

DARTMOUTH MEDICINE seeks to convey the breadth and depth of the education, research, and clinical activities of DMS and DHMC; to serve as a publication of historical record; to stimulate thought and discussion on issues in medicine and medical education; and to reflect the range of opinions and activities among Dartmouth medical students, faculty, and alumni. Abbreviations used here include DMS (Dartmouth Medical School), DHMC (Dartmouth-Hitchcock Medical Center), DH (Dartmouth-Hitchcock), MHMH (Mary Hitchcock Memorial Hospital), and DC (Dartmouth College). The opinions of contributors do not necessarily reflect those of DMS or DHMC.

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## FEATURES

**Science versus Slime**  
 By Amos Esty **26**

Biofilms can be as mundane as slime on a shower curtain, or as menacing as antibiotic-resistant bacterial colonies on a medical device or in a human lung. But luckily, scientists are making progress in understanding these mysterious aggregations of microorganisms.

**Delivering the Goods**  
 By Jennifer Durgin **32**

When U.S. health care is good, it's very, very good. But when it's bad . . . well, it's no secret that many aspects of the system need fixing. A concerted new effort at Dartmouth to study and teach how to improve the delivery of care is bringing together experts from many fields.

**Fourth-Down Decision-Making**  
 By John E. Castaldo, M.D. **42**

His star lineman just needed routine clearance to return to play, the high-school football coach assured the doctor. But the neurologist quickly realized the situation would be a much more complex call. This excerpt from a book by a DMS alumnus describes events that took place some years ago, but tackles issues that are all too current.

## ONLINE

Check out our online edition at [dartmed.dartmouth.edu](http://dartmed.dartmouth.edu) and all of the multimedia **WEB EXTRAS** for this issue at [dartmed.dartmouth.edu/f10/we](http://dartmed.dartmouth.edu/f10/we).



9



10



42

## DEPARTMENTS

**Discoveries** **3**  
 How opioids can worsen pain 3  
 A somersaulting pill 7  
 Quest for a cancer vaccine 8  
 . . . and more

**Vital Signs** **9**  
 Easing agonizing decisions 9  
 Pomp and circumstance 10  
 Celebrating a 50th 12  
 When minutes matter 14  
 . . . and more

**Letters** **23**

**Student Notebook** **24**  
 By Armand Russo

**Point of View** **25**  
 By Jennifer Brokaw, M.D.

**Giving** **50**

**Faculty Focus** **52**  
 John Lyons, Jr., M.D.

**Grand Rounds** **54**  
 By Arnold M. Katz, M.D.

**Art of Medicine** **64**  
 Jon Gilbert Fox

## COVER

The image on our cover is an electronmicrograph of a *Pseudomonas aeruginosa* biofilm growing on a plastic surface. Each cylinder is an individual bacterial cell, and collectively they constitute the biofilm. The image is courtesy of the lab of DMS microbiologist George O'Toole. See page 26 to read about the lab's contributions to the growing understanding of these mysterious colonies.