Program
2010 Molecular Basis of Infectious Diseases (MBID) Retreat
March 26, 2010
UTHealth (University of Texas Health Science Center at Houston)
Brown Foundation Institute of Molecular Medicine (IMM)
1825 Pressler Street, Houston, TX 77030
Website: http://www.uth.tmc.edu/pathology/MBID/2010MBIDRetreat/

Sponsored by:
The Molecular Basis of Infectious Diseases Training Program (http://www.uth.tmc.edu/pathology/MBID/)
Center of Emerging and Re-Emerging Infections, UTHealth
Center for Infectious and Inflammatory Diseases, Texas A&M Institute of Biosciences and Technology (http://ibt.tamhsc.edu/labs/ciid/)

Co-Organizers:
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Overview

8:00-10:00 Registration and coffee – James T. Willerson (JTW) Discovery Hall
(Note: No food or drinks are allowed in the IMM Auditorium)

8:30-9:30 Optional Workshop on Career Development in Microbiology/Infectious Diseases – IMM Auditorium

9:30-10:00 Break

10:00-11:00 Keynote Speaker: David A. Relman, M.D., Professor and Chief of Infectious Diseases, Stanford University School of Medicine, Palo Alto, California
“Patterns of bacterial diversity within the human microbiome” – IMM Auditorium

11:00-12:30 Platform presentations – IMM Auditorium

12:30-2:30 Poster session and fajita lunch – JTW Discovery Hall

2:30-3:30 Platform presentations – IMM Auditorium

3:30-4:30 Keynote Speaker: Shelley M. Payne, Ph.D., Professor of Microbiology, University of Texas at Austin
“Shigella flexneri: life in the intracellular environment” – IMM Auditorium

4:30-6:00 Poster award presentations and social hour – JTW Discovery Hall
Schedule

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8:30-9:30 Optional Workshop on Career Development in Microbiology/Infectious Diseases – IMM Auditorium

9:30-10:00 Break

10:00-12:30 Morning Session – IMM Auditorium
Moderator: Danielle A. Garsin, Ph.D., Assistant Professor of Microbiology & Molecular Genetics, UTHealth Medical School

10:00-11:00 Keynote Speaker: David A. Relman, M.D., Professor and Chief of Infectious Diseases, Stanford University School of Medicine, Palo Alto, CA.
“Patterns of bacterial diversity within the human microbiome”

11:00-11:15 Lara Bull-Otterman, Postdoctoral Fellow, Dept. of Molecular Virology and Microbiology, Baylor College of Medicine, Houston, TX.
“A preliminary comparison of distal gut microbiomes from HIV-infected and healthy subjects”

11:15-11:30 Owen Mapingire, Graduate Student, Dept. of Biology and Biochemistry, University of Houston, Houston, TX. “Channel properties of wildtype and domain mutants of the PapC usher”

11:30-11:45 Troy Hammerstrom, Graduate Student, Dept. of Microbiology and Molecular Genetics, UTHealth Medical School, Houston, TX. “Functional analysis of AtxA, the major virulence gene regulator of Bacillus anthracis”

11:45-12:00 Ziyin Li, Ph.D., Assistant Professor of Microbiology & Molecular Genetics, UTHealth Medical School, Houston, TX. “Molecular mechanisms of the unusual cytokinesis in Trypanosoma brucei”

12:00-12:30 Kristy Murray, D.V.M., Ph.D., Assistant Professor of Epidemiology, Center of Infectious Diseases, UT Health School of Public Health, Houston, TX. “Investigation of viral disease outbreaks”

12:30-2:30 Poster session and fajita lunch – JTW Discovery Hall
(A key of abbreviations is provided on the last page.)


2. Julie Chang, Anjali Mandlik and Hung Ton-That. MMG, UTHMS. Adhesive minor pilins of Corynebacterium diphtheriae are cross-linked to the bacterial cell wall.

Poster session, ctd.

4. Jennifer L. Dale and Theresa M. Koehler. MMG, UTHMS. 
A trans-acting repressor controls expression of the master virulence regulator atxA in Bacillus anthracis.

Bile acids improve the bioavailability and bacteriostatic effect of rifaximin.

6. Diane G. Edmondson and Steven J. Norris. Pathology and Laboratory Medicine, UTHMS. 
vlSE recombination in tissue explants ex vivo.

7. Kristina Fox, Arati Ramesh, Wade Winkler, Danielle Garsin. MMG, UTHMS. 
Multiple post-transcriptional regulatory mechanisms control ethanolamine utilization genes in Enterococcus faecalis.

8. Jessica R. Galloway-Pena and Barbara E. Murray. Div. of Infectious Diseases/ Internal Medicine, UTHMS. 
Enterococcus faecium proteins with the “WxL” motif are antigenic surface proteins located in putative operons.

The Enterococcus faecalis RNase J2 ortholog is a key regulator of pili expression and bacterial virulence.

10. Elicia D. Grace, Matthew D. Blankschien, and Christophe Herman. MVM, BCM. 
TraR increases bacterial fitness for conjugation.

11. Chunfang Gu, Brooke Russell, Ranga Vansa, Yi Xu. CIID, Texas A&M IBT. 
Intracellular trafficking of Bacillus anthracis in lung epithelial cells.

12. Jennifer Kerr, Angel Paredes, Lois Banta, and Peter Christie. MMG, UTHMS. 
Agrobacterium tumefaciens VirB10 antennae projection’s role in substrate transfer and T pilus biogenesis.

13. Ya-Ping Ko, C. Wayne Smith, Xiaowen Liang, Magnus Höök. CIID, Texas A&M IBT. 
Staphylococcus aureus extracellular fibrinogen binding protein modulates innate immunity by blocking neutrophil-fibrinogen interaction.

14. Tao Lin, Lihui Gao, Chuhua Zhang, Evelyn Odeh, George Chaconas, and Steven J. Norris. Pathology, UTHMS. 
Identification of virulence determinants and essential genes through comprehensive signature-tagged transposon mutant library of infectious Borrelia burgdorferi.

15. Tao Lin, Lihui Gao, and Steven J. Norris. Pathology, UTHMS. 
Role of the DNA mismatch repair protein MutS in vlsE recombination and infectivity of Borrelia burgdorferi.

Cellular architecture of Treponema pallidum: novel flagellum, periplasmic cone, and cell envelope as revealed by cryo-electron tomography.

17. Owen Mapingire, Nadine Henderson, David Thanassi, Anne Delcour. Biology and Biochemistry, UH. 
Channel properties of wildtype and domain mutants of the PapC usher.

18. Amber Miller, Sarah Blutt, Margaret Conner. MVM, BCM. 
A role for regulatory T cells and TGF-β in intestinal IgA to rotavirus.
Poster session, ctd.

19. Arunima Mishra, Chenggang Wu, Jinhua Yang, John O. Cisar, Asis Das and Hung Ton-That. MMG, UTHMS. A fimbrial shaft mediates Actinomyces coaggregation with oral streptococci, adherence to RBC and biofilm development.


23. Christopher R. Singh, Arshad Khan, Jaymie Estrella, Robert L. Hunter, Qing Bo Li, Chinnaswamy Jagannath. Pathology, UTHMS. A novel mechanism of peptide processing in mouse dendritic cells that leads to MHC-II priming of T cells.

24. Emanuel Smeds & Magnus Hook. CIID, Texas A&M IBT. Staphylococcus aureus is a causative virulence factor in experimental murine sepsis.


26. Zalman Vaksman, Mehdi Esmaeiliyan, Anne T. Bell, and Heidi B. Kaplan. MMG, UTHMS. Myxococcus xanthus muropeptides as a developmental quorum signal and a novel signal for Bacillus subtilis predation.

27. Ransome van der Hoeven, Melissa Fellers and Danielle Garsin. MMG, UTHMS. Regulation of dual oxidase Ce-Duox1 in response to E. faecalis in C. elegans.


2:30-4:30  Afternoon Session – IMM Auditorium
Moderator: Timothy G. Palzkill, Ph.D., Professor and Chair of Pharmacology, Baylor College of Medicine

2:30-3:00  David Gorenstein, Ph.D., Professor and Deputy Director, UTHealth Inst. of Molecular Medicine, Houston, TX. “Thioaptamers for immunomodulation in infectious diseases: therapeutics and diagnostics”

3:00-3:15  Vanessa Vazquez, Graduate student, Center for Infectious and Inflammatory Diseases, Texas A&M Inst. of Biosciences & Technology and UTHealth Graduate School of Biomedical Sciences, Houston, TX. “The Staphylococcus aureus MSCRAMM Bbp targets the Fibrinogen A-alpha chain”

3:15-3:30  Arunima Mishra, Ph.D. Postdoctoral Fellow, Dept. of Microbiology & Molecular Genetics, UTHealth Medical School, Houston, TX. “A fimbrial shaft mediates Actinomyces coaggregation with oral streptococci, adherence to RBC and biofilm formation”

3:30-4:30  Keynote Speaker: Shelley M. Payne, Ph.D., Professor of Microbiology, University of Texas at Austin. “Shigella flexneri: life in the intracellular environment” – IMM Auditorium

4:30-6:00  Poster award presentations and social hour – James T. Willerson, M.D., Discovery Hall

Abbreviations
BCM = Baylor College of Medicine  MVM = Dept. of Molecular Virology & Microbiology
CIID = Center for Infectious and Inflammatory Diseases  TAMHSC = Texas A&M Health Science Center
IBT = Institute of Biosciences and Technology  TMHRI = The Methodist Hospital Research Institute
IM = Internal Medicine  UTHealth = Univ. of Texas Health Science Center at Houston
IMM = Institute of Molecular Medicine  UTHMS = UTHealth Medical School (Houston)
MMG = Dept. of Microbiology and Molecular Genetics  UTMB = Univ. of Texas Medical Branch (Galveston)
MMP = Dept. of Microbial & Molecular Pathogenesis  UH = Univ. of Houston

Attendee list available on request: Christine.M.Haverkorn@uth.tmc.edu