

# NEW CENTER FOR QUANTITATIVE BIOLOGY

**T**HE GEISEL SCHOOL OF MEDICINE RECEIVED A 5-YEAR, \$12.5 MILLION GRANT FROM THE NATIONAL INSTITUTES OF HEALTH (NIH) TO ESTABLISH A CENTER FOR QUANTITATIVE BIOLOGY. The new center is bringing together a diverse community of scientists and initiatives in computational biology, bioinformatics, and experimental genomics from faculty across Dartmouth as well as colleagues at the University of Vermont Larner College of Medicine.

Through its emphasis on the generation and analysis of wet-lab-based “omics big data”—genomic (genes), proteomic (proteins), metabolomic (nutrients)—the center will work together with ongoing initiatives in the Norris Cotton Cancer Center, other COBREs at Dartmouth, and educational programs such as the Graduate Program in Quantitative Biomedical Sciences at Geisel.

Funded by an Institutional Development Award (IDeA) Center for Biomedical Research Excellence (COBRE), the IDeA program builds research capacities in states that historically have had low levels of NIH funding by supporting basic, clinical and translational research; faculty development; and infrastructure improvements.

## RESEARCH NOTES

### DARTMOUTH STUDY REVEALS HOW FUNGAL BIOFILM STRUCTURE IMPACTS LUNG DISEASE

A new study led by researchers at Dartmouth’s Geisel School of Medicine reveals that the way in which human fungal pathogens form colonies, known as biofilms, can significantly impact their ability to cause disease. These colonies allow invasive fungal pathogens to grow in the lungs, which can be deadly to patients with diseases like cancer, who are on drugs or therapies that suppress their immune systems.

### NEW RESEARCH EXAMINES IMPLICATIONS OF AN AGING RURAL PHYSICIAN WORKFORCE

A recent study led by a research team at Geisel examines the aging physician workforce in rural populations—a demographic shift with important implications for the future—and offers strategies to forestall the projected diminishing access to healthcare.

### ONCE SCARCE, NEONATAL INTENSIVE CARE PROLIFERATES

Is care at Neonatal Intensive Care Units (NICUs) being driven by medical need or competition? A new Dartmouth Atlas report finds that, following a robust national expansion of neonatal intensive care units over the past two decades, nearly half of all newborns admitted to U.S. NICUs are of normal birth weight.

### STUDY REVEALS THAT PARENTAL ‘MEMORY’ IS INHERITED ACROSS GENERATIONS IN FRUIT FLIES

A study by Dartmouth researchers, reveals that when threatened, female fruit flies switch to ethanol-rich food to protect their eggs from predatory wasps. This adaptation is passed on to their offspring, persisting for five generations.

### STUDY EXAMINES ASSOCIATION BETWEEN CARE MANAGEMENT AND OUTCOMES AMONG PATIENTS IN MEDICARE ACOS

A recent report from The Dartmouth Institute for Health Policy and Clinical Practice finds that Accountable Care Organization (ACO)-reported care management and coordination activities were not associated with improved outcomes or lower spending for patients with complex needs.

### RESEARCHERS RECEIVE \$2.6 MILLION AWARD TO STUDY PEDIATRIC HOSPITAL ADMISSIONS

A team of researchers at Geisel has received a \$2.6 million funding award from the Patient-Centered Outcomes Research Institute to compare the effectiveness of direct admission and admission through emergency departments for hospitalized children.

### DNA TEST IS AN EFFECTIVE CERVICAL CANCER SCREENING TOOL FOR WOMEN IN LOW-INCOME COUNTRIES

A group of researchers from Dartmouth’s Norris Cotton Cancer Center have introduced an inexpensive DNA-based testing protocol for human papillomavirus in Honduras, showing that cervical cancer screening can be implemented in low-resource settings using this method.

### RESEARCHERS OFFER NEW INSIGHTS INTO HOW MATERNAL IMMUNITY IMPACTS NEONATAL HERPES

Findings from a recent study led by a Dartmouth research team, offer new insights into neonatal herpes, its impact on developing nervous systems, and how newborns can be protected from the disease.

### NOVEL SCALE CORRELATES CHILDREN’S SNACKING BEHAVIORS WITH EXTERNAL FOOD CUES

Dartmouth researchers have developed a brief, parent-reported scale to measure external food cue responsiveness to food marketing for preschool-age children that could be employed easily in their natural environments.

*For more information about research highlighted on this page and more Geisel research news, please visit [dartgo.org/DMF19-researchnotes](http://dartgo.org/DMF19-researchnotes)*