

The University of Maine

DigitalCommons@UMaine

Division of Marketing & Communications

University of Maine Departmental Records

5-13-2021

COVID-19_UMaine News_Yaseen Balkhi gives in-depth look at immune responses to SARS-COV-2

University of Maine Division of Marketing and Communications

Follow this and additional works at: https://digitalcommons.library.umaine.edu/c19_marketing



Part of the [Higher Education Commons](#), [History Commons](#), and the [Medicine and Health Sciences Commons](#)

This Press release is brought to you for free and open access by DigitalCommons@UMaine. It has been accepted for inclusion in Division of Marketing & Communications by an authorized administrator of DigitalCommons@UMaine. For more information, please contact um.library.technical.services@maine.edu.

UMaine News

- Home
- UMaine Today Magazine
- Submit news
- Subscribe
- Podcast
- Contact
-
-

Want weekly UMaine news updates in your inbox?

[SUBSCRIBE NOW](#)

Recent Posts

Guardian cites Allan, Kerschner hazing studies

Published: May 19, 2021

NEA talks with Morin about food insecurity on college campuses

Published: May 19, 2021

Howorth speaks with BDN to promote new special education certificate

Published: May 19, 2021

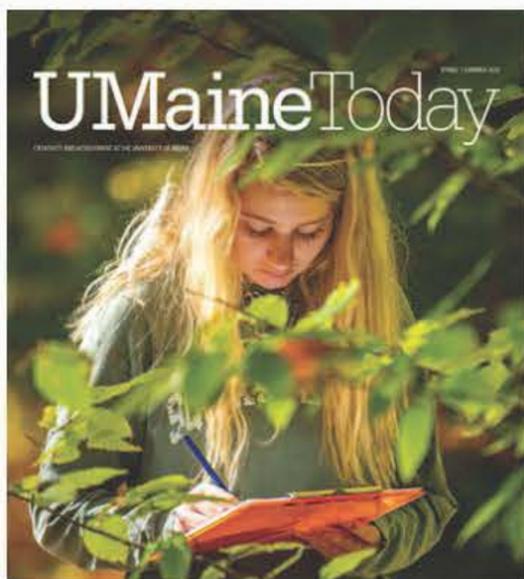
Morning Ag promotes compost, manure webinar for home gardeners

Published: May 19, 2021

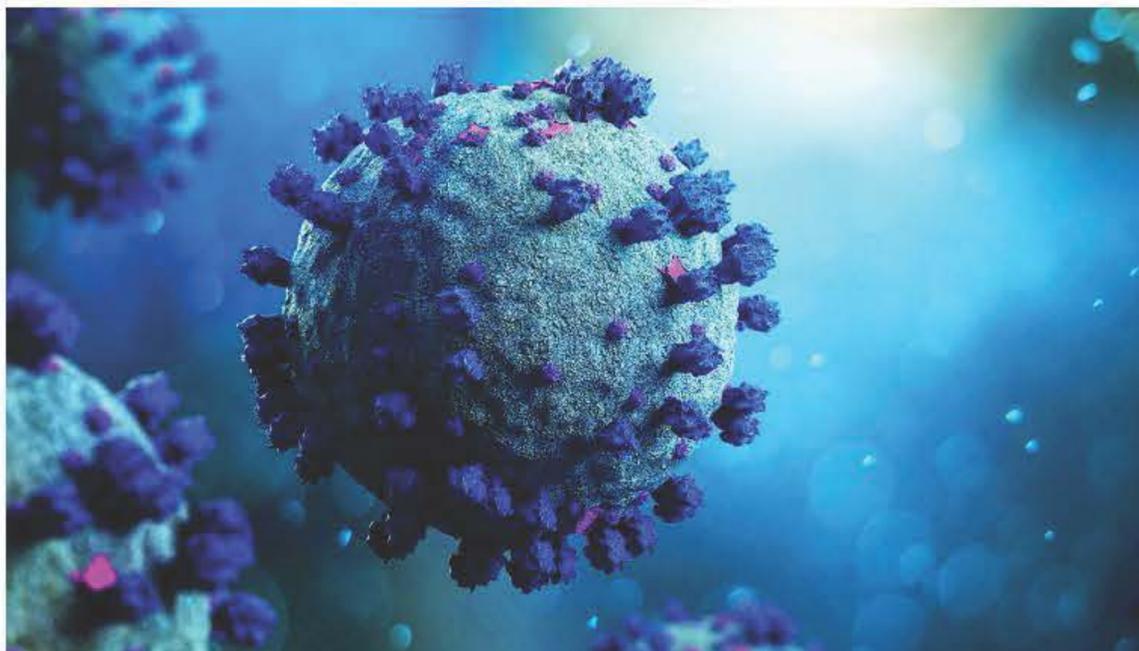
Free Press advances social justice series, Ranco presentation

Published: May 19, 2021

UMaine Today



COMIFER CLASSROOM What are the roles of Maine's University forests?



Yaseen Balkhi gives in-depth look at immune responses to SARS-COV-2

May 13, 2021

Specific receptors in the immune cells detect and generate responses to defend against the virus that causes COVID-19 — SARS-COV-2 — when it infects the body, according to University of Maine immunology expert Mumtaz Yaseen Balkhi.

Using several recent studies involving human samples, cell line and nonhuman primate models, Yaseen Balkhi, an assistant research professor with the UMaine Department of Molecular and Biomedical Sciences, wrote a review article and model detailing innate, or frontline, and adaptive immune responses to the virus that spurred a global pandemic.

The article, published in [Molecular Immunology](#), particularly focuses on the mechanisms leading to excessive proinflammatory cytokine release and attenuation of type-I-Interferons seen in SARS-CoV-2 infected severe cases of COVID-19 patients.

Yaseen Balkhi also explains the mechanism leading to an increase in the expression of the cell receptor that allows the virus to attach to and infect human cells, angiotensin converting enzyme 2 (ACE2). His review article provides new data about how T-cell responses in SARS-COV-2, and elaborates “on adaptive and memory responses generated against” the virus.

Using a heat-inactivated version of SARS-COV-2, its total RNA genome and its expression vectors in primary human epithelial or innate immune cells can reveal how the immune system detects the virus and signals infected and other immune cells to create the necessary antiviral proteins to defend against it, Yaseen Balkhi says. They can also help researchers explore additional mechanisms that regulate the expression of ACE2 in airway epithelial cells.

“This article presents several new ideas based on understanding gained over the course of the pandemic about how the human immune system responds to SARS-CoV-2 in COVID-19 patients,” Yaseen Balkhi says. “These ideas can potentially help further understanding about our ability to defend against SARS-CoV-2.”

In addition to teaching courses at UMaine, Yaseen Balkhi has an additional appointment as an assistant professor from Tufts University School of Medicine and serves as scientific director of IT Bio, a Boston-based firm he co-founded that designs new anti-exhaustion therapies for cancer and chronic viral infection treatment.

Contact: Marcus Wolf, 207.581.3721; marcus.wolf@maine.edu

Share this:

Division of Marketing and Communications
5703 Alumni Hall
Orono, ME 04469-5703

Tel: 207.581.3743
Fax: 207.581.3776

Home
Submit news
Podcast

UMaine Today Magazine
Subscribe
Contact

