2016 VCOM Biomedical Research Retreat

Research in the VCOM System

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VCOM STRENGTHS
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• VCOM specific research opportunities
• Campus specific research opportunities
  • Collaborative partners
  • Available facilities
  • VCOM Colleagues
Pilot Funding – VCOM

Center for One Health Research Pilot Grants

Research Eureka(!) Acceleration Program Pilot Grants
Center for One Health Collaborative venture between Virginia Tech College of Veterinary Medicine and VCOM.

Pilot grant program designed to foster new collaborative research teams involving CVM and VCOM researchers. All areas of research accepted: Biomedical, Clinical, Simulation and Education, Public Health, Etc.

Grants must involve at least one Principal Investigator from VCOM and one PI from CVM.

Open to all VCOM Campuses

One year awards (July 1 to June 30), target budget $50K.

PIs may apply for a second year of funding, but application will be competitively reviewed with all others.

Major review criteria: (1) Best science wins – Osteopathic topics encouraged, (2) clear plan for publication(s), (3) clear plan for extramural grant application(s), (4) inclusion of students.
Two Rounds of One Health Funding So Far

First round: December 2015 – June 2016
Berglind (VCOM) and Allen (VCM): NLR Protein Modulation of Gastrointestinal Inflammation Following Exposure to Wheat Gluten
Costa (VCOM) and Klein (VCM): The Role of Tri-heteromeric (GluN 1/2/3) NMDA Receptors in Stroke and its Mitigation
Johnson, Prater (VCOM) and LeRoith (VCM): Development of the Lamb Model for RSV Vaccine Development and Testing
Reilly (VCOM) and Luo (VCM): HDAC6 Inhibition in SLE
Rzigalinski (VCOM) and Ehrich (VCM): Cerium-Containing Nanoparticles for Amelioration of Neurodegenerative Conditions
Prater, Elswaifi (VCOM) and Sriranganathan, Boyle (VCM): Nanoparticles to Deliver .. Therapeutics for Intracellular Bacterial Infections.

Second round: July 2016 – June 2017
Berglind (VCOM) and Allen (VCM), year 2 continuation – NLR Protein Modulation of Gastrointestinal Inflammation…
Costa (VCOM) and Klein (VCM), year 2 continuation – The Role of Tri-heteromeric…
Hrubec (VCOM) and Luo (VCM): Effect of QACs on Gut Microbiota and Development of Immune Function
Palmieri (VCOM) and Inzana (VCM) and others: Improved Lyme Disease Detection in Humans and Dogs
Prater (VCOM) and Sriranganathan, Boyle (VCM): year 2 continuation – Nanoparticles to Deliver…
Williams (VCOM) and He (VCM): Benefits of Gemmnotherapy on the Treatment of Peripheral Vascular Disease

Next Request for Applications: Announcement Early 2017, Due Date Early Spring 2017, Funding July 1
Research Eureka(!) Acceleration Program (REAP)

Pilot grant program designed to stimulate new research at VCOM.

All three campuses have REAP funds available.

Open for all types of research: Biomedical, Clinical, Simulation and Education, Public Health, etc.
Osteopathic-related research highly encouraged.

Collaborative research highly encouraged, and cross-campus research most highly favored.

Typical budget requests: ~ $50K for award period July 1 to June 30.
PIs may apply for a second year of funding, but application will be competively reviewed with all others.

Major review criteria: (1) Best science wins – Osteopathic topics encouraged, (2) clear plan for publication(s),
(3) clear plan for extramural grant application(s), (4) inclusion of students.

Request for applications: Early Spring 2017, several due dates – reviews continue until allocated funds are all
committed (2016, 2 rounds)
# 2016 REAP Awards

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<tr>
<th>Campus</th>
<th>PI</th>
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<tr>
<td>Auburn</td>
<td>White, Jeremy</td>
<td>Wireless Ecosystem in Mass Casualty Assessment and Triage (WEMCAT)</td>
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<td>Auburn</td>
<td>Liu, Wei</td>
<td>Effect of Tai Chi Exercise on Mechanical Joint Loading and Biology Response in Knee Osteoarthritis</td>
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<td>Carolinas</td>
<td>Berglind, Jennifer</td>
<td>Impact of Complement on Inflammation and Healing during IBD</td>
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<td>Identifying the interaction of sex hormone binding globulin and estradiol receptor-β at the plasma membrane and within the cell</td>
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<td>Gregg, Randy</td>
<td>Effect of Zaire Ebolavirus soluble viral proteins upon the functions of innate immune cells</td>
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<td>McKinney, Cindy</td>
<td>X-linked Cardiomyopathy: Isogenic Cell Models of Patient Mutations in Danon Disease</td>
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<td>In situ identification and in vitro characterization of human heart valve progenitor cells</td>
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<td>Carolinas</td>
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<td>“The Other 45”: Improving Chronic Disease Self-Management through Education</td>
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<td>Virginia</td>
<td>Garner, Skip</td>
<td>Identification and verification of genetic markers for Autism</td>
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<td>Virginia</td>
<td>Costa, Blaise</td>
<td>Clearance of Brain Metabolic Waste in Rat Model of Alzheimer’s Disease by Cranial Osteopathic Manipulation</td>
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<td>Virginia</td>
<td>Johnson, Teresa</td>
<td>Vaccine Development for the Prevention of Gram Negative Bacterial Infections</td>
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<td>Virginia</td>
<td>Hrubec, Terry</td>
<td>Synergistic Action of Tap Water Contaminants: Potential Health Risks</td>
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<td>Virginia</td>
<td>Rzigalinski, Beverly</td>
<td>Cerium Oxide Nanoparticles in the Treatment of Blast Neurotrauma</td>
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<td>Virginia</td>
<td>Queen, Robin</td>
<td>The Ability of Osteopathic Structural Evaluation to Assess Gait Asymmetry</td>
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AOA Research Grants

Redesigned research priorities / expectations

“[the] AOA identified five research priorities that would have the greatest potential to impact patient care and evidence-based medicine and to demonstrate the value DOs and their approach to care offer the patient and research communities.”

That is – the AOA is looking to fund research that has a high probability of making a real impact on Osteopathy and the practice of Osteopathic Medicine.

Key review criteria include: Likelihood of publication, likelihood of subsequent funding, involvement of clinicians and students, etc.

Osteopathic component a LARGE review criterion.
AOA Research Focus Areas

1. Chronic Diseases & Conditions
   The AOA will focus on the impact of osteopathic medicine on prevention, diagnosis and/or treatment of chronic diseases & conditions. More specifically, the AOA encourages research on common chronic diseases with high public health impact and for which “osteopathic” approaches can lead to improvements in patient outcomes and reduction in health care costs.

2. Musculoskeletal Injuries & Preventions
   The AOA will focus on the influence of osteopathic medicine on management of musculoskeletal injuries and prevention.

3. Osteopathic Manipulative Medicine/Osteopathic Manipulative Treatment
   The AOA will focus on the impact of osteopathic manipulative medicine (OMM) and osteopathic manipulative treatment (OMT)(e.g., evaluation of the benefits of OMM & OMT on validated and clinical outcomes, describing the underlying basic science of OMM and OMT and its impact on patient outcomes).

4. Osteopathic Philosophy
   The AOA will focus on the impact of osteopathic philosophy on physician training, patient health outcomes, quality of care, communication, system utilization, and patient satisfaction.

5. Pain Management
   The AOA will focus on the osteopathic approach to chronic pain management (patient outcomes, enrich quality of life and demonstrate cost effectiveness).

Watch for specific RFAs to be announced in the coming months. Projected Due Date: July 2017.
Grantsmanship

• Submissions
  – If you don’t have a hook in the water you will never catch a fish
  – Expect a 10 to 20% success rate of funding
  – Follow the rules and pay attention to details
  – Be willing to think outside the box
Grantsmanship

- **Focus**
  - Develop an Expertise
  - Have a long-term vision with an endpoint
    - Clinical outcome
  - Set goals
  - Look at the world around you for ideas
Grantsmanship

• Establish networks and collaborations
  – Fellow researchers
  – Medical and scientific meetings
  – Program directors
  – Commercial and Industry partners
  – Speaking at scientific meetings
Grantsmanship

• Sell the product
  – Creativity
  – Application
  – Solution
Successful Grantsmanship

Create
Support
Deliver
Disseminate