Microbial Biofilms and Their Impact on Public Health

Course Number: MICRO 281
Instructors and contact information:
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Time: 9:00 am -11:00 am, Wednesdays
Location: conference room 6339, LSU School of Dentistry, 1100 Florida Avenue

Topics and schedule:
Week one (June 3, 2010):
1. Introduction to the course (Dr. Wen)
2. Microbial biofilms and their major impacts (Dr. Wen)
3. Biofilm formation and factors affect biofilm formation (Dr. Wen)

Week two (June 9, 2010):
1. Regulation of biofilm formation (Dr. Wen)
2. Microbial cell-cell communication and its impact on biofilm development and regulation of virulence expression (Dr. Wen)
3. Dental plaque, a complex ecosystem (Dr. Wen)

Week three (June 16, 2010):
1. Analytical technologies available for study of biofilms (except molecular approaches for microbial communities (Dr. Wen)
2. Lab session involving relevant modes (Dr. Wen) (exact time to be determined)

Week four (June 23, 2010):
1. Streptococcus mutans, a obligate-biofilm-forming bacterium and human dental caries (Dr. Wen)
2. Periodontitis: an archotypical biofilm disease (Dr. Wen)

Week five (June 30, 2010):
1. Commensal microbe-host interaction, Candida albicans and candidasis (Dr. Noverr)
2. Recent advances in the microbiome of the GI tract, pediatric irritable bowel syndrome and other inflammatory bowel diseases, and application of probiotics (Dr. Noverr)

Week six (July 7, 2010):
1. Molecular approaches for study of microbial communities (Dr. Ferris)
2. Human vaginal microbiota and vaginosis and other biofilm-associated diseases in the urinary tract (Dr. Ferris)

Week seven (July 21, 2010)
1. *P. aeruginosa* biofilms, cystic fibrosis and other associated disease (Dr. Hobden)
2. *S. aureus and S. epidermidis* biofilms: the constant threat in the medical community (Dr. Hobden).

Week eight (July 28, 2010)
1. Biofilms and wound healing (Dr. Wen)
2. Issues on biofilm control (Dr. Wen)
3. Current trends in biofilms research (Dr. Wen)