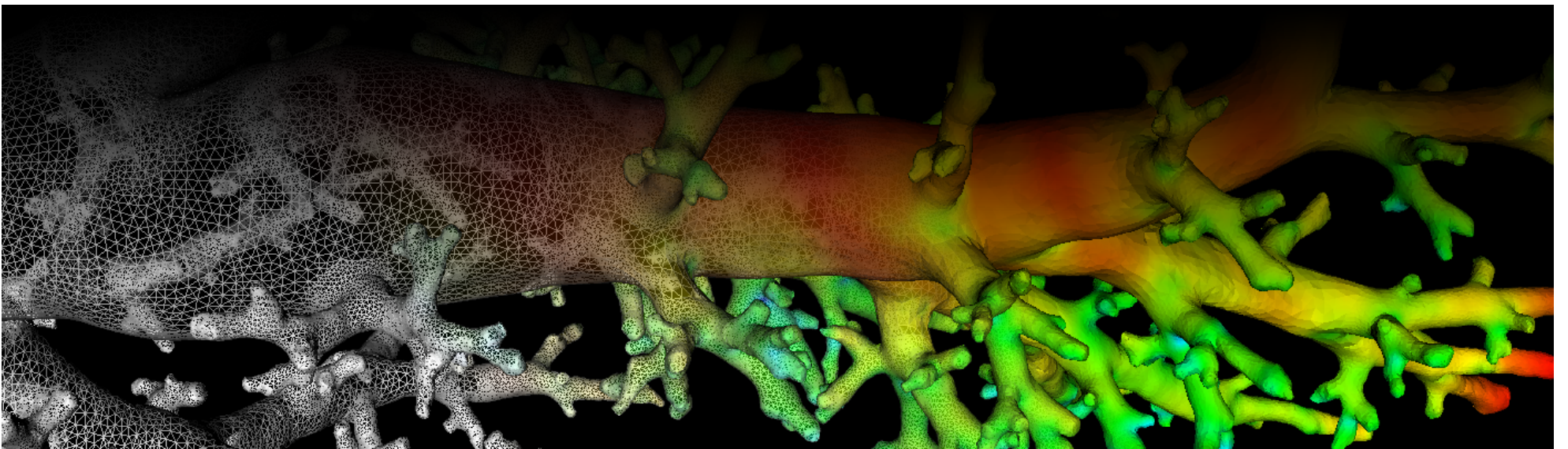
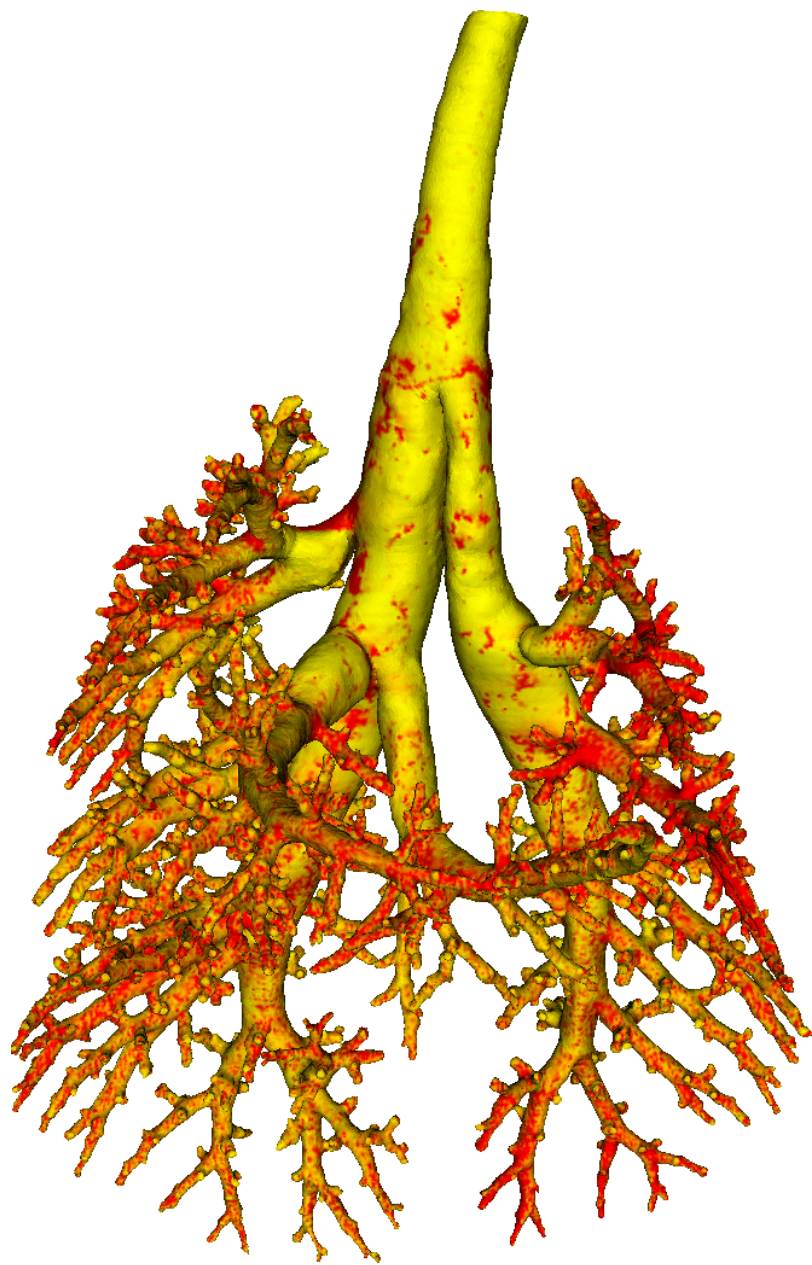


Lung Anatomy + Particle Deposition (lapd) Mouse Archive for Modeling and Computational Toxicology



m26

[Go to data folder](#)



Mouse Physiologic Parameters

- Sex: Female
- Strain: BALB/c
- Weight (g): 22.3
- Vendor: Jackson Labs
- Physical abnormalities: None
- Protocol (<https://cebs-ext.niehs.nih.gov/cahs/file/lapd/pages/Core/Animal%20Model.pdf>)

Aerosol Dosing

- Particle size: 2 microns
- Exposure time: 15 minutes
- Exposure estimate: 9.99E+06 FMS

Time	RR (bpm)	Vt (ml)	VE (ml/min)	I:E
Pre Aerosol	219	0.23	51.0	0.89
Post 7.5min Aerosol	193	0.22	43.0	1.01
Post 15min Aerosol	238	0.21	50.7	0.84

Slicing Info

- Approximate lung orientation: LAS
- Camera: D7100, 14-bit, 200mm Nikkor Macro lens, f/16
- Voxel size: 4.71 x 4.71 x 9.52 (microns)
- Image exposures (msec). ISO=160, all images.

	mt	ol	fl	rd	Notes
excitation	UVND2	UVND2	485/20	560/20	center wavelength/fwhm
emission	N/A	470/30	535/30	635/30	
Image	Exp	Exp	Exp	Exp	Notes
white	25	167	5000	200	Rhodamine B in OCT
cal	20	125	67	400	
images		77	20000	1000	
darks		77	20000	1000	

- Notes regarding slicing:
 - Good trachea length.
 - Small pinch in the apex of the right lung.
 - Good aerosol signal. Some areas have multiple red images.

Airway Segmentation

- Total centerline length: 615.716 mm
- Number of branches: 1487
- Number of terminal branches: 745
- Maximum generation number: 26
- Number of outlet areas: 2251

Compartment Sizes and Aerosol Deposition

- Lung volume: 1166.22 (mm³)

Compartments	Count	Volume (mm ³)
Lung	1	1166.22
Lobes	5	233.24±110.94
Sublobes	53	21.47±21.04
Near acini	358	3.07±2.08

Lobe	Volume (mm ³)	Average aerosol deposition
left	387.11	1.28±4.20
cranial	184.94	1.44±7.79
middle	156.48	1.16±2.28
caudal	339.73	0.95±2.41
accessory	97.97	1.13±2.60

Additional Notes

- Overall quality: A