



CIMD Newsletter



VOLUME VI, ISSUE II

APRIL 2008

NIH Funding for CIMD Grows in Fiscal Year 2007

The Center for Immunology and Microbial Disease ranked 57th for total NIH funding out of 102 medical schools that reported under the category of Microbiology/Immunology. It should be noted that CIMD ranked ahead of such schools as the University of Southern California, Boston University, Texas A & M, University of

Texas Health Science Center in Houston, George Washington University, Georgetown, and University of Florida. In 2007, CIMD NIH funding rose to \$4.1M from \$3.1M in 2006.

CIMD contributed 37% of all Albany Medical College NIH funding in 2007. This is a remarkably high percent-

age, exceeded by only one medical school's Microbiology/Immunology Department. The median value for all medical school departments is 5%.

Inside this issue:

Dr. Fuller Featured on Cover of AMC Today	2
Dr. Kirimanjswara Receives Fellowship	2
Dr. Melendez Receives \$1.6M Grant	2
Conferences, Meetings and Study Sections	3
Peer-reviewed Publications	3
Other News	4
Seminars	4

Graduate Studies Program Poster Day

Four CIMD Graduate Students were selected for having presented excellent research posters.

1st and 2nd Year Students

Bhuvana Katkere

"Effect of Interferon- γ Activation on Macrophage Antigen Processing"



4th Year Students

Douglas Durrant

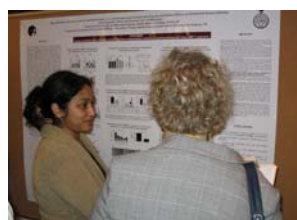
"IL-12 Treatment Alleviates IL-17-mediated Allergic Lung Inflammation in the Absence of T-bet Regulation"



Senior Students

Jaya Dasgupta*

"Age-dependent Induction of Matrix Metalloproteinase-1 is a Redox-dependent Process Requiring the Activation of the c-Jun N-terminal Kinase Pathway"



Senior Students

Sita Subbaram*

"Remodeling Chromatin: Reactive Oxygen Species as a Key Player in MMP-1 Transcription"



*Invited to give an oral presentation on Awards Day.

Dr. Fuller On Cover of Albany Med Today



Deborah Fuller, Ph.D., Associate Professor, joined CIMD last year. One reason for her move was to be part of the cutting-edge vaccine research programs being developed in the Center.

Dr. Fuller and her research team (including colleagues at the University of Pittsburgh and the University of Chicago) were recently awarded a 5-year, \$5.4M grant from the National Institute of Health (NIAID) to develop a “universal” flu vaccine. The idea behind this type of vaccine is that you don’t have to worry about strains or mutations. This vaccine would fight all forms of the flu.

Dr. Fuller has been work-

ing in the field of vaccine research for more than 17 years. She has also spent considerable time in industry and development programs.

Dr. Fuller’s work has three main components. The first is to use a DNA vaccine that will activate both arms of the body’s defenses. Current vaccines activate the body’s antibody response, which attempts to stop a virus before it enters the body’s cells. A DNA vaccine would also activate a T-cell response, which would identify infected cells and shut them down before they can replicate.

The second component would activate a response in the lungs, which is the first

site of exposure for flu virus.

The third component uses computer models to better predict changes that need to be made in the sequence of the vaccine to make it more effective.

Studies are also being done to develop a needle-free delivery of the vaccine, through the skin, which in turn would allow generation of stable stockpiles and worldwide distribution without the need for refrigeration.

Vaccine preparations should be ready for initial clinical trials in three to five years.

Dr. Kirimanjeswara Receives Fellowship

Girish Kirimanjeswara, D.V.M., Ph.D., Postdoctoral Fellow, has received a 2-year Senior Research Training Fellowship from the

American Lung Association for \$65,000 in support of his research entitled, “Mechanism of antibody-mediated protection against

intracellular respiratory pathogens.” (Mentor: Dennis W. Metzger, Ph.D.)



Dr. Melendez Receives \$1.6M NIH Grant

J. Andrés Melendez, Ph.D., Associate Professor, received a \$1.6 million, 5-year research grant from the NIH, National Institute on Aging in support of his research entitled, “Redox-

Control of MMP-1 and Senescence.”

Congratulations!



Conferences, Meetings and Study Sections

[Timothy J. Sellati, Ph.D.](#), attended the Gordon Conference *Biology of Spirochetes*, January 20-25, 2008, in Ventura, CA. [Bikash Sahay, D.V.M., Ph.D.](#), Postdoctoral Fellow, presented his research entitled, "Requirement of CD14 for the Expression of Negative Regulators of Inflammation via p38-dependent Signaling." Also presenting was [Matthew C. Haller](#), graduate student. His talk was entitled, "Matrix Metalloproteinase 9 Does not Play a Critical Role in the Mouse Model of Lyme Disease." Both Bikash and Matthew received travel awards.

[Dennis W. Metzger, Ph.D.](#), was invited to be the Vaccine and Adjuvants Session Leader and present his research entitled, "Stimulation of Pulmonary Immunity by IL-12 as a Vaccine Adjuvant" at the NIAID Workshop *Immune Defense Mechanisms at the Mucosal Surface*, hosted by the Division of Allergy, Immunology and Transplantation, National Institute of Allergy and Infectious Diseases, held January

29-30, 2008, in Bethesda, MD.

[Jing-Ren Zhang, D.V.M., Ph.D.](#), was asked to serve on the National Institutes of Health *Drug Discovery and Mechanisms of Antimicrobial Resistance* Study Section, February 7-8, 2008 in Bethesda, MD. Dr. Zhang was also asked to serve on the National Institute on Deafness and Other Communication Disorders CDRC Review Panel for Training Grants, February 14-15, 2008.

[Dennis W. Metzger, Ph.D.](#), was asked to serve on the Allergy, Immunology and Transplantation Research Committee to review training grant applications for the National Institute of Allergy, Immunology and Infectious Diseases, February 11-13, 2008, in Washington, DC.

[Justin Wilson](#), graduate student, was selected to receive a travel award and gave a poster presentation entitled, "Modulation of

Macrophage Function for Immune Evasion by *Francisella tularensis*," at the 2008 Moffitt Cancer Center Retreat on February 22, 2008, in Tampa, FL. (Mentor: [James R. Drake, Ph.D.](#))

[Edmund J. Gosselin, Ph.D.](#) was asked to serve on the National Institute of Allergy and Infectious Diseases *Non-HIV Microbial Vaccine Development* Study Section, February 25-26, 2008, in Los Angeles, CA.

[Dennis W. Metzger, Ph.D.](#), was invited to give a seminar to the Division of Viral Products at the FDA Center for Biologics on March 6, 2008 in Bethesda, MD. His lecture was entitled, "Inhibition of Pulmonary Anti-bacterial Defense During Recovery from Influenza Virus Infection."

[Deborah L. Fuller, Ph.D.](#), was invited to present her research entitled, "Immunotherapeutic DNA Immunization in Combina-

tion with Antiretroviral Drug Therapy Increases Immune Function and Reduces the Viral Reservoir in SIV-Infected Rhesus Macaques," at the 2008 Palm Springs Symposium on HIV/AIDS *Novel Therapeutic Targets*, March 6-9, 2008, in Palm Springs, CA.

[Dennis W. Metzger, Ph.D.](#), was invited to present his research entitled, "Mucosal vaccination against pulmonary bacterial infections," at the Gordon Conference *Biology of Acute Respiratory Infection* on March 9-14, 2008, in Ventura, CA. Postdoctoral Fellows [Girish Kirimanjeswara, D.V.M., Ph.D.](#), and [Keer Sun, Ph.D.](#), presented posters entitled, "The Mechanism of Synergy Between Cell-mediated and Humoral Immune Responses in Protection Against Acute Respiratory Pathogens," and "Inhibition of Pulmonary Anti-bacterial Defense by IFN- γ Produced During Recovery from Influenza Virus Infection," respectively.

Peer-reviewed Publications



Xu Y, [Harton JA](#), and Smith BD. CIITA mediates interferon-gamma repression of collagen transcription through phosphorylation - dependent interactions with co-repressor molecules. *J Biol Chem.* 283:1243-56, 2008.

Paskaleva EE, [Lin X](#), [Duus K](#), McSharry JJ, Veille JC, Thornber C, Liu Y, Lee DY, and [Canki M](#). Sargassum fusiforme fraction is a potent and specific inhibitor of HIV-1 fusion and reverse transcriptase. *Virology* 5:8, 2008.

Sierralta WD, Epuñan MJ, Reyes JM, Valladares LE, Andersen TT, [Bennett JA](#), [Jacobson HI](#) and Pino AM. A peptide derived from alpha-fetoprotein inhibits the proliferation induced by estradiol in mammary tumor cells in culture. *Oncol Rep.* 19:229-35, 2008.

Sabirov A and [Metzger DW](#). Intranasal vaccination of infant mice induces protective immunity in the absence of nasal-associated lymphoid tissue. *Vaccine* 26:1566-76, 2008.

Sabirov A and [Metzger DW](#). Mouse models for the study of mucosal vaccination against otitis media. *Vaccine* 26:1501-24, 2008.



Albany Medical College

**CENTER FOR IMMUNOLOGY
& MICROBIAL DISEASE AT
ALBANY MEDICAL COLLEGE**

Albany Medical College
47 New Scotland Ave., MC-151
Albany, NY 12208-3479

Phone: 518-262-6750
Fax: 518-262-6161

*Knowledge is our goal,
Teamwork and Excellence
are our standard.*

Other News Items...

- [Dennis W. Metzger, Ph.D.](#), was recently re-appointed as a member of the External Advisory Board of NIH's *Center of Biomedical Research Excellence (COBRE)* at Dartmouth Medical School to review the school's research programs on March 20-21, 2008.
- CIMD was well represented by 18 faculty, postdocs and graduate students at the 2008 Tularemia Workshop held March 30-April 1, 2008, at The Sagamore Resort and Conference Center in Bolton Landing, NY. [Jing-Ren Zhang](#) and [Meenakshi Malik](#) gave oral presentations and [Shekhar Bakshi](#), [Constantine Bitsaksis](#), [Jonathan Harton](#), [Karsten Hazlett](#), [Manish Mahawar](#), [Amanda Melillo](#), and [Jingliang Su](#) presented posters. [Dr. Metzger](#) co-chaired the Adaptive Immunity session. Albany Medical College served as the Workshop Organizer and coordinated travel arrangements for international attendees.



Upcoming CIMD Seminars

April 21, 2008

12 Noon, MS-316

Dennis W. Metzger, Host

Lester Kobzik, M.D.

Professor of Pathology

Director of Molecular & Integrative Physiological Sciences

Dept. Of Environmental Health, Harvard School of Public Medicine

"Scavenger Receptors and Lung Host Defense"

April 28, 2008

12 Noon, MS-316

Justin Wilson, Host

Craig R. Roy, Ph.D.

Associate Professor

Center for Microbial Pathogenesis

Yale University School of Medicine

"Manipulation of Membrane Transport Proteins by the Intracellular Pathogen Legionella pneumophila"

May 5, 2008

12 Noon, MS-316

Jing-Ren Zhang, Host

John S. Gunn, Ph.D.

Associate Professor

Center for Microbial Interface Biology

Yale University School of Medicine

"Francisella Intramacrophage Survival: Phosphatases and Virulence Gene Regulators"

May 12, 2008

12 Noon, MS-316

Douglas Durrant, Host

Andrea Cooper, Ph.D.

Member, Trudeau Institute, Inc.

"IL-12 and Tuberculosis: An Old Story Revisited"

May 19, 2008

12 Noon, MS-316

Jing-Ren Zhang, Host

Yi-Wei Tang, M.D., Ph.D.

Associate Professor of Medicine & Pathology, Infectious Disease

Director, Molecular Infectious Diseases Laboratory

Vanderbilt University Medical Center

"Staphylococcus aureus: A Super Bug with New Challenges and Opportunities in Diagnostic Molecular Microbiology"

June 2, 2008

12 Noon, MS-316

Jing-Ren Zhang, Host

Zhao-Qing Luo, Ph.D.

Assistant Professor

Department of Biological Sciences

Purdue University College of Sciences

"Making a Living in a Hostile Environment: Lessons from Legionella pneumophila"