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*Cover Page Graphic Provided by Dr. John Crane
Full Members of the Witebsky Center:

Terry D. Connell, Director (July 2010 - June 2012)

Mark Sutton, Associate Director (July 2010 - June 2012)

Richard Bankert

Anthony Campagnari

John Crane

Nejat Egilmez

Anders Hakansson

Iain Hay

Amy Jacobs

Paul Knight

Thomas Melendy

Mark O’Brian

John Panepinto

Laurie Read

Kate Rittenhouse-Olsen

Stefan Ruhl

Michael Russell

Thomas Russo

Noreen Williams
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Executive Summary: July 1, 2011 - June 30, 2012

Extramural funding: The Witebsky Center for Microbial Pathogenesis and Immunology (WCMPI) had another successful year. As of July 2012, our current ongoing grant support (total direct costs) is over $26.6 million (including $249,899 in ARRA funding) with current year direct costs of $9.2 million. These grants are mainly (~70%) derived from the NIH, but include a significant number from other funding entities including the Department of Defense, Department of State, Veterans Administration, New York State Department of Health, NYSTAR, the John R. Oishei Foundation, and other private and corporate sources. Submissions of pending grant applications totaling >$28 million speaks well for the future success of our Center. Notably, several of the current and pending grants support collaborative projects developed between Center Members and between Center Members and other faculty members located elsewhere at UB or at outside institutions.

Publications: Between 2011 and 2012, Center faculty, students, and postdoctoral fellows published 59 peer reviewed papers and 15 chapters/reviews. In the past year, WCMPI members presented their research in 16 invited seminars at other institutions or invited talks at symposia. 17 posters or oral presentations documenting work in Center laboratories were featured at national and international meetings.

Expanded membership: In February of 2007, the WCMPI expanded its regular membership by relaxing the on-site requirement for full membership, extending this status to other investigators working in the areas of microbial pathogenesis and immunology within the greater UB community and Buffalo area. This development expanded and strengthened the WCMPI's membership and provided for a more diversified group of Departments to be included, including a tie with the Center of Excellence in Bioinformatics.

Honors and Awards: Over the past year, numerous awards and honors have been presented to Center members, including:

Dr. Richard Bankert is a member of the Immunology Research Program at Roswell Park Cancer Institute
Dr. Anthony Campagnari was elected to join the John Timon Society.
Dr. Paul Knight received the SUNY Chancellor’s Award for Scholarship and was promoted to a University at Buffalo Distinguished Professor.
Dr. Kate Rittenhouse-Olson was selected to serve as a judge for the New York Academy of Sciences for the 2012 Blavatnik Awards for Young Scientists, was an external reviewer for the University of Wisconsin Pharmacology and Toxicology Program, and Received the 2011 University at Buffalo Faculty Award for Excellence in Mentoring Undergraduates in Research and Creative Activities.
Dr. Michael Russell is a member of the International Association for Dental Research: Distinguished Scientist Awards – Research in Oral Biology Award committee (2007-2012) and is also a Research Scholar for the Department of Medical Microbiology and Immunology, University of Wisconsin, Madison (June – September 2011).

Conferences: As in prior years, the WCMPI co-hosted and administered three annual conferences in Microbial Pathogenesis (May 4, 2012), DNA Replication and Repair (June 22-23, 2012), and Immunology (September 12-13, 2011). Each conference attracted between 60-140 attendees and featured internationally known investigators as keynote speakers. In addition to the obvious benefit for attendees in the context of scientific exchange, these conferences served to advertise to the guest speakers UB’s many accomplishments and the quality of the faculty, students, and post-doctoral fellows.

UB20/20: The WCMPI has continued its involvement in the UB20/20 Strategic Strengths process. Center members are serving on faculty advisory committees such as Clinical and Translational Research Program Development. Center members are also serving on the committee for Molecular Recognition in Biological Systems and Bioinformatics strategic strength. Center Members have additionally been involved in the organization and teaching of “Science and Culture” related to the Bioinformatics, Extreme Events, and Health and Wellness strategic strengths.
Historical Development of the Witebsky Center for Microbial Pathogenesis and Immunology

The current Center arose from the merger in June 2000 of two Centers that had been established previously at UB: the Center for Microbial Pathogenesis (CMP) and the Witebsky Center for Immunology.

The CMP was organized in 1995 by UB faculty who shared a common interest in investigating aspects of microbial life and microbe-induced pathogenesis. The CMP, which was housed in two floors of the Biomedical Research Building, formed the core of the new combined Center.

The original Witebsky Center for Immunology was founded in 1967 for the purpose of enhancing research in Immunology in Buffalo and was housed in Sherman Hall.

The Witebsky Center for Microbial Pathogenesis and Immunology (WCMPI) currently has 19 members, of which 14 occupy the first two floors of the Biomedical Research Building. The other 5 members are located in other UB space or at institutions and hospitals located throughout the Greater Buffalo area.

The WCMPI has maintained its strengths in bacteriology, parasitology, virology, immunology, host-response, bioinformatics, and has recently added mycology to its fields of research. Through cooperation and collaboration among both members, funding levels and output measured in terms of publications and other accomplishments have remained at high levels. This annual report details the research programs of the 'on-site' membership. Productivity by the off-site members is difficult to quantify. But, increased collaborations within the membership are expected to enhance the research activities for all and to result in increased funding levels and to increasing output and accomplishments.

Center Organization: The WCMPI is administered by a Director and Associate Director, each of whom is elected for two-year terms. Administrative assistance is supplied by Kathrine Ohms and Shari Wilson, who run the day-to-day operations. The Director and Associate Director in agreement with the members of the Center address all financial, space and faculty status issues and long term objectives. WCMPI functions are supported by a yearly fee of $500 per laboratory unit granted to on-site members and by support from the University.

Full Membership in the WCMPI requires an active research program, which is documented by the presence of current extramural funding and professional publications, is re-evaluated each three years. Allotment of laboratory space is evaluated yearly. Various committees manage maintenance of common equipment and facilities, the conferences, training grants, and planning for multi-investigator initiatives.

Associate Membership in the WCMPI is open to members of the Buffalo scientific community who are interested in the biology of microbial pathogenesis and/or host defense mechanisms but who are not physically located within the Center space in the Biomedical Research Building. Associate members are updated with information on Center sponsored research meetings and are encouraged to participate in Center committees.
The WCMPI operates according to a set of Bylaws of governance, which were formulated by the Members upon inception of the Center and updated by the membership, as needed.

**WCMPI Administration:** The central office of the WCMPI is located in Room 243 of the Biomedical Research Building (BRB) on the UB South Campus. The 2011-2012 governing and administrative staff include:

- **Terry D. Connell, Ph.D., Director** (connell@buffalo.edu)
- **Mark D. Sutton, Ph.D., Associate Director** (mdsutton@buffalo.edu)
- **Kathrine Ohms, Assistant to the Director** (kvloera@buffalo.edu)
- **Shari Wilson, Keyboard Specialist** (swilson@buffalo.edu)

  Telephone Number: 716-829-2848
  Fax Number: 716-829-3534
  Website: [http://www.smbs.buffalo.edu/wcmpi](http://www.smbs.buffalo.edu/wcmpi)

**WCMPI Members:** The membership of the WCMPI currently comprises 19 investigators who have primary or secondary appointments in 5 different UB Medical School departments (Anesthesiology, Biochemistry, Medicine, Microbiology & Immunology, Biotechnical & Clinical Sciences), the Oral Biology Department within the UB Dental School, the NYS Center for Excellence in Bioinformatics, and the Roswell Park Cancer Institute (RPCI). The diverse interests of the group cover the range of virology, bacteriology, parasitology, mycology, immunology, host response to infectious disease, and bioinformatics. The membership of the Center is a blend of senior and junior members, which provides a strong mentoring system and assuring continued growth for the junior faculty members. All members have established strong, independent research programs and many have substantial experience in the training of graduate students and postdoctoral fellows. The research programs of the faculty are well funded predominantly through the NIH. Extramural funding for the current year is $24.6 million in direct costs (including ARRA funding). Members have also applied for more than $28 million of research funding in applications that are currently pending.

WCMPI members serve the scientific community nationally and internationally through membership on peer review panels, such as NIH Study Sections (Campagnari, Connell, Crane, Egilmez, Knight, O’Brian, Read, Russell, Russo, and Sutton) with several serving as Chairs either currently or in the recent past. Center members are invited to speak at a number of national and international scientific meetings. Members also serve as Editors, as Editorial Board members, and as *ad hoc* reviewers for frontline scientific journals within their respective fields.
## Research Interests of the Membership

<table>
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<th>Faculty</th>
<th>Department</th>
<th>Bacteriology</th>
<th>Virology</th>
<th>Parasitology</th>
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<td>Connell</td>
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Current List of Associate Members

Richard J. Ablin, Ph.D.
Daniel Amsterdam, Ph.D., M.D.
Sergio Arce, Ph.D. M.D.
Mark Ballow, M.D.
Piero Bianco, Ph.D.
Joel M. Bernstein, M.D.
Arlene Collins, Ph.D.
Howard Faden, Ph.D.
Lee Ann Garrett-Sinha, Ph.D.
Andrew Gulick, Ph.D.
Joseph H. Kite Jr., Ph.D.
Vijay Kumar, Ph.D.
Howard K. Kuramitsu, Ph.D.
Raymond J. Kelleher, Ph.D.

Alan J. Lesse, Ph.D.
Joseph M. Merrick, M.D.
Timothy F. Murphy, M.D.
John O. Naim, Ph.D.
Madhavan P. Nair, Ph.D.
Russell Nisengard, Ph.D.
Frank A. Scannapieco, D.M.D., Ph.D.
Ashu Sharma, Ph.D.
Stanley A. Schwartz, M.D., Ph.D.
Mehmet Okyay Kilinc, Ph.D.
Thomas C. Shanahan, Ph.D.,
Harshad R. Thacore, Ph.D.
Carel Jan van Oss, Ph.D.
Adrian Vladutiu, M.D., Ph.D.
Collaborations involving WCMPI members

The core of the WCMPI resides within 21 laboratory suites (floors 1 and 2, plus two units on the sixth floor) located in the BRB on the UB South Campus. The majority of individual laboratories and offices of Center faculty are in close proximity, which enables direct interactions on a daily basis not only between the faculty, but also between students, post-docs, and laboratory staff. Small conference rooms (one per floor) are available for regularly scheduled laboratory group discussions and impromptu meetings. A small library/reading room is also situated on each floor. Four shared equipment rooms, coldrooms, and darkrooms are also located on each floor. Full members not housed within the core have access to all of the common facilities.

WCMPI members and their laboratory groups participate in Center-wide research exchanges. At the September meeting of all full Center members, it was decided that three types of research exchange meetings would be held in the following years.

One meeting is designed to allow graduate students, MSTP students, and postdoctoral fellows to present data on their projects. These meetings occur twice per month. These meetings provide a venue for the students and postdoctoral fellows to gain experience in organizing and presenting talks at professional conferences and seminars to be presented during employment interviews.

The second more informal meeting composed only of graduate students and postdoctoral fellows provide opportunities for exchange of ideas and technical information between laboratory groups.

The third meeting, a Faculty Research Exchange, is a monthly gathering in which the WCMPI members present an overview of their research interests and information on new directions and recent findings. These meetings are designed to encourage potential collaborations among the members and to provide input on new projects that individual members may be considering.

In addition to these Center-wide exchanges, laboratories with ongoing collaborations arrange joint group meetings using the conference rooms and audiovisual facilities available within the Center core.

WCMPI members frequently read and critique each other's grant proposals to ensure the most competitive applications will be submitted to funding agencies. Since essentially all members of the Center members at the associate and full professor levels have served as regular members and/or Chairs of NIH, NSF, VA Merit, and private sector review panels, their experience increases the competitive edge of proposals originating in the Center and participating Departments.
Research Collaborations within the WCMPI: One major goal of the WCMPI is development and maintenance of productive collaborations among Center members. The following projects are the current collaborative associations within the Center membership:

- **Richard Bankert & Thomas Melendy**  
  Screening for HPV in nasal polyp tissues

- **Anthony Campagnari & Thomas Russo**  
  Analyzing the role of *A. baumannii* surface polysaccharides in virulence

- **Terry D. Connell & Anders Hakansson**  
  To evaluate the adjuvant effects of type II heat-labile enterotoxins in a mouse model of Streptococcal infection

- **Nejat Egilmez & Thomas Russo**  
  Use of slow-release adjuvant formulations of IL-12 and antigen for vaccination against extra-intestinal *E. coli*

- **Nejat Egilmez & Amy Jacobs**  
  Oral therapeutics for treatment of HIV

- **Nejat Egilmez & Michael Russell**  
  Use of slow-release cytokine and antibody formulations to modulate immunity to *G. nickeria*

- **Anders Hakansson & Terry D. Connell**  
  Protective effect of immunization with pneumococcal surface protein A using labile toxins as adjuvants

- **Anders Hakansson & Stephan Ruhl**  
  Investigation of carbohydrate binding properties of Streptococci

- **Anders Hakansson & Timothy Murphy**  
  Adherence and internalization of *Haemophilus influenzae* into respiratory epithelial cells and the role of IgA proteases.

- **Anders Hakansson & Andy Gulick**  
  Structural studies of pneumococcal enzyme DLDH and its ligands and the milk protein complex HAMLET.

- **Amy Jacobs & John Panepinto**  
  The effect of *Cryptococcus neoformans* Capsule on HIV entry

- **Paul Knight & Anders Hakansson**  
  Influenza and secondary bacterial pneumonia; pathogenesis of aspiration pneumonitis

- **Paul Knight & Thomas Russo**  
  Influenza and secondary bacterial pneumonia; pathogenesis of aspiration pneumonitis

- **Michael Russell & Terry D. Connell**  
  Evaluating adjuvant activities and mechanisms of enterobacterial heat-labile enterotoxins including cholera toxin and *E. coli* type II enterotoxins

- **Stefan Ruhl & Anders Hakansson**  
  Determination of sialic acid binding of *Streptococcus pneumoniae*

- **Noreen Williams & Laurie Read**  
  Role of arginine methylation in the function a novel trypanosome RNA binding protein.
**National Collaborations External to the WCMPI**

Center Members also maintain an extensive network of collaborations with other investigators, both within UB and at other institutions throughout the USA. Current national collaborations include:

- **Richard Bankert** & Leonard Shultz, The Jackson Laboratory
- **Richard Bankert** & Kunle Odunsi, RPCI
- **Richard Bankert** & Paul Wallace, RPCI
- **Richard Bankert** & Sathy Balu-Iyer, Univ. at Buffalo
- **Richard Bankert** & Dale Greiner, Univ. of Mass
- **Anthony Campagnari** & David Dyer, Univ. of Oklahoma Health Science Center
- **Anthony Campagnari** & Phil Rather, Emory Univ.
- **Anthony Campagnari** & Lauren Bakaletz, The Research Institute at Nationwide Children’s Hospital, Columbus, Ohio
- **Anthony Campagnari** & Mark Ehrensberger, UB Department of Biomedical Engineering and Orhtopedics
- **Anthony Campagnari** & Thomas Mang, UB Department of Oral and Maxillo Facial Surgery
- **Terry D. Connell** & Shabaana Khader, Univ. of Pittsburgh
- **Terry D. Connell** & George Hajishengallis, The Univ. of Louisville
- **Terry D. Connell** & Nicholas Mantis, Wadsworth Center
- **Terry D. Connell** & Jonathan Ravdin, Wisconsin Medical College
- **Terry D. Connell** & Arne Pralle, Univ. at Buffalo,
- **John Crane** & Edgar C. Boedeker, Univ. of New Mexico
- **John Crane** & Jay L. Mellies, Reed College, Portland, OR
- **Nejat Egilmez** & Edith Mathiowitz, Brown Univ.
- **Nejat Egilmez** & Charles Elson, Univ. of Alabama
- **Nejat Egilmez** & Dennis Metzger, Albany Medical School
- **Nejat Egilmez** & Robert Stout, University of Louisville
- **Nejat Egilmez** & Sharon Evans, RPCI
- **Anders Hakansson** & Andrew Camilli, Tuft University School of Medicine, Boston, MA
- **Anders Hakansson** & Daniel Smith, Forsyth Institute, Boston, MA
- **Anders Hakansson** & Moon Nahm, University of Alabama at Birmingham
- **Anders Hakansson** & David Briles, University of Alabama at Birmingham
- **John Hay** & Ann Arvin, Stanford Univ.
- **John Hay** & Allen Richards, National Naval Research Center, Washington, D.C.
- **John Hay** & Ric Yanagihara, Univ. of Hawaii
- **Amy Jacobs** & Robert Blumenthal, National Cancer Institute, NIH
- **Amy Jacobs** & Jacek Capala, National Cancer Institute, NIH
- **Amy Jacobs** & Irwin Chaiken, Drexel Univ.
- **Amy Jacobs** & Robert Rizzo, SUNY Stony Brook.
- **Amy Jacobs** & Walter Mothes, Yale University, New Haven, CT
• Amy Jacobs & Gregory Melikian, Emory University, Atlanta, GA
• Paul Knight & Prakash Sambhara, Centers for Disease Control & Prevention, Atlanta, GA
• Paul Knight & Svetomir Markovic, Mayo Clinic, Rochester, MN
• Thomas Melendy & Vivian Cody, Hauptmann Woodward Institute
• Mark O’Brien & Gary Stacey, Univ. of Missouri
• John Panepinto & Mattheos A.G. Koffas, Chemical Engineering, Univ. at Buffalo
• Laurie Read & Maria Schumacher, Duke University
• Laurie Read & Jorge Cruz-Reyes, Texas A&M Univ.
• Laurie Read & Steven Clarke, UCLA
• Stefan Ruhl & Latif Kazim, RPCI
• Stefan Ruhl & Ajit Varki, Univ. of California, San Diego
• Michael Russell & Ann Jerse, Uniformed Services University of the Health Sciences, Bethesda, MD
• Michael W. Russell & Sarah Gaffen, Pittsburgh University, Pittsburgh, PA
• Michael W. Russell & Jiri Mestecky, University of Alabama at Birmingham, Birmingham, AL
• Michael W. Russell & Edward Hook III, University of Alabama at Birmingham, Birmingham, AL
• Michael Russell & Gary Jarvis, University of California San Francisco, San Francisco, CA
• Michael Russell & Joseph Dillard, University of Wisconsin, Madison, WI
• Mark Sutton & Daniel Hassett, Department of Microbiology, University of Cincinnati
• Mark Sutton & Anthony Berdis, Case Western Reserve University
• Mark Sutton & Daniel Wozniak, Departments of Microbiology and Medicine, Ohio State University
• Mark Sutton & Lyle Simmons, Biology Department, University of Michigan
• Noreen Williams & Joachim Frank, Columbia University, NY
International Collaborations and Activities
International collaborations involving Center Members have been a hallmark of the WCMPI since its inception and frequently result in collaborative grants either through the Fogarty International Fund or The U. S. State Department. Current collaborations, many of which are long standing, include:

- **Anthony Campagnari** & James Richard and Andrew Cox Laboratory, National Research Council of Canada, Ottawa
- **Terry D. Connell** & P & L.C.S. Ferreira, The Univ. of San Paulo
- **Anders Hakansson** & Sergei Permyakov, Russian Academy of Sciences, Moscow, Russia
- **Anders Hakansson** & Ludmila Morozova-Roch, Umea University, Umea, Sweden
- **John Hay** & Liudmila Yashina, State Research Center for Viral Diseases (VECTOR) Novosibirsk, Siberia, Russia
- **John Hay** & R. Hewson (Health Protection Agency, Porton Down UK
- **John Hay** & B. Ospanov (Kazakh Scientific Centre for Quarantine and Zoonotic Diseases, Almatry, Kazakhstan
- **John Hay** & A. Junushov (Institute of Biotechnology, Bishkek, Kyrgyzstan
- **Amy Jacobs** & Roy Duncan, Dalhousie Univ., Nova Scotia, Canada
- **Amy Jacobs** & Omar Quraishi, NMD, Inc., Montreal, Canada
- **Thomas Melendy** & lain Morgan Laboratory, Univ. of Glasglow, Glasglow, UK
- **Thomas Melendy** & Jacques Archambault, Quebec, Canada
- **Mark O’Brien** & Elena, IIBCE, Montevideo Uruguay.
- **Kate Rittenhouse-Olson** & Adel Almogren in Saudi Arabia.
- **Laurie Read** & Julius Lukes, Institute of Parasitology, UNIV. of South Bohemia, Czech Republic
- **Laurie Read** & Antonio Estevez, Instituto de Parasitología y Biomedicina, Granada, Spain
- **Stephan Ruhl** & Rainer Müller, Institute of Physical Chemistry, UNIV. of Regensburg, Germany
- **Stefan Ruhl** & Frank Rupp, Medical Biomaterials and Technology Section, Univ. of Tübingen, Germany.
- **Stephan Ruhl** & Thomas Borén, Dept. of Medical Biochemistry & Biophysics, Umeå Univ., Umeå, Sweden
- **Stefan Ruhl** & Jianjun Li, National Research Council of Canada, Ottawa, Canada
- **Michael Russell** & Scott Gray-Owen, Department of Molecular Genetics, University of Toronto, Canada
- **Michael Russell** & Jennifer Woof, University of Dundee, Scotland
- **Noreen Williams** & Beatriz Garat, Universidad de la Republica, Uruguay

Additional long term interactions with non-U.S. Universities include adjunct Professorships held by **John Hay** at the Birla Institute of Technology and Science, Rajasthan, India. **Mark O’Brien** has presented a series of lectures at the Instituto Investigaciones Biologicas Clemente Estable (IIBCE), Montevideo, Uruguay, as a visiting faculty member.
Conference Organization/Conference Boards

Members of the WCMPI and involved in coordinating a number of scientific conferences including:

**Local**

- **Richard Bankert** - Buffalo Immunology Conference Committee Member
- **Terry D. Connell** – Buffalo Immunology Conference Committee Member
- **John Crane** – ASM Fall Symposium
- **Nejat Egilmez** – Co-Chair of the 2011 Buffalo Immunology Conference
- **Anders Hakansson** – Buffalo Conference on Microbial Pathogenesis Committee Member, Buffalo Immunology Conference Committee Member
- **Amy Jacobs** – Buffalo Conference on Microbial Pathogenesis Co-Chair
- **Thomas Melendy** – Organizer, Buffalo DNA Replication and Repair Symposium
- **John Panepinto** – Buffalo Conference Microbial Pathogenesis Co-Chair
- **Laurie Read** – Buffalo Conference on Microbial Pathogenesis Committee Member
- **Michael Russell** – Buffalo Immunology Conference Committee Member
- **Mark Sutton** – Organizer, Buffalo DNA Replication and Repair Symposium
- **Noreen Williams** – Buffalo Conference on Microbial Pathogenesis Committee Member

**National/International**

- **Terry D. Connell** - Buffalo Conference on Immunology Upstate New York Immunology Conference; UB representative on Scientific Advisory Board
- **Nejat Egilmez** – Upstate Immunology Conference
- **Paul Knight** – Director, Committee on Research, American Association of Anesthesiology; Member, Committee on Academic Anesthesiology, American Association of Anesthesiology; Member, Steering Committee, Foundation for Anesthesiology Education and Research (FAER)
- **John Panepinto** - The Northeast Regional Yeast Meeting, UB
- **Noreen Williams** – Organizer of the 22nd Annual Molecular Parasitology Meeting at Woods Hole, MA
Service on Study Sections and/or Grant Review Panels

A number of extramural funding organizations (national, international, and private) recognized the high caliber of research being performed by members of the WCMP by appointing members as grants’ reviewers.

- **Richard Bankert** – Cellular and Tissue Biology PO1 NCI Special Emphasis Panel
- **John Crane** – Gastrointestinal Mucosal and Pathobiology (GMPB) Study Section, 2011, ad hoc member; Gastrointestinal Mucosal and Pathology (GMPB) Study Section, 2012, ad hoc member
- **Nejat Egilmez** – NIH TME study section, regular member
- **Paul Knight** – Chair, Anesthesiology Committee on Research (Foundation for Anesthesiology Education and Research study section); several ad hoc NIH study sections
- **Laurie Read** – Ad hoc member of NIH MID review panel for T and K awards
- **Kate Rittenhouse-Olsen** – Woodburn Grant Committee
- **Michael W. Russell** – American Institute of Biological Sciences/Military Infectious Disease Research Program, Bacterial Diseases Review panel. (2000-2011)
- **Mark Sutton** – Invited member, MOI study panel, NSF-GMC, Division of Molecular and Cellular Biosciences
- **Noreen Williams** – Member Special study section ZRG1 IDM-B February 2011; Ad hoc Burroughs Wellcome.
Editorships/Memberships on Editorial Boards

A second level of recognition of the accomplishments of the Center’s members is appointment to the editorial boards of frontline professional journals including:

**Richard Bankert:** Member, Editorial Board, *Cancer Microenvironment*, 2008-present; Member, Editorial Board, *Frontiers in Immunotherapies and Vaccines*, 2012-present.

**Anthony Campagnari:** Member, Editorial Board, *Infection & Immunity*.


**John Crane:** Member, Editorial Board, *Immunological Investigations*.

**Nejat Egilmez:** Associate Editor, *Immunological Investigations; Associate Editor, Clinical and Developmental Immunology; Associate Editor, Frontiers in Immunology*.

**Anders Hakansson:** Member, Editorial Board, *Infection & Immunity*.

**John Hay:** Member, Editorial Board, *Immunological Investigations*.

**Mark O’Brien:** Member, Editorial Board, *Applied & Environmental Microbiology; Monitoring Editor, Plant Physiology*.

**Kate Rittenhouse-Olson:** Member, Editorial Board, *Immunologic Investigations, 10/03-present; Section Editor: ASCP LabQ, 2002-present*.

**Laurie Read:** Member, Editorial Board, *Eukaryotic Cell*.

**Michael W. Russell:** Member, Editorial Board of *Immunological Investigations* (2003-); Associate Editor of *Human Vaccines* (2005-2012); Editorial Board of *mBio* (2010-2012); Associate Editor of *Frontiers in Mucosal Immunity* (2010-); Board of editors for *Mucosal Immunology, 4th edition* (Academic Press/Elsevier) to be published 2013.

**Mark Sutton:** Associate Editor, *BMC Molecular Biology* (2011-present, continuing); Review Editor, *Frontiers Genetics* (2011-present, continuing)

**Noreen Williams:** Member, Editorial Board, *J. Bioenergetics Biomembrane*. 
Administrative Duties (not inclusive for each member)

Members of the WCMPI participate on a number of committees at the SMBS, the university, and at other institutions. These members and duties include:

**Anthony Campagnari**
- Member of Graduate Affairs Committee; Executive Committee for the NYS COE; Search Committee for Microbiology/Immunology Chair; Member of the PPBS Steering Committee; member of the School of Medicine Mentoring Committee.

**Terry D. Connell**
- Director of IGPBS Recruiting and Admissions; Director of the Summer Undergraduate Research Experience (SURE); UB2020 Strength in Molecular Recognition in Biological Systems/Bioinformatics Seminar Series, Committee Member, 2007-current; McNair (Minority) Program Advisory Board, Member, 2009-current; Review Panel member, United University Professions, Faculty Development Awards, 2005, 2008, 2009; Associate Director, The Witebsky Center for Microbial Pathogenesis & Immunology, UB, 2008-2010; Director, The Witebsky Center for Microbial Pathogenesis & Immunology, UB, 2010-2012; Dean’s Committee on Promotions to Unqualified (Tenurial) Rank, 2007-2010; Phase I Committee for Medical Education, 2009-current; Director of Recruiting and Admissions, Interdisciplinary Graduate Program in the Biomedical Sciences (IGPBS), 2009-current; Member, Steering Committee for the Research Education, Training and Career Development Core, 2010-current; United University Professions, Buffalo Health Sciences Chapter, Executive Board Member, 2005-2009; 2010-2012.

**John Crane**
- Section Chief, ID Division, ECMC; Hospital Epidemiologist, ECMC; Member, Promotions and Tenure Committee, Member, ECMC Antimicrobial Drug Subcommittee.

**Nejat Egilmez**
- Director of Graduate Program, Microbiology & Immunology; Chair, IACUC, UB.

**Anders Hakansson**
- Member, Faculty Council, School of Medicine & Biomedical Sciences, 2008-present; Member, Radiation Safety Committee, UB, 2008-present; Member, Admissions Committee, Interdisciplinary Graduate Program in Biological Sciences, School of Medicine & Biomedical Sciences, 2009; Associate Director, Graduate Affairs Committee, 2010-present; Member, T32 Training Grant Award Committee, 2010-present; Member, Microbiology &Immunology Department Seminar Series Committee, 2008-present; Member, Planning committee for the Annual Conference on Immunology, 2009-present; Member, Planning committee for the Annual Microbial Pathogenesis Conference, 2008-present; Chair, Planning committee for the Annual Microbial Pathogenesis Conference, 2009; Member, Graduate Affairs Committee, 2008-present.

**Iain Hay**
- Chair of the Department of Microbiology & Immunology; Member of the Basic Science Council; Member of the Executive Committee.

**Amy Jacobs**
- Microbiology and Immunology Graduate Affairs Committee; IGPBS Admissions Committee; Departmental Seminar Series, Committee Chair.
Paul Knight
Director of Medical Scientist Training Program (MSTP); Director of Research for Department of Anesthesiology.

Thomas Melendy
Course Organizer, MIC501, Graduate Microbiology Core Course; Department Representative to the UB-SOM Faculty Council; Member of the Faculty Council Steering Committee; Member of the Dean’s Executive Committee; Member of the SOM Promotions Committee; Representative to the UB SOM Phase 1 Committee.

John Panepinto
SMBS Faculty Council Representative, Dept. of Microbiology & Immunology; Microbiology & Immunology Chair Search Committee, Member; IGPBS Admissions Committee, Member.

Laurie Read
Director, Ph.D. Program in Biomedical Sciences; Course Director, BMS 511; Member, Junior Faculty Mentoring Committee; Course Director, MIC627.

Kate Rittenhouse-Olsen
Search Committee for the Director if the Honors Program UB, Presenter for the UB Center for Educational Collaboration for the STEM program for Buffalo Public Schools, Search Committee for BCLS faculty member, UB Faculty Entrepreneur Award Committee, UUP chapter committee to oversee distribution of Individual Development Awards Program, IREWG steering committee, Chair of the SMBS unqualified promotion committee, Catalyst fund review committee, Biomedical Science Undergraduate Education Committee, Director of the Biotechnology Committee.

Stefan Ruhl
School of Dental Medicine Student Research and Honors Committee, Co-Chair; Admissions Committee, School of Dental Medicine, Member; Organizer, Seminar Series in Oral Biology.

Thomas Russo
Chief, Division of Infectious Diseases; Vice Chair, Business Operations Dept. of Medicine; MSTP Admissions Committee; MSTP Steering Committee; University Biosafety Committee; University Faculty Recognition Committee; UB National Medal of Technology and Innovation nomination committee; Undergraduate Research Academy council member; Faculty Senate; School of Medicine ad hoc committee for qualified promotions; VAMC Institutional Animal Care and Usage Committee alternate; Chair, Committee for evaluation of the of the MSTP training program; T35 Steering Committee- Research in Infectious Diseases, Micro & Immunology for Med Students.

Mark Sutton
Medical School Promotions committee, School of Medicine; PPBS Steering committee, School of Medicine; Genetics, Genomics and Bioinformatics Program organizing committee, School of Medicine; Space Committee, School of Medicine; Radiation Safety Committee, Chair, (University wide); member of organizing committee for Genetics, Genomics, and Bioinformatics Program; Course coordinator for BMS 512.

Noreen Williams
Member, IGPBS Steering Committee; Chair, Departmental Junior Faculty Mentoring Committee; Course Director MIC610; Member, Preliminary examination committee.
Training of Students and Fellows

WCMP1 laboratories currently train 28 graduate students and 18 postdoctoral fellows. In addition, a number of undergraduate and high school students participate in research programs in WCMP1 laboratories each year.

In 1999, the Center was awarded an NIH Training Grant in Microbial Pathogenesis that supported four graduate students and two fellows through 2004. The first competitive renewal application for this grant was funded by the NIH through September 2011 for training of four pre-doctoral fellows. A second five-year competitive renewal of this training grant was renewed by the NIH for training of four pre-doctoral students. All Center members function as training faculty.

The Primary Investigator for the current NIH Training Grant is Dr. Laurie Read.

The 2011 – 2012 Trainees were: Julie Sudhakaran (Read Lab), Matthew Fieger (Sutton Lab), Amanda Misener (Panepinto Lab), and Christopher Greene (Connell Lab).

Members of the Center also participate in NIH training grants for medical students and undergraduate students. A number of Center members are also participant/mentors for the NIH/NHLBI Undergraduate Minority Research Program, Children's Hospital and for other minority research programs. In addition, many Center members are involved in teaching or community outreach.

The Medical Scientist Training Program (MSTP)

The MSTP program of the School of Medicine and Biomedical Sciences, directed by Dr. Paul Knight, a WCMP1 member, provides highly talented students with an opportunity to combine intensive scientific training with medical school experience. The MSTP curriculum is designed to integrate both a rigorous clinical and research experience throughout the program and to provide the student with skills needed for an academic career path. The primary purpose of the MSTP is to develop physician-scientists who will become leaders in basic, translational, or clinical research, and in clinical medicine in medical schools and teaching hospitals, and is aimed at helping students prepare for careers in which they will excel as both investigators and clinician-educators.
Conferences hosted by the WCMPI

The WCMPI has become regionally and nationally recognized for sponsoring three high quality annual symposia, each of which feature internationally recognized scientists as keynote speakers. These meetings, which are well established and involve poster presentations from UB laboratories, are a showcase for research conducted at both the WCMPI and the University at Buffalo.

The WCMPI has organized the Buffalo Conference on Microbial Pathogenesis for the past 24 years. The upcoming 25th Anniversary Conference is to be held in May of 2013.

The Annual Buffalo DNA Replication and Repair Symposium arose from the founding and organization of the Buffalo DNA Replication & Repair Group... This conference is co-sponsored with Roswell Park Cancer Institute and brings together researchers at UB and RPCI with those from Rochester, Toronto, Pittsburgh, Ithaca, New York City and Cincinnati. This meeting is now approaching its 17th year.

Since 2001, the WCMPI has co-sponsored with RPCI the Fall Buffalo Immunology Conference. This 1 ½ day conference features four to five national keynote speakers and a keynote speaker from the local immunology research community.

11th Annual Buffalo Conference on Immunology – September 12-13, 2011
Location: Barton Hill Hotel and Conference Center, Lewiston, NY
Keynote Speakers: John O’Shea, M.D.
Khashayarsha Khazaie, Ph.D., D.Sc.
Paul Kubes, Ph.D.
Anuradha Ray, Ph.D.
Dario Vignali, Ph.D.
Richard Phipps, Ph.D.
Total Attendees: 138

24th Annual Buffalo Conference on Microbial Pathogenesis – May 4, 2012
Location: Ramada Hotel and Conference Center, Amherst, NY
Keynote Speakers: Maurizio Del Poeta, M.D.
Elaine Tuomanen, M.D.
Michael Farzan, Ph.D.
Manoj Duraisingham, Ph.D.
Total attendees: 109

16th Annual DNA Replication and Repair Symposium – June 22-23, 2012
Location: Roswell Park Cancer Institute, Buffalo, NY
Keynote Speaker: Thomas Glover, Ph.D.
Total Attendees: 61
UB 2020 Activities

WCMP members have been involved in the UB2020 process since its inception. The following documents their activities during the current reporting period.

Service on UB2020 Committees

- **John Crane** – Volunteer physician, Good Neighbors Health Center, a free clinic on Jefferson Ave., Buffalo, NY. Associate Medical Director, Buffalo-Honduras Medical Mission Projects, 2004 to present.

- **Paul Knight** – Clinical and Translational Research Program Development Committee

- **Thomas Melendy** – Member, Molecular Recognition Faculty Advisory Committee

Organizing/teaching in UB20/20 related courses

- **John Crane** – Co-organizer, Global Health Day for UB medical students, January 2011.

- **Mark O'Brien** – UE141 Discover Seminar
## Bankert, Dick

### Title, Amount, and Term of Active Grants, Sponsors

<table>
<thead>
<tr>
<th>Title</th>
<th>Amount</th>
<th>Term</th>
</tr>
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<tbody>
<tr>
<td>National Cancer Institute (NIH) Grant CA108970</td>
<td>$513,720</td>
<td>2005 – 2015</td>
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<tr>
<td>Dr. Bankert—P.I. CD4+ Memory T-Cells in Human Lung Tumor Microenvironment</td>
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<tr>
<td>National Cancer Institute (NIH) Grant CA131407</td>
<td>$807,239</td>
<td>2007 – 2012</td>
</tr>
<tr>
<td>Dr. Bankert—P.I. Re-activating Memory T-Cells in the Microenvironment of Human Tumors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Institute of Allergy and Infectious Diseases (NIAID) Grant AI079188</td>
<td>$250,000*</td>
<td>2010 – 2012</td>
</tr>
<tr>
<td>Dr. Bankert—P.I. Role of Memory T-Cells in Pathogenesis and Resolution of Inflammatory Diseases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Cancer Institute (NIH) Grant CA122645</td>
<td>$41,150</td>
<td>2008 – 2011</td>
</tr>
<tr>
<td>Dr. Bankert—Subcontract P.I.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Bernstein—P.I. Rituximab Elicitation of Tumor Specific T-Cell Responses in Lymphoma Patients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Heart, Lung (NIH) Grant HL-70227</td>
<td>$1,000,000</td>
<td>2011 – 2015</td>
</tr>
<tr>
<td>and Blood Institute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Bankert—Co-Investigator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Balu-Iyer—P.I. Development and pharmacology of novel lipidic rAHF</td>
<td></td>
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</tbody>
</table>

### Honors

#### Editorial Positions and Review Boards
- Member, Editorial Board of Frontiers in Immunotherapies and Vaccines 2012-present
- Member, Editorial Board, Cancer Microenvironment 2008-present

#### Research Positions
- Member, Immunology Program, Roswell Park Cancer Institute 1999-present

### Publications


## Campagnari, Anthony

### Title, Amount, and Term of Active Grants, Sponsors

Principals Investigator on "Genetics & Biology of M. catarrhalis LOS in Otitis Media". NIH-NIDCD RO1DC005837-02 Funding period December 1, 2007-October 30, 2012. Current year's funding total direct costs $220,000.

Principal investigator on "Adapting Photodynamic Therapy into a Novel Treatment for Bacterial Infections". Buffalo Clinical and Translational Center. Funding period April 1, 2012 - March 31, 2013. Current year's funding total direct costs $35,950.

### Honors

Elected to the John Timon Society
November 2011
## Publications


## Connell, Terry

### Title, Amount, and Term of Active Grants, Sponsors

**National Institute of Dental and Craniofacial Research, “Oral Immunity and Adjuvant Receptors”, R01 DE017138, P.I. – George Hajishengallis, $1,250,000. Co-P.I. and Subcontractor – Terry D. Connell (15% effort), Total direct costs - $344,440. 08/01/10 - 07/15.**

**The John R. Oshei Foundation, “Development of a chimeric protein as a novel multivalent delivery vehicle for inducing protective immune responses to pathogens on mucosal surfaces”, P.I.-Terry D. Connell, 08/01/10 – 07/31/12, Total direct costs - $195,120.**

**Research in Infectious Diseases, Microbiology and Immunology for Medical Students, Ruth L. Kirschstein National Research Service Award, 1 T35 AI089693, P.I. – Timothy Murphy; Mentor - Terry D. Connell.**

**National Institute of Dental and Craniofacial Research, “Type II enterotoxins as mucosal immunomodulators”, R56 DE013833, P.I. Terry D. Connell, 09/26/11 - 08/31/2012, Total Direct Costs - $200,000.**

**National Institute of General Medical Sciences, “Membrane biophysics of enterotoxin-mediated immunomodulation”, R21 XXXXXX, P.I. -Arnd Pralle; Co-I - Terry D. Connell (5% effort), 9/12 – 8/14, Total Direct costs - $275,000.**

### Honors

**none**

## Publications


### Crane, John

#### Title, Amount, and Term of Active Grants, Sponsors

<table>
<thead>
<tr>
<th>Title</th>
<th>Amount</th>
<th>Term</th>
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</thead>
<tbody>
<tr>
<td>Effect of Zinc in Attaching-and-Effacing E. coli infections</td>
<td>NIH, NIAID</td>
<td>05/15/10 to 04/30/13</td>
</tr>
<tr>
<td>Research for Health in Erie County</td>
<td>NIH, NIAID</td>
<td>05/15/10 to 04/30/13</td>
</tr>
<tr>
<td>Total Direct Costs (Year 2)</td>
<td>$391997</td>
<td>05/15/10 to 04/30/13</td>
</tr>
<tr>
<td>Total Direct Costs (for all three years)</td>
<td>$1,141,943</td>
<td>05/15/10 to 04/30/13</td>
</tr>
</tbody>
</table>

#### Honors

A student supervised by Dr. Crane, Rachel Ochotny, applied for and received a prestigious IDSA Medical Scholarship Award for research in summer of 2011. The work she did was recognized at the University at Buffalo Medical Student Research Symposium with a Third Place Award. Her poster was entitled “Selection and Toxicity of Medicinal Plants used by Traditional Peruvian Healers.” Her work was carried out in Trujillo, Peru. Rachel Ochotny’s lab partner in Trujillo was medical student Rachel Simpson. As a result of her positive research experience in Peru, Rachel Simpson applied for and was accepted into the MD-PhD program here at the Univ. at Buffalo medical school.

**Recipient, American Society for Microbiology Minority Mentoring Award for 2011.**

#### Photography Awards

**Cover Photos: Infection and Immunity, April, 2011**

- WBFO Listener Photo of the Week. Jan., 2012
- WBFO Listener Photo of the Week. March, 2012

#### Publications


### Egilmez, Nejat

#### Title, Amount, and Term of Active Grants, Sponsors

<table>
<thead>
<tr>
<th>Title</th>
<th>Amount</th>
<th>Term</th>
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<tbody>
<tr>
<td>Integrating Innate and Adaptive Immunity in Cancer Therapy</td>
<td>NIH/NCI</td>
<td>2R01-CA100656-07A1 (Egilmez)</td>
</tr>
<tr>
<td>The objectives are to determine whether oral sustained-release formulations of immune modulatory cytokines/small molecule drugs can suppress tumor-promoting inflammation in the gut via induction of T-regulatory cells and/or inhibition of mast cell activity. Annual direct costs: $168,600.</td>
<td></td>
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</tr>
<tr>
<td>The objectives are: 1. To define the molecular basis of IFN -mediated conversion of immunogenic DC to IDO+ tolerogenic DC, 2. To determine whether manipulation of tolerogenic DC phenotype via sustained paracrine delivery of recombinant cytokines and pharmacological inhibitors can re-direct counter-regulation. 3. To determine whether neutralization of the regulatory rebound will achieve cure of metastatic disease. Annual direct costs: $218,770.</td>
<td></td>
<td></td>
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</table>
### Witebsky Center Membership and Accomplishments (2011-2012)

#### Honors
None

#### Publications


#### Hakansson, Anders

<table>
<thead>
<tr>
<th>Title, Amount, and Term of Active Grants, Sponsors</th>
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<tbody>
<tr>
<td><strong>SR01DE019807-01A</strong></td>
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<tr>
<td>NIH, NIDCR</td>
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<tr>
<td>Title: “Microbial Recognition of Sialic Acid Diversity in the Salivary Proteome.”</td>
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<tr>
<td>Role in project: Co-PI 10% effort</td>
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<tr>
<td>Total direct funds $1,250,000</td>
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<tr>
<td><strong>SR21DE019714-02</strong></td>
</tr>
<tr>
<td>NIH, NIDCR</td>
</tr>
<tr>
<td>Title: “Purported role of human milk in early childhood caries development.”</td>
</tr>
<tr>
<td>Role on project: PI</td>
</tr>
<tr>
<td>Effort: 20% (2.4 calendar months)</td>
</tr>
<tr>
<td>Total direct costs $275,000</td>
</tr>
<tr>
<td><strong>1F31DC011218-01A1</strong></td>
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<tr>
<td>NIH, NIDCD</td>
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<tr>
<td>Title: “The effect of a protein-lipid complex from human milk against pneumococcal otitis”</td>
</tr>
<tr>
<td>Role on project: Sponsor</td>
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#### Honors
none

#### Publications


### Hay, Ian

**Title, Amount, and Term of Active Grants, Sponsors**

<table>
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<tr>
<th>Title</th>
<th>Amount</th>
<th>Term</th>
<th>Sponsor</th>
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<tbody>
<tr>
<td>T32 AI007614-08 (Rueychan) Training in Microbial Pathogenesis</td>
<td>$128,832</td>
<td>09/30/99-08/31/11 (up to 07/31/11)</td>
<td>NIH/NIAID</td>
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<tr>
<td>R01 AI053846-08 (Arvin) Varicella-Zoster Virus: Tegument Proteins in Pathogenesis</td>
<td>$29,591 (sub only)</td>
<td>09/22/09-08/31/11 (up to 07/31/11)</td>
<td>NIH/NIAID</td>
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<tr>
<td>R56 AI018449-25A2S1 (Rueychan) Structure/Function of Varicella Zoster Virus DNA.</td>
<td>$249,899 (ARRA bridge funding)</td>
<td>09/22/09-08/31/11 (up to 07/31/11)</td>
<td>NIH/NIAID</td>
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<tr>
<td>GM092719 (Williams) A Novel Preribosomal Complex in Trypanosomes.</td>
<td>$180,000</td>
<td>09/22/09-08/31/11 (up to 07/31/11)</td>
<td>NIH, NIGMS</td>
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<tr>
<td>R01 AI020459-28 (Arvin) Varicella-Zoster Virus: T Cell/Skin Tropoisms &amp; Immunity</td>
<td>$41,440 (sub only)</td>
<td>05/05/10-04/30/15 (up to 07/31/11)</td>
<td>NIH/NIAID</td>
</tr>
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</table>

**Honors**

Invited to attend the planning meeting for the next five years of the US Army Medical Infectious Disease Research Program in April, 2011.

**Publications**

None

### Jacobs, Amy

**Title, Amount, and Term of Active Grants, Sponsors**

None

**Honors**

None

**Publications**


### Knight, Paul

**Title, Amount, and Term of Active Grants, Sponsors**

Pathogenesis of Aspiration Pneumonitis, PI, 4/1/07-3/31/12, $1,250,000, $250,000, ***Thomas Russo

Influenza Therapy by Au-nanorod 5’PPP-NS1 siRNA/cDNA Targeting of Bronchial Cells, PI, 7/22/09-6/30/11, $493,056, $243,140

Lung Contusion-Mechanisms & Interaction w/Aspiration, Mentor, 2/1/06-1/31/11, $128,780, $643,900 (K08)

**Honors**

SUNY Chancellor’s Award for Scholarship

University at Buffalo Distinguished Professor
### Witebsky Center Membership and Accomplishments (2011-2012)

#### Publications


#### Melendy, Thomas

##### Title, Amount, and Term of Active Grants, Sponsors

<table>
<thead>
<tr>
<th>Grant</th>
<th>Term</th>
<th>Cost</th>
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<tr>
<td>1R01AI095632-01A1 from the National Institutes of Allergy and Infectious Diseases</td>
<td>4/1/12 - 3/31/16</td>
<td>$1,066,365</td>
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#### Honors

None

#### Publications

None

#### O’Brien, Mark

##### Title, Amount, and Term of Active Grants, Sponsors

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<tr>
<th>Grant</th>
<th>Term</th>
<th>Sponsor</th>
<th>Cost</th>
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<tbody>
<tr>
<td>R01 GM06796612/1/08 to 11/30/12. $820,000 direct costs. Regulation of Bacterial Heme Metabolism, PI: M.R. O’Brien.</td>
<td>07/01/11 to 06/30/16</td>
<td>National Institute of Allergy &amp; Infectious Disease</td>
<td>$225,000 (annual), $1,125,000 (All years).</td>
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</table>

#### Honors

None

#### Publications


#### Panepinto, John

##### Title, Amount, and Term of Active Grants, Sponsors

<table>
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<tr>
<th>Project Title</th>
<th>Sponsor</th>
<th>Term Date</th>
<th>TDC to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress-Responsive RNA Regulons in Cryptococcus Neoformans (R01)</td>
<td>National Institute of Allergy &amp; Infectious Disease</td>
<td>07/01/11 to 06/30/16</td>
<td>$225,000 (annual), $1,125,000 (All years).</td>
</tr>
<tr>
<td>CCR4 in the Maintenance of Thermotolerance and Pathogenicity of C. Neoformans (K22)</td>
<td>National Institute of Allergy &amp; Infectious Disease</td>
<td>06/01/2008-06/30/2011</td>
<td>$250,000 Total over 3 years.</td>
</tr>
</tbody>
</table>

#### Honors

Best Abstract Award, 8th International Conference on Cryptococcus and Cryptococcosis
Witebsky Center Membership and Accomplishments (2011-2012)

Publications


Read, Laurie
Title, Laurie, and Term of Active Grants, Sponsors

<table>
<thead>
<tr>
<th>Title</th>
<th>Amount, and Term of Active Grants, Sponsors</th>
</tr>
</thead>
<tbody>
<tr>
<td>RO1 AI060260 (Read)</td>
<td>09/15/03-04/30/15</td>
</tr>
<tr>
<td>NIH/NIAID</td>
<td>$247,500</td>
</tr>
<tr>
<td>Protein Arginine Methylation in Trypanosomes</td>
<td></td>
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<tr>
<td>The long term goal of this project is to elucidate the functions of protein arginine methylation in T. brucei gene expression.</td>
<td></td>
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</tbody>
</table>

| RO1 AI077520 (Read) | 05/01/08-04/30/13 | 2.40 calendar |
| NIH/NIAID | $245,025 |
| Cis- and trans-acting Factors in Mitochondrial RNA Decay |
| The long term goal of this project is to elucidate the roles of specific cis-acting elements and trans-acting factors in mitochondrial RNA decay in Trypanosoma brucei, and to understand the mechanisms by which these factors regulate mitochondrial gene expression. |

| RO1 AI061580 (Read) | 12/01/05-11/30/10 | 0.6 calendar |
| NIH/NIAID | $171,459 |
| Regulation of RNA Editing in Trypanosoma brucei |
| The long term goal of this project is to understand the mechanism by which RBP16 regulates specific editing events during the life cycle of Trypanosoma brucei. |

| T32 2T32AI007614 (Read) | 09/01/11-08/31/16 | 0.6 calendar |
| NIH/NIAID | $148,375 |
| Training in Microbial Pathogenesis |
| The long term goal of this training grant is to provide training to Ph.D. students in diverse aspects of the biology of human pathogens, and to provide them with skills to succeed as biomedical scientists. |

Honors
None

Publications


## Rittenhouse-Olsen, Kate

### Title, Amount, and Term of Active Grants, Sponsors

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Source of Support</th>
<th>Title</th>
<th>Total Direct Costs</th>
<th>Role</th>
<th>Entire Period of Support</th>
<th>Percent effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kate Rittenhouse-Olsen</td>
<td>NIH</td>
<td>King Saud University Chairs Research Fund. Title: Development of a Cancer Vaccine: Vaccines to TF-Ag.</td>
<td>$300,000</td>
<td>Co-investigator</td>
<td>2011-2012</td>
<td>4%</td>
</tr>
</tbody>
</table>

The purpose of this project is to perform vaccine development studies to create an immune response to the pancarcinoma antigen, TF-Ag.

### Honors

- Selected to serve as a judge for New York Academy of Sciences for the 2012 Blavatnik Awards for Young Scientists
- External reviewer for University of Wisconsin Pharmacology and Toxicology Program
- University at Buffalo Faculty Award for Excellence in Mentoring Undergraduates in Research and Creative Activities

### Publications

- **Rittenhouse-Olsen, K.** Multiplexing for Rapid Diagnostic Differentiation. LabQ 2010

## Ruhl, Stefan

### Title, Amount, and Term of Active Grants, Sponsors

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<th>Title</th>
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<th>Term</th>
<th>Sponsors</th>
</tr>
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<tbody>
<tr>
<td>Microbial recognition of sialic acid diversity in the salivary proteome</td>
<td>$30</td>
<td>2011-2012</td>
<td>NYSTAR (UB-CAT). Title: &quot;Saliva Spectral Analysis for New Fertility Diagnostic&quot; (Principal Investigator)</td>
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### Honors

**UB-SDM Society for the Advancement of Dental Research Award (2011)**

**SCIENTIFIC AWARDS WON BY STUDENTS 2011**
- Seok-Mo Heo: ABSTRACT AWARD, Rochester Conference on Oral Biology.
- Supaporn Thamadilok: JAMES ENGLISH RESEARCH AWARD FOR PH.D. STUDENTS, School of Dental Medicine Research Day, University at Buffalo.
- Gregory White: UNDERGRADUATE MARYANNE MATHER CLINICAL RESEARCH AWARD, School of Dental Medicine Research Day, University at Buffalo.
- Gregory White: HINMAN STUDENT RESEARCH SYMPOSIUM AWARD, School of Dental Medicine Research Day, University at Buffalo.
- Gregory White: WRIGLEY CLINICAL SALIVARY RESEARCH AWARD FOR DENTAL STUDENTS, 89th General Session & Exhibition of the IADR, San Diego.

### Publications

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Journal</th>
<th>Year</th>
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</thead>
</table>

### Russell, Michael

**Title, Amount, and Term of Active Grants, Sponsors**

- **The John R. Oishei Foundation, Buffalo, NY; “The Th17 axis of immunity in infectious and autoimmune diseases”**
  - PI: M.W. Russell
  - Awarded 07/01/08 - 06/30/12
  - Total award $200,000
  - Current direct costs (no-cost extension)

- **NIH/R21-AI074791-02; “Gonococcal inflammatory immune responses”**
  - PI: M.W. Russell
  - Awarded 02/01/09 - 01/31/13
  - Total direct costs $275,000
  - Current direct costs (no-cost extension)

- **NIH/R21-AI092348-01 “Imaging antigen and adjuvant uptake for enhancing response to mucosal vaccines”**
  - PI: M.W. Russell
  - Awarded 12/3/10 – 11/30/12.
  - Total direct costs $275,000
  - Current direct costs $150,000

- **NIH/R01-DE13833-10; “Type II Enterotoxins as Mucosal Immunomodulators” Co-Investigator**
  - PI: T.D. Connell
  - Awarded 08/01/06 - 07/31/12
  - Current direct costs (no-cost extension)
  - Total direct costs $200,000

### Honors

- International Association for Dental Research: Distinguished Scientist Awards – Research in Oral Biology Award committee (2007-12)
- Research Scholar, Department of Medical Microbiology and Immunology, University of Wisconsin, Madison (Jun – Sept 2011)
### Publications


### Russo, Thomas

#### Title, Amount, and Term of Active Grants, Sponsors

<table>
<thead>
<tr>
<th>Grant ID</th>
<th>Amount (total direct costs)</th>
<th>Start Date</th>
<th>End Date</th>
<th>Sponsor/Program Description</th>
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<tbody>
<tr>
<td>RO1 HL048889-08A2</td>
<td>$1,250,000</td>
<td>3/31/07</td>
<td>4/1/12</td>
<td>NIH/NHLBI “Pathogenesis of Aspiration Pneumonitis” Role: Co-Investigator (10% effort)</td>
</tr>
<tr>
<td>GRANT10470129 Ehrensberger (PI)</td>
<td>$395,400</td>
<td>9/1/10</td>
<td>9/1/13</td>
<td>US ARMY Medical Research and Materiel Command, Congressionally Directed Medical Research Program “Electrical Stimulation of Titanium for the Prevention and/or Eradication of A. baumannii and S. aureus Biofilm Infections on Osseointegrated Prostheses” Role: Co-Investigator (5% effort)</td>
</tr>
<tr>
<td>NIH/Fogarty International Center 1D43TW007991-01A2 PI: Morse, GD</td>
<td>$1,501,194</td>
<td>4/2009</td>
<td>3/2014</td>
<td>Antiretroviral Pharmacology Training in Resource Poor Countries Role: Potential faculty mentor (2.5% effort)</td>
</tr>
<tr>
<td>VA Merit review: PI: Thomas Russo. Direct Costs $603,976.00 anticipated start/end dates 04/01/11-03/31/15 “Analysis of A. baumannii capsule as a vaccine candidate” The goal is to determine the prevalence of capsular serotypes in A. baumannii the potential of capsule a vaccine candidate. Role: Principal Investigator (20% effort)</td>
<td></td>
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<tr>
<td>1R21AI088318-01A1 Russo (PI)</td>
<td>$275,000</td>
<td>8/1/11</td>
<td>7/31/13</td>
<td>NIH/NIAID “Identification of genes essential for survival of hypervirulent Kleb. pneumonia” The goals of this grant are to identify virulence factors essential for the virulence of a new hypervirulent variant of K. pneumonia” Role: Principal Investigator (10% effort)</td>
</tr>
</tbody>
</table>
W81XWH-11-2-0218  Gulick (PI) $1,744,854 (total costs) 9/26/11-10/25/14
DOD
“Identification of New Drug Targets in Multi-Drug Resistant Bacterial Infections”
The goals of this project are to identify and validate new antimicrobial targets in Acinetobacter baumannii.
Role: Co-PI

**Honors**

Appointed Vice Chair for Business Operations for the Department of Medicine

**Publications**

Book Chapters


**Sutton, Mark**

**Title, Amount, and Term of Active Grants, Sponsors**

NIH RO1 GM066094, Regulation of DNA replication and repair, PI-Sutton, MD. June 1, 2008-May 31, 2013
Total Direct Costs for Entire Period of Award: $989,000.
Total Direct costs for this year: $191,250.

**Honors**

none

**Publications**


<table>
<thead>
<tr>
<th>Title, Amount, and Term of Active Grants, Sponsors</th>
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</table>
| R01077548  
Williams- PI  
NIH  
Ribosomal biogenesis in *T. brucei*  
4/01/10- 3/31/14  
$1,940,500 total costs |  |
| 3610003  
Williams- PI  
American Heart Association  
Ribosomal Biogenesis as a Chemotherapeutic Target for *T. cruzi*  
07/01/10- 6/30/13 |  |

**Honors**
none

**Publications**

- Characterization of a Novel Association between Two Trypanosome-Specific Proteins and 5S rRNA.
  PMID: 22253864

- Eukaryotic 5S rRNA biogenesis.
  PMID: 21957041

- Comparative genomic analysis of dinucleotide repeats in Tritryps.
  PMID: 21824509