Series: http://bwhbri.partners.org/ResearchConnection/Live_Lunch.asp
The Center’s mission is to recruit, retain and advance a diverse faculty that represents the communities that BWH serves and trains.
Professional Development

Collaboration on center-wide and hospital-wide programming for diverse professional and career development opportunities

- Academic Advancement
- Professional Development
- Communication and Interpersonal Skills
- Professional and Career Pathways
- Work-Life Balance
- Leadership & Mentorship
- Community Building and Networking Events

2009
112 programs
1,885 Participants [945 Unique]
4.48 average evaluation (where 5 = highest)
CFDD Program Plan 2010

**Academic Advancement**
- Demystifying Promotion
  - Promotions by Rank
  - Longer Service
- Diverse Scholarship Pathways
  - Perspectives on Scholarship
  - Clinical Writing
  - Medical Education Research
- CV Conversion
- Writing Narratives

**Professional Development**
- Communications Series
  - Press Appeal
  - Public Speaking
  - Presentations with Impact
- Designing PowerPoint
- Scientific Presentations
- Writing Recommendations
- Interpersonal Interactions
  - Difficult of Different
  - Making Meetings Matter
- Developmental Planning
- Negotiations
- Conflict Management

**Mentorship**
- Faculty Mentoring Leadership Pilot

**Collaborative Programming**
- HR Concepts (HR)
- Cultural Competence (HR, CPPS)
- Annual Review/Feedback Training (BWPO)
- ESL (BRI)

**Networking**
- OWC, OMC, OPRC
- URM Medical Students
- International Faculty & Fellows
- New Faculty Welcome Lunch
Career Development Continuum

- English as a Scientific Language
- Postdoc Q & A Series
- Postdoc Career Series
- Communications Seminar Series
- Research Case Studies Series
- Topic Specific Seminars*
- Academic Advancement Series
- Research Leadership Course
- Intro to Human Resources Concepts
- Faculty Mentoring Leadership Program
- Brigham Leadership Program
Upcoming PI Training Program

Who: Investigators from all PHS entities


When: Monday October 25, 2010 4:00PM - 6:00PM*

Where: Duncan Reid Room at BWH*

Why: Designed to provide fundamental information to new investigators involved in clinical research and to all investigators who wish to understand the infrastructure and Partners efforts to support clinical research

*This program will be repeated at MGH sometime early in 2011. Please stay tuned for the next scheduled date.

Please contact Maureen Lawton at mlawton@partners.org with any questions.
MGH Clinical Research Program

- Study design and implementation
- IRB submission
- Budget preparation
- Education in performance of clinical research
- Biostatistical support
- Genetics and genomics consultation
- Study coordinator pool
- Project management

http://www2.massgeneral.org/crp/
Clinical Research Center

- Inpatient and outpatient study support
- Metabolic kitchen
- Nursing, technical, nutritionist staff
- Biosampling, processing
- Laboratory testing and development
- Bionutrition core
- Imaging core (MRI, MEG)

http://www2.massgeneral.org/crc/
Core Lab Services

- Clinical Genetics Research Facility
- Biostatistics
- MR/PET Imaging
- Tumor Imaging Metrics
- Biospecimen Repository
- Genotyping
- DNA Synthesis and Sequencing
- Peptide Synthesis and Sequencing
- Radiation Safety
- Transgenic and Knockout Mice
- Knight Surgical Research Lab
- Microscopy and FACS

http://www.partners.org/researchcores/home.asp?subID=leftnav8
Animal Research - MGH

Center for Comparative Medicine (CCM)
- Animal housing and veterinary care
- Small and large-animal models
- Shipping/receiving animals, quarantine services
- Investigator training in common procedures
- Regulatory compliance
  http://intranet.massgeneral.org/ccm/

Subcommittee on Research Animal Care (SRAC)
- Institutional Animal Care and Use Committee (IACUC) for the MGH and the Shriners Hospitals for Children
- Reviews/approves protocols for animal research
- Monitors compliance with approved protocols
  http://is.partners.org/aniweb/?subID=leftnav12
MGH Center for Faculty Development

- Established to facilitate career development of all MGH faculty.
  - Office for Clinical Careers (OCC)
  - Office for Research Career Development (ORCD)
  - Office for Women's Careers (OWC)
- Support/education regarding promotion process
- Individual counseling
- Faculty Development seminars, newsletters
- Mass General Postdoc Association

http://www2.massgeneral.org/facultydevelopment/index.html
MGH Research Email Listserve
• Weekly email announcements of interest to MGH researchers:
  
  http://researchlistweb.partners.org/list/w/mgh/subscribeMGH.html

MGH Research Intranet
• Inventory of research-related information at one site

• Listing of Departments/ Centers, Forms, Policies & Procedures, Events Calendar/ Grants & Funding Information, Clinical Research Resources, etc.

• Links to key MGH, BWH and Partners resources

  http://mghresearch.partners.org/
Partners Resources

• Partners Research Management: http://phsresearchintranet.partners.org/

• Partners Clinical Research Office (PCRO): http://www.partners.org/pcro/

• Partners Research Ventures & Licensing: http://rvl.partners.org/home

• Partners Human Research Committee: http://healthcare.partners.org/phsirb/
Partners Research Management

- Pre-Award Grant Proposal review, approval & submission
- Post-Award Financial Management
- Subcontract Negotiation
- Billing of Sponsors
- Receiving and Posting Cash
- Financial Status Reports

http://phsresearchintranet.partners.org
Partners Human Research Office

Partners Human Research Committee
- IRB for Partners Research
- IRB applications submitted electronically through Insight (eIRB)

Human Research Quality Improvement Program
- Provides support and education to ensure optimal conduct of human research within the framework of federal regulations, institutional policies, and good clinical practice.

Human Embryonic Stem Cell Research Oversight Office
- Provides institutional oversight of hESC research

http://healthcare.partners.org/phsirb/home.htm
Partners Clinical Research Office (PCRO)

- Responsible for developing, negotiating and executing agreements for industry-sponsored clinical research
  - Clinical Trial Agreements
  - Clinical Research Support Agreements
  - Confidentiality Agreements
- Budget development service and negotiation with sponsors
- Prepares Medicare Coverage Analyses (MCA) for all non-oncology clinical research protocols
- Assistance with Medicare Petitions & renewals for device studies

http://www.partners.org/pcro/default.aspx
Partners Research Ventures and Licensing

- Negotiates (non-clinical trial) corporate research and material transfer agreements
- Manages intellectual property
- Identifies opportunities and markets ideas to industry
- Develops agreements for commercialization of intellectual property
- Provides advice on start-up opportunities
- Coordinates institutional service agreement review

http://rvl.partners.org/home
Partners Research Computing

- Cloud/cluster computing
- Data management and storage
- EDC
- Survey tools
- RPDR

http://rc.partners.org/
Research Patient Data Registry

• User-defined queries of patient populations with defined attributes
  – Aggregate results
  – Real time
  – Database of > 4 million Partners patients

• IRB-approved acquisition of more detailed clinical/demographic data with patient identifiers
Research Patient Data Registry

1) Queries for aggregate patient numbers

- Warehouse of in & outpatient clinical data
- 3.6 million Partners Healthcare patients
- 980 million diagnoses, medications, procedures, laboratories, physical findings, & genomics coupled to demographics & visits
- Authorized use by faculty status
- Clinicians can construct complex queries
- Queries cannot identify individuals, internally can produce identifiers for (2)

2) Returns detailed patient data

- Start with list of specific patients, usually from (1)
- Authorized use by IRB Protocol
- Returns contact and PCP information, demographics, providers, visits, diagnoses, medications, procedures, laboratories, microbiology, reports (discharge, LMR, operative, radiology, pathology, cardiology, pulmonary, endoscopy), and images into a Microsoft Access database and text files.
Set of patients is selected through RPDR and data is gathered into a data mart.

Selected patients

Data directly from RPDR
Data from other hospital sources
Data collected specifically for project

Daily Automated Queries search for Patients and add Data

Project Specific Phenotypic Data
Data Pipeline/Workflow Application

Services:
- Ontology
- Consent/Tracking
- Application Pool
- Management

Input

Soap/Http interfaces

Data flowing

Output

Custom Interfaces

A program

CRC DB

AsthmaMart

Data retrieval
Language processing
Load Data into Mart

Data de-identification
Vocabulary matching

Clinical trials performed in-silico
Using the Crimson system, patient samples can be accessed for analysis.

Research Patient Data Registry

The Identifiers that accompany the data and the samples are substituted for a random identifier. Any identifiers not conforming to the HIPAA limited data set requirements are removed.

Discarded Tissue
The discarded tissue may be from any source, but only if collected in the course of clinical care, and only if would be discarded.

BWH/CL
Partners Research Applications Group

- Development and maintenance of IT systems supporting research administration
- InfoEd
  - Proposal Development
  - Proposal Tracking
- Insight
  - Financial Management
  - Time and Effort Reporting
  - Conflict of Interest Disclosure
  - IRB and SRAC Application Submission
  - Clinical Trial Budget Builder
Partners Core Facilities

- Partners
- BWH
- MGH
- PCPGM
- DF/HCC

Welcome to Partners Core Facilities

The shared interdepartmental facilities at Partners bring state-of-the-art instrumentation, methodologies and expertise crucial to the promotion of research at Partners. The Partners' cores not only provide high quality, cutting edge research services by our in-house experts but also constitute a major educational resource for our growing research enterprise.

The development of shared resources is part of our commitment to interdisciplinary research and will be an important part of our future endeavors. Cores make it possible to share our wealth of expertise, facilities and equipment with the research community, allowing for more efficient use of resources, promote collaboration among investigators and further enhance the competitiveness of Partners investigators to secure research funding.
Partners Center for Personalized Genetic Medicine

- Laboratory of Molecular Medicine
  - Genetic testing
  - Genetic test development

- PCPGM Core Services
  - DNA sequencing
  - DNA/RNA microarray analysis
  - Genotyping
  - Biosample processing, management and storage
  - Consultations

- PCPGM Educational Programs
  http://pcpgm.partners.org
Harvard CATALYST

• Education in clinical and translational research

• Clinical Research Centers
  – Inpatient and outpatient study support
  – Nursing, technical, nutritionist staff
  – Biosampling, processing
  – Laboratory testing and development

• Consultation
  – Biostatistics
  – Genetics
  – Imaging
  – Bioinformatics

http://catalyst.harvard.edu
Harvard CATALYST

- Regulatory - single IRB review
- IT resources
  - SHRINE
  - Pathology specimen locator
  - EDC
- Faculty connectivity
  - Web portal
  - Faculty profiles
  - Funding opportunities
- Pilot grants
  - 50K x 1 year, cross-institutional
  - Research navigators

http://catalyst.harvard.edu
Research Resources

- Identify collaborators
  - Profiles
  - Medvane
• Request advice
  – Biostatistics
  – Genetics
  – Imaging
  – Provider & Health Systems Research

http://catalyst.harvard.edu
Educational Resources

• Degree programs
  – Biomedical Informatics
  – Biostatistics
  – Clinical Investigation
  – Clinical Science
  – KL2 training program
• Non-degree courses
  – Genetics
  – Imaging

http://catalyst.harvard.edu
Grant Resources

- Projects
- Finding grant opportunities
- Finding research collaborators
- Managing online collaboration
- Get advice from colleagues
- Managing your applications

http://catalyst.harvard.edu
Managing Harvard in all its complexity

<table>
<thead>
<tr>
<th>Institution</th>
<th>Website Homepage</th>
<th>Phone Numbers</th>
<th>Person Directory</th>
<th>Find a Doctor</th>
<th>Maps &amp; Floorplans</th>
<th>Driving Directions</th>
<th>Parking Info</th>
<th>Public Trans.</th>
<th>Shuttle Schedules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beth Israel Deaconess Medical Center</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
</tr>
<tr>
<td>Boston College Connell School of Nursing</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
</tr>
<tr>
<td>Brigham and Women’s Hospital</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
</tr>
<tr>
<td>Broad Institute</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
</tr>
<tr>
<td>Cambridge Health Alliance</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
</tr>
<tr>
<td>Children’s Hospital Boston</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
</tr>
<tr>
<td>Dana-Farber Cancer Institute</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
</tr>
<tr>
<td>Forsyth Institute</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
</tr>
<tr>
<td>Harvard Business School</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
</tr>
<tr>
<td>Harvard Divinity School</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
</tr>
<tr>
<td>Harvard Graduate School of Education</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
</tr>
<tr>
<td>Harvard Law School</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
<td>![Icon]</td>
</tr>
</tbody>
</table>
Questions and Thank you

Barbara E. Bierer, M.D.
SVP Research, BWH
bbierer@partners.org
(617) 732-8990

Rick Bringhurst, M.D.
SVP Research, MGH
rbringhurst@partners.org
(617) 724-8549