

**“THE STATE OF RESEARCH AT THE LARNER COLLEGE
OF MEDICINE”
&
DEAN’S CELEBRATION OF EXCELLENCE IN RESEARCH
AWARDS CEREMONY**

PRESENTED BY

Gordon Jensen, M.D., Ph.D.,
Senior Associate Dean for Research

Thursday, November 5, 2020
4:00 PM - 6:00 PM
Via ZOOM



**CELEBRATING
EXCELLENCE
IN RESEARCH**

NOVEMBER 4 AND 5



The University of Vermont
LARNER COLLEGE OF MEDICINE

Dean's Excellence in Research Celebration

- I. Welcome by Dean Page**
- II. Remarks by UVM Provost, Patricia Prelock and VP for Research, Kirk Dombrowski**
- III. State of Research at LCOM by Senior Associate Dean Jensen**
- IV. Research Awards Celebration**
- V. Keynote Address – Mark Nelson**



State of Research

GORDON L. JENSEN, M.D., PH.D.

SENIOR ASSOCIATE DEAN FOR RESEARCH

THE ROBERT LARNER, M.D. COLLEGE OF MEDICINE

THE UNIVERSITY OF VERMONT



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Phased Research Response to COVID-19 Pandemic

I. Laboratory research

- March 25 – immediate closure of labs in response to Governor Phil Scott’s “Stay Home, Stay Safe” order
- March 26 – June 1 – only essential research activities
- June 1 – June 15 – added additional research personnel and activities
- June 15 – present – labs effectively open to research and following UVM and VT guidance

II. Clinical research

- Similar but more protracted timeline to full reopening

We have been among the most fully functioning research institutions in USA.



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Research response to COVID-19 pandemic

I. COVID-19 research slam

II. LCOM researchers have initiated 57 related proposals/projects.

III. These included 16 NIH proposals; 13 administrative supplements, 1 competitive revision, and 2 completely new proposals.

IV. Highlights

- The contributions of **Drs. Emily Bruce and Jason Botten** include a paper in PLoS Biology showing that the rate- and reagent-limiting RNA extraction step for diagnostic Sars-CoV-2 RNA RT-qPCR testing can be omitted, and, in collaboration with **Dr. Dev Majumdar**, a paper in Cell entitled SARS-CoV-2 disrupts splicing, translation, and protein trafficking to suppress host defenses.
- The “Vermontilator” developed by **Dr. Jason Bates** and colleagues is an innovative ventilator that is based upon airway pressure release ventilation. This project has attracted investor interest and was featured in the May 11, 2020 issue of the New Yorker.



Research response to COVID-19 pandemic

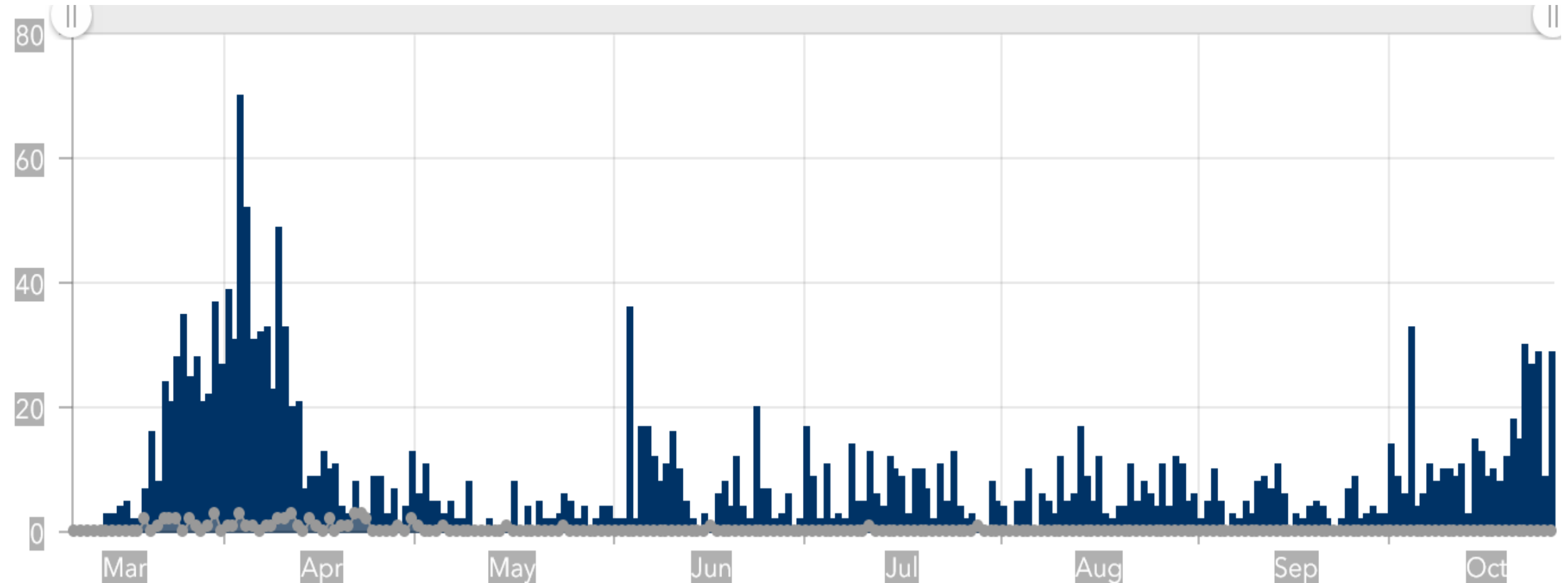
- **Dr. Russell Tracy** is running the central lab for the NHLBI ACTIV 4 antithrombotic program that has 3 trials of antithrombotic interventions.
- **Dr. Mary Cushman** is a Co-PI and central lab director for the multisite RAPID COVID Coag trial that is funded out of University of Toronto.
- **Dr. Neil Zakai** is partnering in a CDC study with 10 hospital systems and 23 hospitals to determine the rates of bleeding and thrombosis in hospitalized COVID-19 patients and whether antithrombotic agents impact hospital mortality.
- **Dr. Sean Diehl's** NIH-supported work has led to new insights into antibody responses during COVID-19 infection, recently published in Clinical and Translational Immunology.
- **Dr. Eline van den Broek-Altenburg** and colleagues contributed the paper, Risk Factors for COVID-19: Community Exposure and Mask-Wearing, SSRN, August 18, 2020.



COVID-19 Vaccine Trial – AstraZeneca

- I. October 27, 2020 announcement
- II. Dr. Beth Kirkpatrick and colleagues
- III. The UVM Medical Center has been selected to participate in the AZD1222 Vaccine Study. This is a randomized, double-blind, multicenter study assessing the safety, efficacy, and immunogenicity of AZD1222 compared to placebo for the prevention of COVID-19.
- IV. The UVM Medical Center is looking to recruit about 250 volunteers

Vermont Department of Health



Vermont COVID-19 New Daily Cases www.healthvermont.gov

Phased Research Response to COVID-19 Pandemic

I. Going forward

- Continue social distancing, masking, and hygiene
- Limit travel, quarantine as indicated
- LCOM facilities remain locked down
- Testing readily available on campus
- OVPR research leadership committee meets weekly to review UVM/local/regional caseloads and percent of positive tests.
- Research opening/closure status based upon instructions disseminated from OVPR that are aligned with VT Health and Governor's Office guidance.

II. Upcoming break

- Detailed instructions will be forthcoming. Hope to maintain our research activities, but please be prepared for possible ramp down depending upon progression of the pandemic.



Firestone Medical Research Building - North & East Facades



Firestone Medical Research Building

Key Events Timeline:

- Approved by UVM BOT, January 2020
- Original construction start, April 2020
- Revised construction start, October 2020
- Projected completion, winter 2023

Current Status:

- Given lot established as construction site
- Enabling utility work focused on electrical and site drainage
- Construction of new Jeffords East parking lot with anticipated early December 2020 completion

More Information & Questions/Concerns: <https://www.med.uvm.edu/FirestoneBuilding>

Live Construction Webcam: <https://streaming.uvm.edu/live/embed.php?id=15>



Center for Biomedical Shared Resources (CBSR)

- I. Participating cores in the include Integrative Genomics, the Vermont Biomedical Research Network (VBRN), Flow Cytometry/Cell Sorting, Microscopy Imaging, and Mass Spectrometry. Bioinformatics and Biomedical Statistics will be in close proximity.**
- II. Aim to promote long-term sustainability through efficiencies of scale, improved access, sound fiscal management, cross training of personnel, and sharing of resources.**
- III. The proposed CBSR will encompass the first floor of the new Firestone Medical Research Building.**
- IV. Supported by a \$5.4 million NIH C06 Biomedical Facilities Grant.**
- V. Key participants – Eric Gagnon, Jeralyn Haraldsen, Doug Taatjes, Julie Dragon, Roxana Del Rio Guerra, Rex Forehand, Dwight Matthews, and Peter Callas**

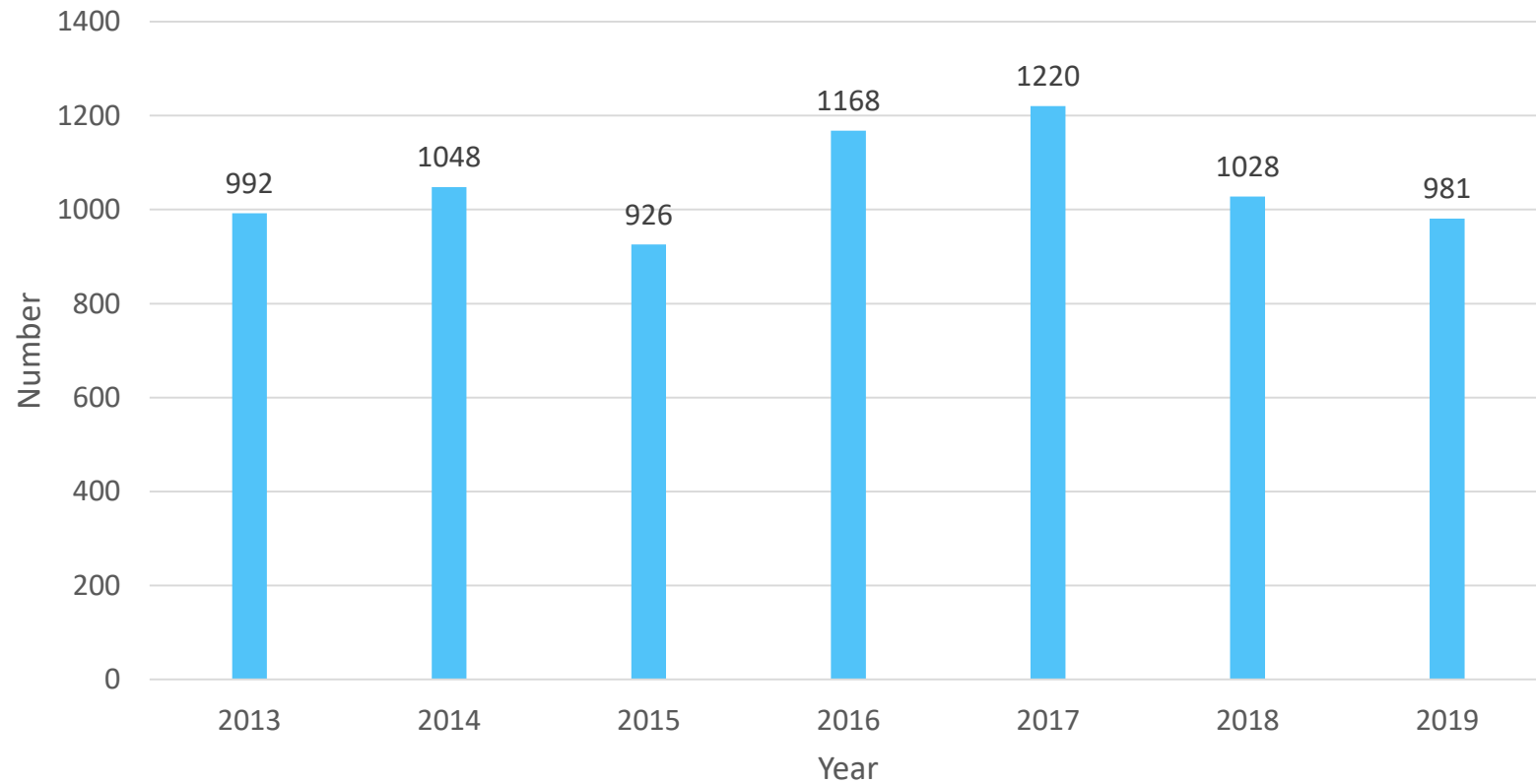


LCOM New Faculty Hires

| Faculty Hires | | | | |
|-------------------|---------|-------|-------|-------|
| Pathway | FY20 | FY 19 | FY 18 | FY 17 |
| Tenure | 2 | 2 | 2 | 1 |
| Research | 5 | 8 | 5 | 3 |
| Faculty Scientist | 1 | 1 | 5 | 1 |
| | | | | |
| Open Recruitments | | | | |
| Pathway | Current | | | |
| Tenure | 3 | | | |
| Research | 2 | | | |
| Faculty Scientist | 1 | | | |



Peer-reviewed Publications



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Major Grant Awards FY 20

- I. S. Sigmon – HRSA - \$10.3
- II. J. Shaw – VT Health - \$4.9
- III. S. Higgins – NIDA - \$3.9
- IV. S. Doubleie – NCI - \$3.6
- V. R. Tracy – NIH, U Florida - \$3.4
- VI. S. Higgins – NIGMS - \$2.3
- VII. B. Kirkpatrick – NIGMS - \$2.2
- VIII. T. Sympatico – VA - \$2.1
- IX. D. Bock – NIMH - \$1.9
- X. G. Stein – NIGMS - \$1.7

All awards in \$ millions

Total LCOM grant funding FY20 = \$105 million



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Center of Biomedical Research Excellence (COBRE) and Clinical Translational Research (CTR) Grants

- I. Vermont Center on Behavior and Health**
- II. Translational Global Infectious Disease Research (TGIR)**
- III. Vermont Center for Cardiovascular and Brain Health**
- IV. Northern New England Clinical and Translational Research Network (NNE-CTR)**



Vermont Center for Cardiovascular and Brain Health



New COBRE awarded by NIGMS - \$12M over 5 years

- I. Co-directors - Mary Cushman, M.D. and Mark Nelson, Ph.D.
- II. Seeks to better understand, treat, and prevent disorders like cardiovascular diseases and dementia that inflict tremendous morbidity and mortality on our population.
- III. Neil Zakai, M.D., M.Sc., and Peter Durda, Ph.D., direct the Study Design and Molecular Epidemiology Core. Todd Clason, M.S., will direct the Customized Physiology and Imaging Core.
- IV. Junior faculty mentees - Katharine Cheung, M.D., Ph.D., Masayo Koide, Ph.D., Denise Peters, P.T., D.P.T., Ph.D.



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NORTHERN NEW ENGLAND **CLINICAL & TRANSLATIONAL** RESEARCH NETWORK

- Pilot grants – 21 awards over 4 application rounds
- Collaborative Gund Catalyst Award – targeting rural environment/health
 - Supported by NNE-CTR, LCOM, Maine Medical Center, and Gund Institute - \$100K
 - Awarded to Dr. Meredith Niles (Nutrition & Food Science) – impact of COVID-19 pandemic on food security
- Test a peer-based strategy to overcome HPV vaccination inequities in rural northern New England communities.
- Develop a Rural Health Communication Network in collaboration with the VT Department of Health, for dissemination of evidence-based pandemic and health information.



Gary Stein, Ph.D.
UVM Co-PI



University of Vermont Center on Rural Addiction Update



I. Stacey Sigmon, Ph.D. – PI, Department of Psychiatry

II. Year 1 accomplishments

- Conducted baseline assessment of Vermont provider needs
- Established best practices provider scholarship program
- Provided training and technical assistance to >550 participants from 42 states
- Provided >60 instances of clinical peer mentoring
- Distributed 150 Narcan doses, 2,000 fentanyl tests, 6,000 masks, 4,500 gloves, and 100 digital thermometers to rural providers



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Center for Health Services Research Update

I. Engagement

- New affiliate membership
- Health Services Research Slam
- Please reach out to participate

II. Research

- Topics range from narrow clinical questions to state and region-wide policy analyses with multiple projects across LCOM
- COVID capacity planning for health system and state including timely analysis of deferred care, relationship between COVID and hospital utilization and more
- Growth in grant funding from both internal and external sources

III. Data Projects

- Promoting use of VHCURES data
- Developing infrastructure to support electronic record repository



**Adam Atherly,
Ph.D.
Director**



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Programs and Investments

- I. Health services
- II. Firestone Medical Research Building
- III. Research cores
- IV. Research support
- V. Salary support for PI's for major institutional grant opportunities
- VI. Training grants
- VII. Pilot research funds
- VIII. UVM Health Network
- IX. Medical student research



Research Cores and Services

<http://med.uvm.edu/research/corefacilities>

LCOM Cores

Microscopy Imaging

Flow Cytometry

VT Integrative Genomics

- DNA Analysis
- Microarray
- Massively Parallel Sequencing
- Bioinformatics

MRI Center

Biostatistics

Office of Clinical Trials Research (OCTR)

Clinical Research Center (CRC)

Other Resources

Genomic Medicine Laboratory

BSL-3 Facility

Investigational Pharmacy

Medical Simulation Center

VT Advanced Computing Center

Instrumentation and Model Facility

Mass Spectrometry

Proteomics

Biobank

Animal Facilities



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Clinical Research Support

I. Office of Clinical Trials Research (OCTR)

- Assists with regulatory, contact and budget support – FY20: 187 agreements
- Research staff support – FY20: 183 projects
- Total profit \$90,775, half of which was returned to the departments
- Nine research QA reviews conducted in FY20

II. Clinical Research Center (CRC)

- Resources: inpatient beds, research nurses, bio-nutrition kitchen, physiology and exercise physiology staff, informatics (REDCap), and other support staff
- Supporting laboratory, interventions, and procedures for research projects
- 53 current protocols and for FY20: 2,138 outpatient visits

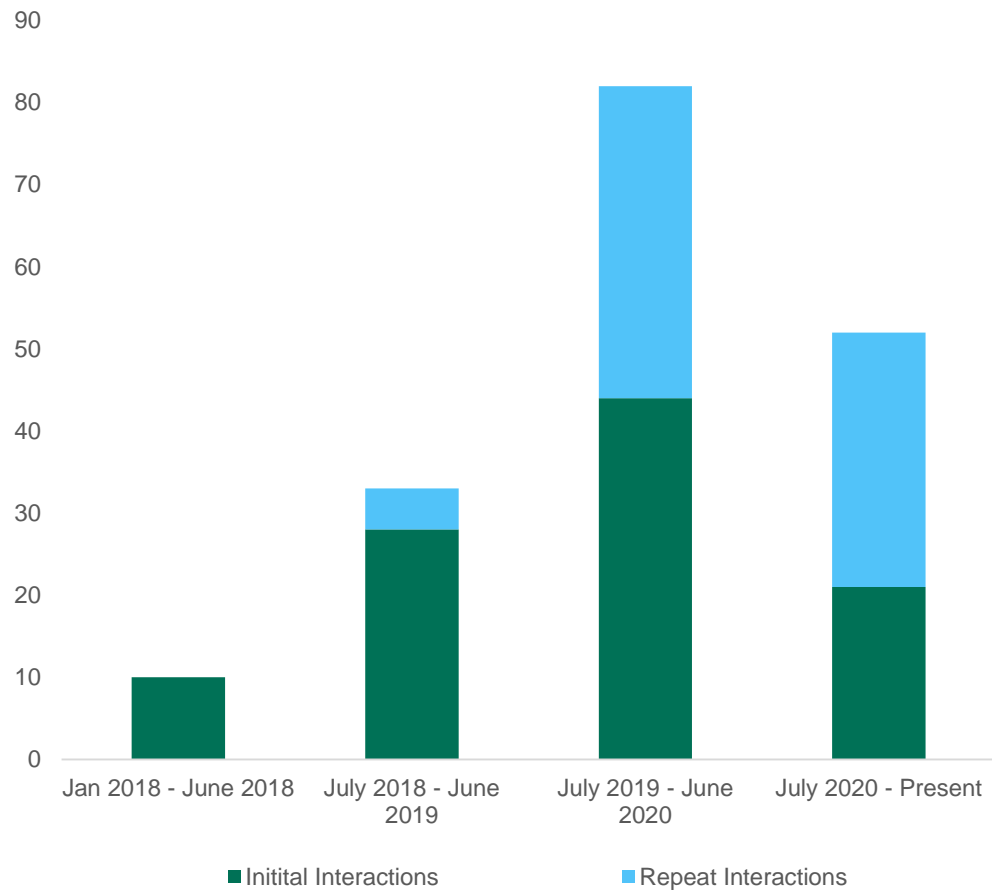
Directed by Kim Luebbers, MSHS, RN, BSN, OCN,
Assistant Dean for Clinical Research



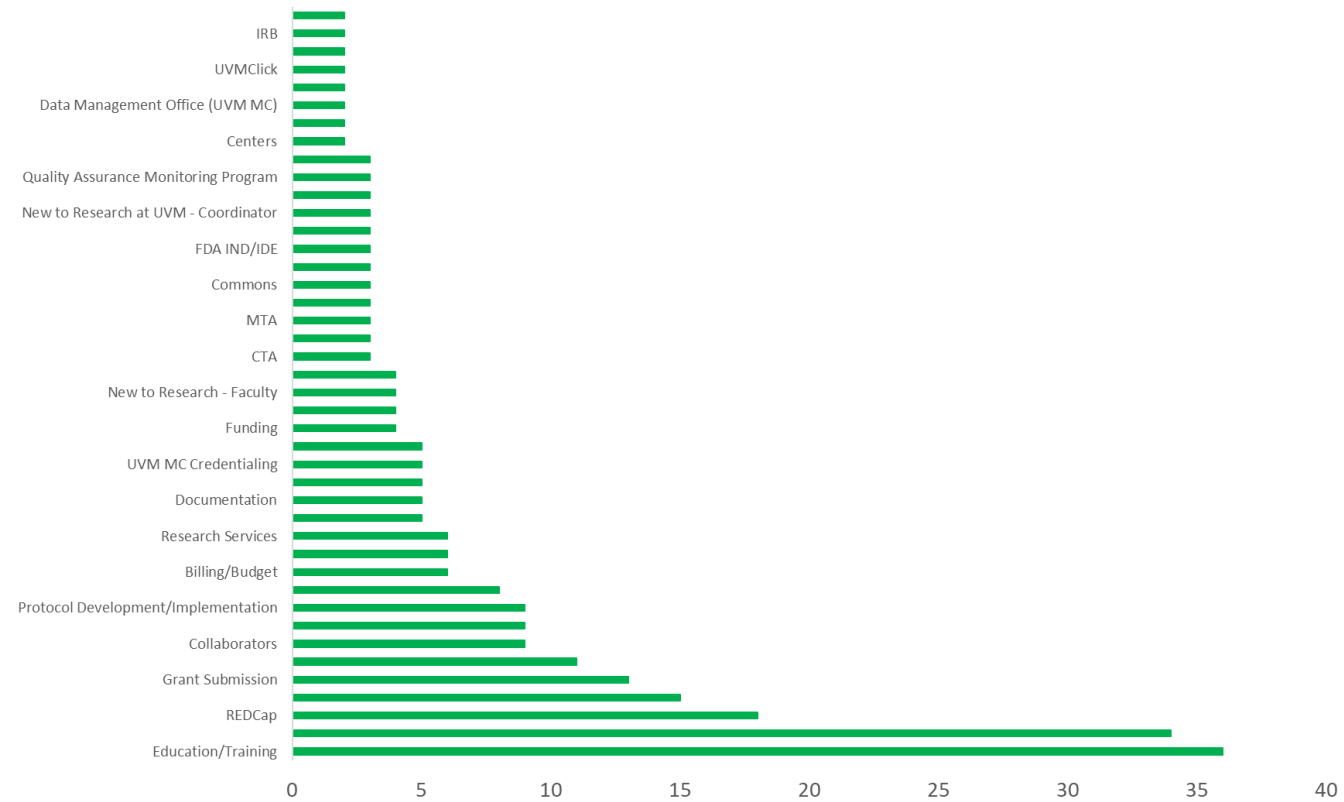
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Research Support - Navigators

Navigator Interactions



Reason for Research Navigator Services



Fundamentals in the Conduct of Clinical Research

I. Required Clinical Research Coordinator Training Program

- Launched Feb 2020
- Conducted six (6) sessions, 65 individuals have participated
- CITI Clinical Research Coordinator Foundations 10 hours, 4 – 2.5 hour sessions zoom classroom Competency Assessment

II. Development of training program for clinical investigators – spring 2021

Research.Navigator@med.uvm.edu

802-656-9404 or 802-656-9407

Given Building C423

<http://www.med.uvm.edu/clinicaltrials/researchnavigator>



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Research Support – Biomedical Statistics

I. Peter Callas, Ph.D., Core Director

II. Biomedical statistics support for consultation

- Up to 5 hours of assistance per grant application is available
- LCOM faculty members or trainees
- Contact Laura.Clayton@uvm.edu
- Working on voucher approach to provide consultations for entire UVM campus

III. Plan to integrate with the Center for Biomedical Shared Resources



Salary support for PI's for major institutional grant opportunities

- I. LCOM has budgeted \$100K annually to provide 20-40% effort of PI salary at the NIH cap for a maximum of 3 months to support development and submission of training or other major institutional grant opportunities.**
- II. Should support 3-9 faculty members annually depending upon the award amounts.**
- III. Announcement with instructions has been disseminated.**
 - Maximum 3 page outline application including requested details.
 - Supporting letter from department head.
 - Biosketch in NIH format.
- IV. Ad hoc committee review**
- V. This support has already been associated with successful COBRE and training grant applications.**



Salary support for PI's of active funded training grants

- I.** LCOM will provide 5% effort for the PI of a funded T32 training grant at the NIH cap for up to 5-years corresponding to the period of grant funding. If there are two Co-PI's, then the salary support can be split.
- II.** NIH T32 pre-doctoral and post-doctoral training grants are eligible.
- III.** To request support please submit the following to the Senior Associate Dean for Research.
 - Copy of training grant award letter.
 - If the grant is anything other than a funded NIH T32, then please provide a description of the training program and funding source.
 - To be eligible for consideration, a training grant must support multiple trainees and it should not provide salary support for PI's or Co-PI's.
- IV.** Training grant PI's are currently being supported by this mechanism.



Pilot Research Funds

- I. **We will look to continue our internal pilot and bridge support programs.**
 - I would like to acknowledge the assistance of Matt Wargo, Ph.D., Chair, and other members of the Research Committee

- II. **In the context of the CBSR grant we will aim to resume targeted pilot funding for new methodologies in basic research in conjunction with a research core.**
 - Investigator / core director teams
 - Phase 1 – Learn new methodology - Funded 5 teams - \$20K
 - Phase 2 – Competed for \$80K to implement new methodology
 - Funded GridION Sequencing – J. Dragon, Ph.D.
 - Funded Upgrade Nikon A1R confocal microscope – D. Taatjes, Ph.D.



UVM Health Network Research Opportunities

I. Network research retreat – November 20, 2020

- Identify key leaders/stakeholders
- Ongoing Network research projects
- TriNetX and electronic data repository
- Objectives, resources, support, and impediments

II. Priority - enhance clinical trial opportunities/capabilities



Medical Student Research Year Fellowship

- I. We are now offering an internally funded research gap year between years 3 and 4**
- II. Competitive review of student and mentor teams**
- III. Awardees for 2020**
 - Jennifer Holland was awarded a Medical Student Research Fellowship with Dr. Valerie Harder.
 - Jordan Munger was awarded a Medical Student Research Fellowship with Dr. Neil Zakai.



Research Objectives Vision 2025

- I. Improve infrastructure**
- II. Provide sustainable shared resources – CBSR, alignment bioinformatics/biostatistics**
- III. Enhance data processing and storage capabilities**
- IV. Focus on current strengths and future opportunities**
- V. Support innovation and entrepreneurship**
- VI. Strengthen mentorship and career development for faculty, students, and trainees**
- VII. Maximize faculty recruitment and retention**
- VIII. Diversify funding portfolio for research support**



Specific Opportunities to Establish UVM as a Leader in Biomedical Research

- I. Grow our regional and national partnerships in biomedical research.
- II. Promote strong interdisciplinary teams to tackle complex medical and public health concerns.
- III. Target rural health disparities in New England including opiate use disorder, smoking cessation, cancer screening and treatment, cardiovascular disease, lung disease, obesity, and poor rates of vaccination.
- IV. Support research and training targeting COVID-19 and future pandemics.
- V. Identify and support evolving research methods and technologies.
- VI. Electronic health record data repository (in progress).



State of Research at LCOM

- I. We will disseminate my presentation.
- II. Please reach out with any questions or feedback.
- III. Gordon.jensen@med.uvm.edu



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These are challenging times

*Dear LCOM Colleagues:
Please accept my sincere thanks for
all of your contributions to our
research enterprise and to the health
and safety of our community.
All the best,
Gordon*



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Dean's Excellence in Research Awards



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2020 UVM Medical Alumni Association Distinguished Graduate Alumni Award

- I. Presented yesterday to Marilyn Cipolla, PhD, UVM Professor Neurological Sciences, Joint appointments in Obstetrics, Gynecology & Reproductive Sciences and Pharmacology
- II. PhD in Cell and Molecular Biology, UVM 1997
- III. Presentation entitled “Lessons I’ve Learned: How Mentoring and My Dogs Helped Shape My Career”



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Research Celebration Awards Program

- I. Graduate student research showcase awards**
- II. Trainee awards - outstanding research publication**
- III. UVM Health Network Medical Group**
- IV. UVM LCOM Staff**
- V. UVM LCOM Faculty**

Awards will be forwarded via interoffice mail.



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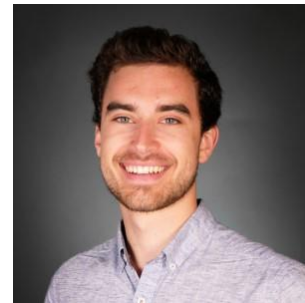
Graduate Student Research Showcase

I. Held earlier Congratulations to all participants and award recipients!

Junior Graduate Division

First Place: Melissa Boucher

Runner-up: Jeffrey Brabec



Senior Graduate Division

First Place: Alex Thompson

Runner Up: Leslie Sepaniac



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Dean's Excellence in Research Awards

- I. Graduate Student – Outstanding Research Publication
- II. **Katharine Beca (Tooke)** – mentor Margaret Vizzard, Ph.D.
- III. **Tooke K, Girard B, Vizzard MA.** Functional effects of blocking VEGF/VEGFR2 signaling in the rat urinary bladder in acute and chronic CYP-induced cystitis. *Am J Physiol Renal Physiol.* 2019 Jul 1;317(7):F43-F51.



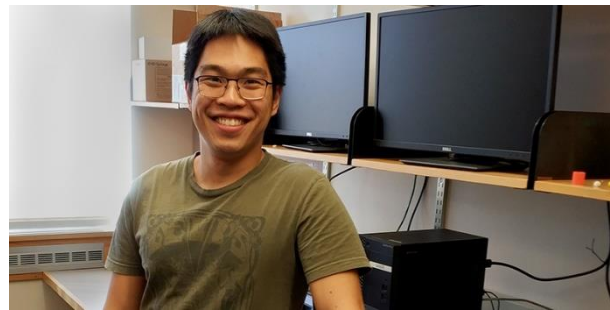
Dean's Excellence in Research Awards

- I. Medical Student – Outstanding Research Publication
- II. **Christina Evans** – mentor Mary Cushman, M.D., M.Sc.
- III. **Evans, CR, Hong, CP, Folsom, AR, Heckbert, SR, Smith, NL, Wiggins, KL, Lutsey PL, Cushman, M.** Lifestyle moderates genetic risk of venous thromboembolism: the Atherosclerotic Risk in Communities study. In press, *Arterioscler Thromb Vasc Biol*.



Dean's Excellence in Research Awards

- I. Postdoctoral Fellow – Outstanding Research Publication
- II. **Vitor Mori, Ph.D.** – mentor Jason Bates, Ph.D.
- III. **Mori V, Roy GS, Bates J, Kinsey CM.** Cisplatin Pharmacodynamics Following Endobronchial Ultrasound-Guided Transbronchial Needle Injection into Lung Tumors. Scientific Reports 2019.



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Dean's Excellence in Research Awards

- I. Resident – Outstanding Research Publication
- II. **Stas Amato, M.D.** – mentor Gary An, M.D.
- III. **Amato SS, Benson JS, Murphy S, Osler TM, Hosmer D, Cook AD, Wolfson DL, Erb LA, Malhotra A and An G:** "Geographic Coverage and Verification of Trauma Centers in a Rural State: Highlighting the Utility of Location-Allocation for Trauma System Planning." *Journal of the American College of Surgeons*, in press, ePublished October 3, 2020.



UVM Health Network Medical Group

Research Grants

- I. **PI- Scott Raymond, Radiology;** David M Johnson, Radiology; Rachel Oldinski, Mechanical, Electrical, and Biomedical Engineering; Mentor- Bruno Passebon Soares, Radiology
 - A Transradial-Specific Diagnostic Catheter for Cerebral Angiography

- II. **PI- Jessica Cintolo-Gonzalez, Surgery;** Jon Ramsey, Biochemistry; Shahid Ahmed & Hibba Rehman, Hem/Onc, Mentor- Carlos Marroquin, Surgery
 - Using Circulating Tumor DNA (ctDNA) to Predict Minimal Residual Disease, Recurrent Disease, and Clinical Outcomes in Patients with High-Risk Malignant Melanoma



UVM Health Network Medical Group

Innovation Grant

- I. **PI- Devika Singh, Medicine - Infectious Disease;** Jennifer Monroe Zakaras, Independent Consultant; Patsy Kelso, Vermont Health; Jennifer Read, Vermont Health
 - Sexual and Reproductive Health Needs and Experiences of Women Living with HIV/AIDS in Vermont.



UVM Health Network Medical Group

I. Faculty Practice - Junior Researcher of the Year: Jessica Crothers, M.D.

- Assistant Professor, Pathology and Laboratory Medicine

II. Highlights

- Research program focused on infectious diseases, the human microbiome, the host immune response, and effective prevention and treatments.
- Awarded a World Health Organization grant as Co-PI for a clinical trial assessing the safety and immunologic impact of a novel polio vaccine.
- Selected as a junior faculty project director for the COBRE on Translational Global Infectious Diseases.
- 17 peer-reviewed papers



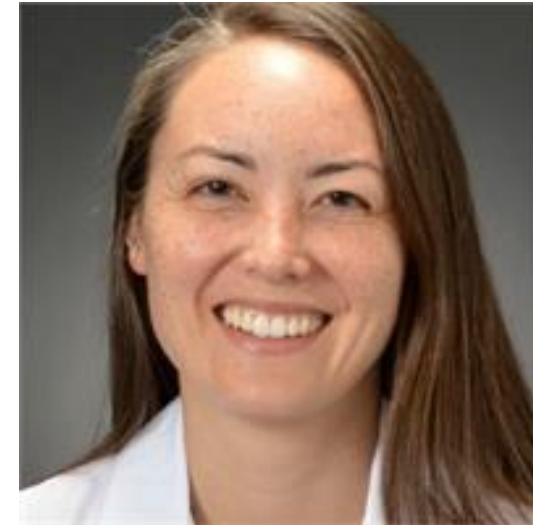
UVM Health Network Medical Group

I. Faculty Practice - Junior Researcher of the Year: Katharine Cheung, M.D., Ph.D.

- Assistant Professor, Medicine - Nephrology

II. Highlights

- Research on cognitive impairment in renal disease with a clinical focus on older adults with advanced kidney disease.
- Awarded 3 pilot grants and a career development award from the National Palliative Care Research Center for her work in geriatrics/palliative nephrology.
- Selected as a junior faculty project director for the COBRE on Cardiovascular and Brain Health.
- 8 peer-reviewed papers



UVM Health Network Medical Group

I. Faculty Practice - Senior Researcher of the Year: Elizabeth Bonney, M.D., MPH

- Professor of Obstetrics, Director Research Division, Gynecology and Reproductive Sciences

II. Highlights

- Recipient of multiple NIH grants. She is currently the lead or Co-PI on 4 independent NIH research project awards.
- Served as Acting Chair of the Board of Scientific Directors for National Institute of Child Health and Human Development.
- Served on the council for the Society for Reproductive Investigation.
- Active member of the COBRE Center for Immunology and Infectious Disease.
- 39 peer-reviewed papers
- Selected for Executive Program in Academic Medicine (ELAM).



Dean's Excellence in Research Awards

I. Research Laboratory Staff

II. Cheryl Collins – Research Analyst, Budd Lab. Nominated by Ralph Budd.

- Coauthor on 18 publications, 5 as first author.
- 18 years in Budd lab.



III. Terri Messier – Research Analyst and Lab Manager, Cunniff Lab. Nominated by Brian Cunniff.

- Coauthor on 17 papers.
- 25 years UVM service.



Dean's Excellence in Research Awards

- I. Clinical Research Coordinator Staff
- II. **Sara Ardren** – Clinical Research Coordinator, Vermont Lung Center, Pulmonary Disease and Critical Care Medicine. Nominated by Renee Stapleton.
 - Project leader for 3 multisite, investigator-initiated NIH-funded clinical trials.



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Dean's Excellence in Research Awards



I. Dean's Research Mentorship Award

II. Daniel Weiss, M.D., Ph.D. – nominated by Anne Dixon

- Professor of Medicine, Dept. of Medicine, Division Pulmonary Disease and Critical Care

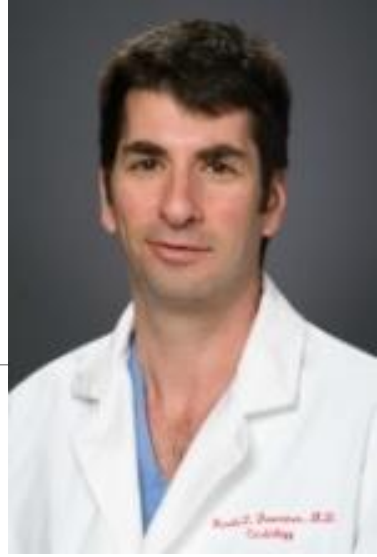
III. Highlights

- Mentees highlight his passion, dedication, support, and commitment.
- Past mentees include 10 junior faculty, 22 postdoctoral fellows/graduate students, 9 residents, 7 summer session med students, 46 undergraduates, and 13 high school STEM students.
- Past recipient of Dept. of Medicine Research Mentor Award.
- 86 peer-reviewed research papers, many with mentee co-authors.



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Dean's Excellence in Research Awards



I. Dean's Clinical Trials Research Award

II. Harold Dauerman, M.D., Ph.D. – nominated by Dave Schneider

- Professor of Medicine, Dept. of Medicine, Division of Cardiovascular Medicine

III. Highlights

- He has published 158 manuscripts in peer reviewed journals.
- Leadership roles in major pharmacotherapy trials including serving as national Co-PI for the EDUCATE trial designed to optimize the use of pharmacotherapy after stenting.
- Active in development of new approaches to the treatment of structural heart disease.
- Seminal contributions in the development of a pharmaco-invasive approach to the treatment of ST elevation myocardial infarction (STEMI).



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Dean's Excellence in Research Awards



I. Dean's Rising Star New Investigator Award (Assistant Professor)

II. Jessica Heath, M.D. - nominated by Heather Bradeen

- Assistant Professor, Departments of Pediatrics and Biochemistry

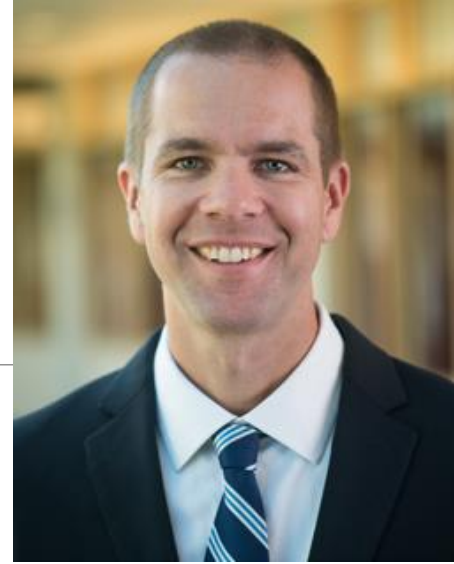
III. Highlights

- Research focus on translational and molecular biology of acute leukemia.
- Presented in Plenary Paper Session at the American Society of Pediatric Hematology Oncology annual meeting in May 2020.
- Research funding – multiple foundation and internal pilot grants
- Six peer-reviewed papers



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Dean's Excellence in Research Awards



I. Dean's Mid-Career Investigator Award (Assoc. Professor)

II. Jason Botten, Ph.D. – nominated by Ralph Budd

- Associate Professor, Dept. of Medicine, Division of Immunology

III. Highlights

- Research focus on Hantavirus, Dengue, Zika, and more recently COVID-19
- 21 grants as PI or MPI totaling \$9,496,106
- 48 peer-reviewed papers
- Global recognition – 9 international presentations
- Very active mentor – undergraduates, grad students, postdocs, and faculty
- Spearheading the opening of our BSL-3 research facilities in Colchester



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Dean's Excellence in Research Awards



I. Dean's Research Laureate Award (Professor)

II. Anne Dixon, M.D. – nominated by Renee Stapleton

- Professor of Medicine, Dept. of Medicine, Division Pulmonary Disease and Critical Care, Director Vermont Lung Center

III. Highlights

- Paradigm shifting research on obesity and asthma.
- Published 120 peer-reviewed papers in high-impact journals.
- Continuous NIH funding since 2000. Currently, she is PI of four R01s and two R34s.
- Mentored >25 medical and graduate students, residents, and fellows.
- Served on multiple grant review panels including NIH K23, K08, and Special Emphasis, and VA grants.



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Keynote Address

“Translating Thought into Blood Flow in the Brain: Capillaries as Sensors of Neural Activity”



I. Mark Nelson, Ph.D.

- University Distinguished Professor and Chair of Pharmacology
- LCOM Research Laureate

II. Highlights

- Contributions span 38 years with key breakthroughs in understanding molecular mechanisms governing smooth muscle activation/contraction and relationships with systemic and neuro-vascular biology.
- Greater than 250 publications/32,000 citations
- Fellow of American Heart Association and Biophysical Society
- Recipient of NIH Merit Award and NIH Outstanding Investigator Award (R35)
- First UVM faculty member elected to National Academy of Sciences



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