

**FOOD AND DRUG ADMINISTRATION (FDA)  
Center for Biologics Evaluation and Research (CBER)  
Office of Tissues and Advanced Therapies (OTAT)  
Cellular, Tissue and Gene Therapies (CTGT)  
Advisory Committee Meeting  
September 2-3, 2021**

**FINAL AGENDA**

**TOPIC SUMMARY**

*On September 2-3, 2021, the committee will meet in open session on both days to discuss the toxicity risks of AAV vector-based gene therapy products. The discussion topics include oncogenicity risks due to vector genome integration and safety issues identified during preclinical and/or clinical evaluation.*

**DAY 1: SEPTEMBER 2**

10:00 a.m.	Opening Remarks: Call to Order and Welcome	<b>Lisa Butterfield, Ph.D.</b> (5 min) Chairperson Vice-President, PICI Research Center University of California, San Francisco
10:05 a.m.	Administrative Announcements, Roll Call, Introduction of Committee, Conflict of Interest Statement	<b>Jarrold Collier, M.S.</b> (15 min) Designated Federal Officer
10:20 a.m.	FDA Opening Remarks	<b>Wilson W. Bryan, M.D.</b> (5 min) Director Office of Tissues and Advanced Therapies (OTAT), CBER
10:25 a.m.	<b>FDA Presentation</b> “Toxicity Risks of Adeno-associated Virus (AAV) Vectors for Gene Therapy (GT)”	<b>Rosa Sherafat-Kazemzadeh, M.D.</b> (30 min) Medical Officer Division of Clinical Evaluation and Pharmacology/ Toxicology (DCEPT), OTAT, CBER
10:55 a.m.	Q & A	(10 min)
<b>Session 1: Vector Integration and Oncogenicity Risks</b>		
11:05 a.m.	<b>Invited Speaker Presentation</b> “rAAV Integration: <i>In Vitro</i> & Mice”	<b>Mark Sands, Ph.D.</b> (20 min) Professor, Dept. of Medicine Oncology Division, Stem Cell Biology Washington University School of Medicine Saint Louis, MO
11:25 a.m.	Q & A	(15 min)
11:40 a.m.	<b>Invited Speaker Presentation</b> “AAV Integration Studies in Large Animal Models: Non-Human Primates and Dogs”	<b>Denise Sabatino, Ph.D.</b> (20 min) Research Associate Professor of Pediatrics Perelman School of Medicine Philadelphia, PA
12:00 p.m.	Q & A	(15 min)
12:15 p.m.	LUNCH	(30 min)

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12:45 p.m.	Open Public Hearing	(30 min)
1:15 p.m.	Committee Discussion of Questions	(90 min)
<b>Session 2: Hepatotoxicity</b>		
2:45 p.m.	<b>Invited Speaker Presentation</b> “Systemic AAV: Clinical Findings of Hepatotoxicity”	<b>Lindsey George, M.D.</b> (20 min) Tenure Assistant Professor of Pediatrics Children’s Hospital of Philadelphia Philadelphia, PA
3:05 p.m.	Q & A	(15 min)
3:20 p.m.	<b>Invited Speaker Presentation</b> “Adeno-Associated Virus-Related Toxicities in Nonhuman Primates”	<b>James Wilson, M.D., Ph.D.</b> (20 min) Director, Gene Therapy Program Perelman School of Medicine Philadelphia, PA
3:40 p.m.	Q & A	(15 min)
3:55 p.m.	BREAK	(10 min)
4:05 p.m.	Open Public Hearing	(30 min)
4:35 p.m.	Committee Discussion of Questions	(85 min)
6:00 p.m.	ADJOURN	<b>Jarrold Collier, M.S.</b> Designated Federal Officer

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<b>DAY 2: SEPTEMBER 3</b>		
10:00 a.m.	Opening Remarks: Call to Order and Welcome	<b>Lisa Butterfield, Ph.D.</b> (5 min) Chairperson Vice-President, PICI Research Center University of California, San Francisco
10:05 a.m.	Administrative Announcements, Roll Call, Introduction of Committee, Conflict of Interest Statement	<b>Jarrod Collier, M.S.</b> (10 min) Designated Federal Officer
10:15 a.m.	FDA Opening Remarks	<b>Wilson W. Bryan, M.D.</b> (5 min) Director Office of Tissues and Advanced Therapies
<b>Session 3: Thrombotic Microangiopathy</b>		
10:20 a.m.	<b>Invited Speaker Presentation</b> “Clinical Findings of Thrombotic Microangiopathy (TMA)”	<b>Deepa Chand, M.D.</b> (20 min) Executive Director, Patient Safety Novartis Gene Therapies Bannackburn, IL
10:40 a.m.	Q & A	(15 min)
10:55 a.m.	BREAK	(5 min)
11:00 a.m.	Open Public Hearing	(30 min)
11:30 a.m.	Committee Discussion	(60 min)
12:30 p.m.	LUNCH	(35 min)
<b>Session 4: Neurotoxicity: Dorsal Root Ganglion (DRG) Toxicities</b>		
1:05 p.m.	<b>Invited Speaker Presentation</b> “Nonclinical Findings of Dorsal Root Ganglion, Spinal Cord and Peripheral Nerve Toxicities”	<b>James Wilson, M.D., Ph.D.</b> (20 min) Director, Gene Therapy Program Perelman School of Medicine Philadelphia, PA
1:25 p.m.	Q & A	(15 min)
1:40 p.m.	BREAK	(10 min)
1:50 p.m.	Open Public Hearing	(30 min)
2:20 p.m.	Committee Discussion	(80 min)
<b>Session 5: Neurotoxicity: Brain MRI Findings</b>		
3:40 p.m.	<b>Invited Speaker Presentation</b>	<b>Ronald Crystal, M.D.</b> (20 min) Professor/Chairman, Department of Genetic Medicine

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	“Clinical and Nonclinical Consequences of Direct CNS Parenchymal Administration of AAV Vectors”	Weill Cornell Medical College New York, NY
4:00 p.m.	Q & A	(15 min)
4:15 p.m.	BREAK	(10 min)
4:25 p.m.	Committee Discussion	(90 min)
6:00 p.m.	Closing Remarks	<b>Peter Marks, M.D., Ph.D.</b> Director, CBER
	ADJOURN	<b>Jarrold Collier, M.S.</b> Designated Federal Officer