

Subject: Dissertation Defense - Maryonne Snow-Smith, PHD Biosciences

Date: Tuesday, June 10, 2025 at 11:10:07 AM Eastern Daylight Time

From: SSB Faculty List on behalf of Diane St. Germain

To: SSB-FACULTY-LIST-L@LISTSERV.GMU.EDU

Dissertation Defense Announcement

To: The George Mason University Community

Candidate: Maryonne Snow-Smith

Program: PhD in Biosciences

Date: Tuesday June 24, 2025

Time: 10:30 AM Eastern Time (US and Canada)

Location:

Virtual via Zoom

Join Zoom Meeting

<https://gmu.zoom.us/j/98633134860?pwd=O1Ho9yE8YbKk7xwt99j0VvkyH6MA6O.1>

Meeting ID: 986 [3313 4860](#)

Passcode: 019286

One tap mobile

[+12678310333](#),,98633134860#,,, *019286# US (Philadelphia)

[+13017158592](#),,98633134860#,,, *019286# US (Washington DC)

Dial by your location

[+1 267 831 0333](#) US (Philadelphia)

[+1 301 715 8592](#) US (Washington DC)

Meeting ID: 986 [3313 4860](#)

Passcode: 019286

Find your local number: <https://gmu.zoom.us/j/9616161616>

Committee Chair: Dr. Ancha Baranova

Committee members: Dr. Amy Klion, Dr. Alessandra Luchini, Dr. Katrin Mayer-Barber

Title: The Functional Role of Eosinophils in Host Defense to Pulmonary Infections

Abstract:

Eosinophils are multifunctional granulocytes primarily associated with allergic responses and defense against parasitic infections. However, their role in viral infections, particularly in the environment of the ongoing SARS-CoV-2 pandemic, remains incompletely understood. Initial investigations into COVID-19 pathophysiology suggested limited involvement of eosinophils in direct anti-viral defense mechanisms. Our current data indicates that eosinophils do not significantly contribute to initial viral control in the lungs of SARS-CoV-2 infected mice. Despite this, mice lacking eosinophils demonstrated markedly reduced survival following SARS-CoV-2 infection, suggesting that eosinophils may play an immunoregulatory role in host resistance. These findings imply that eosinophils may influence disease outcome through mechanisms beyond anti-viral control, potentially involving modulation of inflammation, tissue repair, or effects on other immune cells promoting disease tolerance. The lack of antiviral activity but essential contribution to host protection highlights the complexity of eosinophil function in the context of viral disease. Further clarification of the role of eosinophils may provide critical insights into the immune dynamics of COVID-19 and uncover new avenues for therapeutic intervention that enhance protective immunity while minimizing immunopathology.

###