

Course Schedule: Molecular Epidemiology of Infectious Diseases:

FETP-Japan, February 4-8 and 16, 2013

Dr. Lee W. Riley

University of California Berkeley

Venue:

National Institute of Infectious Diseases, Toyama

Kansenshen-Daiichi meeting room (4-8 Feb)

Kansenshen-Daini meeting room (16 Feb)

Date	Time	Content
Feb 4	INTRODUCTION AND OVERVIEW	
	10:00-10:15	Review of course objectives and syllabus
	10:15-11:15	Basic Principles Part I: Lecture 1 (1 hr): 1) Definition of molecular epidemiology 2) Differentiating molecular epidemiology, taxonomy, and phylogeny 3) Overview of the types of epidemiologic investigations conducted using molecular biology techniques
	11:25-12:25	Basic Principles Part II: Lecture 2 (1 hr) Laboratory methods, Part I a. Conventional laboratory methods b. Molecular biology laboratory methods
	13:30-14:30	Lecture 3: (1 hr) Laboratory methods, Part II a. PCR-based genotyping methods b. Sequence-based and other new genotyping methods
	14:40-15:40	Basic Principles Part III: Lecture 4 (1 hr) 1) Validation of new laboratory techniques 2) Analysis of similarity and relatedness
Feb 5	Practices of Molecular Epidemiology Part I: Outbreaks and sporadic (endemic) infections:	
	10:00-11:30	Lecture 5: (1.5 hrs) 1) Drug-resistant salmonellosis in the United States: assessing prevalence of drug-resistant infectious disease

		2) Drug-susceptible salmonellosis in New Jersey and Pennsylvania: quantifying attributable risk fraction in sporadic cases of salmonellosis.
	12:40-13:40	Modular exercise 1 (1 hr) Salmonellosis in Rio de Janeiro
	Practices of Molecular Epidemiology Part II: Stratification of data using genotyping methods	
	13:50-14:50	Lecture 6 (1.5 hr) 1) Drug-resistant salmonellosis in Brazil: Stratification of data to refine epidemiologic investigation 2) Drug-resistant urinary tract infection: unmasking new modes of transmission
	Practices of Molecular Epidemiology Part III: Pathovar vs non-Pathovar	
Feb 6	10:00-11:00	Lecture 7 (1 hr) Intestinal and extra-intestinal E. coli pathogens
	11:10-12:10	Modular exercise 2 (1 hr) Bloody diarrhea in Sao Paulo, Brazil
	13:20-14:20	Lecture 8 (1 hr) Molecular epidemiology of Methicillin-resistant <i>Staphylococcus aureus</i> infections
	Practices of Molecular Epi Part IV: Surveillance	
Feb 7	10:00-11:00	Lecture 9 (1 hr) Application of molecular epidemiologic methods for disease surveillance
	11:10-12:10	Lecture 10 (1 hr) Application of molecular epidemiologic methods for health-care associated infections
	13:20-14:20	Modular exercise 3 (1 hr) <i>Acinetobacter baumannii</i> infection in an OB-Gyn hospital ward
	14:30-15:30	Lecture 11 (1 hr) Molecular epidemiologic methods applied to conduct parasitic disease surveillance
	Practices of Molecular Epi V: Identifying genetic determinants of disease transmission	
Feb 8	10:00-11:30	Lecture 11 (1.5 hrs) Identifying biological determinants of tuberculosis transmission
	11:40-12:40 12:40-13:40	Lecture 12 (1 hr) Next generation molecular epidemiology
Feb 16	10:00-12:00	Special Lecture: "Global spread of drug-resistance genes in Gram negative bacteria"

