

CAMB 6100: Molecular Basis of Genetic Therapies - Fall 2024 (TOPICS ARE PRELIMINARY AND SUBJECT TO CHANGE)

Monday / Wednesday / Friday 1:45-3:15 PM, unless otherwise indicated

Director: Kiran Musunuru, MD, PhD, MPH, ML, MRA (email: kiranmusunuru@gmail.com)

	Day	Date	Time	Room	Format	Instructor	Topic
UNIT 1: Genome Editing, Gene Therapy, and Vector Platforms	M	2-Sep					NO CLASS - Labor Day
	W	4-Sep	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	History, foundations, and principles of genome editing
	F	6-Sep	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Zinc finger nucleases and TALENs
	M	9-Sep	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	CRISPR-Cas9 and other RNA-guided endonucleases
	W	11-Sep	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Defining, improving, and altering the specificities of genome-editing tools
	F	13-Sep	1:45 - 3:15 pm	SCTR 11-146	Workshop	Kiran Musunuru	Hands-on workshop with CRISPR-Cas9 nuclease, part 1
	M	16-Sep	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Research applications of genome editing, part 1
	W	18-Sep					NO CLASS
	F	20-Sep	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Research applications of genome editing, part 2
	M	23-Sep	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Therapeutic applications of genome editing, part 1
	W	25-Sep	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Therapeutic applications of genome editing, part 2
	F	27-Sep	1:45 - 3:15 pm	SCTR 11-146	Workshop	Kiran Musunuru	Hands-on workshop with CRISPR-Cas9 nuclease, part 2
	M	30-Sep	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Base editing and epigenome editing
	W	2-Oct	1:45 - 3:15 pm	SCTR 11-146	Workshop	Kiran Musunuru	Hands-on workshop with base editing and epigenome editing
	F	4-Oct					NO CLASS
	M	7-Oct	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Prime editing
	W	9-Oct	1:45 - 3:15 pm	SCTR 11-146	Workshop	Kiran Musunuru	Hands-on workshop with prime editing
	F	11-Oct	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Basics of immunology, part 1
	M	14-Oct	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Basics of immunology, part 2
	W	16-Oct	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	AAV vectors, part 1
	F	18-Oct	1:45 - 3:15 pm	SCTR 11-146	Workshop	Kiran Musunuru	Workshop on therapeutic hypotheses
	M	21-Oct	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	AAV vectors, part 2
	W	23-Oct	1:45 - 3:15 pm	SCTR 11-146	Lecture	M.-G. Alameh	mRNA and lipid nanoparticle delivery
	F	25-Oct	1:45 - 3:15 pm	SCTR 11-146	Workshop	Kiran Musunuru	Workshop on genetic therapies, part 1
	M	28-Oct	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Retrovirus
	W	30-Oct	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Lentivirus
	F	1-Nov	1:45 - 3:15 pm	SCTR 11-146	Workshop	Kiran Musunuru	Workshop on genetic therapies, part 2
	M	4-Nov	1:45 - 3:15 pm	SCTR 11-146	Lecture	Kiran Musunuru	Characterizing integration events
	W	6-Nov	1:45 - 3:15 pm	SCTR 11-146	Workshop	Kiran Musunuru	Workshop on genetic therapies, part 3
UNIT 2: Crafting Research Proposals	F	8-Nov					EXAM
	M	11-Nov	1:45 - 3:15 pm	SCTR 11-146	TBD	TBD	TBD
	W	13-Nov	1:45 - 3:15 pm	SCTR 11-146	TBD	TBD	TBD
	F	15-Nov	1:45 - 3:15 pm	SCTR 11-146	TBD	TBD	TBD
	M	18-Nov	1:45 - 3:15 pm	SCTR 11-146	TBD	TBD	TBD
	W	20-Nov	1:45 - 3:15 pm	SCTR 11-146	TBD	TBD	TBD
	F	22-Nov	1:45 - 3:15 pm	SCTR 11-146	TBD	TBD	TBD
	M	25-Nov					NO CLASS - Thanksgiving
	W	27-Nov					NO CLASS - Thanksgiving
	F	29-Nov					NO CLASS - Thanksgiving
	M	2-Dec	1:45 - 3:15 pm	SCTR 11-146	TBD	TBD	TBD
	W	4-Dec	1:45 - 3:15 pm	SCTR 11-146	TBD	TBD	TBD
	F	6-Dec	1:45 - 3:15 pm	SCTR 11-146			STUDENT PRESENTATIONS