

VAPHS RESEARCH

FISCAL YEAR 2019 ANNUAL REPORT

**Delivering Excellence in
Veteran Focused Medical Research**

Remarks from the Associate Chief of Staff, Steven Graham, MD, PhD

It is my pleasure to present to you, on behalf of the staff of VA Pittsburgh Healthcare System (VAPHS) Research and Development Service, our Annual Report. FY 19 has been a year of great achievement for our research program. VAPHS is one of a handful of VAMCs with four research centers of excellence. We have two VA Office of Research and Development (ORD) funded Research Centers: The Human Engineering Research Laboratories (HERL) part of the Center for Wheelchairs and Associated Rehabilitation Engineering, which helps to advance the care of Veterans with disabilities and the Center for Health Equity Research and Promotion (CHERP), which addresses disparities in health care delivery in the VA. Our clinical centers, the Geriatric Research Education and Clinical Center (GRECC) and the Mental Illness Research Education and Clinical Center (MIRECC) continue to advance clinical care and conduct cutting edge research that will improve the care of Veterans. Our Clinical Trials Center (CTC) has continued to grow and provides an outstanding research resource for VAPHS physician researchers and our Veterans. Sixteen new ORD funded merit reviews and other projects were funded or received intent-to-fund decisions in FY19. We received funding or intent-to-fund notifications for three career development awards. It has indeed been an outstanding year for VAPHS Research. I thank and congratulate all the VAPHS scientists who have contributed to these successes.

Our staff continues to work hard to ensure that VA research is conducted in compliance with VA and Federal regulations. Their efforts are essential in order to continue to protect our Veteran subjects, animal subjects and our staff from harm. We are developing new educational programs to aid investigators and staff in their efforts to comply with these regulations and protect Veterans, staff and animal subjects. Thank you to the many investigators and staff who work on the R&D Committee, Institutional Review Board (IRB), Institutional Animal Care and Use Committee (IACUC), Institutional Biosafety Committee (IBC), and Research Scientific Evaluation Committee (RSEC) to ensure the excellence of our program. And thanks to the staff of the research office who work hard to help investigators and research staff conduct their research in a safe and compliant manner.

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VAPHS Research Portfolio



350

Active Research
Projects



116

Principal
Investigators



650+

Personnel

RESEARCH EXPENDITURES AT A GLANCE

\$16,724,677

Total Research Expenditures for
FY 2019

\$10,293,965

VA Office Research & Development
Research Expenditures

\$655,311

VA funds reimbursed from another
federal agency or direct grant

\$4,193,385

National Institutes of Health & Other
Federal Agencies

\$1,319,453

Veterans Research Foundation of
Pittsburgh

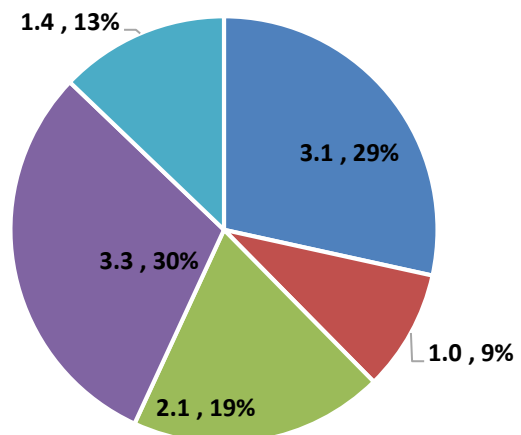
\$262,563

Other

\$10,949,276

Total Office Research & Development
Research Expenditures for FY 2019

Research Expenditures FY 2019
(Millions)



- Biomedical Laboratory Research and Development
- Clinical Science Research and Development
- Health Services Research and Development
- Rehabilitation Research and Development
- Miscellaneous (QUERI; CDA; RCS)

ACCREDITATIONS



2019 HIGHLIGHTS

55

ACTIVE RESEARCH
PROJECTS

13

ACTIVE
INVESTIGATORS

\$40,193

DOD FUNDING

\$2,737,471

VA FUNDING

\$2,024,083

NIH FUNDING

\$940,969

FOUNDATION and State
funding

\$4,579,073

Funding from other sources

3

PATENTS awarded

43

PUBLICATIONS,
including 1 Book

47

National and Local
PRESENTATIONS

Awards and Honors

- HERL Director Rory Cooper was revealed as the #28 Inventor in the US Patent and Trademark Office "Collectible Card Series." Others include Thomas Edison, Nicolas Tesla, Steve Wozniak, George Washington Carver, and Temple Grandin. The reveal was done at the Smithsonian Institute of American History by the Deputy Director of the USPTO Laura Peter during Military Invention Day of the Lemelson Exhibit. Among the people present were the Secretary of the Navy Richard Spencer, Admiral John Richardson, Chief Naval Officer, MG Cedric Wins, and Elizabeth Dougherty of USPTO.
- HERL Director Rory Cooper featured in the Tribune Article *Pitt professor's inventions recognized by Smithsonian, patent office* https://triblive.com/local/pittsburgh-allegheeny/pitt-professors-inventions-recognized-by-smithsonian/?fbclid=IwAR3uMzBzLUUw8qg547RzpxwJ_A67gqikoatrXiPadeYLRzReh6eR-aaNwQ
- PittWire reports on HERL Director Dr. Rory Cooper's USPTO trading card honor.

HERL Director Rory Cooper Joins Hall of Inventors

- https://www.pittwire.pitt.edu/accolades/herl-director-rory-cooper-joins-hall-inventors?fbclid=IwAR1UH4aQKZrRRGWbeSmg6kklu_TE_4aCSWGx3U0SWnwwl_dY9ugTD6yWUR4
- HERL Medical Director Dr. Brad Dicianno was featured in the January 2019 #RehabCast from the Archives of Physical Medicine & Rehabilitation. This podcast highlights the first comprehensive 10-year review of rehabilitation-related mobile health applications, which helps chart where mRehab should go next.
- HERL Associate Director for Research Dr. Alicia M. Koontz became Editor of PLOS's Veterans Disability and Rehabilitation Research Channel. Alicia Koontz named new Channel editor for The Veterans Disability and Rehabilitation Research Channel https://blogs.plos.org/collections/the-veterans-disability-and-rehabilitation-research-channel-meet-our-new-channel-editor-alicia-koontz/?fbclid=IwAR15HF72vwHovpPKhVIDFxK07BvQ0zy_pcwfWxBGKkYwWeqLpCn3SXB1eH84
- HERL Senior Associate Medical Director Dr. Michael Boninger and HERL Core Faculty Dr. Jennifer received \$8 million grant to study brain-computer interfaces. https://www.eurekalert.org/pub_releases/2018-10/uops-pbr101118.php?fbclid=IwAR2h_n5TAnS0OM8UCp2qjZgB2xGpTS2VMX-F9YbuDBq11nL8OgTELSmobMc
- HERL was honored on July 25, 2019 with the proclamation in the City of Pittsburgh and Allegheny County of [Human Engineering Research Laboratories Day](#)

Key Publications

❖ Daveler B, Gebrosky B, Grindle GG, Cooper RA, [Development of the PneuChair: Pneumatic Powered Wheelchair](#), **Technology and Innovation**, pp. 11-19(9), Vol. 20, No. 1-2, November 2018.
Describes the conceptual design and development of a novel wheelchair powered entirely by compressed air.

❖ Dicianno BE, Joseph J, Eckstein S, Zigler CK, Quinby E, Schmeler M, Schein R, Pearlman J, Cooper RA, [The Voice of the Consumer: A Survey of Veterans and Other Users of Assistive Technology](#), **Military Medicine**, pp. e518-e525, Vol. 183, No. 11-12, November 2018.

Survey of a large number of individuals with disabilities to identify ongoing priorities for technological research and development.

❖ Candiotti JL, Kamaraj DC, Daveler B, Chung C, Grindle GG, Cooper RM, Cooper RA, [Usability Evaluation of a novel robotic wheelchair for indoor and outdoor environments](#), **Archives of Physical Medicine and Rehabilitation**, pp. 627-637, Vol. 100, No. 4, April 2019.

Evaluated the efficacy of the MEBot power wheelchair in driving indoors and outdoors and determined it was fully usable in all terrains.

❖ Duvall J, Karg P, Brienza D, Pearlman J, [Detection and classification methodology for movements in the bed that supports continuous pressure injury risk assessment and repositioning compliance](#), **Journal of Tissue Viability**, pp. 7-13, Vol. 28, No. 1, February 2019.

Determined the E-scale system could identify and monitor movements in bed relevant for pressure injury risk.

❖ Dicianno BE, Joseph J, Eckstein S, Zigler CK, Quinby E, Schmeler M, Schein R, Pearlman J, Cooper RA, [The Future of the Provision Process for Mobility Assistive Technology: A Survey of Providers](#), **Disability and Rehabilitation: Assistive Technology**, pp. 338-345, Vol. 14, No. 4, 2019.

Survey of a large number of individuals who participate in the process of wheelchair provision to identify themes of wheelchair design and continuing education priorities.

❖ Marino DJ, Rivera V, Joseph J, Williams R, Jeannis H, Goldberg M, Grindle GG, Kimmel J, Cooper RA, [Accessible Machining for People who use Wheelchairs](#), **WORK: A Journal of Prevention, Assessment, and Rehabilitation**, pp. 361-370, Vol. 62, No. 2, 2019.

Identified and evaluated possible accommodations for people with disabilities in a machine shop environment.

❖ Greenhalgh M, Landis JM, Brown J, Kulich H, Bass S, Alqahtani S, Deepak N, Crytzer TM, Grindle G, Koontz AM, Cooper RA, [Assessment of Usability and Task Load Demand Using a Robotic Assisted Transfer Device Compared to a Hoyer Advance for Dependent Wheelchair Transfers](#), **American Journal of Physical Medicine and Rehabilitation**, pp. 729-734, Vol. 98, No. 8, August 2019.

Compared a novel robot-assisted transfer device to a standard Hoyer lift; participants favored the novel device to the standard.

❖ Jeannis H, Goldberg M, Seelman K, Schmeler M, Cooper RA, [Participation in science and engineering laboratories for students with physical disabilities: survey development and psychometrics](#), **Disability and Rehabilitation: Assistive Technology**, pp. 692-709, Vol. 14, No. 7, 2019.

Concluded the FPSEA survey is a reliable instrument for reporting barriers and facilitators for science and engineering laboratories.

❖ Candiotti JL, Kamaraj DC, Daveler BJ, Chung C, Cooper RM, Grindle GG, Cooper RA, [A heuristic approach to overcome architectural barriers using a robotic wheelchair](#), **IEEE Transactions on Neural Systems and Rehabilitation Engineering**, pp. 1846-1854, Vol. 27, No. 9, September 2019.

Subjects tested MEBot power wheelchair ascending and descending different curb heights and demonstrated effectiveness of MEBot curb climbing application.

Trend Setting Innovations

○ VA's Technology Transfer Program and the Human Engineering Research Laboratories helped respiratory therapist Cathy Abee with her invention, a heat-enhanced pulse oximeter that can help capture blood oxygen levels of patients with poor circulation.

www.research.va.gov/currents/0819-New-VA-program-helping-inventors-turn-ideas-into-viable-products.cfm

○ HERL researcher Brandon Daveler's startup, Atimize, has been selected as a featured company for the AlphaLab Gear Hardware Cup, a global pitch competition for early-stage hardware startups.

○ HERL: an incubator for innovation in assistive technology

<http://www.startnowpgh.com/news/2019/9/9/herl-an-incubator-for-innovation-in-assistive-technology?fbclid=IwAR3L8klw0jnHEe6QLjdBq6r-OtC2A-r6neghCgZGKV8YYiwX4-ync4wKXMI>

○ HERL Director Dr. Rory Cooper discusses Big Ideas in Technology in a story for New Mobility magazine.

CHERP

Center for Health Equity Research
and Promotion

2019 HIGHLIGHTS

28

CORE & AFFILIATE
INVESTIGATORS

7

ADVANCED FELLOWS

Associated with various disciplines,
including health services, addictions,
women's health, and medication
safety and pharmacy outcomes.

111

Peer reviewed
PUBLICATIONS...

53

were explicitly focused on
VULNERABLE VETERAN
POPULATIONS.

CHERP's mission is to advance the quality and equity of health and health care for Veterans through rigorous health services research, multidisciplinary collaborations with investigators from other VA research centers and academic institutions, partnerships with key stakeholders, research training and mentoring, and service to VA partners, other federal agencies, and national organizations. In addition to our primary research focus on improving the quality and equity of health and health care for vulnerable populations, CHERP has a secondary research focus on improving the effectiveness, safety, and value of medication therapy.

Faculty Recruitment

Utibe Essien, MD, MPH, is a staff physician at VAPHS and Assistant Professor of Medicine in the Division of General Internal Medicine at the University of Pittsburgh. Dr. Essien conducts research on racial/ethnic health disparities, focusing on the use of novel therapeutics and technologies in the management of chronic diseases.

Lena Makaroun, MD, MS, is a staff physician at VAPHS and Assistant Professor of Medicine in the Division of Geriatric Medicine at the University of Pittsburgh. Her research focuses on social determinants of aging health and elder abuse.

Katie Suda, PharmD, MS, is a Clinical Pharmacy Specialist at VAPHS and Professor of Medicine in the Division of General Internal Medicine at the University of Pittsburgh. Dr. Suda's area of research is pharmacoepidemiology, especially in the use of antimicrobials and dual use of VA and non-VA health care.



Impacts of CHERP Research

- Dr. Walid Gellad and his team examined opioid safety in linked national VA and Medicare data for 5 million Veterans with at least one opioid prescription from either system in 2008-2015. Their research in this cohort identified treatment-related risks associated with receiving opioid prescriptions concurrently from both health care systems, including unsafe opioid dosing, concurrent opioid and benzodiazepine use, and overdose death. These findings were published in high impact journals, briefed to the VA national leadership council, and presented to an audience of Congressional staff members and representatives from Veterans' organizations at VA Research Day on Capitol Hill. This body of research was the driving force behind the establishment of a landmark Memorandum of Agreement between the VA and the Centers for Medicare & Medicaid Services to strengthen safety surveillance for medications prescribed to Veterans dually enrolled in Medicare and VA.
- Dr. Sonya Borrero and colleagues used decision modeling to estimate the financial and reproductive health implications of 12-month dispensing of oral contraceptives in VA. Their retrospective analysis of data for a national cohort of 24,309 women Veterans of child-bearing potential demonstrated anticipated annual cost savings of \$87 per woman compared with the cost of 3-month dispensing, or estimated total savings of \$2,117,800 annually. The projected cost savings result primarily from reductions in unintended pregnancies, a key reproductive health care outcome. Dr. Borrero's findings of substantial cost savings and reduced unintended pregnancies with 12-month dispensing for oral contraceptives have immediate implications for VA reproductive health care policy. This paper received substantial national media coverage when it appeared online in July 2019, generating unique news features by USA Today, ABC News, NPR, Business Insider, Good Morning America, and others, many of which were syndicated by other outlets, including Yahoo, MSN, and local radio stations across the country.

CHERP Research in the National News

- Dr. Sonya Borrero's research on the financial implications of 12-month oral contraceptive prescribing in VA received substantial press coverage from Reuters, ABC News, Good Morning America, NPR, and others. [Judge-Golden CP, Smith KJ, Mor MK, Borrero S. Financial implications of 12-month dispensing of oral contraceptive pills in the Veterans Affairs health care system. JAMA Intern Med. 2019 Jul 8. Epub ahead of print.]

- Dr. Utibe Essien’s research on disparities in management of atrial fibrillation published was covered by the New York Times. [Essien UR, Holmes DN, Jackson LR 2nd, Fonarow GC, Mahaffey KW, Reiffel JA, Steinberg BA, Allen LA, Chan PS, Freeman JV, Blanco RG, Pieper KS, Piccini JP, Peterson ED, Singer DE. Association of race/ethnicity with oral anticoagulant use in patients with atrial fibrillation: findings from the Outcomes Registry for Better Informed Treatment of Atrial Fibrillation II. *JAMA Cardiol.* 2018 Dec 1;3(12):1174-1182]
- Dr. Walid Gellad’s research on the risks of receiving dual opioid prescriptions from VA and Medicare was covered by US News and World Report. [Moyo P, Zhao X, Thorpe CT, Thorpe JM, Sileanu FE, Cashy JP, Hale JA, Mor MK, Radomski TR, Donohue JM, Hausmann LRM, Hanlon JT, Good CB, Fine MJ, Gellad WF. Dual receipt of prescription opioids from the Department of Veterans Affairs and Medicare Part D and prescription opioid overdose death among Veterans: a nested case-control study. *Ann Intern Med.* 2019 Apr 2;170(7):433-442]

Investigator Honors and Awards

- Sonya Borrero, MD, MS** received the Mid-Career Research Mentorship Award from the Society of General Internal Medicine.
- Michael Fine, MD, MSc** received the Daniel Deykin Award for Outstanding Mentor from the VA Health Services Research and Development Service.
- Utibe Essien, MD, MPH** was recognized as by the National Minority Quality Forum as one of 40 Under 40 Leaders in Health.
- Walid Gellad, MD, MPH** received the Presidential Early Career Award for Scientists and Engineers.
- Leslie R. M. Hausmann, PhD** received a Gold Award for Outstanding Contributions to Medical Science from the Federal Executive Board Excellence in Government Program.

New and Established Operational Partnerships

Walid Gellad, MD, MPH, Steven Weisbord, MD, MS, and CHERP colleagues partnered with the National Surgery Office to evaluate utilization and outcomes for Veterans who receive transplant care in VA, Medicare, or both. **Carolyn Thorpe, PhD, MPH** and **Thomas Radomski, MD, MS** will partner with the *Office of Community Care* to identify low-value health care for Veterans in Community Care and Medicare. **Leslie Hausmann, PhD** established a Memorandum of Understanding (MOU) with the *VA Office of Health Equity* to build a data dashboard prototype to display how key quality measures compare across Veteran subgroups defined by characteristics linked with relative social or economic disadvantage (e.g., race/ethnicity, sex, geographic location, etc.), alone and in combination, at national, regional, and local levels.

Ann-Marie Rosland, MD, MS renewed her MOU with the *VHA Primary Care Analytic Team* to lead a High Risk Workgroup to enhance understanding of PACT implementation and effects on care for patients at high risk of hospitalization and poor health outcomes.

Shari Rogal, MD, MPH renewed her MOU with the *VHA HIV, Hepatitis, and Related Conditions (HHRC) Program Office* to evaluate the national evaluation of the VISN Hepatic Innovation Team initiative.

Karin Daniels, PhD renewed her MOU with the *VA Office of Academic Affiliations* to co-lead the Interprofessional Advanced Fellowship in Addiction Treatment Coordinating Center that supports all seven training sites in the development, management, and promotion of the VA interdisciplinary addiction fellowship program.

Matthew Chinman, PhD continues to partner with the *Office of Mental Health Services, Office of Mental Health Operations, Office of Patient Centered Care and Cultural Transformation, and the National Center for Health Promotion and Disease Prevention* on a Team-Based Behavioral Health QUERI project to evaluate the implementation of peer specialists at 25 VAMCs across the country.

CHERP Research Briefed to the VHA National Leadership Council in FY19

1. Jones AL, **Hausmann LRM**, Kertesz SG, Suo Y, **Cashy JP, Mor MK**, Pettey WBP, Schaefer JH Jr, Gordon AJ, Gundlapalli AV. Providing positive primary care experiences for homeless Veterans through tailored medical homes: The Veterans Health Administration’s Homeless Patient Aligned Care Teams. *Med Care.* 2019 Apr;57(4):270-278.
2. **Judge-Golden CP**, Smith KJ, **Mor MK, Borrero S**. Financial implications of 12-month dispensing of oral contraceptive pills in the Veterans Affairs Healthcare System. *JAMA Intern Med.* 2019 Jul 8. [Epub ahead of print]
3. **Thorpe JM, Thorpe CT, Schleiden L, Cashy J**, Carico R, **Gellad WF**, Van Houtven CH. Association between dual use of Department of Veterans Affairs and Medicare Part D drug benefits and potentially unsafe prescribing. *JAMA Intern Med.* 2019 Jul 22. [Epub ahead of print]
4. Moyo P, **Zhao X, Thorpe CT, Thorpe JM, Sileanu FE, Cashy JP, Hale JA, Mor MK, Radomski TR**, Donohue JM, **Hausmann LRM, Hanlon JT, Good CB, Fine MJ, Gellad WF**. Dual receipt of prescription opioids from VA and Medicare Part D and prescription opioid overdose death among Veterans: A nested case-control study. *Ann Intern Med.* 2019 Apr 2;170(7):433-442.
5. Barnett ML, **Zhao X, Fine MJ, Thorpe CT, Sileanu FE, Cashy JP, Mor MK, Radomski TR, Hausmann LRM, Good CB, Gellad WF**. Emergency physician opioid prescribing and risk of long-term use in the Veterans Health Administration: An observational analysis. *J Gen Intern Med.* 2019 Aug;34(8):1522-1529.

MIRECC

Mental Illness Research,
Education and Clinical Center

2019 HIGHLIGHTS

47

PUBLICATIONS

19

ACTIVE RESEARCHERS

37

PRESENTATIONS

36

ACTIVE RESEARCH
PROJECTS

MIRECC is enhancing the mental health of Veterans in the region and the nation by studying and implementing measurement-based mental health care. The Center's research focuses on measures including biomarkers, clinical assessments and patient self-assessments to guide the tailoring of treatments for mental health conditions. MIRECC conducts research, education and training programs, and clinical programs built on research findings in collaboration with regional VA facilities and university affiliates.

Celebrating the 5-year Renewal of our Center

We are pleased to announce that the VISN 4 MIRECC has been renewed for five years! On May 29, 2019, members of the MIRECC Executive Committee travelled to Washington, DC, where they presented Center accomplishments and the plan for the next stage of our MIRECC. The review group included leaders from the Office of Mental Health and Suicide Prevention, the Office of Research and Development, and selected content experts from other Centers of Excellence. The reviewers were highly laudatory and funding is to continue uninterrupted with no contingencies

New Funding

Judith Callan, PhD, RN, was awarded an RR&D Merit to conduct her study, *Does Adding a Tailored Cognitive Behavioral Therapy (CBT) Mobile Skills App Mediate Higher Rates of Depression Recovery, Adjustment, and Quality of Life in OEF/OIF Veterans Compared to Standard CBT?*

David Volk, MD, was awarded a VA BLR&D Merit for his project, *Dendritic Spine Deficits and Activated Microglia in Schizophrenia*.

Sarah Forster, PhD, was awarded a CSR&D Career Development Award (CDA-2).

Isabella Soreca, MD, Adam Bramoweth, PhD, Charles Atwood, MD, and other VAPHS colleagues were selected to be a CSP site for the study, *National Adaptive Trial for PTSD related Insomnia (NAP)*. In PTSD.

Study Milestones

The Million Veteran Program (MVP) Pittsburgh team (Bea Chakraborty, Cathy Boarts, Patrick Strollo, and Gretchen Haas) was congratulated in March by the National MVP Coordinating Team for reaching a milestone of recruiting 13,000 Veterans.

Key Findings

- **Forster, S. E., DePhilippis, D., & Forman, S. D. (2019).** "I's" on the prize: A systematic review of individual differences in Contingency Management treatment response. *Journal of Substance Abuse Treatment*, 100, 64-83. doi:10.1016/j.jsat.2019.03.001
- **Tighe, C., Youk, A., Ibrahim, S., Weiner, D., Vina, E., Kwoh, C., Gallagher, R., Bramoweth, A. D., & Hausmann, L. (2019).** *Pain Catastrophizing and Arthritis Self-Efficacy as Mediators of Sleep Disturbance and Osteoarthritis Symptom Severity*. *Pain Medicine*. Advance online publication. doi:10.1093/pm/pnz187
- **Gebara, M. A., DiNapoli, E. A., Lederer, L., Bramoweth, A. D., Germain, A., Kasckow, J. W., & Karp, J. (2019).** *Brief behavioral treatment for insomnia in older adults with late-life treatment-resistant depression and insomnia: a pilot study*. *Sleep and Biological Rhythms*. Advance online publication. doi:10.1007/s41105-019-00211-6
- **Volk, D., Moroco, A., Roman, K., Edelson, J., & Lewis, D. (2019).** *The Role of the Nuclear Factor-kB Transcriptional Complex in Cortical Immune Activation in Schizophrenia*. *Biological Psychiatry*, 85, 25-34. doi:10.1016/j.biopsych.2018.06.015
- **Bonfils, K., Haas, G. L., & Salyers, M. (2019).** *Emotion-specific performance across empathy tasks in schizophrenia: Influence of metacognitive capacity*. *Schizophrenia Research: Cognition*. Advance online publication. doi:10.1016/j.scog.2019.100139

- **Chinman, M. J., McCarthy, S., Bachrach, R., Mitchell-Miland, C., Schutt, R., & Ellison, M. (2018).** *Investigating the Degree of Reliable Change Among Persons Assigned to Receive Mental Health Peer Specialist Services.* *Psychiatric Services*, 69, 1238-1244. doi:10.1176/appi.ps.201800118
- **Gujral, S., Aizenstein, H., Butters, M. A., Reynolds, C. F., Grove, G., Karp, J. F., & Erickson, K. I. (2019).** *Exercise for Depression: A Feasibility Trial Exploring Neural Mechanisms.* *American Journal of Geriatric Psychiatry*, 27(6), 611-616. DOI: <https://doi.org/10.1016/j.jagp.2019.01.012>

Media and Education Highlights

- [The VISN 4 MIRECC Precision Medicine in Mental Health Care \(PRIME Care\) study was featured on VA INSIDER](#), the official internal blog for VA staff and leadership. This article is part of a monthly national MIRECC/CoE Education Group series designed to keep VA employees informed about programs and resources available to them.
- A [blog post](#) from the Recovery Research Institute at Massachusetts General Hospital featured a [review](#) article about contingency management published by **Sarah Forster, PhD**, Dominick DePhillippis, PhD, and **Steven Forman, MD, PhD**.
- **Isabella Soreca, MD**, was interviewed by [U.S. Medicine](#) about a recently published [article](#) in *Psychosomatics*, which she co-authored with **Caitlan Tighe, PhD** and **Adam Bramoweth, PhD**. They found that Veterans with serious mental illness (SMI) have a greater risk of sleep apnea as well as increased rates of comorbid conditions like obesity, hypertension, smoking, and diabetes. Dr. Soreca explained that while sleep apnea is generally underdiagnosed, identifying it in Veterans with SMI can be particularly challenging due to overlapping symptoms and barriers to receiving care like transportation or financial issues.
- **Vishwajit Nimgaonkar, MD, PhD**'s published article in *JAMA Psychiatry* was highlighted on [Healio.com](#) with a summary of the findings of a genome-wide association study (GWAS) in India that identified a novel susceptibility gene for schizophrenia.
- **Stuart Steinhauer, PhD**, was invited to conduct oral presentations on his research at two Israeli Universities this year, Ben-Gurion University of the Negev and the University of Haifa.

- The MIRECC presented a national Cyber Seminar, jointly offered by Mental Health Services, titled, ***Mental Health Care: Can Pharmacogenomic Testing Improve Antidepressant Outcomes?*** This virtual conference reviewed the current gaps in antidepressant prescribing and examined whether systematic use of pharmacogenomics testing can improve treatment outcomes.

Awards and Honors

The University of Pittsburgh Department of Psychiatry recognized **Gretchen Haas, PhD**, for excellence in teaching medical students.

Highlights of the MIRECC's VA Advanced Fellows

James Stevenson, PharmD, MS, MIRECC Advanced Fellow, received a MIRECC Pilot Project Award for his project, *Predicted and Observed 10-year Incidence of Cardiovascular Events in Veterans Treatment with Antipsychotics*.

Swathi Gujral, PhD, received a MIRECC Pilot Project Award for her study, *Neurobiological Correlates of Physical Activity and Cardiorespiratory Fitness: Role in Predicting Treatment Response in a Pharmacotherapy Trial for Treatment-Resistant Late-Life Depression*.

-Also received a Gerald Goldstein Early Career Mental Health Research Award from the Veterans Research Foundation of Pittsburgh for her project, *Feasibility and Acceptability of a 12-week Technology-Assisted Home-Based Aerobic Exercise Intervention for Veterans with Late-Life Depression*

Kelsey Bonfils, PhD, received a Gerald Goldstein Early Career Mental Health Research Award from the Veterans Research Foundation of Pittsburgh for her project, *Social Cognition as a Correlate of Functioning and Symptoms in PTSD: A Pilot Study*.

- Selected to receive a competitive Travel Award to attend the 2019 Congress of the Schizophrenia International Research Society (SIRS) in Orlando, FL (April, 2019) where she presented a first-authored poster, *Emotion-specific performance on empathy tasks in schizophrenia: Influence of metacognitive capacity*.

Rachel Bachrach, PhD, received a MIRECC Pilot Project Award for her study, *Risky Alcohol Use Screening and Brief Intervention among Complex Veterans Seeking Primary Care Services*.

Julia Longenecker, PhD, joined the MIRECC Fellowship Program. Dr. Longenecker received her PhD from the University of Minnesota and completed her internship at the VA Pittsburgh Healthcare System. She was awarded 1st Place Best Poster Award at the 2018 Canadian Psychiatric Association Annual Conference, and she recently received a Soldier Suicide Prevention Scholarship to attend a workshop on Recovery-Oriented Cognitive Therapy for serious mental illness at the Beck Institute.

GRECC

Geriatric Research Education and
Clinical Center

2019 HIGHLIGHTS

84

PUBLICATIONS

22

RESEARCH INVESTIGATORS

22

FUNDED PROJECTS

\$2,309,101

In VA RESEARCH FUNDING

\$278,681

from NATIONAL
INSTITUTES OF HEALTH

139

Aging related EDUCATIONAL
PRESENTATIONS

2,489

TRAINING HOURS provided

The Geriatric Research, Education, and Clinical Center (GRECC) is a center of excellence focused on aging. GRECC was established in order to improve the health and health care of older Veterans. They have three main missions: (1) to build new knowledge through research; (2) to improve health care through the development of new clinical programs; and (3) to ensure that VA staff are educated about aging-related issues.

Key Publications/ Key Findings

- *Frailty Among Older Adults with Acute Myocardial Infarction and Outcomes From Percutaneous Coronary Interventions.* **A. A. Damluji, J. Huang, K. Bandeen-Roche, D. E. Forman, G. Gerstenblith, M. Moscucci, J. R. Resar, R. Varadhan, J. D. Walston and J. B. Segal.** *J Am Heart Assoc.* 2019 Sep 3;8(17):e013686. doi: 10.1161/JAHA.119.013686. Epub 2019 Aug 31. Some individuals become fragile as they age, being more vulnerable to stressors and less able to recover from illness. This condition is known as frailty. This research study sought to determine whether people > age 75 who were hospitalized with a heart attack and who also were frail (based on a structured review of medical claims using the Claims Based Frailty Index), were more or less likely than those who were not frail, to benefit from heart attack-related procedures such as percutaneous coronary interventions (PCI - e.g., a balloon procedure to open the heart's blood vessels) and bypass surgery.
- *Aging Back Clinics-a Geriatric Syndrome Approach to Treating Chronic Low Back Pain in Older Adults: Results of a Preliminary Randomized Controlled Trial.* **D. K. Weiner, A. Gentili, M. Rossi, K. Coffey-Vega, K. L. Rodriguez, K. L. Hruska, L. Hausmann and S. Perera.** *Pain Med.* 2019 Sep 10. pii: pnz179. doi: 10.1093/pm/pnz179. [Epub ahead of print]. Treatments for chronic low back pain (CLBP) that focus exclusively on imaging abnormalities can be costly, dangerous, and ineffective, especially for older adults. Many conditions outside of the spine such as depression, fibromyalgia and hip arthritis can contribute to pain and difficulty functioning but are not routinely evaluated and treated in older adults with CLBP.
- *Role of UCHL1 in axonal injury and functional recovery after cerebral ischemia.* **H. Liu, N. Povysheva, M. E. Rose, Z. Mi, J. S. Banton, W. Li, F. Chen, D. P. Reay, G. Barrionuevo, F. Zhang and S. H. Graham.** *Proc Natl Acad Sci U S A.* 2019 Mar 5;116(10):4643-4650. doi: 10.1073/pnas.1821282116. Epub 2019 Feb 13. A brain protein called UCHL1 may be critical to how nerve cells repair themselves after stroke damage. UCHL1 is inactivated after stroke by reactive fatty acids that bind to the protein. Mutation of UCHL1's reactive fatty acid binding site resulted in improved recovery of axonal conduction, synaptic function and motor behavior in a mouse stroke model.
- *Central Nervous System Medication Burden and Risk of Recurrent Serious Falls and Hip Fractures in Veterans Affairs Nursing Home Residents.* **S. L. Aspinall, S. P. Springer, X. Zhao, F. E. Cunningham, C. T. Thorpe, T. P. Semla, R. I. Shorr and J. T. Hanlon.** *J Am Geriatr Soc.* 2019 Jan;67(1):74-80. doi: 10.1111/jgs.15603. Epub 2018 Oct 11. Falls are common in older adults, especially those who live in nursing homes. Medications, especially those that affect the brain, can increase the risk of falls. This study examined whether brain-related medications increased the risk of falling in residents of VA Community Living Centers (CLCs, i.e., nursing homes) who were known to have a prior history of falling.

➤ *Robot-Assisted Arm Training in Chronic Stroke: Addition of Transition-to-Task Practice*. **S. S. Conroy, G. F. Wittenberg, H. I. Krebs, M. Zhan, C. T. Bever and J. Whittall.** *Neurorehabil Neural Repair*. 2019 Sep;33(9):751-761. doi: 10.1177/1545968319862558. Epub 2019 Jul 22. Robot-assisted therapy provides high-intensity arm rehabilitation that improve arm function after stroke. There has been some concern that the robots are good at training simple movements, but that people don't bring their better movement ability into real world tasks.

Notable Awards, Honors, and Leadership Roles

- ❖ Honors of the Association of VA Audiologists and Speech Pathologists – William D. Hula, PhD, CCC-SLP
- ❖ Best Doctors in America, Edward A. Burton, MD, DPhil, FRCP
- ❖ Stroke Rehabilitation Award/International Stroke Conference, Xiaoming Hu, MD, PhD
- ❖ Peter P. Lamy Memorial Lecture Award, American Society of Consultant Pharmacy, Joseph T. Hanlon, PharmD, MS
- ❖ Dr. John Meyers Visiting Professor of Geriatric Medicine, University of Massachusetts, Daniel E. Forman, MD
- ❖ Research mentoring-pair travel award, 28th Annual ASHA Convention Research Symposium, William S. Evans PhD, CCC-SLP
- ❖ Tomas Willis (for basic science stroke research), American Heart Association, Jun Chen, MD
- ❖ First Prize: Bench Science, Aging Institute Research Day, Aditi U. Gurkar, PhD
- ❖ Named an Associate Editor of Neurorehabilitation and Neural Repair, George F. Wittenberg, MD, PhD
- ❖ Funded VA Merit Review Award, Guodong Cao, PhD
- ❖ Program Chair, Academy of Aphasia, Michael W. Dickey, PhD
- ❖ Vice Chair for Research, Dept. Neurological Surgery, University of Pittsburgh, C. Edward Dixon, PhD
- ❖ Director, Audiology and Speech Pathology Program, VAPHS, Patrick J. Doyle, PhD
- ❖ Associate Chief of Staff for Research, VAPHS, Steven H. Graham, MD, PhD
- ❖ Acting Associate Director for Education and Evaluation, VAPHS GRECC, Debra K. Weiner, MD, FACP
- ❖ Two funded VA Merit Review Awards, Dandan Sun, MD, PhD
- ❖ VISN 4 Dementia Committee Chair, Michelle I. Rossi, MD, MPH
- ❖ CHARGE Consortium Committee on Age-Related Hearing Loss, Sheila R. Pratt, PhD
- ❖ Associate Director, University of Pittsburgh ADRC Neuropathology Core, Milos Ikonovic, MD
- ❖ Editor-In-Chief, Neurobiology of Disease, J. Timothy Greenamyre, MD, PhD

2019 HIGHLIGHTS

29
PUBLICATIONS

31
RESEARCH
INVESTIGATORS

43
ACTIVE CLINICAL TRIALS

26
National and Local
PRESENTATIONS

1,130
TRAINING HOURS provided

The Clinical Trials Center, established in 2007 and supported by the Veterans Research Foundation of Pittsburgh, provides researchers with a single portal of resources, expertise and best Practices.

Publications

- Vida Almario Passero, Andrew Liman, Kaneen Allen, Lucy Speerhas, Jocelyn Lai Tan, Laurie Harrold, Joyce Tokarsky, Kristen Veraldi, Myra Couch, John Hotchkiss, Deborah L Gray, Hema Rai, Jeanne Green, Jenna Shields. VA Pittsburgh Healthcare System, Pittsburgh, PA; James E Van Zandt VA Medical Center, Altoona, PA. *Creation of a virtual cancer care network for remote oncology treatment*, ASCO Abstract and Poster presentation, ASCO annual meeting June 2019.
 - Published in J Clin Oncol 37, 2019 (suppl; abstr 6546).
- Jocelyn Lai Tan, Jennifer Carrick, Vida Almario Passero, Jenna Shields, Andrew Liman, Hema Rai, Lauri Harrold. *Modified ketogenic diet in solid tumors: A Veteran Affairs Pittsburgh Healthcare System case series*. ASCO annual meeting abstract.
 - Published in J Clin Oncol 37, 2019 (suppl; abstr e14217).
- Kuang C, Alshoubaki N, Liman AD, Lontos K, Brown L, Rai H, Liman AK, Frye RA. *A Rare Case of Immunotactoid Glomerulopathy in Monoclonal Gammopathy of Renal Significance with an IgM Kappa Clone at the VA Pittsburgh Healthcare System*. Abstract submitted and accepted for publication, AVAHO meeting in Minneapolis.
 - Published in Federal Practitioner, September 20-22, 2019.
- Andrew Liman, Rashmikan Shah, Vida Passero, Jocelyn Tan, Hema Rai, Laurie Harrold, Joyce Tokarsky, Agnes Liman. *The Effect of Radium-223 Therapy in Agent Orange Related Veterans with Metastatic Castrate Resistance Prostate Carcinoma (CRPC)*. Poster presented at ESMO meeting in Singapore, November 22-24, 2019.
 - Published in Annals of Oncology, 30 (suppl 9), November 2019.

Presentations and Speaking Engagements

Dr. Archana Bandi

3 National Presentations:

- Endo Society
- Annual Diabetes Meeting
- VA Innovation experience hosted by VA innovators Network.

2 Local Presentations held at Allegheny Health Network.

Awards:

- Chairman Award Nomination;
- Excellence in Government Awards program, Pittsburgh Federal Executive Board 2019

Key Findings:

Successful demonstration of collaborative care practice for Veterans with Type 2 diabetes using telehealth and multidisciplinary team approach.



Research Committees

Institutional Biosafety Committee

- 42 New Studies

107 Continuing Reviews

26 Amendments
1. In June, the Office of Research Oversight (ORO) conducted a combined program review. It focused on research information security, human subjects research, and general research administration. However, the Chair and the Program Assistant were interviewed to discuss the committee's relationship and involvement in those areas.
 2. Amendment to add new staff to conduct animal procedures on an animal study now go through the IBC for approval as well as the IACUC, because staff members could conduct work in the lab with biological or hazardous agents.
 3. The members extensively reviewed new VHA Directive 1200.08, Safety of Personnel and Security of Laboratories involved in VA Research. This Directive combines VHA Handbook 1200.08 Safety of Personnel Engaged in Research and VHA Handbook 1200.06, Control of Hazardous Agents in VA Research Laboratories.
 4. The VAPHS Research Compliance Officer (RCO) conducted twenty-five research safety regulatory audits throughout the year. The reports were reviewed by the full committee for non-compliance or IBC related issues. There were no compliance or IBC related issues identified in the audits. However, during the RCO's presentations of these reports she noted observations relating to the addition of staff on studies via other subcommittees.
 5. There were no security issues to report this fiscal year.

Institutional Animal Care & Use Committee

- 3 New Studies

33 Continuing Reviews

28 Amendments

10 3-Year renewals

3 Study Closures
1. At the March meeting, the Associate Chief of Staff (ACOS) informed the committee that we are scheduled for our triennial Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) site visit in the fall of 2019 and the Program Description is due by August 1st. The final version of the Program Description was submitted to AAALAC on July 16, 2019.
 2. In December, the committee voted to require that the all voting members to take the "Working with the IACUC" training course so that they will be provided information on the requirements in the humane practices of animal care and use for anyone involved with animal research as required by Office of Laboratory Animal Welfare (OLAW). Instead of waiting for the "Essentials for IACUC Members" training to be modified to include this information in the Planning Research and Completing the Protocol Form module.
 3. The Research Compliance Officer (RCO) conducted 11 animal welfare regulatory audits throughout the year. The reports were reviewed by the full committee for non-compliance or IACUC related issues. There were no compliance or animal welfare related issues identified in the audits.
 4. The committee did not need to submit any serious non-compliance incident reports this year to OLAW or ORO. However, in July there was an incident involving the unanticipated death of research animals on one study. The PI was asked to submit a corrective action plan (CAP) to address which cohorts were impacted, the material that was injected, and specify the inoculation times and note to the sections in the protocol that describes these manipulations. Additionally, the PI submitted an Adverse Events Report and study amendment in which he added the time frame for the injections. The IACUC reviewed and approved the Adverse Event Report and protocol modification and agreed that the PI was not out of compliance. The committee determined that this was not a reportable incident and considered the matter closed.

Institutional Review Board

1. IRB Turnaround Review Times: The 2019 audit of review timelines (from initial submission to ACOS approval) reveals continued improvement for studies reviewed by the fully convened IRB with a median review time of 91.5 in 2018 and 89.5 in 2019.
2. Reduction in the Duration of IRB1 Meetings: A recent review has shown a decrease in the duration of IRB1 meetings. In 2017, the average meeting length was 2 hours, compared to 1.75 hours in 2018. In 2019, the meeting length decreased to 1.67 hours.
3. Compliance with the revised Common Rule: All standard operating procedures, policies, guidance documents, ProSPECT application forms and workflows, reviewer checklists, processes, etc. were updated in accordance with the revised Common Rule/2018 Requirements.
4. Successfully added the NCI CIRB as an IRB of record. This process included developing an SOP and establishing an authorization agreement. In addition, the NCI CIRB was added to our FWA.
5. The Office of Research Oversight (ORO), Veterans Health Administration (VHA), conducted an on-site Combined Program Review (CPR) of the Human Research Protection Program, Research Information Security Program, and General Research Administration at VA Pittsburgh Healthcare System (VAPHS) on June 11-14, 2019.
6. Streamlined IRB reviewer checklists. Revisions were made to most of the IRB reviewer checklists, including those for initial review, modifications, consent forms and waiver checklists. While still maintaining compliance with policies and regulations, the revisions to the checklists reduce redundancy and minimize the burden on the reviewers.

45 New Studies
297 Continuing Reviews
498 Amendments
39 Study Closures

Research Scientific Evaluation Committee

1. The major activity of RSEC during this period has been the coordination of pre-application review of projects prior to submission for funding to VA Merit Review programs including BLR&D, CSR&D, HSR&D, and RR&D. In addition, applications to other government agencies (NIH, DoD) and non-government foundations also received reviews. Per SOP, reviews provided by the Centers of Excellence (GRECC, MIRECC, CHERP-COIN, and HERL-WARE) were also reviewed.
2. Initial review was conducted for 5 studies that were Science Only or Human Exempt based on IRB pre-review. The RSEC processed 17 continuing reviews, 6 study closures, and 8 amendments.
3. VISN 4 CPPF Reviews: The RSEC members assisted in reviews for CPPF applications from the Eastern region of VISN 4 (e.g., Philadelphia, Coatesville) that were forwarded to the Research Advisory Group.
4. More intensive monitoring of CDA applications provided ongoing feedback to applicants during period of preparation of projects for VACO submission. RSEC provided individualized feedback during preparation of the training and research plans to BLR&D, CSR&D, and RR&D applicants. We have made special efforts to provide advance input for applicants from the Program Officers at each Service.
5. Both careful review of non-committee comments to investigators and additional guidance for Merit Review and CDA applications based on committee discussions were provided for applicants. Guidelines developed by the Research Office administration include timelines for meeting with ACOS, RSEC, and submission of LOI and applications for pre-review have been disseminated to new investigators.
6. We continued to review comments received from the Centers of Excellence (CHERP, GRECC, MIRECC, WARE/HERL) who provided primary initial reviews for submissions from their investigators.
7. The review process for initial and continuing reviews has been streamlined. All RSEC members participate in Continuing Reviews and Initial Reviews as needed and appropriate to their expertise for Science Only studies, and no longer review new Human Exempt studies which are under the purview of R&DC.

Statistical and Bioinformatics Core (StatCore)

2019 HIGHLIGHTS

16

Number of
INVESTIGATORS
worked with on...

16

funded research and
CLINICAL/QA/QI
PROJECTS

4

NEW RESEARCH
PROJECTS

The VAPHS Research Office StatCore provides statistical and data support to VA clinical and administrative staff and to research investigators with projects that are extramurally funded (VA, DoD, NIH, VISN, private foundations, rural health funds).


The StatCore has a diversified portfolio of research, QA/QI, education/assessment, administrative and development projects. In FY19, StatCore worked with **16** investigators on **14** funded research and clinical/QA/QI projects (3 new in FY19) and **2** Medical Center funded projects (1 new in FY19). Additionally, they provided support for preparatory research and preliminary data for several submissions to NIH, VA, CCDF and private foundation. A Merit, a CCDF, a SPiRE, and a private foundation grant were approved to fund work to be performed in FY20.

StatCore contributes to VA/VAPHS missions by providing support to projects that are critical for clinical and administrative operations of the VA. In 2019, these projects included creation of a dataset that allows comparison of trends in surgical procedures across VA facilities after adjustment for case mix index, ongoing maintenance and updating to user-driven Surgical Office “productivity” and “quality” databases they created in FY17 and FY18, and expanding an IMPACT clinic patient tracking and pre-surgical assessment database. They supported the VA Hospital water safety subcommittee with data extraction from all available data sources regarding water maintenance, laboratory testing, facilities management, and patient outcomes. In addition, StatCore began working to support Critical Care patient care reports to ensure increased continuity of care and improved communication across local ICUs.

Research Week

May 13-17, 2019

Research Week is designed to celebrate and call attention to the achievements of VA researchers and the role they play in providing high quality care for veterans and advancing medical science. This year's Research Week celebrated 'The Science of Hope.' The week began with a kickoff event that is part of a national event that took place at VA facilities across the country. This year's guest presenter was Christopher Bever, MD, MBA, Director of Biomedical and Laboratory Research and Development Service, Office of Research and Development. Dr. Bever was also joined by The Honorable Conor Lamb, U.S. House of Representatives 17th Congressional District of Pennsylvania.



Celebrate 2019 National VA Research Week with the VAPHS Research Office

Please join us in the Atrium at University Drive on Monday, May 13th

The Young Investigator Poster Display and Presentations will begin at **9:00am**, and the Kickoff Event will begin at **11:00am**, followed by lunch in the Learning eXchange

The Research Office is delighted to announce this year's guest speaker as

Christopher Bever, MD, MBA

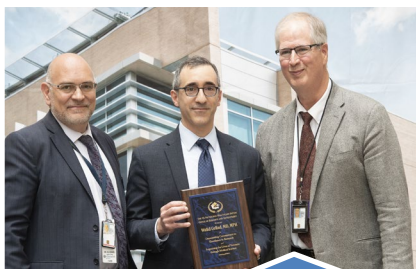
Director of Biomedical and Laboratory Research & Development Service, Office of Research & Development
and

The 2019 Keynote Presentation will be delivered by VAPHS Investigator

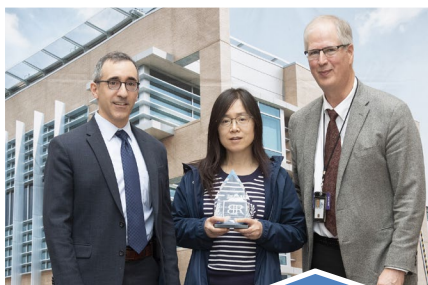
Umamaheswar Duvvuri, MD, PhD



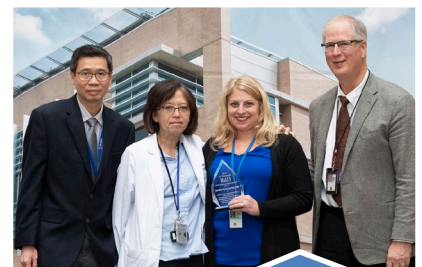
During Research Week investigators, staff, Veterans and the public are invited to celebrate the achievements of VA Researchers. The event begins with a 'Kick Off' that includes a guest speaker, investigators sharing their stories, and an awards ceremony. Three awards are given each year; the recipients and information for awards are listed below.



VAPHS 2017 Excellence in Research Award- Recipient: Walid Gellad, MD, MPH



VAPHS Research Staff Achievement Award - Indirect Interactions, Recipient: Xinhua Zhao, PhD



VAPHS Research Staff Achievement Awards - Direct Interactions, Recipient: Jennifer Carrick, RN, MSN

VAPHS Research Administration

Steven. H. Graham, MD, PhD, Associate Chief of Staff for Research and Development

Franca Cambi, MD, Deputy Associate Chief of Staff for Research and Development



VAPHS Research Administration Staff

Kristin Dimond
Curtis Katz
Kristy Kralik
Kathy Parks
Amy Tomko
Stephanie Partee

Dana Roolf
Elizabeth Toth
Rachel Samuels
Janelle Altman
Claire Raible

VAPHS Research Statistical and Bioinformatics Core

Monique Boudreaux Kelly, PhD
Joseph M. Mikolic, PhD

VA Pittsburgh Healthcare System Research Development

Veterans Research Foundation Administrative Staff

Alanna Caffas, Executive Director
Laura Thompson, CPA, Director of Finance

Committee Chairpersons

Gretchen Haas, PhD, Chairperson, VAPHS Research and Development Committee

Linda Fried MD, MPH, Chairperson, VAPHS Institutional Review Board

George Dougherty, MD, Chairperson, VAPHS Institutional Review Board 2

Paula Clemens, MD, Chairperson, VAPHS Institutional Biosafety Committee

Edward Dixon, PhD, Chairperson, VAPHS Institutional Animal Care and Use Committee

Stuart Steinhauer, PhD, Chairperson, VAPHS Research Scientific Evaluation Committee

VA



U.S. Department of Veterans Affairs

Veterans Health Administration
VA Pittsburgh Healthcare System