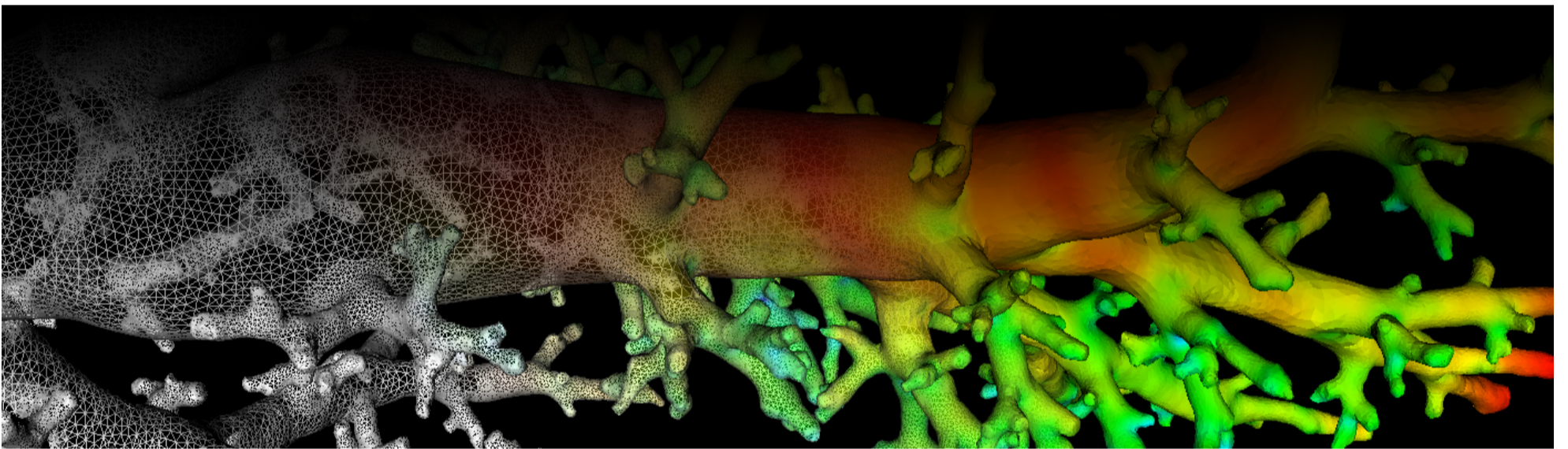
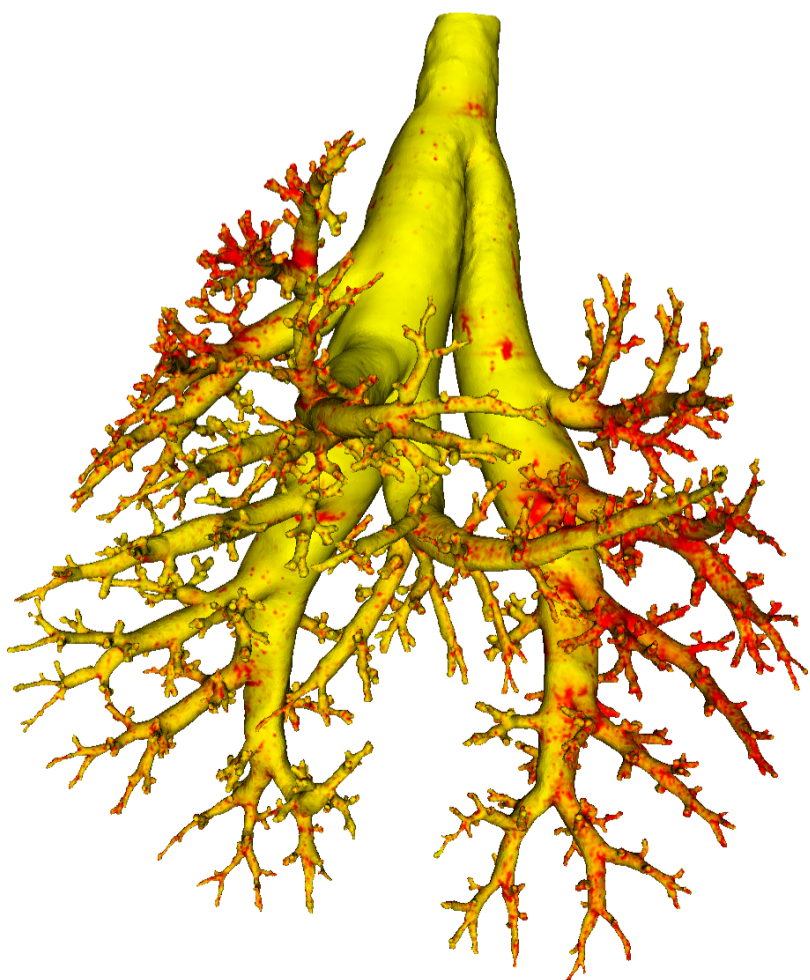


Lung Anatomy + Particle Deposition (lapd) Mouse Archive for Modeling and Computational Toxicology



m17

[Go to data folder](#)



Mouse Physiologic Parameters

- Sex: Female
- Strain: C57BL/6
- Weight (g): NaN
- 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: unknown

Time	RR (bpm)	Vt (ml)	VE (ml/min)	I:E
Pre Aerosol	281	0.24	67.5	0.92
Post 5min Aerosol	239	0.20	47.7	0.88
Post 10min Aerosol	197	0.19	37.4	0.93

Slicing Info

- Approximate lung orientation: LAS
- Camera: D7100, 14-bit, 200mm Nikkor Macro lens, f/16
- Voxel size: 4.67 x 4.67 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	20	125	5000	167	Rhodamine B in OCT
cal	20	167	67	400	
images		67	15000	1000	
darks		67	15000	1000	

- Notes regarding slicing:
 - Some aerosol clusters.
 - Good sample.

Airway Segmentation

- Total centerline length: 623.436 mm
- Number of branches: 1838
- Number of terminal branches: 921
- Maximum generation number: 25
- Number of outlet areas: 1905

Compartment Sizes and Aerosol Deposition

- Lung volume: 1062.17 (mm³)

Compartments	Count	Volume (mm ³)
Lung	1	1062.17
Lobes	5	212.43±99.66
Sublobes	54	18.98±19.42
Near acini	252	3.95±2.45

Lobe	Volume (mm ³)	Average aerosol deposition
left	357.41	1.81±4.72
cranial	168.55	1.22±6.31
middle	128.94	0.67±1.86
caudal	302.60	0.82±1.93
accessory	104.67	0.95±3.08

Additional Notes

- Overall quality: A
- some airway branches missing

Updated: 7/24/19
2018 r2b