



Commonwealth Health Research Board  
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## **PRESS RELEASE Dated August 1, 2016**

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## **From the Commonwealth Health Research Board**

The Commonwealth Health Research Board [CHRB] has awarded \$1,077,444 in grants to eleven medical and health researchers in Virginia

The CHRB was created by Virginia Code § 23-278 to provide financial support, in the form of grants, donations, or other assistance, for research efforts that have the potential of maximizing human health benefits for the citizens of the Commonwealth. Research efforts eligible for support by the Board shall include traditional medical and biomedical research relating to the causes and cures of diseases as well as research related to health services and the delivery of health care. The grants include:

**Eastern Virginia Medical School:** [\$100,000] This grant is to support a continuation of a study of a selective inhibitor of a pancreatic beta cell enzyme that can cause beta cell dysfunction. This selective inhibitor protects beta cell function and may halt or reverse diabetes progression.

**Eastern Virginia Medical School:** [\$100,000] This new study will explore the inflammatory milieu in adipose tissue that may lead to the development of aggressive epithelial cancers and resistance to chemotherapy caused by an oncogene.

**James Madison University:** [\$100,000] This grantee will continue to investigate whether gene regulation in retinal neurons contributes to the pathogenesis of eye diseases such as age-related macular degeneration. The molecular mechanisms contributing to the onset and progression of age-related macular degeneration will be followed. This work may provide a better understanding of epigenetic gene regulation in the diseased retina.

**Old Dominion University:** [\$100,000] This investigator will continue to investigate how normal breast tissue is able to control the development of cancer producing mutated cells and how sometimes these mutated cells are able to overcome the suppression to form breast tumors. This work could lead to new diagnostic methods of detecting breast cancer at its earliest stages and to develop new therapeutic strategies that may suppress or eliminate these mutated cells.

**Virginia Commonwealth University:** [\$100,000] This continuation study involves the promising treatment of Traumatic Brain Injury. An inflammasome inhibitor that the investigator has developed appears to be able to reduce cortical brain tissue damage and neuronal cell loss in an animal model with Traumatic Brain Injury. This work may lead to a promising treatment for Traumatic Brain Injury.

**Virginia Commonwealth University:** [\$100,000] This is a new study that aims at developing a technology that will enable local release of a form of a known anticancer drug, doxorubicin that will diminish severe side effects of cancer chemotherapy treatments.

**Virginia Commonwealth University:** [\$100,000] This newly funded project is aimed at studying a novel drug candidate for lung repair and to reverse emphysema.

**Virginia Commonwealth University:** [\$100,000] This study will attempt to design and implement subcutaneous, ultra-sensitive, miniature ZnO-based sensors for long-term continuous glucose monitoring. This is a project that is aimed at designing and implementing subcutaneous sensors for long term continuous glucose monitoring. The technology proposed would allow miniaturization of sensing devices, eliminating the discomfort with the current bulky type sensors.

**Virginia Polytechnic Institute and State University:** [\$77,445] The investigator will continue to study the causative factors associated with the risk for obesity in children born from obese mothers. These children also have a higher risk for diabetes, hypertension, and dementia as adults. The investigator hopes to better define when during early pregnancy these adverse responses to maternal obesity occur.

**Virginia Polytechnic Institute and State University:** [\$99,999] This new study is aimed at providing a better understanding of cardiac arrhythmia and the establishment of the fundamental basis for regenerative medicine to treat cardiovascular diseases.

**Virginia Polytechnic Institute and State University:** [\$100,000] This new study is aimed at obtaining an understanding of molecular connections between obesity-related type 2 diabetes and the risk for Alzheimer's disease.

## Commonwealth Health Research Board [CHRB]

**FY 2016/2017 CHRB Grant Awards**

Year 2 of a two-year grant award

| Principal Investigator          | Submitting Institution/<br>Organization                   | Grant Award \$ | Recipient<br>Matching \$ | Total Project<br>Funds | Grant Title  |
|---------------------------------|---|----------------|--------------------------|------------------------|--|
| Robert Bruno, Ph.D.             | Old Dominion<br>University                                | \$ 100,000     | \$ 53,000                | \$ 153,000             | Chimeric mammary models for<br>elucidating microenvironment<br>contributions to tumor suppression<br>and promotion   |
| Anca Dobrian, Ph.D.             | Eastern Virginia<br>Medical School                        | \$ 100,000     | \$ 46,500                | \$ 146,500             | Is Twist-1 endothelial-derived<br>microparticles a key link between<br>obesity and cancer?   |
| Alan Ealy, Ph.D.                | Virginia Polytechnic<br>Institute and State<br>University | \$ 77,445      | \$ 47,241                | \$ 124,686             | Fetal Outcomes from Maternal Obesity<br>Around the Time of Conception  |
| Raymond Enke, Ph.D.             | James Madison<br>University                               | \$ 100,000     | \$ 79,328                | \$ 179,328             | Molecular and bioinformatic analysis of<br>epigenetic gene regulation in the<br>normal and diseased retina:<br>Characterizing pathways for diagnosing<br>and treating macular degeneration |
| Matthew Hartman,<br>Ph.D.       | Virginia<br>Commonwealth<br>University                    | \$ 100,000     | \$ 33,000                | \$ 133,000             | Development of an oxygen-<br>independent strategy for targeted<br>phototherapy of cancer   |
| Jia-Qiang He, Ph.D.             | Virginia Polytechnic<br>Institute and State<br>University | \$ 99,999      | \$ 61,000                | \$ 160,999             | Biodegradable Microcapsules<br>Containing Stem Cell Derived-<br>Biological Pacemaker to Treat Mice<br>with Bradycardia   |
| Masahiro Sakagami,<br>Ph.D.     | Virginia<br>Commonwealth<br>University                    | \$ 100,000     | \$ 33,000                | \$ 133,000             | A salvianolic acid B derivative:<br>HIF1 $\alpha$ /STAT3-directed VEGF<br>stimulation for lung repair in<br>emphysema  |
| Dong Sun, M.D., Ph.D.           | Virginia<br>Commonwealth<br>University                    | \$ 100,000     | \$ 33,000                | \$ 133,000             | Targeting NLRP3 inflammasomes to<br>treat traumatic brain injury with a<br>novel pharmacological inhibitor   |
| David Taylor-Fishwick,<br>Ph.D. | Eastern Virginia<br>Medical School                        | \$ 100,000     | \$ 46,500                | \$ 146,500             | New Drug Target for Diabetes   |
| Erdem Topsakal, Ph.D.           | Virginia<br>Commonwealth<br>University                    | \$ 100,000     | \$ 33,000                | \$ 133,000             | Implantable Biosensors for Long-Term<br>Continuous Glucose Monitoring  |
| Bin Xu, Ph.D.                   | Virginia Polytechnic<br>Institute and State<br>University | \$ 100,000     | \$ 61,000                | \$ 161,000             | Molecular mechanisms of amylin as a<br>novel contributor to Alzheimer's<br>disease   |
|                                 |   | \$ 1,077,444   | \$ 526,569               | \$ 1,604,013           |  |