Fungal Diseases: An emerging challenge to human, animal, and plant health

Keck Building, 500 Fifth St., NW, Room 100
Washington, DC
December 14-15, 2010

DAY 1: Tuesday, December 14, 2010:

8:00 - 8:30 am  Registration and Continental Breakfast

8:30 - 8:45 am  Welcoming Remarks
Dave Relman, M.D., Chair, and Jim Hughes, M.D., Vice-Chair, Forum on Microbial Threats

8:45-10:15 am  Keynote Remarks
Jim Hughes, Moderator

8:45 - 9:30 am  The “Good”, the “Bad”, and the “Ugly”: Fungi mold your world
Meredith Blackwell, Ph.D., Louisiana State University

9:30 - 10:15 am  Emerging fungal pathogens—past, present, and future
Arturo Casadevall, M.D., Ph.D., Albert Einstein College of Medicine

10:15 - 10:45 am  Discussion

10:45 - 11:00 am  Break

SESSION 1: Environmental factors influencing the emergence and spread of fungal diseases
Mary Wilson, Moderator

11:00 - 11:30 am  Climate, extreme weather events, and fungal disease emergence and spread
Compton (Jim) Tucker, Ph.D., NASA Goddard Space Flight Center

11:30 - 12:00 pm  Trade-mediated spread of fungal disease and resulting shifts in amphibian conservation status and practices
Ché Weldon, Ph.D., North-West University
12:00 - 12:30 pm  Weather, globalization, and trade—impacts on invasion and dispersal of fungal plant pathogens  
**Michael Jeger, Ph.D.,** Imperial College London

12:30 - 1:00 pm  Geography, climate, dust, and disease—epidemiology of Valley Fever (Coccidioides spp.) and ways it might be controlled  
**John Galgiani, M.D.,** University of Arizona

1:00 - 1:20 pm  Discussion

1:20 - 2:00 pm  Lunch

**SESSION 2: Case studies of emerging fungal diseases of humans, animals, and plants**  
Erica Rosenblum, Moderator

2:00 - 2:30 pm  Predicting and mitigating mycoses by merging deep-sequencing with global mapping projects [amphibian chytridiomycosis]  
**Matthew Fisher, Ph.D.,** Imperial College London

2:30 - 3:00 pm  Bat white-nose syndrome: an emerging fungal pathogen in New World bats  
**David Blehert, Ph.D.,** National Wildlife Health Center, US Geological Survey

3:00 - 3:30 pm  Knowing where to look—environmental sources of cryptococcal disease in human and animal residents in the Pacific Northwest  
**Karen Bartlett, Ph.D.,** University of British Columbia

3:30 - 3:45 pm  Break

3:45 - 4:15 pm  Emergence of Phytophthora ramorum in Europe and North America  
**David Rizzo, Ph.D.,** University of California at Davis

4:15 - 4:45 pm  Rapid global spread of aggressive strains of Puccinia striiformis on wheat – origins, causes, and consequences  
**Mogens Støvring Hovmøller, Ph.D.,** Aarhus University

4:45 - 5:15 pm  Discussion

5:15 - 6:00 pm  Open Discussion of Day One

6:00 pm  Meeting Adjoums

6:30 - 9:00:  Private Reception & Dinner for Speakers, Forum Members, and Staff
Day 2: December 15, 2010

8:30 – 9:00 am Continental breakfast

9:00 – 9:15 am Summary of Day One: Dave Relman, M.D., Chair, Forum on Microbial Threats

SESSION 3: Host and pathogen factors influencing the emergence and spread of fungal diseases
Jeff Duchin, Moderator

9:15 – 9:45 am Fungal pathogenesis in plants and animals: similarities and differences
Barbara Howlett, Ph.D., University of Melbourne

9:45 – 10:15 am Sexual reproduction, evolution and adaptation of C. gattii in the Pacific Northwest
Joseph Heitman, M.D., Ph.D., Duke University

10:15-10:30 am Break

10:30 – 11:00 am Genetic factors and immune responses to fungal infection in health and disease
Steve Holland, M.D., National Institute for Allergy and Infectious Diseases

11:00 – 11:30 am Host-pathogen dynamics of amphibian chytridiomycosis: the role of the skin microbiome in health and disease
Vance Vredenburg, Ph.D., San Francisco State University

11:30 – 12:00 pm Geomyces destructans in Old World and New World bats
Gudrun Wibbelt, D.V.M., Leibniz Institute for Zoo and Wildlife Research

12:00 – 12:30pm Discussion

12:30 - 1:15 pm Lunch

SESSION 4: Surveillance, detection and response
Steve Morse, Moderator

1:15 – 1:45 pm Informal surveillance networks for diseases of humans, plants, and animals
Larry Madoff, M.D., Massachusetts Department of Public Health & University of Massachusetts Medical School
1:45 – 2:15 pm  Local and national detection capability and public health responses for C. gattii  
Julie Harris, Ph.D., Centers for Disease Control and Prevention

2:15 – 2:45 pm  Global capacity for coordinated surveillance, detection, and response to emerging diseases of wildlife  
Peter Daszak, Ph.D., EcoHealth Alliance

2:45 – 3:15 pm  Wildlife conservation at the Smithsonian Conservation Biology Institute  
Luis Padilla, D.V.M., Smithsonian Conservation Biology Institute

3:15 – 3:45 pm  Break

3:45 – 5:15 pm  Panel and Open Discussion  
Speakers: Peter Daszak, Julie Harris, Larry Madoff, and Luis Padilla  
Discussants: David Blehert, Jacque Fletcher, and Kevin Russell

5:15 – 5:30 pm  Closing Remarks  
Jim Hughes & Dave Relman

5:30 pm  Meeting Adjourns