

# ACADEMIC CONNECTIONS

THOUGHTS AND UPDATES FROM DR. W. P. ANDREW LEE

March 24, 2023

Dear Colleagues,

I write to share the news that **Michael V. Norgard, Ph.D.**, Chair and Professor of the Department of Microbiology and holder of the B.B. Owen Distinguished Chair in Molecular Research, has announced his plans to retire in January 2024 after 45 years of service at UT Southwestern.

Following his undergraduate degree in zoology and microbiology from Rutgers University, Dr. Norgard pursued a Ph.D. in microbiology from New Jersey Medical School, now Rutgers Biomedical and Health Sciences, and a postdoctoral fellowship in genetic engineering from the Roche Institute of Molecular Biology.

Dr. Norgard joined UT Southwestern in 1979 as an Assistant Professor in the Department of Microbiology. Over his career, he served in various leadership roles in the Department – including Vice Chair and Acting Chair – before being appointed Chair in 1998.

Under his leadership, the Department has expanded research in cellular microbiology, microbial pathogenesis, cell biology, virology, and host-parasite interactions. Over the past 25 years, Dr. Norgard has amassed a distinguished faculty comprising one of the outstanding microbiology departments in the world. He is known as a meticulous leader and strong mentor of junior faculty, reflected by many of his faculty members garnering prestigious awards.

An expert in the identification and characterization of bacterial membrane proteins, Dr. Norgard is internationally recognized for his research on pathogenic spirochetes, most notably those causing syphilis (*Treponema pallidum*) and Lyme disease (*Borrelia burgdorferi*). In the 45 years of his scientific career, he has garnered \$40 million in grants and contracts for research and related academic activities.

Before the advent of genomics, Dr. Norgard was the first to describe treponemal lipoproteins, molecules believed to be crucial to the membrane biology of *T. pallidum* and largely responsible for the local and systemic inflammatory events of syphilis. His early recognition of key *T. pallidum* membrane lipoproteins and the generation of their recombinant counterparts are the bases of newer generation-specific serological tests for syphilis used throughout the world. In addition, he established that fetal IgM serological testing performed on neonates of mothers at risk for active syphilis can substantially



enhance the diagnosis of asymptomatic congenital syphilis. Dr. Norgard is listed as the lead inventor on five United States patents and many international patents related to syphilis diagnosis.

In his Lyme disease work, Dr. Norgard was the first to report that *B. burgdorferi* exploits two unconventional sigma factor subunits (RpoN and RpoS) of RNA polymerase in succession to comprise an alternative sigma factor regulatory cascade. Upon sensing appropriate environmental cues (e.g., warm blood), this novel control system, termed the RpoN-RpoS regulatory pathway, governs the expression of key outer membrane lipoproteins responsible for allowing the spirochete to infect and cause disease in mammals. The discovery set the stage for understanding many aspects of differential antigen expression in *B. burgdorferi* as it cycles between its arthropod (tick) and mammalian (including human) hosts.

An engaged educator, Dr. Norgard has taught medical microbiology and infectious diseases to over 8,000 medical students. He served as Chair of UT Southwestern's Molecular Microbiology Graduate Program, and for more than two decades, he was PI/Director of a National Institutes of Health (NIH)-funded Molecular Microbiology Training Grant.

Because of his many contributions to the field, Dr. Norgard has been invited to serve on numerous NIH and Centers for Disease Control and Prevention advisory panels, and as a special consultant for the U.S. Treasury Department and the U.S. and Canadian departments of justice.

Dr. Norgard is an elected Fellow of the American Academy of Microbiology. In 2002, he received the Distinguished Alumni Award from Rutgers Biomedical and Health Sciences.

I am pleased to announce that **Margaret Phillips, Ph.D.**, Chair and Professor of the Department of Biochemistry, will serve as chair of the committee that will conduct a national search to identify Dr. Norgard's successor. Other members of the committee are:

- Roger Bedimo, M.D., Professor of Internal Medicine
- Zhijian (James) Chen, Ph.D., Professor of Molecular Biology
- James Collins, Ph.D., Associate Professor of Pharmacology
- Lora Hooper, Ph.D., Chair and Professor, Department of Immunology
- Andrew Koh, M.D., Associate Professor of Pediatrics and Microbiology
- Kim Orth, Ph.D., Professor of Molecular Biology and Biochemistry
- Michael Shiloh, M.D., Ph.D., Associate Professor of Internal Medicine and Microbiology
- Vincent Tagliabracci, Ph.D., Associate Professor of Molecular Biology
- Joan Conaway, Ph.D., Vice Provost and Dean of Basic Research (*ex officio*)

This important search will be launched shortly, and we look forward to receiving faculty input. Please join me in congratulating Dr. Norgard for his many decades of committed leadership to UT Southwestern, for his extensive contributions to the field of microbiology, and for his dedication to training generations of scientists.



Sincerely,

*Andy*

W. P. Andrew Lee, M.D.

Executive Vice President for Academic Affairs and Provost  
Dean, UT Southwestern Medical School

Copyright 2023 UT Southwestern Medical Center. All rights reserved.

*Academic Connections* is a publication of Communications, Marketing, and Public Affairs (CMPA) at UT Southwestern Medical Center.