### Research Resources

The resources to the right are available to all investigators affiliated with Children’s Healthcare of Atlanta, including medical staff, Emory Department of Pediatrics faculty and staff, and those outside of the DOP and CHOA who are members of our research centers. We encourage involvement of all those interested in research throughout our system, and provide this as an interim guide to resources until our research website is fully operational and updated. Our goals are to build infrastructure and programs that will serve a broad community of scientists and clinicians engaged in pediatric research, and to provide training in grant writing and grant opportunities that will enhance our extramural funding for all child health investigators affiliated with Children’s Healthcare of Atlanta. For suggestions and comments on any of the initiatives and resources, please contact Paul Spearman, MD (paul.spearman@choa.org or paul.spearman@emory.edu).

### Grant and Manuscript Support

- **Stacy Heilman, PhD, Grants Advocate** (404-727-4819, stacy.heilman@emory.edu)
  - Assistance with finding grant opportunities and connecting to collaborators
  - Core laboratory assistance, supervision

- **Becky Kinkead, PhD**
  - Prioritized for extramural funding opportunities, program projects
  - Experienced at program project management, grant and scientific paper editing
  - Request form on pedsresearch.org; send to Stacy Heilman

### Grants/Paper Writer

- **Traci Leong, PhD**
  - Data analyst/database assistance: To be hired
  - Procedure: Request form on pedsresearch.org; send to Stacy Heilman

### Biostatistics Core

- **Howard Katzenstein**
  - Medical Director, Pediatric Research Unit (Egleston): hhoward.katzenstein@choa.org

### Grant and Manuscript Support

- **Kris Rogers, Director, Clinical Research** (404-785-1215, kristine.rogers@choa.org)
- **Manager, Egleston campus**: Allison Wellons (404-785-6459, Allison.wellons@choa.org)

### Clinical studies coordinators

- **Manager, Hughes Spalding/Scottish Rite campuses**: Beena Desai (404-785-2269, beena.desai@choa.org)
- **Nurse Manager, Pediatric Research Unit (Egleston)**: Vacant (404-785-0400-main number)

### Equipment/Specimen Processing Core

- **2nd floor ECC 260 lab:**
  - **Technical Director**: Katie Casper (kcasper@emory.edu)

### Equipment:
- Biosafety cabinet, incubators, clinical centrifuge, real-time PCR machine, standard PCR machine, multilabel plate reader, gel documentation system on order

### Services:
- This core provides common equipment for investigator’s use, including access to benchtop space and hood space, centrifuges for clinical specimen processing

### Laboratory Specimen Processing: Egleston

- **Manager**: Diana Worthington-White (404-785-1721, diana.worthington-white@choa.org)
  - Clinical trials specimen processing, shipping, limited storage
  - ACTSI processing lab
  - Laboratory inventory management system (LIMS) available
Research Leadership:

CHOA Research Operations Council (ROC)

- Beth Howell
  SVP Academic Affairs

- Barbara Stoll
  Chief Academic Officer

- Paul Spearman
  Chief Research Officer

- Kris Rogers
  Director, Clinical Research

- Barbara Kilbourne
  Lead Program Coordinator

- Tom Brems

Research Advisory Council (RAC)

- Liz McCarty, Grants Administration
- Lela Wulf, Finance
- Stacy Heilman, Grants Advocate, Cores
- Prabhu Shankar, Clinical Informatics

- Traci Leong (biostats)
- Becky Kinkaid (writer)
- Data analyst (TBN)

- Research Center Directors
  - Nursing Research

- Other Pediatric Research Leaders from
  - Emory, Ga Tech, Morehouse

- Research Managers, Research Coordinators
- Center Program Coordinators

Research Update April 2011
Emory-Children’s Pediatric Research Centers*

- Pediatric Nanomedicine
- Cardiovascular Biology
- Marcus Autism Center
- Healthcare Technology Innovations
- Immunology and Vaccines
- Transplant Immunology and Immune Therapeutics
- Aflac Cancer Center
- Cystic Fibrosis
- Aflac Cancer Center
- Developmental Lung Biology
- Endothelial Biology
- Clinical Outcomes Research and Public Health

*For more information, please see center-specific one-pagers

Research Update April 2011
New Centers in Development for 2011:

Drug Discovery
Ray Schinazi, PhD, Director
Vision forthcoming

Neurosciences Research Center
(assuming new leader)

Clinical/Translational Research Center
(New leader to be recruited)
- Organize pediatric clinical research units, ACTSI relationship, research nurse/coordinator pool, and support for multicenter trials networks
- NIH and other extramural funding emphasized, as for all sponsored activities
- **Mission:** This Center will engage those clinical investigators who perform interventional clinical research, including trials of drugs, devices, and vaccines. The Clinical/Translational Research Center will be the research “home” for clinical investigators throughout the system who are not primarily epidemiologists/outcomes researchers. We envision the leader of this center leading and organizing further the central clinical research resources, including the distribution of research coordinators, managers, and data analysts. Clinical informatics will be a key part of this Center, shared with the Outcomes/Wellness Center.

Research Update April 2011
Emory-Children’s Pediatric Research Center Contacts

**Center Directors:**

- **Aflac Cancer Center and Blood Disorder Services**
  - Center Director: Bill Woods, MD
  - william.woods@choa.org

- **Center for Autism Research**
  - Center Director: Ami Klin, PhD
  - amiklin@emory.edu or amiklin@choa.org

- **Center for Cardiovascular Biology**
  - Center Director: Mary Wagner, PhD
  - mbwagne@emory.edu
  - Program Coordinator: Shantisa Fulgham
  - shantisa.fulgham@choa.org

- **Center for Clinical Outcomes Research and Public Health**
  - Center Director: Ann Mertens, PhD
  - ann.mertens@choa.org
  - Program Coordinator: Shantisa Fulgham
  - shantisa.fulgham@choa.org

- **Center for Cystic Fibrosis Research**
  - Center Director: Nael McCarty, PhD
  - namccar@emory.edu
  - Program Coordinator: Megha Madan
  - megha.madan@choa.org

- **Center for Developmental Lung Biology**
  - Center Director: Lou Ann Brown, PhD
  - lbrow03@emory.edu
  - Program Coordinator: Megha Madan
  - megha.madan@choa.org

- **Center for Drug Discovery**
  - Center Director: Raymond Schinazi, PhD, DSc
  - raymond.schinazi@emory.edu

- **Center for Endothelial Biology**
  - Center Director: Solomon Ofori-Acquah, PhD
  - soforia@emory.edu
  - Program Coordinator: Megha Madan
  - megha.madan@choa.org

- **Center for Immunology and Vaccines**
  - Center Directors: Paul Spearman, MD and Bali Pulendran, PhD
  - paul.spearman@emory.edu and b pulver@emory.edu
  - Program Coordinator: Shantisa Fulgham
  - shantisa.fulgham@choa.org

- **Center for Pediatric Healthcare Technology Innovation**
  - Center Director: Barbara Boyan, PhD
  - barbara.boyan@bme.gatech.edu
  - Program Coordinator: Maribel Baker
  - maribel.baker@bme.gatech.edu

- **Center for Pediatric Nanomedicine**
  - Center Director: Gang Bao, PhD
  - gang.bao@bme.gatech.edu
  - Additional contact: Amy Tang
  - amy.tang@bme.gatech.edu

- **Children’s Transplant Immunology and Immune Therapeutics Center**
  - Center Directors: Leslie Kean, MD, PhD and Allan Kirk, MD, PhD
  - leslie.kean@choa.org and adkirk@emory.edu
  - Program Coordinator: Jennifer Kenny
  - jennifer.kenny@choa.org

- **Center for Pediatric Healthcare Technology Innovation**
  - Center Director: TBD
  - Program Coordinator: Jennifer Kenny
  - jennifer.kenny@choa.org

- **Children’s Center for Neurosciences**
  - Center Director: TBD
  - Program Coordinator: Jennifer Kenny
  - jennifer.kenny@choa.org

---

**Research Center Administration:**

- **Barbara J. Stoll, MD**
  - George W. Brumley, Jr., Professor and Chair
  - Department of Pediatrics, Emory University
  - President and CEO, Emory-Children’s Center
  - SVP and Chief Academic Officer, Children’s Healthcare of Atlanta
  - barbara_stoll@oz.ped.emory.edu

- **Paul Spearman, MD**
  - Nahmias-Schinazi Professor and Chief, Pediatric Infectious Diseases
  - Chief Research Officer, Children’s Healthcare of Atlanta
  - Vice Chair for Research, Department of Pediatrics, Emory University
  - paul.spearman@emory.edu

- **Beth Howell**
  - SVP, Academic Administration
  - Children’s Healthcare of Atlanta
  - beth.howell@choa.org

- **Kris Rogers, RN**
  - Director of Research & Graduate Medical Education
  - Children’s Healthcare of Atlanta
  - kristine.rogers@choa.org

- **Liz McCarty**
  - Director, Business & Finance
  - Department of Pediatrics, Emory University
  - mnccar2@emory.edu

- **Lela Wulf**
  - Director of Finance, Academic Administration
  - Children’s Healthcare of Atlanta
  - lela.wulf@choa.org

- **Stacy S. Heilman, PhD**
  - Director of Programs & Grants Advocate
  - Department of Pediatrics, Emory University & Children’s Healthcare of Atlanta
  - stacy.heilman@emory.edu

- **Barbara W Kilbourne, RN, MPH**
  - Director of Finance, Academic Administration
  - Children’s Healthcare of Atlanta
  - barbara.kilbourne@choa.org
# Research-sponsored events/meetings:

<table>
<thead>
<tr>
<th>MONDAYS</th>
<th>TUESDAYS</th>
<th>WEDNESDAYS</th>
<th>THURSDAYS</th>
<th>FRIDAYS</th>
<th>VARIOUS DAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research Operations Council (ROC) meetings:</strong> occurs weekly at the Marcus Autism Center. Designed for central team to discuss detailed operations and issues.</td>
<td></td>
<td></td>
<td></td>
<td><strong>PeRCS:</strong> 10 AM coffee social every Friday, 3rd floor break area, E-CC</td>
<td></td>
</tr>
<tr>
<td><strong>K club:</strong> Monthly discussions/lectures for K award training, other grants training/education. Typically 2nd Monday, Contact Stacy Heilman (<a href="mailto:Stacy.heilman@emory.edu">Stacy.heilman@emory.edu</a>) for more information.</td>
<td>Research <strong>Brainstorming Sessions:</strong> Typically, 2nd Wed. To allow development and exploration of special research topics. For suggested topic nominations, contact (<a href="mailto:Stacy.heilman@emory.edu">Stacy.heilman@emory.edu</a>)</td>
<td></td>
<td>Research <strong>Seminars:</strong> Fridays (Egleston Classrooms). Contact Paul Spearman for suggestions or needs (<a href="mailto:paul.spearman@emory.edu">paul.spearman@emory.edu</a>) <strong>Including:</strong> ✓ <strong>GRIP:</strong> (Genetics Research in Pediatrics): seminar series, planned monthly, typically the 2nd Friday, Egleston classrooms. Contact David Okou <a href="mailto:david.okou@emory.edu">david.okou@emory.edu</a> for more information. ✓ <strong>CORPH (Clinical Outcomes Research and Public Health):</strong> interest group has monthly meetings scheduled for the 3rd Friday of each month. Contact Ann Mertens <a href="mailto:amerten@emory.edu">amerten@emory.edu</a> for more information.</td>
<td></td>
<td>Research Advisory Council (RAC) meetings: twice monthly; restricted to RAC membership, contact Paul Spearman for inquiries or suggestions <a href="mailto:paul.spearman@emory.edu">paul.spearman@emory.edu</a></td>
</tr>
<tr>
<td><strong>Research Grand Rounds:</strong> 3rd Wednesday of month, Egleston, 7:30 AM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Invited Speakers</strong> through seminar series sponsored by centers; contact Center Directors or Barbara Kilbourne at <a href="mailto:barbara.kilbourne@choa.org">barbara.kilbourne@choa.org</a> if interested in upcoming events. Center Directors are listed on pedsresearch.org website.</td>
</tr>
</tbody>
</table>
**Specialized Research Equipment/Service Cores:**

<table>
<thead>
<tr>
<th>CORE</th>
<th>SCIENTIFIC DIRECTOR</th>
<th>TECHNICAL DIRECTOR/CONTACT</th>
<th>EQUIPMENT</th>
<th>LOCATION</th>
<th>SERVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biomarkers Core</strong></td>
<td>Lou Ann Brown <a href="mailto:lou.ann.brown@emory.edu">lou.ann.brown@emory.edu</a> 404-727-5739</td>
<td>Mojgan Zavareh <a href="mailto:mojgan.zavareh@emory.edu">mojgan.zavareh@emory.edu</a></td>
<td>Agilent gas chromatography/mass spectrometer and Waters high performance HPLC with fluorescence detector</td>
<td>Emory-Children’s Center, 3rd Floor Lab</td>
<td>This core analyzes markers of oxidative stress and markers of alcohol exposure. Speak to Scientific Director about other chromatography/mass spec assays available.</td>
</tr>
<tr>
<td><strong>Cardiovascular Imaging Research Core (CIRC)</strong></td>
<td>Will Border, MBChB, MPH <a href="mailto:borderw@kidsheart.com">borderw@kidsheart.com</a> 404-785-6255</td>
<td>Carey K. Lamphier, RN, BSN, CCRC <a href="mailto:Carey.lamphier@choa.org">Carey.lamphier@choa.org</a></td>
<td>-Echocardiograms - Flow Doppler -3-D Imaging -Upright Bicycle -VO2 Analysis -Electrocardiogram -Cardiac MRI Nursing Services</td>
<td>Outpatient Cardiac Services, 2nd Floor, Tower 1</td>
<td>This core provides non-invasive cardiac support for investigators involved in clinical research involving infants, children and adolescents. The CIRC has dedicated space, equipment and staff to provide you with quality cardiovascular imaging data that is collected in a meticulous, systematic, detail-orientated manner. Because of our unique set-up, we are able to utilize state-of-the-art imaging modalities not typically seen in the clinical setting.</td>
</tr>
<tr>
<td><strong>Cellular Imaging</strong></td>
<td>Lou Ann Brown <a href="mailto:lou.ann.brown@emory.edu">lou.ann.brown@emory.edu</a> 404-727-5739</td>
<td>Nimita Fifadara, PhD <a href="mailto:nfifada@emory.edu">nfifada@emory.edu</a></td>
<td>Olympus laser scanning confocal, TIRF microscopy</td>
<td>Emory-Children’s Center, 3rd Floor Lab</td>
<td>This core provides training and access to advanced cellular imaging systems, including confocal and TIRF microscopy.</td>
</tr>
<tr>
<td><strong>Flow Cytometry/Cell Sorting</strong></td>
<td>David Archer <a href="mailto:darcher@emory.edu">darcher@emory.edu</a></td>
<td>Aaron Rae <a href="mailto:aaron.j.rae@emory.edu">aaron.j.rae@emory.edu</a></td>
<td>FACSCanto, LSRII, FACSaria, AutoMACS</td>
<td>Emory-Children’s Center, Room 560</td>
<td>This core offers access to several state of the art analytical flow cytometers as well as high-speed cell sorting. We also offer training as well as expert help to enable our users to improve the quality and scope of their research.</td>
</tr>
</tbody>
</table>
## Specialized Research Equipment/Service Cores (continued)

<table>
<thead>
<tr>
<th>CORE in Development</th>
<th>CURRENT FACILITATOR</th>
<th>EQUIPMENT/LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen Repository (which will enhance the Specimen Processing Core)</td>
<td>Task force headed by Allison Wellons <a href="mailto:Allison.wellons@choa.org">Allison.wellons@choa.org</a> Goal: initial investment 2011</td>
<td>LIMS, freezers (-80, LN2) Sync with freezer space in new building; temporary space until then being identified</td>
<td>The specimen repository will offer organized storage of blood and body fluids and nucleic acids in 2011. Tissue repository services are under further discussion. Specimen processing can be coordinated to link with the specimen repository. Bar-coded standard vial storage and a dedicated LIMS will offer automated tracking and organized retrieval of specimens.</td>
</tr>
</tbody>
</table>

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### Core in Development for 2011:

<table>
<thead>
<tr>
<th>CORE in Development</th>
<th>CURRENT FACILITATOR</th>
<th>EQUIPMENT/LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Immunology Core</strong></td>
<td>Larry Anderson <a href="mailto:larry.anderson@emory.edu">larry.anderson@emory.edu</a> 404-712-6604</td>
<td>Katie Casper <a href="mailto:kcasper@emory.edu">kcasper@emory.edu</a></td>
<td>Specimen processing (hood, centrifuges, Coulter counter), Zeiss ELISPOT reader, ELISAs, assay design for intracellular cytokine staining (ICS), luminex 200 assays for protein quantitation, real-time PCR</td>
</tr>
<tr>
<td><strong>Microsurgery Core</strong></td>
<td>Mary Wagner <a href="mailto:mary.wagner@emory.edu">mary.wagner@emory.edu</a> 404-727-1336</td>
<td>Rong Jiang <a href="mailto:rjiang2@emory.edu">rjiang2@emory.edu</a></td>
<td>Small animal surgical equipment</td>
</tr>
</tbody>
</table>
## Funding Opportunities:

<table>
<thead>
<tr>
<th>Funding Opportunity</th>
<th>Funding Limit</th>
<th>Funding Term</th>
<th>Eligibility</th>
<th>Post Award Expectations</th>
<th>Additional Information</th>
</tr>
</thead>
</table>
| Friends                                                  | $50,000       | 12-18 months | 1. Children's professional staff  
2. Must be for clinical research taking place in Children's facilities | 1. Must provide annual and final reports  
2. Must be willing to present findings to Friends groups, Children's leadership, etc | 1. Fund was originally created for non-Faculty who were not eligible for EECRC funding  
2. Fund does not provide for investigator salary                                      |
| EECRC (Emory-Egleston Children’s Research Center, Inc.)  | $50,000       | 12 months    | 1. regular faculty in clinical departments at Emory. Applicants outside of DoP must have clinical privileges at Children's.  
2. Must not have an active R01 or P01.  
3. Must provide agency and proposed date they will submit for extramural funding | Must submit a grant to an extramural agency | $25,000 of total award may be directed to investigator salary                                    |
| H S I                                                    | $50,000       | 1 year       | Must include at least one Ga Tech collaborator from GTRI, College of Engineering or Computing and at least one collaborator from Children's. | Written quarterly reports | Commitment to this opportunity is made on a year to year basis depending on budget. Priority funding areas are agreed to on a yearly basis |
| Center Pilot Grants                                      | Varies by Center | 1 year     | Varies by Center | Annual report |                                                                                |
| Dudley Moore Nursing and Allied Health Research Fund     | $15,000       | 6-18 months  | 1. All Children’s nursing and allied health staff who provide services at one of Children’s locations are eligible.  
2. Excludes those with regular faculty appointments or who are employed by Emory  
3. Projects must have an impact on enhanced patient care, priority is given to projects that will provide evidence to change practice. | Must be willing to present findings by request. | Fund restricted by donor to support nursing and allied health research at Children's |
### Research listserv:
Contact [barbara.kilbourne@choa.org](mailto:barbara.kilbourne@choa.org) to be added to this listserv used to disseminate all pediatric research related announcements including seminars, funding opportunities, such as BiRD (Bringing in the Research Dollars), and the Weekly PREP (Pediatric Research Programs and Events)

### Website:
**Website:** [www.pedsresearch.org](http://www.pedsresearch.org)
Remains under construction
This is the central resource for research seminar info, contacts, cores, calendars, forms

### New Research Building Update:
**Groundbreaking:** June 15, 2011
**Finish date:** December 2012
190,000 ft2; 115,000 for pediatric research
Dry and wet lab research
Programming in progress; space for new recruits

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Research Update April 2011
## Research Recruitment Update:

<table>
<thead>
<tr>
<th>NAME</th>
<th>PHOTO</th>
<th>CENTER</th>
<th>TITLE</th>
<th>DATE STARTED</th>
<th>RECRUITED FROM</th>
<th>RESEARCH INTERESTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tom North, PhD</td>
<td><img src="image1.jpg" alt="Photo" /></td>
<td>Center for Drug Discovery</td>
<td>Professor, Dept. of Pediatrics, Emory</td>
<td>September 2010</td>
<td>UC Davis, where he was a member of the Center for Comparative Medicine in the School of Veterinary Medicine.</td>
<td>Dr. North’s laboratory has recently developed a nonhuman primate model for AIDS therapy that mimics important aspects of highly active antiretroviral therapy (HAART) in humans. This model uses rhesus macaques infected with a chimeric virus (RT-SHIV) consisting of simian immunodeficiency virus containing the reverse transcript from HIV-1. The major focus of the laboratory is to use this model for detailed analyses of cell and tissue sanctuaries of virus that evade HAART through the establishment of viral latency, or through residual replication of virus. An important goal is to use this model to test novel strategies that may lead to eradication of virus from an infected host.</td>
</tr>
<tr>
<td>Larry Anderson, MD</td>
<td><img src="image2.jpg" alt="Photo" /></td>
<td>Center for Immunology and Vaccines</td>
<td>Professor, Dept. of Pediatrics, Emory</td>
<td>October 2010</td>
<td>Centers for Disease Control and Prevention as Director, Division of Viral Diseases, and National Center for Immunization and Respiratory Diseases</td>
<td>His research program focuses on the immunopathogenesis of respiratory viral infections, especially respiratory syncytial virus (RSV).</td>
</tr>
<tr>
<td>Tracey Lamb, PhD</td>
<td><img src="image3.jpg" alt="Photo" /></td>
<td>Center for Immunology and Vaccines</td>
<td>Professor, Dept. of Pediatrics, Emory</td>
<td>November 2010</td>
<td>Lecturer in the Immunology of Infectious Diseases Nationality: British School of Biological Sciences, University of Reading, UK</td>
<td>Her research interests are concerned with how immune responses to malaria parasites are generated. Current research in the Lamb laboratory is looking at the signalling pathways triggered by malaria parasites in antigen presenting cells.</td>
</tr>
</tbody>
</table>
**Research Recruitment Update (continued):**

<table>
<thead>
<tr>
<th>NAME</th>
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<th>RECRUITED FROM</th>
<th>RESEARCH INTERESTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilbur Lam, MD, PhD</td>
<td></td>
<td>Aflac Cancer Center</td>
<td>Assist. Prof., Dept of Peds/ Aflac Cancer Center &amp; Blood Disorders Service, Children’s Healthcare of Atlanta/ Emory University SOM, Department of Biomedical Engineering GA Tech &amp; Emory University</td>
<td>December 2010</td>
<td>Pediatric Hematology-Oncology, Pediatrics, UCSF Medical Centers</td>
<td>Adjunct Assistant Professor, Department of Pediatrics, School of Medicine Division of Pediatric Hematology/Oncology University of California, San Francisco Postdoctoral Scholar, Department of Bioengineering University of California, Berkeley</td>
</tr>
<tr>
<td>Ami Klin, PhD</td>
<td></td>
<td>Marcus Autism Center</td>
<td>Chief of Autism and Related Disorders/ Georgia Research Alliance Eminent Scholar at Emory University/Director of the Division of Autism and Related Developmental Disabilities, DOP, SOM, Emory</td>
<td>January 2011</td>
<td>Klin is an internationally recognized psychologist and researcher. He comes from the Child Study Center at Yale University School of Medicine, where he was the Harris Professor of Child Psychology and Psychiatry and directed the Yale Autism Program.</td>
<td>Klin and his team will play an instrumental role in the autism community, working collaboratively with experts at Children’s Healthcare of Atlanta, the Emory University School of Medicine and the Emory Autism Center, the Centers for Disease Control and Prevention, the Georgia Institute of Technology and Atlanta Autism Consortium.</td>
</tr>
<tr>
<td>Murali-Krishna Kaja, PhD</td>
<td></td>
<td>Center for Immunology and Vaccines</td>
<td>Associate Professor - Department of Pediatrics, Emory University School of Medicine, Division of Infectious Disease</td>
<td>June 2011</td>
<td>Department of Immunology, University of Washington</td>
<td>The goal of experiments in the Kaja laboratory is to understand the mechanisms by which innate and adaptive immune systems interact together in response to infection and generate the most efficient protective immune memory. Lessons learned from such experimental models will be useful for rational and refined vaccine design. The projects in the lab are specifically focused on understanding how type-I interferons, a set of innate anti-viral cytokines that are induced in the first few hours after infection, influence the generation and maintenance of pathogen specific cytotoxic and helper T cell responses.</td>
</tr>
</tbody>
</table>