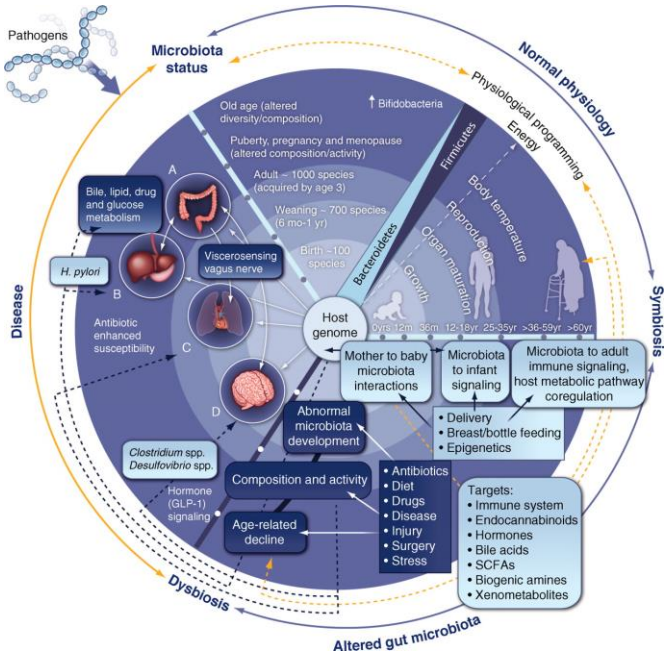
MICROBIOTA IN HEALTH AN DISEASE
TOPICS IN ADVANCED MICROBIOLOGY-MBIO 689 (2 CREDITS)
FALL 2017



Time: 2-4 PM, Tuesday

Place: CTR Bldg. Room 601

Text: None. All the lectures are based on recent seminal papers published in top tier journals.

Course description: This is an advanced interdisciplinary graduate level class focused on composition of the microbiota and its role in health and various diseases for the time of birth till death. These diseases range from allergies to irritable bowel disease to metabolic diseases to cancer. Factors that influence composition of the microbiota, such as breast-fed vs. formula-fed babies, antibiotic treatment, diet in adulthood, hygiene, and the consequences on various diseases, such as obesity and metabolic diseases, will be discussed. The role of fecal transplants, probiotics and prebiotics in alleviating the harmful effects of imbalance of the microbiota will be discussed.

Format of the class: The first weekly session will be a didactic introduction and overview of the microbiota. The rest of the weekly sessions will include a general introduction by the instructor and a class group discussion of recent seminal publications in top tier journals. The assigned papers must be read prior to coming to class and a questionnaire must be completed about the assigned papers. Each student must be actively involved in the discussion of the paper as its preparation and participation to the discussion during the class will be evaluated and worth 40% of the grade.

Grading criteria: The grade is based on oral participation/questionnaire for each session (40%) and two take-home exams: a mid-term (30%) and a final (30%).

Professors: Basic and clinical professors are involved in this class. For more information, contact the course co-directors:

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FALL 2017
TUESDAY 2-4 PM
CTRB 601

Aug 22	The microbiome-overview	Abu Kwaik
Aug 29	Microbiome metagenomics & Biostatistics	Jala
Sept 5	Establishment of the microbiome	Abu Kwaik
Sept 12	Microbiota-immune system interaction	Alard
Sept 19	Gut-brain axis	Alard
Sept 26	Cutaneous microbiome	Alard
Oct 3	Oral microbiome	Miller Dan
Oct 10	Fall break	
Oct 17	Urinary/Vaginal microbiome	Miller Dick
Oct 24	**Mid-term exam-Take home**	
Oct 31	Role of microbiota in cancer	Bodduluri
Nov 7	Role of microbiota in liver diseases	McClain/Kirpich
Nov 14	Role of microbiota in metabolic diseases	Jala
Nov 21	Role of microbiota in autoimmune diseases	Kosiewicz
Nov 28	Microbiota vs. susceptibility to infection	Schmidt
Dec 5	Probiotics, prebiotics, and fecal transplant	Dryden
Dec 5	**Final Exam-Take home**	

Title IX/Clery Act Notification

Sexual misconduct (including sexual harassment, sexual assault, and any other nonconsensual behavior of a sexual nature) and sex discrimination violate University policies. Students experiencing such behavior may obtain confidential support from the PEACC Program (852-2663), Counseling Center (852-6585), and Campus Health Services (852-6479). To report sexual misconduct or sex discrimination, contact the Dean of Students (852-5787) or University of Louisville Police (852-6111).

Disclosure to University faculty or instructors of sexual misconduct, domestic violence, dating violence, or sex discrimination occurring on campus, in a University-sponsored program, or involving a campus visitor or University student or employee (whether current or former) is not confidential under Title IX. Faculty and instructors must forward such reports, including names and circumstances, to the University's Title IX officer.

For more information, see the Sexual Misconduct Resource Guide (http://louisville.edu/hr/employeerelations/sexual-misconduct-brochure).