

# School of Graduate Studies in the Health Sciences Mission

The School of Graduate Studies in the Health Sciences at the University of Mississippi Medical Center in Jackson was established in 2001 by the Board of Trustees of State Institutions of Higher Learning. The Graduate Programs in the Health Sciences previously operated under the auspices of the Graduate School of the University of Mississippi. The school offers 12 programs leading to the degrees of Master of Science and Doctor of Philosophy in Biomedical Sciences, Clinical Health Sciences, Biomedical Materials Science and Nursing.

The goals of the School of Graduate Studies in the Health Sciences are to (1) train highly qualified researchers who will make significant contributions to the scientific literature, (2) educate those who will teach the next generation of biomedical scientists and health care professionals; and (3) foster the spirit of scientific inquiry in this institution.

# Graduate Studies in the Health Sciences Alumni Chapter Mission

The Graduate Studies in the Health Sciences Alumni Chapter was established in November 2005. General objectives of the School of Graduate Studies in the Health Sciences are to promote the welfare of the university and to enhance the relationship that exists between the university and its alumni. Through their united efforts, the university will develop into a greater educational institution which will serve the people of Mississippi effectively and efficiently.

The purpose of this organization is to promote effective education at the University of Mississippi School of Graduate Studies in Health Sciences and to promote the best understanding between the University of Mississippi, the graduate school and its alumni. These efforts will work to promote the wellness of the University of Mississippi and to cooperate with all other agencies of the school, the state government or private interests.

Office of Alumni Affairs  
The University of Mississippi Medical Center  
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Jackson, MS 39216  
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SCHOOL OF  
GRADUATE  
STUDIES  
IN THE  
HEALTH  
SCIENCES

■  
DISTINGUISHED  
ALUMNI  
LECTURE

■  
OCTOBER 23, 2009

## Douglas S. Lyles, PhD



Dr. Lyles is currently Professor and Chair of Biochemistry at Wake Forest University School of Medicine. He received his Bachelor's degree in Biochemistry from the University of Pennsylvania, and he received his PhD in Biochemistry with a minor in Microbiology and Immunology from the University of Mississippi Medical Center in 1975. He did his graduate work under Drs. Harold B. White and Dr. Charles C. Randall. He was a postdoctoral fellow in the Virology Laboratory at the Rockefeller University from 1975 – 1978. In 1978 he joined the faculty of the Bowman Gray School of Medicine of Wake Forest University (now Wake Forest University School of Medicine) as an Assistant Professor of Microbiology and Immunology. He rose through the ranks to become Professor of Microbiology and Immunology, and in 2004 assumed the position of Professor and Chair of Biochemistry.

Dr. Lyles has served on numerous study sections and other grant review panels, most recently serving as Chair of the Virology B Study Section from 2006 – 2008. He is also currently serving as an Editor for the *Journal of Virology*. Dr. Lyles has lived in Winston-Salem, NC, since 1978 with his wife, Mary F. Lyles, M.D., Associate Professor of Geriatrics and Gerontology, Wake Forest University School of Medicine, who is also a graduate of the University of Mississippi Medical Center. They have three children, who are in various stages of career development of their own.

Dr. Lyles has an active research program on the biochemistry and biophysics of virus envelope assembly that has been NIH-funded since 1979. His laboratory is studying the structure and assembly of enveloped RNA viruses. The goal of one research program is to define the molecular interactions involved in assembly of enveloped viruses by budding from cellular membranes. These studies are focused on vesicular stomatitis virus (VSV), a widely studied prototype enveloped virus that serves as a model for many other viruses that have envelopes as part of their structure. In addition, the transmembrane interactions of the VSV envelope glycoprotein are widely studied as a model for host transmembrane proteins such as those involved in signal transduction. These studies have involved analysis of expression of wild-type and mutant forms of the viral transmembrane and internal peripheral (matrix) protein, their intracellular membrane associations, and their assembly into virions.

For his second project, Dr. Lyles has an active research program on cytopathic effects of virus infection that is focused on the matrix (M) protein of vesicular stomatitis virus, the prototype rhabdovirus. In this project, his laboratory is studying the mechanisms by which viruses inhibit the expression of host genes.

The third project for the laboratory is studying the mechanisms by which VSV controls translation in virus-infected cells. Many viruses inhibit the translation of host mRNAs while promoting the translation of viral mRNAs. The goal of this program is to determine the molecular mechanisms involved in this striking example of translational control.

In a series of collaborative projects, his laboratory is studying the mechanisms by which VSV can be used as a cytolytic agent to kill tumor cells and how VSV can be engineered to be a safer and more effective vaccine vector. These studies are focused on the use of M protein mutants, which can be used to target the virus to tumor cells, and also activate more effective immune responses.

The School of Graduate Studies  
in the Health Sciences Alumni Chapter  
cordially invites you to attend the

**DISTINGUISHED ALUMNI LECTURE**

### **"The Many Functions of Viral Matrix Proteins"**

presented by

Dr. Douglas S. Lyles

*Professor and Chair, Department of Biochemistry  
Wake Forest University School of Medicine*

Noon on Friday, October 23, 2009  
Amphitheatre R153 at the Medical Center



\*Lunch provided

\*Dessert reception/poster presentations to follow  
at the Norman C. Nelson Student Union



*RSVP by October 19, to [ceburns@alumni.umsmed.edu](mailto:ceburns@alumni.umsmed.edu) or online at <http://alumni.unc.edu>.*

*For more information, call 1-800-844-5800 or 601-984-1115.*

*Off-campus guests may park in Lot D across the street  
from the School of Dentistry. The lot is most easily reached  
by entering the campus from Lakeland Drive.*

*\*Sponsored by Graduate Studies in the Health Sciences Alumni Chapter*