

Massey researchers awarded over \$800,000 in grant funding

In February, VCU Massey Cancer Center researchers were awarded nearly \$1 million in grant funding to support their research. The awards are outlined below:

“Hematopoietic Cell Therapy for Young Adults with Severe Sickle Cell Disease”

[Christina Wiedl, D.O.](#), Developmental Therapeutics

R34HL108761

The primary goal of this multicenter study is to determine the safety and feasibility of bone marrow transplantation in young adults with severe sickle cell disease. The award was granted by the University of Pittsburgh for the amount of \$9,625 for one year. More information: <http://1.usa.gov/1fnFLBB>

“Functional Characterization of Suppressor of IKKepsilon”

[Jessica K. Bell, Ph.D.](#), Developmental Therapeutics

R21AI107447

A critical barrier to developing effective modulating agents for our immune response is our incomplete understanding of how protein interactions elicit key events downstream of innate immune sensors. This research seeks to characterize the function of a newly identified TBK1 substrate – Suppressor of IKKε, a downstream component of the innate immune response. These studies will explore a previously unrecognized connection between the innate immune response and cytosolic RNA granules providing a new paradigm for coordinating host defenses to stem pathogen invasion and a mechanistic model to examine viral subversion of this host defense mechanism. The award is funded by the National Institutes of Health for the amount of \$360,000 over two years. More information: <http://1.usa.gov/1dQixil>

"The role of the C1P/cPLA2alpha interaction in anaphylaxis"

[Charles E. Chalfant, Ph.D.](#), Cancer Cell Signaling

(R21AI109068)

We are focusing on the physiological condition of anaphylaxis, which is a severe, systemic allergic reaction that occurs quickly upon exposure to an allergen. The incidence rate has increased dramatically to 49.8 people per 100,000 demonstrating the need for new and effective treatments. As the mechanism of anaphylaxis has not been fully characterized, our proposed studies will aid in the future development of new therapeutics in this regard. The award is funded by the National Institutes of Health for the amount of \$419,000 over two years. More information: <http://1.usa.gov/1g46na4>

“Structural Studies on Chromatin Remodeling Complex NURF”

[Joseph W. Landry, Ph.D.](#), Cancer Molecular Genetics

Aberrant gene expression frequently contributes to the development and progression of human cancers. Because of its importance to cancer progression, potential therapeutic benefit may be obtained by correcting defects in gene expression. Gene expression is regulated by many proteins and RNAs through well understood mechanisms. One such mechanism is chromatin remodeling, which is commonly catalyzed by large multi-subunit protein complexes. We have discovered that NURF chromatin remodeling complex has important functions in regulating the expression of genes relevant to cancer biology, and is essential for the progression of breast and melanoma cancers using mouse models. The sum of these experiments suggests that NURF could be a viable therapeutic target. Successful design of therapeutic small molecules to NURF requires solving the molecular structure of the complex design which is currently unknown. The objective of this proposal is to take the first steps towards determining the structure of the NURF complex using complementing biochemical and physical methods. The award is funded by a parent grant from the American Cancer Society for the amount of \$30,000.