

PHYSICS

UNIVERSITY OF MICHIGAN

PRESENTS

Today's Saturday Morning Physics Speaker



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From Milkmaids to mRNA

Abstract

The discovery that host immune defenses could be primed, a process called immunization or vaccination led to eradicating smallpox. Immunization has changed the global impacts of infectious diseases. Messenger RNA (mRNA) vaccines that have Emergency Use Authorization are one part of the toolkit for managing COVID-19. What is mRNA anyway? What are vaccines? We will explore connections among mRNA, milkmaids, and microbial pathogens.

We celebrate the James Robert Walker Lecture on this occasion.

Biography

A. Oveta Fuller is faculty of Microbiology and Immunology in the Medical School and a member of the African Studies Center at the University of Michigan (U-M). As a scientist who studies and teaches about viruses (a virologist), Dr. Fuller's laboratory team has published study results on herpes simplex and influenza viruses. She teaches U-M medical, graduate, dental, and undergraduate students about human virus pathogens.

Current implementation science research with the *Trusted Messenger* intervention that she developed

partners with networks of religious and community leaders in Zambia, South Africa and sites in the USA to enable effective engagement in infectious disease prevention.

As an Adjunct Professor at Payne Theological Seminary, she teaches intensive courses, "Health Matters: What Effective Leaders Should Know" and "What Effective Faith Leaders Should Know about HIV/AIDS" to seminary graduate students from across the USA. Her U-M study abroad course "Global Impact of Microbes: Fieldwork," includes cultural proficiency training for participants before their immersion at global research field sites to explore effective partnerships for advancing health and wellness.

She is a fellow of the Ford Foundation and of the J. William Fulbright programs. A sabbatical leave in 2015-16 in sociology at Duke University explored use of religious leader networks in disease prevention. She is an inaugural alumna of the Ansbacher Women in Academic Leadership Program at the U-M Medical School and serves on the Vaccine and Related Biological Products Advisory Committee (VRBPAC) that examines COVID-19 vaccines authorization or approvals with the Food and Drug Administration.

During the 2020 global emergence of SARS-Coronavirus-2, Dr. Fuller has been a highly trusted resource for providing science insights to community through conversations, webinars, workshops, articles, and visual and other media. She works with networks of faith leaders, seminarians, university students, community leaders, companies, and the general public.

A major goal is to increase capacity of influential community leaders to assist with moving biomedical science advances into broader individual action for health and wellness.

YouTube Link to Saturday's Talk: <https://www.youtube.com/watch?v=5mN-qJmWRkl>

Discover more about Saturday Morning Physics: <http://www.saturdaymorningphysics.org>

View past lectures on YouTube: <http://tinyurl.com/nwb8ydu>