NEWSLETTER

January 2017

Department of Infectious Diseases and Microbiology
Graduate School of Public Health
University of Pittsburgh

The Opioid Epidemic and a Long Overdue Response

Linda Rose Frank, PhD, MSN, ACRN, FAAN
Associate Professor of Public Health, Medicine, and Nursing

As we begin 2017 as the Department of Infectious Diseases and Microbiology, we must continue our efforts to address the drivers of infectious diseases within the US and worldwide. In this regard, the US Surgeon General released a report on the opioid epidemic in October 2016.[1] Pitt Public Health has recently funded several projects focused on substance use. The University of Pittsburgh's Institute of Politics spearheaded a report on opioid use in our region and potential solutions that was released in fall 2016.[2] Time has come for a thoughtful, scientific, targeted, and inclusive response across all sectors of stakeholders.

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INSIDE

A message to IDM alumni and friends from Charles R. Rinaldo, Ph.D., Chairman of the Department of Infectious Diseases and Microbiology

Greetings to alumni, friends and colleagues,

Several new items stand out in this newsletter. Dr. Peter Salk's visit in January, 2017, was met with great enthusiasm as Peter interacted with a wide range of IDM faculty members, postdoctoral fellows and graduate students. Above all, Dr. Salk brings a wealth of insight and knowledge on the value of vaccines in preventing infectious diseases.

Our 19th IDM Annual Meeting in September, 2016 was unique in its use of Dr. David Rowe's drone to take overhead pictures, displayed in this newsletter. Beyond the usual fun and games, we had excellent presentations be several new IDM faculty that emphasized unique aspects of their background that led them to IDM.

Several months ago most of the IDM faculty members moved to their new offices in the south end, second floor, of Parran Hall. It is remarkable how simply being close to our colleagues for the first time in many years was met with great enthusiasm, and is fostering a new *esprit de corp*. It is particularly beneficial to our work in that these offices are now directly linked to our new laboratory pavilion suites. The northern half of the second floor of Parran Hall, including my office, additional faculty offices, and staff and student offices, is now under renovation and is anticipated to be occupied this fall.

We are well aware of the tumultuous changes in 2017 brought about by our 45th President. Besides our personal lives, this affects IDM in several ways. This includes potential radical shifts in federal funding particularly for HIV/AIDS public health measures. In 2013 as governor of Indiana, our new Vice President led a major assault on Planned Parenthood in Scott County, which provided much of the HIV testing for that area. What followed was a major outbreak of HIV infections in opioid users. It took more than two months after the outbreak was detected for the governor to act by reversing his stance on opposing needle exchange as the local HIV epidemic continued, and only after he prayed on it. Now we have the issue of a ban on immigration from certain countries, leading to uncertainly about the visa status of our foreign students and postdoctoral fellows. I recall my parents, both second generation immigrants from Southern Italy, telling of discrimination against Italians in America. I applaud Chancellor Gallagher's statement on this issue, excerpted here:

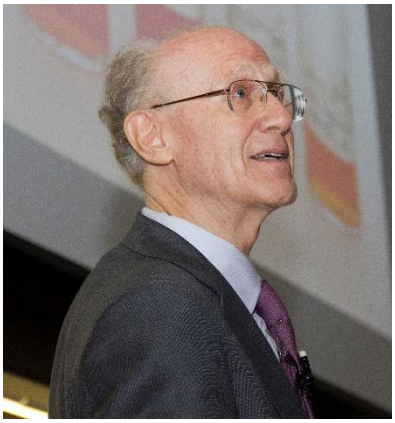
"Our country was founded by individuals escaping from persecution based on their religion. Our government was founded on a belief that 'all men are created equal.' We are a nation of immigrants whose history was enriched by the waves of immigrants crossing onto our shores. Similarly, the University of Pittsburgh is built on a foundation of values that rejects discrimination and embraces diversity as essential to the tasks of education and discovery. Our University's remarkable success story has been written by individuals who came from all over the world—by men and women who shared all types of religious beliefs. They came to Pittsburgh to learn, to teach, to discover, and to serve. Without question, we are a better university because of them." Pitt Chancellor Patrick Gallagher, January 28, 2017

With kind regards,

Peter Salk, M.D., pays IDM a visit: An eclectic mix of eradicating polio, the intricacies of mindfulness/meditation, and the mystery of anelloviruses

In January, 2017, IDM and Pitt Public Health had the pleasure of hosting a visit by our IDM Visiting Professor Dr. Peter Salk. Dr. Salk presented a talk "Polio Eradication: Prospects and Progress" that was open to the Pitt community and public. Dr. Salk's father, Jonas Salk, MD, invented the polio vaccine at the University of Pittsburgh School of Medicine in the early 1950s.

IDM kept Dr. Salk busy during his several day visit with intimate, interactive meetings with our faculty members, postdoctoral fellows and graduate students. Sarah Krier, Ph.D., Needs Assessment Manager for the HIV Care and Prevention Project in IDM, was effusive about her meeting Dr. Salk. "I really enjoyed talking with Dr. Salk. We discussed the challenges facing the eradication of polio and other infectious diseases. I took away a renewed sense of the importance of community education, especially among the younger generations who don't remember the devastation/urgency of infectious diseases such as polio."



Indeed, the realistic hope is that through concerted and focused use of the vaccine, polio will go the way of smallpox and be eradicated - within our lifetime.

Eradicating polio is not the only focus of Peter Salk. He follows his father's lead in exploring "metabiologic evolution", where there is a "need to increase our breadth of consciousness as human beings to expand our range of choice for the wisest alternatives"[1]. Indeed, Jonas Salk felt that our fate would best be determined by the "survival of the wisest"[2]. As David Givens, Project Director for the HIV Care and Prevention Project in IDM, explained "Dr. Carol Greco (Associate Professor of Psychiatry and Rehabilitation Science and Technology) and I met with Dr. Salk and had a lively discussion about mindfulness and other forms of meditation and spirituality. We talked about the Center for Mindfulness and Consciousness Studies at Pitt, what kinds of research its members were engaged in, and future opportunities and potentials in the field. In particular, we discussed at length the potential for quantitatively measuring mindfulness and causal relationships with various markers and measures of health, including biomarkers, brain scans, psychological metrics, and larger societal health and wellness interventions."

Dr. Salk also visited with Dr. David Rowe that morning and discussed the potential for the use of anellovirus plasma loads in monitoring immune competence status, particularly in immunocompromised solid organ transplant recipients. Although intrigued by this idea, the potential origins of this ubiquitous human virus for which there is no known disease became the main focus of the conversation. The discussion then ranged afield to include the origins of all viruses and whether a structural rather than genetic approach to the issue made more sense. They agreed that genome segmentation in RNA viruses was probably not an ancient characteristic but a relatively new one, and a relatively new concept in virology.

Before leaving Dr. Salk admired Peaches seemingly outgoing personality. (Peaches is an 8" African Cichlid that lives in Dr. Rowe's office.)

Dr. Rinaldo, Chairman of IDM, revealed his concern that the planning for Dr. Salk's visit was in some cases a last minute process to meet everyone's availability and set an orderly schedule. "I was extremely pleased with the outcome", he said, "Peter is so gracious and engaging that everyone came away wishing they had more time to interact with him."

1. Fully Present: The Science, Art, and Practice of Mindfulness, by Susan Smalley PhD, Diana Winston, L Smalley (Da Capo Lifelong Books, 2010)

2. The Survival of the Wisest, by Jonas Salk MD (Harper & Row, 1973)

The Opioid Epidemic and a Long Overdue Response

(continued from cover page)

This growing and lethal public health problem must be addressed with the resources, commitment, and resolve by our department, Pitt Public Health, the health care system and the community in a coordinated way. It is not possible to discuss HIV or viral hepatitis without discussing substance misuse and abuse as they are intertwined, making a coordinated and effective response by the public health community so important. Nor is it possible to discuss opioid use without addressing the lack of mental health and substance use services, and issues of poverty, unemployment, and homelessness.

A recent report[3] from the Institute for Health Care Improvement (IHI) identifies causes of the worsening of this epidemic:

1. *Lack of coordination of approaches and resources*
2. *Lack of implementation of promising practices*
3. *Failure to engage local communities and across multiple stakeholders*
4. *Failure to spread promising practices*
5. *Direct and indirect counter forces by the pharmaceutical industry*
6. *Lack of awareness among patients and consumers of the danger of prescription opioids"*

The opioid epidemic is not limited to urban areas but has taken hold in suburban and rural areas in our region and across the US. An adequate response requires that interventions developed need to be utilized "in the field" through engagement with communities for joint problem solving and design of interventions. Intervention in this opioid epidemic cannot be accomplished by sitting behind a desk in an office. A system-wide approach across communities within locales and regions is needed. In my view, this cannot be accomplished without coordinated action. Within this context, new and innovative interventions need to be developed that address co-morbidities and other "drivers" of substance use. There has to be retraining of providers of health care and not just physicians but pharmacists, nurses, nurse practitioners, physician assistants, and dentists. Training must include not just opioid prescribing practices but alternative treatment options for pain management, evidenced-based substance use treatment interventions, harm reduction, use of naloxone to prevent overdose deaths, and addressing stigma associated with substance use.

For our department and Pitt Public Health, there are many actions that can be taken to assume the leadership needed in this epidemic.

1. Integrate substance use and misuse treatment and intervention content in curricula across programs. It is not enough just to describe the scope of the problem. Students and faculty need to be challenged to be engaged in developing approaches to solve this problem and working in collaboration the community.
2. For faculty not already involved in public health practice or direct work with community organizations, they should consider obtaining this type of experience.
3. Collaboration across department and schools within the University of Pittsburgh are needed to develop a robust research and intervention plan.
4. Development of ongoing forums for community collaboration and input into this plan should be ongoing and comprised of genuine partnerships.
5. Health professions and public health training initiatives should be continued through GSPH training centers, such as the Public Health Training Center and the MidAtlantic AIDS Education & Training Center.

6. Incorporation of the opioid misuse prevention and treatment as well as related issues of mental health care, hepatitis, and HIV should be included in strategic planning within IDM, Pitt Public Health and the University of Pittsburgh Health Sciences.

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[1] Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health, DHHS, 2016.
[2]Continuum Of Care Approach: Western Pennsylvania's Response To The Opioid Epidemic, Institute of Politics, University of Pittsburgh, 2016.
[3]Martin L, Laderman, M, Hyatt, J, Krueger, J. Addressing the Opioid Crisis in the United States. IHI Innovation Report, Cambridge, Massachusetts: Institute for Health Care Improvement, April 2016

There's no vaccine yet for CMV

By Jill Daly / Pittsburgh Post-Gazette
August 2, 2016

Despite the prevalence of cytomegalovirus or CMV, screening for the virus is not commonly done.

Work on a vaccine for CMV has been going on for many years, but at this point only some antiviral drugs are available to lessen the effect of an infection, including valganciclovir, said microbiologist **Charles Rinaldo, Ph.D.**, an expert in cytomegalovirus at the University of Pittsburgh Graduate School of Public Health.

"There's a lot of push to get a CMV vaccine," he said. "Trials are going on, but nothing is proven to do the job. We're trying to improve the drugs as well, make them less toxic."

Supporting a vaccine that would both prevent a person's first CMV infection and reduce the effect of a reactivated infection is obstetrician/gynecologist Richard Beigi, chief medical officer at Magee-Womens Hospital of UPMC.

"It is true that this particular infection receives disproportionately low attention and resources," he said. "In general, public health officials are reluctant to do mass testing unless there are interventions."
Pitt's Mr. Rinaldo said the testing is simple.

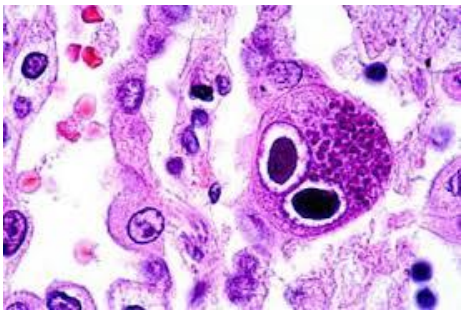
Babies at Magee were part of a National Institutes of Health study on CMV screening, not yet published. Out of a total 100,000 babies, more than 19,000 babies at Magee were screened and followed for four years.
Researcher Marian Michaels, infectious disease specialist at Children's Hospital, said part of the study found that saliva testing is the most accurate.

"Somewhere during my lifetime, I want us to be screening for CMV for everyone. … The logistics are not worked out.

"Now everyone who fails a hearing screen twice, we want them to be screened for CMV," she said. Other babies with symptoms associated with CMV should also be screened, she added.

Dr. Michaels said new research is being planned to test the effectiveness of treating children who test positive for CMV but have no symptoms.

"We don't want to wait until 3 months to get help." ■



CMV inclusion bodies

IDM is Awarded 2 Grants for Zika Research

With no direct federal funding for Zika research and mosquitoes already infecting Floridians with the virus, the University of Pittsburgh Graduate School of Public Health in collaboration with a Brazilian research foundation is funding research on its own.

During a public event last year, Pitt's Cura Zika program announced six research grant winners, including four based at Pitt, with $400,000 available through a $200,000 contribution from the university that was matched by an anonymous donor.

Those studies, most already underway, focus on how the virus infects the mother's placenta leading to infection of brain cells of the fetus, with others working to understand the infection process as a means of developing vaccines to stop the explosive pandemic in South American, Central America and Caribbean nations that has reached mainland United States.

"Given the fact there is no new funding through the government for Zika research, we need to do it ourselves, and so we are announcing awards for research to get things started," said Donald S. Burke, dean of Pitt Public Health and the Cura Zika program director. "It is unconscionable that there isn't any new government funding available for Zika research in the face of this epidemic that destroys the lives of infants and families."

Through Cura Zika, Pitt is collaborating with FIOCRUZ — the Brazilian Ministry of Health's Fundacao Oswaldo Cruz Foundation, described as the most prominent science and technology health institution in Latin America.

Zika is a mosquito-borne viral infection that can be sexually transmitted, with the potential to produce microcephaly in infants born to mothers infected with the virus. That birth defect involves a smaller head and smaller brain, which might not have developed properly. The Zika virus also increases the risk of Guillain-Barre Syndrome and other neurological disorders in people who've contracted the infection, Cura Zika said in its announcement.

Two IDM-based projects were funded:

• How dendritic cells — the quarterbacks of the immune system — respond to the Zika virus infection is the focus of research by **Dr. Robbie Mailliard**, also an assistant professor at Pitt Public Health. It's still unclear, he said, whether a vaccine could be used to prompt the dendritic cells to activate T-cells to foster a better attack against the virus. One problem is that previous exposures to viral infections including Dengue and even West Nile might confuse rather than enhance an effective immune response. That variation in the immune process adds to the difficulty in developing a vaccine but also could provide a vaccine target, he said.

• **Dr. Isabelle Freire Tabosa Viana**, a postdoctoral associate at Pitt Public Health, is using innovative technologies to develop a non-viral DNA vaccine against the Zika virus. The vaccine involves DNA coding for the virus proteins and for a protein called LAMP (lysosomal-associated membrane protein). That combination along with a molecular enhancement is intended to generate a strong immune response against the virus and protect against infection, she said.

"Each study will receive funding for one year, and we expect additional funding downstream," Dr. Burke said. "These are pilot projects to develop data and lead to greater funding from other agencies and hopefully Zika funding through the government." ■

Donald Ainslee "D.A." Henderson

Donald Ainslee "D.A." Henderson, an Adjunct Professor in IDM who led a worldwide effort that eradicated smallpox in 1977 — the first such successful effort in history — died Aug. 19, 2016, in Towson, Maryland. He was 87.

Henderson was a distinguished scholar in the UPMC Center for Health Security, which he helped found and direct at John Hopkins University in 1998 as the Center for Civilian Biodefense Strategies, before it moved to Pitt in 2005. He was also 21st Century Professor of Medicine and Public Health here — an honorary title awarded Henderson by Arthur S. Levine, senior vice chancellor for the Health Sciences and John and Gertrude Petersen Dean, School of Medicine. Henderson also was a Distinguished Service Professor and dean emeritus at the Johns Hopkins Bloomberg School of Public Health.

Said Donald S. Burke, Distinguished University Professor of Health Science and Policy, UPMC Jonas Salk Chair in Global Health and Pitt Public Health dean: "He was probably the most significant player in global health of our generation."

Burke knew Henderson for a quarter century, including a stint as office mates at Johns Hopkins. "He had an uncanny ability to get to the nub of important problems and was absolutely committed to solving them," Burke said. "Nothing could get in his way … He had a big heart for anyone who was willing to work hard but no tolerance for fools."

Henderson was recruited by the World Health Organization (WHO) in Geneva, Switzerland, to lead their anti-smallpox campaign, which met with resistance on a variety of fronts. He recalled his efforts to rid the world of this long-term scourge in a public health-sponsored 2008 John C. Cutler Memorial Lecture in Global Health. "It was a remarkable victory for international public health. But on more than one occasion, it was a very iffy situation."

As Burke noted in jacket copy he wrote for Henderson's 2009 book, "Smallpox: The Death of a Disease," which was launched at Pitt and became the inaugural selection for the University's One Book One Community program in public health: "Whilst the achievement was — in the end — glorious, in its day to day execution it was anything but. As D.A. retells it, his day-in day-out tasks were to cajole indifferent health ministers; upgrade woeful vaccine quality control; out-flank unsupportive superiors at WHO; bargain vaccination plans with anti-government rebels; snatch funds from other accounts; repair broken-down vehicles … This is the heroic stuff of true public health leadership!"

Donald Henderson, MD (standing) at his book launch in 2009, pictured with Charles Rinaldo, PhD

He is survived by his wife of 64 years, Nana, and children Leigh, David and Douglas. ■

Pitt Cancer Researchers Honored

School of Medicine Faculty Members Yuan Chang and Patrick S. Moore Awarded International Research Prize

One of the most prestigious awards in the field of medicine will be presented to University of Pittsburgh School of Medicine faculty members Drs. Yuan Chang and **Patrick S. Moore**, who is a secondary faculty member in IDM.

The duo, whose Chang-Moore Laboratory is credited with discovering two of the seven known human viruses that directly cause cancer, will receive the 2017 Paul Ehrlich and Ludwig Darmstaedter Prize. The award is given annually to medical researchers who have made significant contributions in the fields of immunology, cancer research, microbiology, and chemotherapy.

"Drs. Chang and Moore's contributions to cancer research have been significant and lasting, touching the lives of people around the world," said Arthur S. Levine, Pitt's senior vice chancellor for the health sciences and the John and Gertrude Petersen Dean of the School of Medicine. "They are the first Pitt faculty members to ever be honored with the Paul Ehrlich and Ludwig Darmstaedter Prize. The University community congratulates them and celebrates this well-deserved tribute to the pioneering work that has come to define their careers."

Chang and Moore discovered the Kaposi's sarcoma-associated herpes virus, or human herpesvirus 8 (KSHV/HHV8) in 1994. The virus causes Kaposi's sarcoma, the most common AIDS-related malignancy and one of the most frequently occurring cancers in Africa. Prior to this discovery, medical researchers had worked for nearly 15 years to find an infectious agent associated with Kaposi's sarcoma. The pair also identified Merkel cell polyomavirus (MCV)—the cause of Merkel cell carcinoma, one of the world's most clinically aggressive skin cancers—in 2008.

Chang's current research centers on viral oncogenesis with efforts specifically focused on KSHV, MCV, and new pathogen discovery. Moore's research focuses on addressing cancers caused by viruses and how this information can be used to understand molecular causes for noninfectious cancers. ■

Introduction to a Reprint of Emilia Lombardi

(former Assistant Professor in IDM)

"Enhancing Transgender Health Care"

Theodore M. Brown, PhD, and Elizabeth Fee, PhD

American Journal of Public Health: February 2017, Vol. 107, No. 2, pp. 232-233.

In June 2001, the *American Journal of Public Health (AJPH)* published its first issue devoted to lesbian, gay, bisexual, or transgender (LGBT) health issues. In that issue, Emilia Lombardi presented a powerful case for greater understanding, greatly increased research, and appropriate services for the transgender population. Lombardi began by disentangling the meaning of "transgender" and how its elusive, and sometimes confusing, meaning has evolved. She then identified a range and variety of transgender health issues and raised important questions about access to care, as well as the cultural relevancy of transgender research, policies, and materials, culminating with seven proposals for improving the health of transgender people. These far-reaching proposals include acknowledging "the authenticity of transgender individuals' identities," promoting "increased and better access to health care

resources," and advocating for "more and better promotion of transgender related research and for more innovation within transgender health practices."

In his editorial introduction to that first LGBT health issue, "Why Lesbian, Gay, Bisexual, and Transgender Public Health?," Ilan Meyer wrote that "Transgender individuals are stigmatized, discriminated against, and ridiculed in encounters with even those entrusted with their care." But, he added,

> These perils are not inescapable. . . . [T]he promise of focusing on LGBT health is clear: It can bring much-needed resources, improved research methodologies, and knowledge to bear on the search for innovative approaches to health promotion and disease prevention and treatment.

The American Public Health Association's 1999 policy statement and Lombardi's appeal had an effect. According to our online search, over the next 15 years, *AJPH* published 27 articles focused on transgender health issues. These articles addressed a variety of health concerns and were not simply preoccupied, as some earlier studies were, with HIV/AIDS and other sexually transmitted diseases.

Much has changed since Emilia Lombardi first published her clarion call. This February 2017 issue of *AJPH* is another major step forward. ■

Photo of IDM Faculty, Staff and Students from the IDM Annual Meeting in September 2016.
(more pictures of the event on pg. 18)

Year of the Rooster

We were delighted to hear from our dear former faculty members, Drs. Zheng Fan and Xiao-Li Huang, on the eve of Chinese New Year. They are enjoying a great life in retirement in their desert home near Las Vegas. They wish all of you well, and promise to take you out dancing, their favorite pastime, if you pass through.

2nd Floor Parran Hall New IDM Office Space

David Rowe, PhD

Robbie Mailliard, PhD and Pranali Ravikumar, IDM MS Student

Alumni News

Ayan Chakrabarti (IDM 2009 MS graduate), along with the CDC Sierra Leone Laboratory Team, won the US Department of State Meritorious Honor Award on July 15, 2016. Ayan and his laboratory were recognized for their exceptional support in running the CDC Ebola Laboratories in Kenema and Bo Districts.

A paper has been published from their Ebola outbreak work in Sierra Leone in a very prestigious journal. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4503805/

Ayan (center) is pictured with a public health team from Sierra Leone.

Dr. Ramakrishna (RK) Prasad and **Dr. Varsha Shridhar** are proud alumni of the Department of Infectious Diseases and Microbiology (IDM) at the Graduate School of Public Health. RK obtained his Masters in Public Health in 2006 and Varsha graduated with a PhD from the lab of Dr. Phalguni Gupta in 2011. Till 2015, RK was a faculty in Infectious Diseases and Family Medicine and led the HIV/HCV Clinic. Varsha was a postdoctoral researcher in maternal and infant health at Magee Women's Research Institute.

Since moving back, besides clinical work, they have established a company, Molecular Solutions by Care Health (MSCH), along with two other US-trained PhDs. MSCH uses molecular tools, such as real time PCR and sequencing, in order to provide a broad range of services that include clinical diagnostics, tele-consultation services towards correct application of test results to patient care, new product development, assay optimization and innovation. MSCH has also partnered with a charitable trust called Care Help to make clinical diagnostic tests available to those unable to afford them. MSCH began its services by offering viral loads and genotyping services for HIV, HCV and HBV, and will soon expand its service panel to include TB (including MDR-TB), STDs and other infectious diseases. RK and Varsha have also started collaborating with another Pitt alumnus, Dr. Siddharth Jhunjhunwala, formerly of the University of Pittsburgh Department of Bioengineering, and currently an Assistant Professor at the Indian Institute of Science, Bangalore towards innovative product development, assay optimization, and research.

They both fondly reminisce the incomparable training, outstanding mentorship, and personal bonds with various faculty members and peers from the University of Pittsburgh. They look forward to staying connected and a continued personal and professional relationship with their alma mater!

Spotlight News…

Back Row: ***David Stefanac, Matthew Garofalo, Dr. Don Burke (Dean of GSPH), Dr. Robbie Mailliard, Dr. Phalguni Gupta***
Front Row: ***Dr. Charles Rinaldo, Dr. Tony Silvestre, Dr. Linda Frank, Deena Ratner, Jay Hayes***

Please join us in applauding the following for their service and commitment to the Department of Infectious Diseases and Microbiology

5 Years
Matt Garofalo, Marketing Specialist for the PA/MidAlantic AETC, and Dr. Linda Frank
Jay Hayes, Supervisor and Lab Tech for Drs. Charles Rinaldo and Robbie Mailliard

10 Years
David Stefanac, Tech Support for the Pitt Men's Study and the HIV Prevention and Care Project, and for Dr. Tony Silvestre

20 Years
Deena Ratner, Supervisor and Lab Tech for Dr. Phalguni Gupta

IDM Announces 2016 Public Health Scholarship Recipients

Congratulations to *Jennifer Burwinkel, Scott Chadwell and Jerone Stoner*

Instituted in 2004 to recognize academic excellence among incoming Master of Public Health and Master of Science students, the IDM Public Health Scholarship has again been awarded to three new master's level students. The scholarship is based on academic merit which includes undergraduate grades and Graduate Record Examination scores. The student's letters of recommendation are also reviewed during the selection process. This year's recipients are:

Jennifer Burwinkel (MS)

- **Undergrad:** Montreat College & Clearwater Christian College
- **Degree:** Biology
- **Hometown:** Cincinnati, OH
- **Interests:** cooking

Scott Chadwell (MPH-PEL)

- **Undergrad:** Ohio State University
- **Degree:** Exercise Science
- **Hometown:** Columbus, OH
- **Interests:** working out, golfing

Jerone Stoner (MPH-MIC)

- **Undergrad:** Dickinson College
- **Degree:** Biochemistry & Molecular Biology
- **Hometown:** Chambersburg, PA
- **Interests:** traveling, hiking biking, swimming, volleyball

Support for this scholarship is provided by the Bob Yee Fund in the department. Donations to this fund can be made by personal check to the University of Pittsburgh, subscript "The Bob Yee Fund", and sent to: University of Pittsburgh, Graduate School of Public Health, Attn: Ms. Robin Tierno, A419B Crabtree Hall, 130 DeSoto Street, Pittsburgh, PA 15261. Contact Ms. Tierno with questions at: 412-624-3105 or email: rtierno@pitt.edu

Five New Predoctoral Students have been Awarded a Fellowship from the Pitt AIDS Research Training (PART) Program

Phalguni Gupta, PhD as well as **Simon Barratt-Boyes, BVSc, PhD** are leading a group of Pitt faculty engaged in AIDS research who received a 1 million dollar T32 training grant from the NIH for five years. This grant is now in its ninth year (the third year of a five-year renewal). This year the grant will train three new predoctoral researchers, and two have been reappointed for an additional year in the study of HIV/AIDS to August 1, 2016. The PART Program is based on concepts of interdisciplinary courses and collaborative basic research that provide the foundation for understanding HIV/AIDS and controlling the epidemic.

Congratulations to this year's trainees:

IDM Program

Diana Campbell
Research: ***"Macrophage Cholesterol Regulation of HIV-1 trafficking During Macrophage-Mediated trans Infection"***
Mentor: Charles Rinaldo, PhD

Jan Kristoff
Research: ***"Programming Dendritic Cells to Promote Both the Immunologic 'Kick' and 'Kill' of Latent HIV-1"***
Mentor: Robbie Mailliard, PhD

Ben Policicchio
Research: ***"Quantifying Immune vs. Viral Killing in SIV Productively and Latently Infected Cells"***
Mentor: Ivano Pandrea, MD, PhD

MVM Program

Douglas Fischer
Research: ***"Visualizing and Characterizing HIV-1 Capsid Uncoating in Infected Host Cells"***
Mentor: Zandrea Ambrose, PhD

Ryan Staudt
Research: ***"Mapping the Binding Site for Small Molecule Inhibitors on HIV-1 Nef"***
Mentor: Thomas Smithgall, Ph.D.

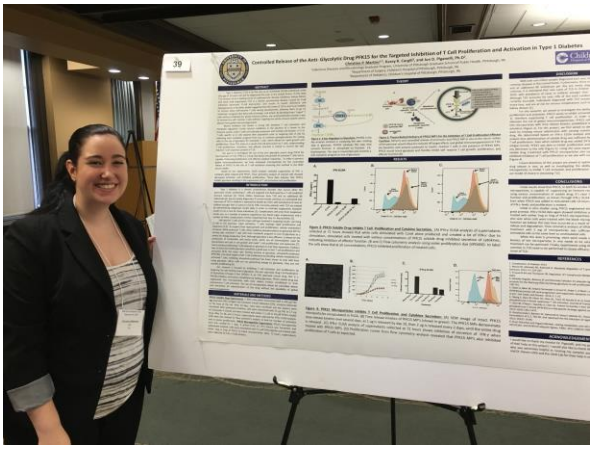
And the Award Goes To …….

IDM Annual Research Day
September 8, 2016

Congratulations to this year's Poster Winners!!!

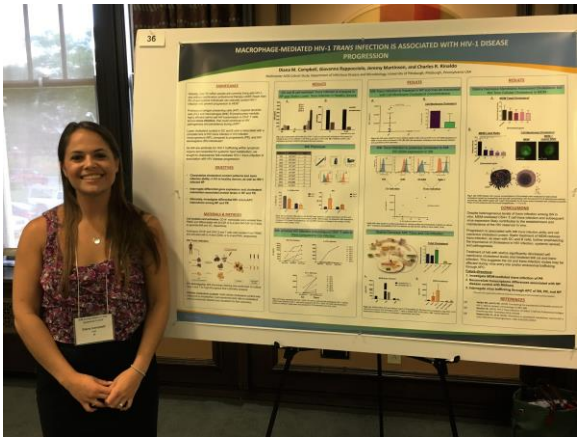
PhD Presentations

1st Place:
Christina Martins



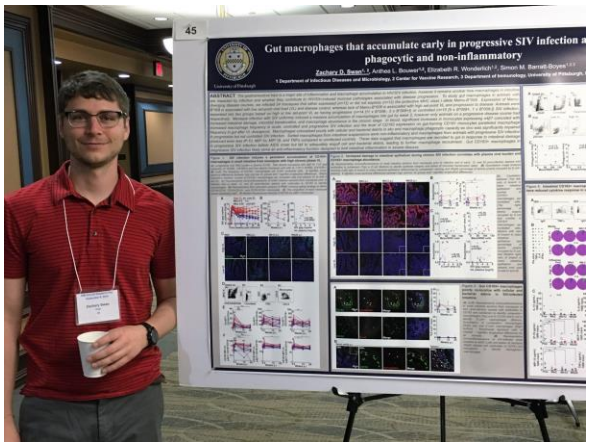
"Controlled Release of the Anti-Glycolytic Drug PFK15 for the Targeted Inhibition of T Cell Proliferation and Activation in Type 1 Diabetes"
Advisor: Jon Piganelli, PhD

2nd Place:
Diana Campbell



"Macrophage-Mediated HIV-1 *trans* Infection is Associated with HIV-1 Disease Progression"
Advisor: Charles Rinaldo, PhD &
Giovanna Rappocciolo, PhD

3rd Place:
Zach Swan

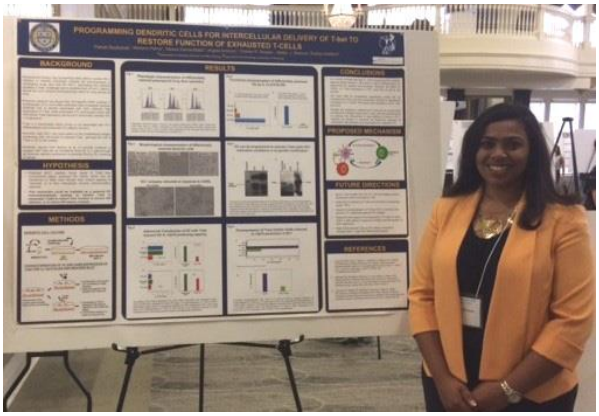


"Macrophages that Accumulate in Gut Mucosa Early in Progressive Siv infection are Poorly Phagocytic and Non-Inflammatory"
Advisor: Simon Barratt-Boyes, BVSc, PhD

And the Award Goes To …….

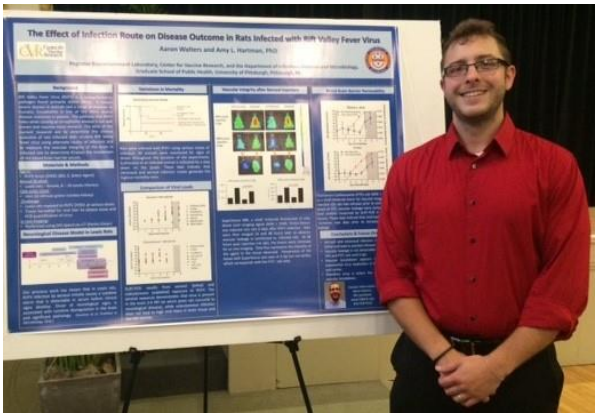
MS Presentations

1st Place:
Pranali Ravikumar



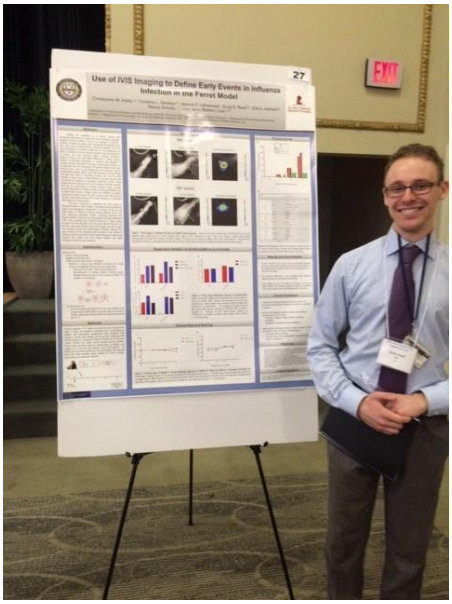
"Programming DC for Enhanced T-bet Expression to Restore Exhausted T-cell Function"
Advisor: Robbie Mailliard, PhD

2nd Place:
Aaron Walters



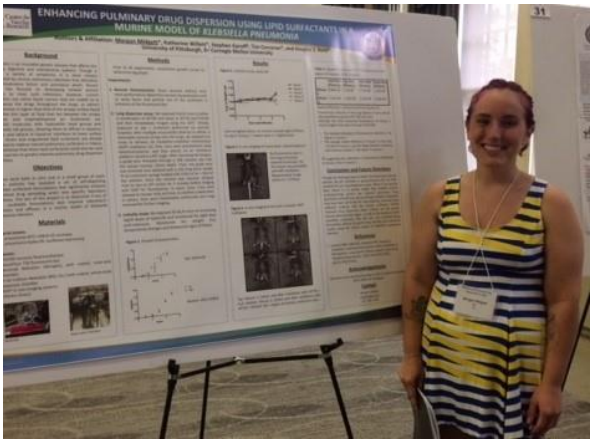
"The Effect of Infection Route on Disease Outcome in Rats Infected with Rift Valley Fever Virus"
Advisor: Amy Hartman, PhD

3rd Place Tie:
Christopher Healy



"Use of IVIS Imaging to Define Early Events in Influenza Infection in the Ferret Model"
Advisor: Kelly Stefano Cole, PhD

3rd Place Tie:
Morgan Midgett

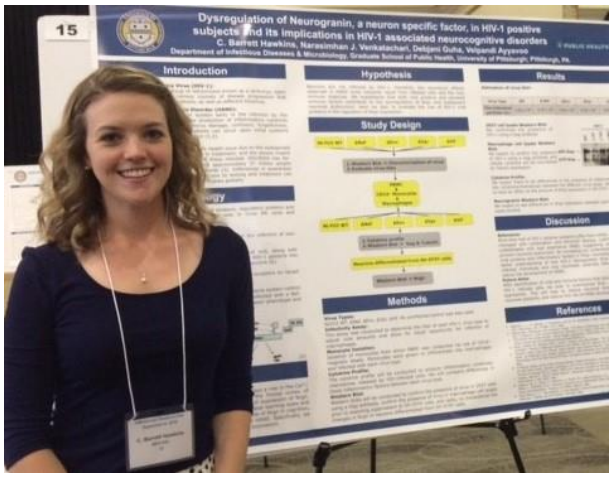


"Enhancing Pulmonary Drug Dispersion Using Lipid Surfactants in a Murine Model of *Klebsiella Pneumonia*"
Advisor: Doug Reed, PhD

And the Award Goes To …….

MPH-PEL Presentations

1st Place:
Christina Barrett Hawkins

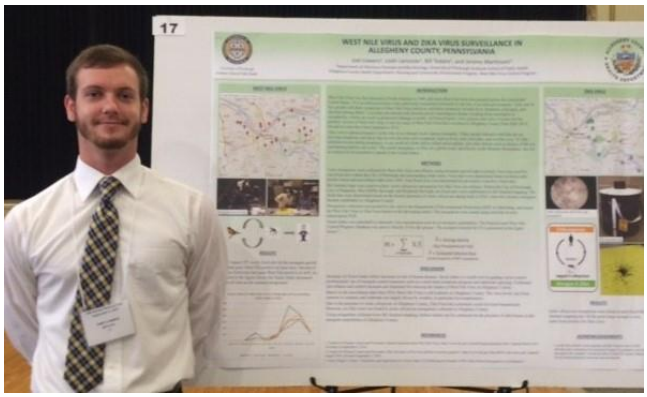


"Dysregulation of Neurogranin: A Neuron Specific Factor, in HIV-1 Positive Subjects and its Implications in HIV-1 Associated Neurocognitive Disorders"
Advisor: Velpandi Ayyavoo, PhD

2nd Place Tie:
Joseph Albe

"Rift Valley Fever Virus-Induced Encephalitis: Characterization of Leukocytes in the CNS"
Advisor: Amy Hartman, PhD

2nd Place Tie:
Joel Lowery



"West Nile Virus and Zika Virus Surveillance in Allegheny County, Pennsylvania"
Advisor: Jeremy Martinson, PhD

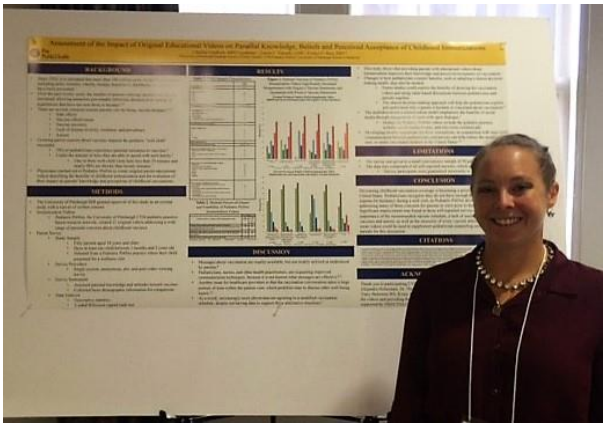
3rd Place:
Julie Laux

"CCR5 Antagonists used as Topical Microbicides Modulate CR5 Expression and may Compound HIV Infection"
Advisor: Charlene Dezzutti, PhD

And the Award Goes To …….

MPH-MIC Presentations

1st Place:
Chelsea Chedrick

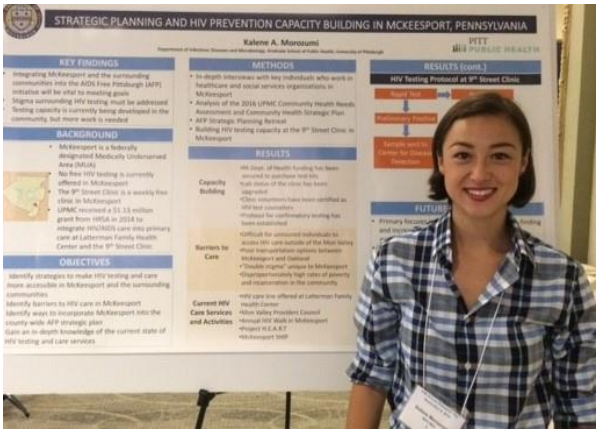


"Assessment of the Impact of Original Educational Videos on Parental Knowledge, Beliefs and Perceived Acceptance of Childhood Immunizations"
Advisor: Linda Frank, PhD

2nd Place:
Abigail Bartus

"Surveillance of Central Line-Associated Blood Stream Infections and the Utilization of Evidence-Based Practice for Central Line Care at Children's Hospital of Pittsburgh of UPMC"
Advisor: Derrick Matthews, PhD

3rd Place:
Kalene Morozumi



"Strategic Planning and Expansion of HIV Testing Services in McKeesport, PA"
Advisor: Derrick Matthews, PhD

We would like to thank the 12 Judges who were assigned to review the posters: 2 for MS, 4 for PhD, 6 for MPH. The Judges were:

MS: **Simon Barratt-Boyes, BVSc PhD (*IDM*), Charlene Dezzutti, PhD (*IDM*), Jay Venkatachari, PhD (*IDM*), Elizabeth Wonderlich, PhD (*IDM*)**

PhD: **Amy Hartman, PhD (*IDM*), Larry Kingsley, DrPH (*IDM*), Josh Mattila, (*IDM*), David Rowe, PhD (*IDM*)**

MPH-PEL: **Moses Bility, PhD *(IDM)*, Robbie Mailliard, PhD (*IDM*), Derrick Matthews, PhD *(IDM)*, Alex Sunderman, MPH (Epi)**

MPH-MIC: **Sarah Krier, PhD (*IDM*), Mackey Friedman, PhD (*IDM*), Jamie Sokol, MPH (*ACHD*), Martha Terry, PhD *(BCHS)***

IDM's 19th Annual Meeting

Congratulations to Recent IDM Graduates

Anwesha Sanyal, Awarded PhD
June 13, 2016

Dissertation Title: ***"Identification of Cellular Factors Involved in Neisseria Gonorrhoea Induced Enhanced HIV-1 Transmission in a Certical Tissue Based Organ Culture Model"***
Advisor: Dr. Phalguni Gupta

Emily Robbins, Awarded MPH
November 18, 2016

Essay Title: ***"Case Study: An Analysis of a Tuberculosis Post-Exposure Contact Investigation Originating from an Undiagnosed Oncology Patient"***
Advisor: Dr. Linda Frank

Kevin Melody, Awarded PhD
November 30, 2016

Dissertation Title: ***"Effects of HIV-1 Resistance to Rilpivirine in the Context of Pre-Exposure Prophylaxis"***
Advisor: Dr. Zandrea Ambrose

Monica Haw, Awarded MPH
December 1, 2016

Essay Title: ***"An Assessment of the International Antiviral Society's Continuing Medical Education Live Courses: A Summative Program Evaluation"***
Advisor: Joanne Russell

Ashley Chung, Awarded MPH
December 5, 2016

Thesis Title: ***"Exploring Acceptance of the Lesbian, Gay, Bisexual, and Transgender (LGBT) Community: A Social Construct thought to be Affected by being a Parent"***
Advisor: Dr. Mackey Friedman

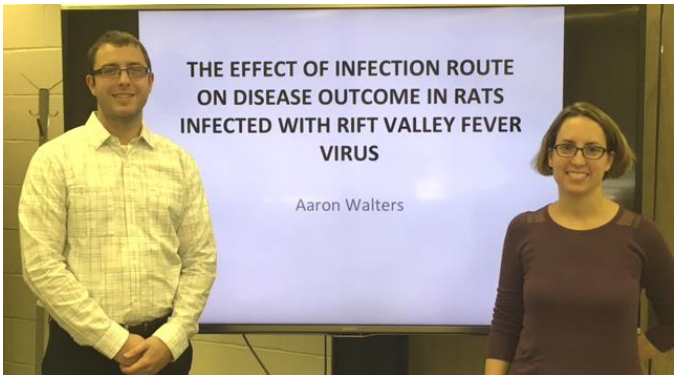
Jessica Goff, Awarded MPH
December 5, 2016

Essay Title: ***"Developing a Comprehensive Respiratory Protection Program for Allegheny County Health Department"***
Advisor: Dr. Larry Kingsley

Chelsea Chedrick, Awarded MPH
December 7, 2016

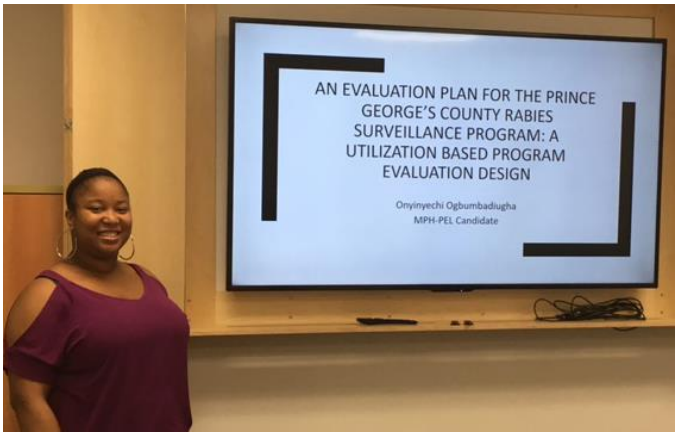
Essay Title: ***"Starting the Conversation Earlier: Using ObGyn Practitioners to Communicate the Importance of Childhood Vaccination to their Pregnant Patients"***
Advisor: Dr. Linda Frank

Aaron Walters, Awarded MS
December 7, 2016



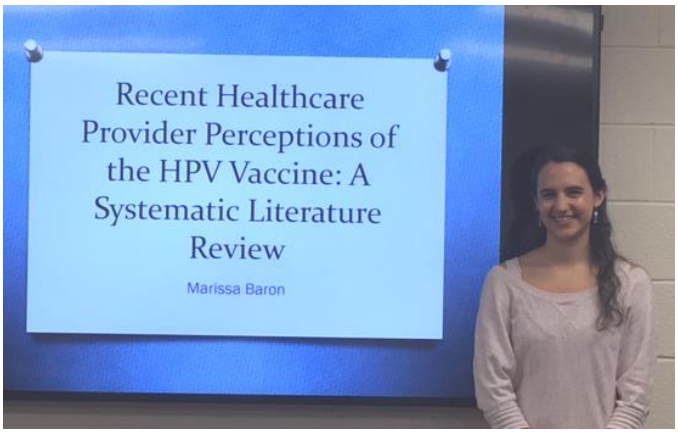
Thesis Title: "*The Effect of Infection Route on Disease Outcome in Rat Infected with Rift Valley Fever Virus"*
Advisor: Dr. Amy Hartman

Onyinyechi Ogbumadiugha, Awarded MPH
December 8, 2016



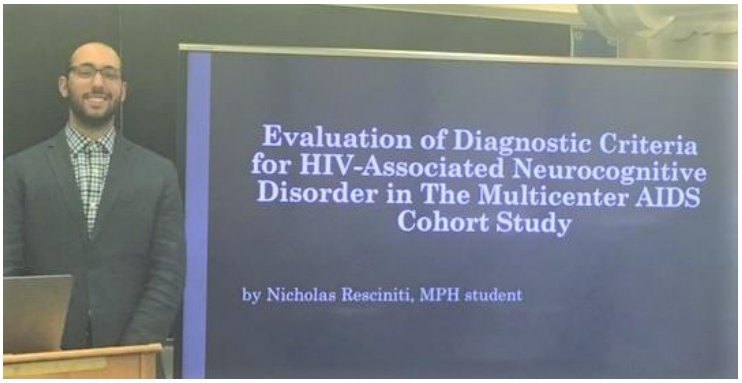
Essay Title: *"An Evaluation Plan for the Prince George's County Rabies Surveillance Program: A Utilization-Based Program Evaluation Design"*
Advisor: Dr. Jeremy Martinson

Marissa Baron, Awarded MPH
December 8, 2016



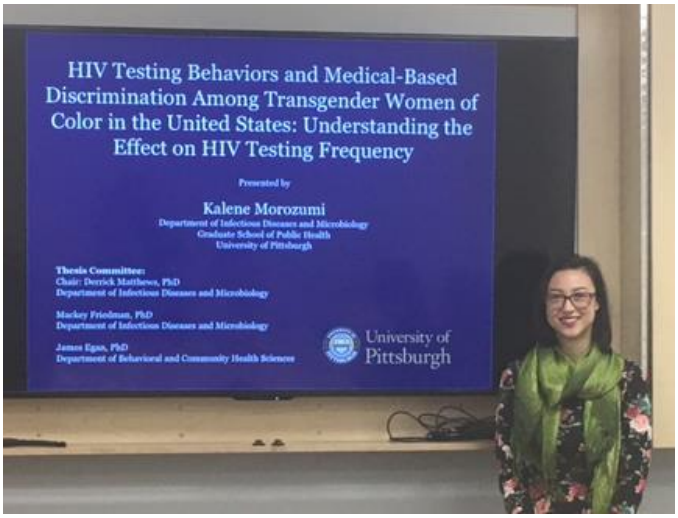
Essay Title: *"Recent Healthcare Provider Perceptions of the Human Papillomavirus Vaccine: A Literature Review"*
Advisor: Dr. Mackey Friedman

Nick Resciniti, Awarded MPH
December 9, 2016



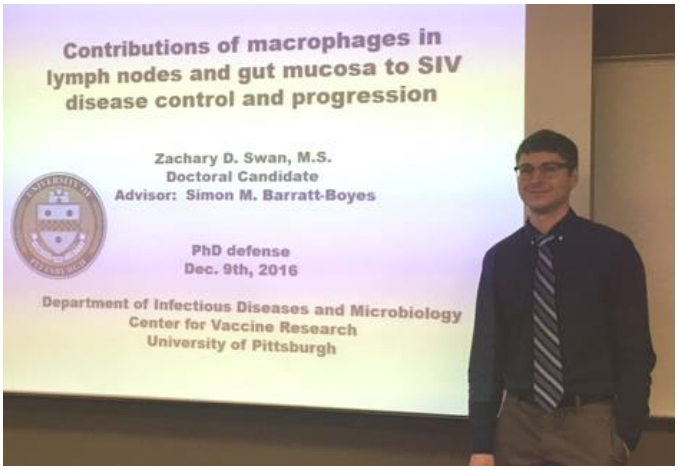
Essay Title: *"Evaluation of Diagnosis Criteria of HIV-Associated Neurocognitive Disorder in the Multicenter AIDS Cohort Study"*
Advisor: Dr. Larry Kingsley

Kalene Morozumi, Awarded MPH
December 9, 2016



These Title: ***"HIV Testing Behaviors and Discrimination in a Medical Setting Among Transgender Women (TGW) of Color in the United States: Understanding the Effect on HIV Testing Frequency"***
Advisor: Dr. Derrick Matthews

Zachary Swan, Awarded PhD
December 9, 2016



Dissertation Title: ***"Contributions of Macrophages in Lymph Nodes and Gut Mucosa to SIV Disease Control and Progression"***
Advisor: Dr. Simon Barratt-Boyes

C. Barrett Hawkins, Awarded MPH
December 9, 2016

Thesis Title: ***"Dysregulation of Neurogranin, a Neuron Specific Factor, in HIV-1 Positive Subjects and Its Implications in HIV-1 Associated Neurocognitive Disorders"***
Advisor: Dr. Velpandi Ayyavoo

Matthew Vendeville, Awarded MPH
December 19, 2016

Essay Title: Partner Notification: Past, Present, and Future"
Advisor: Dr. Mackey Friedman

Visit the IDM website at:
http://www.publichealth.pitt.edu/idm

Editor:
Charles Rinaldo, Jr., Ph.D.

Production Manager:
Judy Malenka

University of Pittsburgh
Department of Infectious Diseases
& Microbiology
A419D Crabtree Hall
Graduate School of Public Health
130 DeSoto Street
Pittsburgh, PA 15261 USA
Phone: 412-624-1637