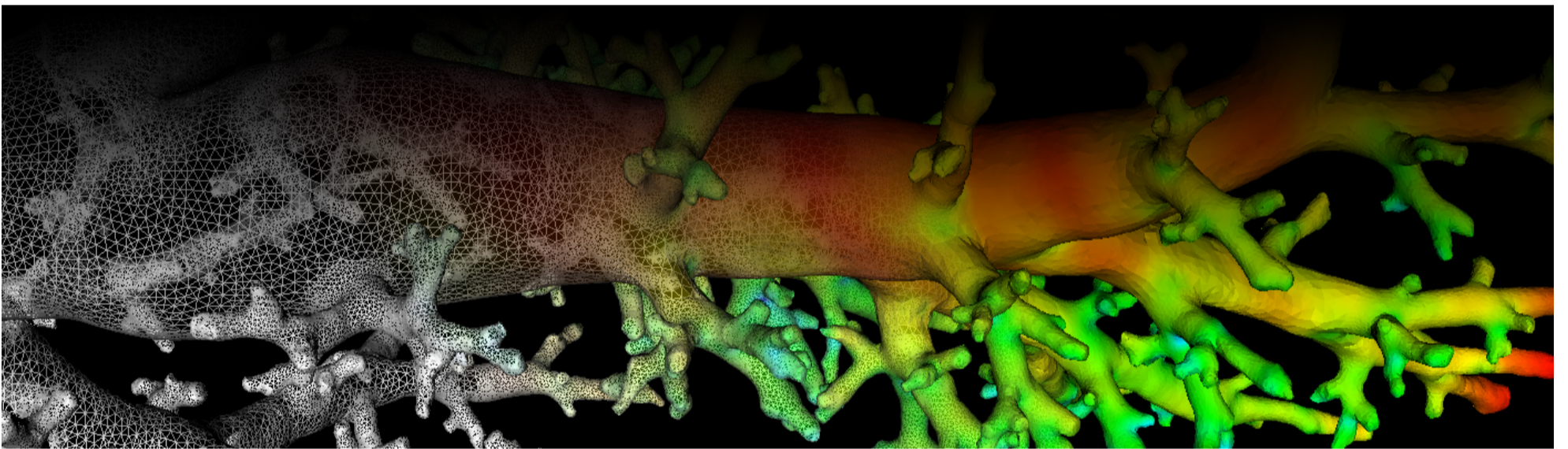
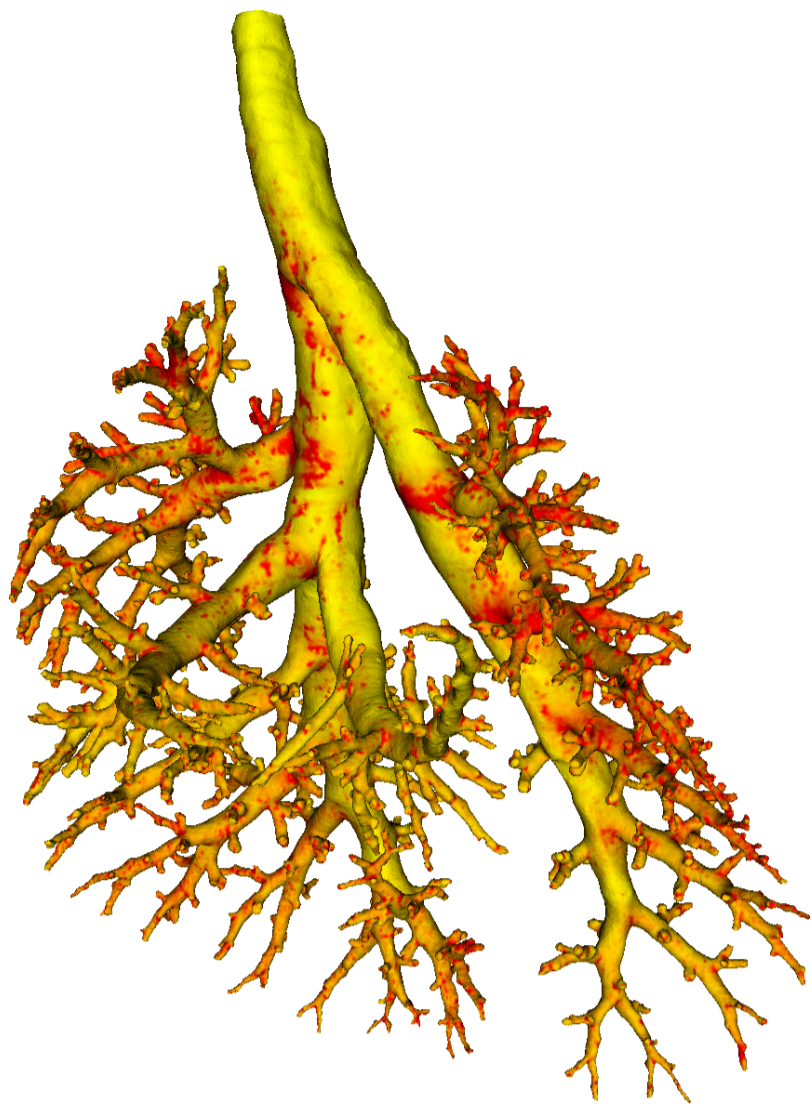


Lung Anatomy + Particle Deposition (lapd) Mouse Archive for Modeling and Computational Toxicology



m10

[Go to data folder](#)



Mouse Physiologic Parameters

- Sex: Female
- Strain: BALB/c
- Weight (g): unknown
- 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: 1 micron
- Exposure time: 10 minutes
- Exposure estimate: 1.12E+08 FMS

Time	RR (bpm)	Vt (ml)	VE (ml/min)	I:E
Pre Aerosol	237	0.27	63.4	0.82
Post 5 Aerosol	229	0.21	48.6	0.76
Post 10 Aerosol	230	0.20	44.9	0.71

Slicing Info

- Approximate lung orientation: LAS
- Camera: D7100, 14-bit, 200mm Nikkor Macro lens, f/16
- Voxel size: 4.64 x 4.64 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	(nm)

	mt	ol	fl	rd	Notes
Image	Exp	Exp	Exp	Exp	Notes
white	25	125	6000	167	1 drop rhodamine B/10mL OCT
cal	20	50	40	200	
images	N/A	50	15000	333	
darks		50	15000	333	

- Notes regarding slicing:
 - Good sample overall.
 - Lung apices have indentations probably from the mold used to freeze them.

Airway Segmentation

- Total centerline length: 524.425 mm
- Number of branches: 1339
- Number of terminal branches: 675
- Maximum generation number: 25
- Number of outlet areas: 1797

Compartment Sizes and Aerosol Deposition

- Lung volume: 1144.66 (mm³)

Compartments	Count	Volume (mm ³)
Lung	1	1144.66
Lobes	5	228.93±114.91
Sublobes	54	20.74±20.94
Near acini	362	3.02±1.92

Lobe	Volume (mm ³)	Average aerosol deposition
left	405.69	1.17±1.59
cranial	193.19	1.58±2.21
middle	131.73	0.99±1.15
caudal	314.47	1.13±1.22
accessory	99.58	0.80±0.79

Additional Notes

- Overall quality: A