**Nicole Putnam, Ph.D., of Vanderbilt University**   
[**“The impact of innate immune recognition of Staphylococcus aureus on bone homeostasis and skeletal immunity”**](https://www.niaid.nih.gov/sites/default/files/nicoleputnamapplicationF31.pdf)

**Project Narrative:**Normal bone remodeling is a tightly regulated process that is dramatically altered by infection and both systemic and local inflammatory conditions. The proposed research will investigate how skeletal cells sense and respond to the human bacterial pathogen Staphylococcus aureus, the most common cause of bone infections, and how these cellular responses disrupt normal bone remodeling. This work will therefore describe how bone is altered by the presence of bacterial pathogens and resulting immune responses, providing critical information for the development of therapeutics that may reduce bone pathology triggered by infection or inflammation.

**Nico Contreras, University of Arizona**

[**“The Immunological Consequences of Mouse Cytomegalovirus on Adipose Tissue”**](https://www.niaid.nih.gov/sites/default/files/F31-sample-application_nico_contreras.pdf)

**Project Narrative:**

Cytomegalovirus (CMV) infects a majority of the world’s population. There has been correlation between CMV infection and metabolic health decline, such as atherosclerosis. Our preliminary results expand this correlation and possibly mechanistically link CMV infection [rest of narrative edited to remove personal details]

**Samantha Lynne Schwartz, Emory University**

[**“Regulation of 2'-5'-Oligoadenylate Synthetase 1 (OAS1) by dsRNA”**](http://www.niaid.nih.gov/sites/default/files/F31-Sample-Application_Samantha-Schwartz.pdf)

**Project Narrative:**

The innate immune system is our cell’s front line defense against infecting pathogens. This project will investigate how one important RNA-sensing component of the innate immune system is regulated by specific molecular signatures within double-stranded RNA molecules. Such studies are essential to understand how the innate immune system is controlled, how its effects can be circumvented by infecting viruses, and as a potential platform to design effective antiviral treatments.