

# The Pitt Men's Study



The end of 2017 marked another successful year for our study. Inside this issue, you will find some updates from the past

year, as well as our many thanks for your continued participation. We truly wouldn't be here without your effort.

## Inside the Issue

- **Page 2** We have another new employee in the house, and an exciting update about one of our familiar faces.
- **Page 3** We had the pleasure of hosting our colleagues in HIV research from across the country for an annual meeting; turn here to see what we talked about.
- **Page 4-5** A glance at the past year in review for the study.
- **Pages 6-7** Your continued participation results in a number of groundbreaking discoveries. We've compiled easy-to-understand summaries of last year's publications for you to peruse.
- **Page 8** Dr. Ron Stall offers a personal thank you for your continued participation in our aging substudy as well as an update on the study's progress.

## Jessica Joins Allies Board

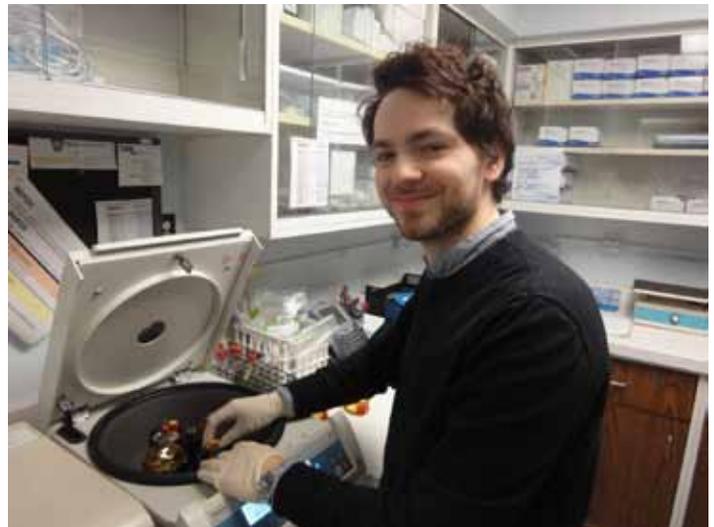
Our very own Jessica McGuinness was named to the advisory board for the Pittsburgh AIDS Task Force in the latter part of 2017. Jessica has worked with the study for over five years now, and she adds this new role to her extensive resume of service to the LGBT community. Most well known for her published chapter in *American Heroes: Coming Out from Behind the Badge*—where she discusses coming out while working as an emergency responder, Jessica also appeared as a feature in a *Post-Gazette* article on the Pittsburgh trans community and holds various speaking engagements across the region. Jessica adds diversity and experience to the board, but her addition also strengthens a long-standing connection between the Pitt Men's Study and PATF.

In the early days of our study, the Community Advisory Board was formed to advocate for study participants, to aide in recruitment, and to protect a vulnerable community. Kerry Stoner, an early Pittsburgh AIDS activist, joined the PMS CAB in 1984. As the AIDS epidemic proved to be amounting problem, Kerry Stoner and others quickly realized that the study's CAB had grown beyond its role. The CAB elected to create the Pittsburgh AIDS Task Force, for which Kerry served as the executive director until 1992.

Over 30 years later, PATF has continued to grow and expand its services. Most recently, PATF decided to change its name to Allies for Health + Wellbeing to reflect their expanded services. Allies now offers comprehensive STI testing, a food bank, a medical clinic, a thriving PrEP clinic, among many other things. To learn more about Allies and the services they offer, please visit <http://www.patf.org/>.

## PMS Welcomes New Employee

Peter Shoucair has joined PMS on a number of different efforts, but mainly to help with lab processing of different specimens. You may notice that there are some changes to our clinic, and you will definitely see Peter throughout the clinic as he will be processing some of your specimens before transporting them to our lab. When the study first began, investigators and the CAB thought it would be important to house the clinic outside of the School of Public Health in order to better protect the confidentiality of participants. That decision has presented some challenges over the years, but we remain committed to protecting your confidentiality, even if that means bringing on additional staff.



Peter is a current Pitt student taking a limited number of credits before his graduation in April. He will graduate with a degree in chemistry and will likely remain with the study for a time after his graduation. He is a Pittsburgher through-and-through, as he grew up just across the river in Aspinwall. When he isn't working or studying, he enjoys science fiction video games and movies, as well as spending time with his girlfriend (sorry guys).

Continued on page 5

# MACS Meeting Highlights

## Sleep Study

As you all know, the National Heart, Lung, and Blood Institute (NHLBI) has stepped up as the major funder of the study. Accompanied with that funding, the NHLBI has funded some major new supplemental studies of heart and lung health in our cohort. These studies have provided all of you with novel testing that may be beneficial for you to know, and have given us the opportunity to conduct exciting new projects that have never been investigated to this extent in HIV populations.

As part of that supplemental research, Dr. Naresh Punjabi of the Johns Hopkins School of Medicine and Bloomberg School of Public Health provided some exciting new details about an upcoming sleep study. The study will provide participants with Nox T3 devices to use for one night. The Nox T3 is quickly becoming the gold standard for sleep research (as well as clinical use) as it allows users to collect sleep-lab-quality data from their own beds. We're ironing out the final kinks with this study, but we will be asking many of you to participate in this new study in the coming months.

## Heart and Lung Studies

Again, we can't thank all of you enough for all that you do for our study. At the meeting, several researchers discussed the results of the heart and lung testing that we conducted which were largely due to your efforts. To start, you allowed us to conduct the largest studies of heart and lung health in HIV-infected and uninfected men ever in the world, and for that we are incredibly grateful. Further, we have to spend a special thanks to all of you here in Pittsburgh, because you helped us to conduct more lung tests than any of the other sites!

You also made a great showing with the ZIO Patch testing—those annoying little buggers we asked you to wear on your chest for two weeks. The average wear-time for them was 12-13 days.

We know how uncomfortable they could be, and we are so thankful for your effort. Your participation in these studies has allowed us to pave the way into new areas of research like never before, and we will look forward to getting you more information on findings after these studies come to a close.

**My Community**Voices *Where your voice matters*

Are you living with HIV? Do you have something to say? You're invited to join our Community in a conversation It's FREE. Register today, at:

[www.MyCommunityVoices.org](http://www.MyCommunityVoices.org)

This new blog, hosted by **My Community Voices**, welcomes people living with HIV to contribute to relevant topics in our lives and to ensure your voices and ideas are represented in our region.

## The Pitt Men's Study

P.O. Box 7319, Pittsburgh, PA 15213

(412) 624-2008 (800) 687-1963

<http://pittmensstudy.com/>

Charles R. Rinaldo, PhD

Principal Investigator

Ken Ho, MD

Medical Director

Mackey Friedman, PhD, MPH

Clinic Director

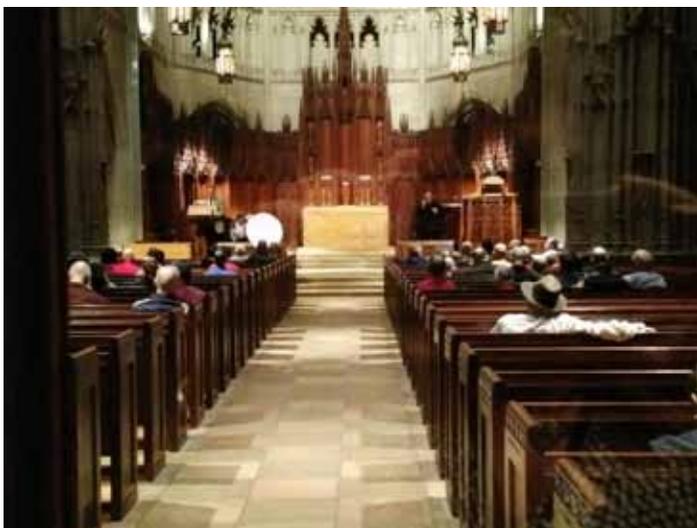
# PMS News and Notes

## Save Time at Your Next Visit!

Many of you have had the opportunity to finish some of your surveys before arriving to your appointments. Over the past few visits, we have asked you to do some extra testing that takes up extra time. For your help with these tests, and with everything else over the years, we are extremely grateful. To show our appreciation for your dedication, and to respect your time, you will find a new insert in your appointment letter that will explain how to complete some of your surveys before arriving to your appointment if you would like to do so.

## Give Us Your Feedback!

Several investigators across all of the MACS sites have gotten together to create a survey about your satisfaction with the study. It has been many years since the PMS has evaluated its customer service, so we want to give you the chance to tell us what we're doing well, and what we might do better. Look for the chance to complete this survey in the coming months.



## PMS Commemorates World AIDS Day for 30 Years Running

The Pitt Men's Study celebrated World AIDS Day for the 30th straight year with its annual service

at Heinz Chapel in Oakland. The commemoration began in a time when being diagnosed with HIV infection was a terminal diagnosis. 30 years later, the event serves both as a way to remember friends and loved ones but also as a way for the study to continue to thank all of you for your participation. Without you, we would never have come this far in HIV research.

## Pittsburgh Hosts Semi-annual MACS Meeting

As you will remember, our study is part of the national Multicenter AIDS Cohort Study, or the MACS. The MACS has enrolled over 7,000 gay and bisexual men into the study from all across the country, but is based mostly in Pittsburgh, Baltimore, Chicago, and Los Angeles. Researchers and staff from each of the sites meet twice annually, and Pittsburgh was able to host this November at the Hilton Garden Inn in Oakland. The meeting was an exciting time of discussion (turn to page for more updates), and culminated in a dinner catered by Pittsburgh's Big Burrito Group.

## PMS Sponsors Tables at the Final Miss Tri-State Pageant

This year was the 25th—and final!—Miss Tri-State Pageant, and the study continued its support of the pageant by sponsoring tables and a full-page ad. The Miss Tri-State pageant is a drag pageant that has been a long-standing staple of the Pittsburgh LGBT community as well as a faithful partner to the study. This final pageant brought back the all-stars of past pageants in a final celebration of the event's success over the years.

# PMS News and Notes



## HIV Educational Forum

The HIV Educational Forum is a way the researchers to present findings and information regarding ongoing studies that our participants have been involved in. Some of the previous topics included neuropsychological testing, heart and lung studies, the bone health study, and aging in the LGBTQ community. Our medical director, Dr. Ken Ho, will also give news and treatment updates to make sure our participants have the latest information. We held our most recent educational forum in September at the Hilton in Oakland. Please look keep an eye out for more of these events in the future!

*On the next two pages we have a compilation of our findings from the past year; meet some of the faculty who made them possible.*



Dr. Phalguni Gupta  
*Professor and IDM Vice  
Chairman  
Research interests: molecular  
basis of HIV and an HIV  
cure*



Dr. Giovanna Rappocciolo  
*Assistant Professor  
Research interests: APCs and  
HIV transmission and long-  
term non-progressors*



Dr. Lawrence Kingsley  
*Professor  
Research interests: HIV  
and heart disease*

# PMS 2017 Publications

*Because of your continued and dedicated effort, our talented group of researchers using the Pitt Men's Study data are able to publish many high-impact papers every year. Not only do these papers add to scientific knowledge, but they often help to improve the lives of people living with HIV—as well as innumerable other conditions—each and every day. Here's a look at all of the discoveries in which YOU played a part in 2017.*

## **1. Comment on primary lymphocyte infection models for KSHV and its putative tumorigenesis mechanisms in B cell lymphomas.**

- Pitt researchers: Dr. Giovanna Rappocciolo and Dr. Charles Rinaldo
- Summary: Kaposi's sarcoma-associated herpesvirus (KSHV) is the latest addition to the herpesvirus family. Using cell lines and specimens from PMS participants, Pitt researchers challenged an existing review of KSHV and B cell infection.

## **2. Novel assay reveals a large inducible replication competent HIV-1 reservoir in resting CD4+ T cells.**

- Pitt Researchers: Dr. Anwasha Sanyal, Dr. Phalguni Gupta, and others
- Summary: In perhaps the most high-impact MACS paper of the year, Pitt researchers published an article in the highly respected journal Nature Medicine about their development of a new test to measure the HIV viral reservoir—the amount of HIV “hidden” in the cells of the body even after medication. This new test is more accurate, faster, cheaper, and requires less blood than the current test, and has important implications in the push for a cure for HIV.

## **3. A novel anti-HIV immunotherapy to cure HIV.**

- Pitt researcher: Dr. Charles Rinaldo, Jr.
- Summary: In a collaboration with the Univer-

sity of Montreal, PMS principal investigator Dr. Charles Rinaldo discussed novel T-cell and immune therapies that could be the answer to a functional cure for HIV.

## **4. Association of midlife smoking status with change in processing speed and mental flexibility among HIV-seropositive and HIV-seronegative older men: the Multicenter AIDS Cohort Study.**

- Pitt researcher: Dr. Jim Becker
- Summary: Using data from MACS neuropsychological tests, researchers investigated the effects of smoking on mid-life cognitive function among HIV-positive and negative men.

## **5. Assessment of coronary artery calcium by chest CT compared with EKG-gated cardiac CT in the multicenter AIDS cohort study.**

- Pitt researcher: Dr. Larry Kingsley and Dr. Alison Morris
- Summary: HIV-infected people are at an increased risk for coronary artery disease. Pitt researchers assessed the effectiveness of a more widely available, less expensive test to assess coronary artery disease that could be helpful to determine risk in the HIV population.

## **6. Inflammation, immune activation, immunosenescence, and hormonal biomarkers in the frailty-related phenotype of men with or at risk for HIV infection.**

- Pitt researcher: Dr. Larry Kingsley
- Summary: This article investigated the relationship between frailty—“a syndrome char-

# PMS 2017 Publications

acterized by an increased vulnerability to stressors in the face of a limited physiologic reserve”—and immune activation. The study found HIV infection to be associated with increased inflammation and lower hormone levels, regardless of comorbid conditions.

## 7. Stability of Bisexual Behavior and Extent of Viral Bridging Behavior Among Men Who Have Sex with Men and Women.

- Pitt researchers: Mackey Friedman, Dr. Ron Stall, and Dr. Tony Silvestre
- Summary: Seeking to debunk the myths that bisexual is transitory (in other words, bisexual people eventually gravitate towards either same or opposite sex partners) and that bisexual men are the “viral bridge” between men who have sex with men and heterosexual populations, this study found strong evidence for the opposite. Actually, bisexual men in the MACS had stable ratios of same to opposite sex partners over time and that bisexual men’s risk to female partners may be lower than expected.

## 8. Association of macrophage inflammation biomarkers with progression of subclinical carotid artery atherosclerosis in HIV-infected women and men.

- Pitt researcher: Dr. Larry Kingsley
- Summary: Using data from supplementary heart studies in both men’s and women’s HIV studies, this study investigated the association of immune activation atherosclerosis, and found that HIV infection may put individuals at increased risk for plaque formation in blood vessels.

## 9. Visceral fat is associated with brain structure independent of human immunodeficiency virus infection status.

- Pitt researcher: Dr. Jim Becker

- Summary: This study found that traditional risk factors—like age, hypertension, diabetes, and BMI, were associated with brain atrophy but HIV status was not. In other words, this study suggests that HIV infection has no effect on brain atrophy.

## 10. Multiplex assay reliability and long-term intra-individual variation of serologic inflammatory biomarkers.

- a. Pitt researcher: Dr. Giovanna Rappocciolo
- b. Summary: Reliable tools to measure inflammation and immune regulation are critical components for HIV research; this study evaluated the reliability of several such assays.

## 11. Use of rosvastatin in HIV-associated chronic obstructive pulmonary disease.

- Pitt researchers: Dr. Alison Morris, Dr. Meghan Fitzpatrick, and others.
- Summary: COPD is more prevalent in HIV-positive individuals, but there are no therapies to address the unique needs of this population. This study found that treatment with rosvastatin—a medication typically used to treat high cholesterol—may slow the decline of lung function in this population.

## 12. Trajectories of marijuana use among HIV-seropositive and HIV-seronegative MSM in the Multicenter AIDS Cohort Study (MACS), 1984-2013.

- a. Pitt researcher: Dr. Jim Becker
- b. Summary: Aiming to determine the effect of HIV-infection on marijuana use, this study examined the long-term patterns of marijuana use among men in the MACS and separated them into several usage categories.

**Continued on page 8**

# Understanding Patterns of Healthy Aging in Gay and Bisexual Men

**Dr. Ron Stall**

The fight against the HIV/AIDS epidemic has had many important milestones. But one of the more remarkable of these milestones occurred in 2016—over half of all people living with HIV in the United States are now over the age of 50.

Although this wonderful news is something to be celebrated, as usual with HIV, it also means that we have new challenges that we did not have the time to prepare for. We now have a very large population of people with HIV, the majority of whom are gay men, who are now having to face the many challenges of later life. Because no one thought that it would be possible at the start of this epidemic that HIV/AIDS could become a problem faced by men in later life, we have few data to guide how best to take care of people affected by or infected with HIV.

That is why we need to turn to the real experts once again: the men in the MACS. The men who have been part of the MACS have so much to teach us because you have been living with the repercussions of the AIDS epidemic for nearly all of your adult lives. Many of you have now reached your 50's, 60's, 70's and even 80's, and by learning about your experiences as you have lived these years in the context of the AIDS epidemic, we can learn a great deal about how to care for future generations of people who have been affected by or infected with HIV as they are aging.

So far as we're aware, this is one of the first studies that has focused on aging among gay men and certainly one of the first to study successful aging among sexual minorities. One of the things that is new about this study is that it focuses not only on the threats to health among aging gay men, but also our strengths and how many of us have reached later life as thriving adults.

We hope that you have enjoyed participating in the study. The men in the MACS are the experts that know more about dealing with the HIV/AIDS epidemic, about aging and about aging successfully

than any group of research scientists in the world. You are the real experts and we hope that by sharing your experiences with us we can take the lessons that you can teach us and use them to benefit future generations of gay men as they approach later life.

If you have any questions or comments about the study, please feel free to contact me at [rstall@pitt.edu](mailto:rstall@pitt.edu) at my office at the University of Pittsburgh.

## **PMS Publications, continued:**

### **13. Glomerular filtration rate and proteinuria associations with coronary artery calcium among HIV-infected and HIV-uninfected men in the Multicenter AIDS Cohort Study.**

- Pitt researcher: Dr. Larry Kingsley
- Summary: This study found relationships between early kidney disease and coronary artery calcium, and found that relationship to be complicated by HIV-infection.

### **14. Transcriptome analyses identify key cellular factors associated with HIV-1-associated neuro-pathogenesis in infected men.**

- Pitt researchers: Narasimhan Venkatachari, Leah Walker, and others.
- Summary: Taking advantage of the ability to use computational methods to study increasingly complex systems, this study investigated the relationships between HIV viral proteins, immune responses, and HIV-associated neuro-cognitive disorder.

### **15. Vitamin D deficiency and metabolism in HIV-infected and HIV-uninfected men in the Multicenter AIDS Cohort Study.**

- Pitt researcher: Dr. Larry Kingsley
- Summary: Using the years of stored samples that are one of the greatest strengths of the MACS, this study found that HIV infection did not confer an additional risk for vitamin D deficiency from 1999 to 2014.