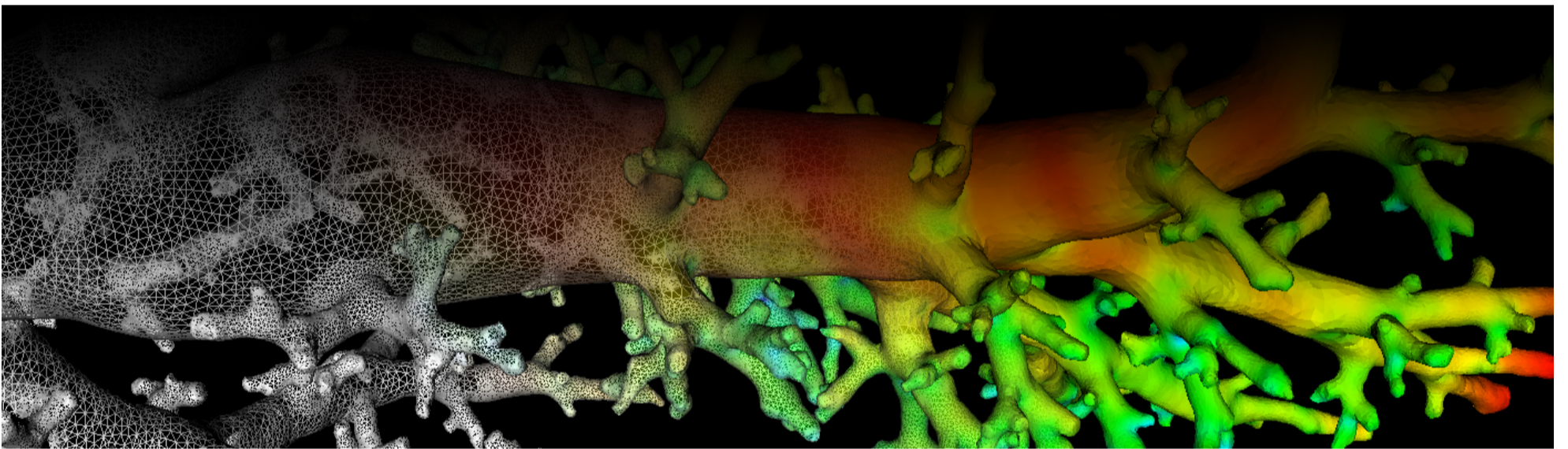
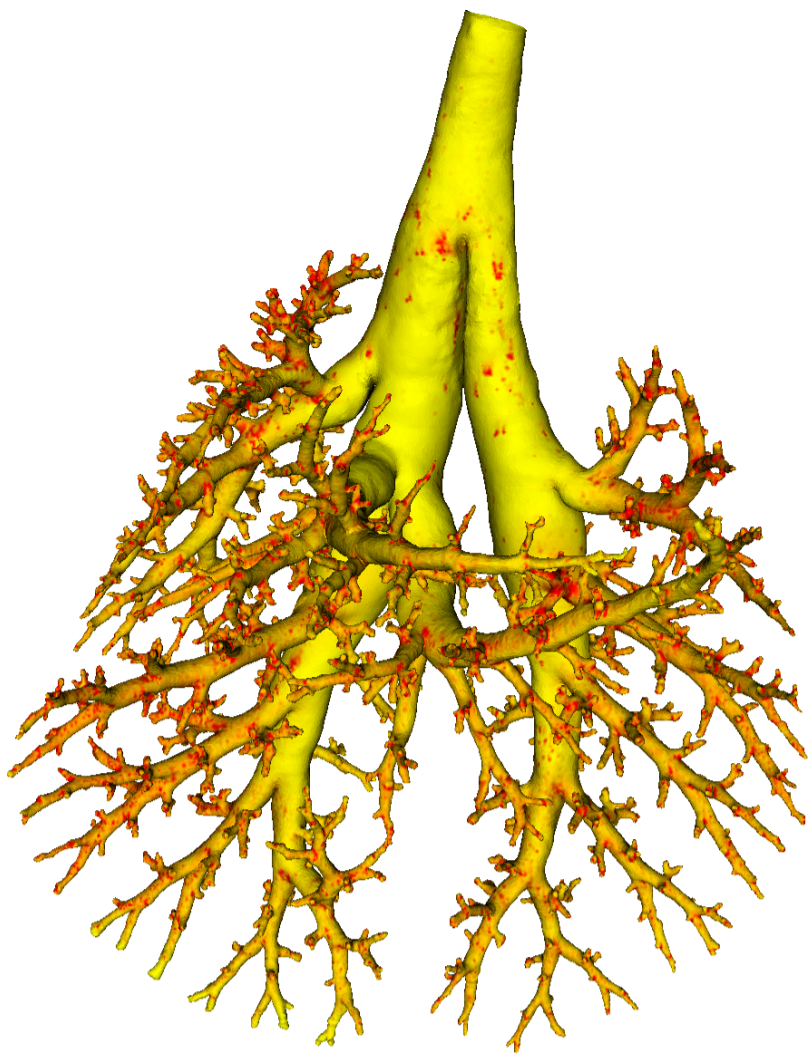


Lung Anatomy + Particle Deposition (lapd) Mouse Archive for Modeling and Computational Toxicology



m01

[Go to data folder](#)



Mouse Physiologic Parameters

- Sex: Male
- Strain: B6C3F1
- Weight (g): unknown
- Vendor: Charles Rivers
- 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: 1.09E+08 FMS

Time	RR (bpm)	Vt (ml)	VE (ml/min)	I:E
Pre Aerosol	166	0.20	33.0	0.91
Post 5 Aerosol	177	0.23	40.1	0.94
Post 10 Aerosol	160	0.19	30.9	0.73

Slicing Info

- Approximate lung orientation: LAS
- Camera: D7100, 14-bit, 200mm Nikkor Macro lens, f/16
- Voxel size: 4.56 x 4.56 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)
Image	Exp	Exp	Exp	Exp	Notes

	mt	ol	fl	rd	Notes
white	20	100	6000	200	1 drop rhodamine B/10mL OCT
cal	12.5	50	40	200	
images	N/A	40	13000	250	
darks		40	13000	250	

- Notes regarding slicing:
 - The aerosol signal is very low.
 - Sample ran without stopping.
 - There is some unexpected particulate in the caudal portion of the right lung (see near slice 1980).

Airway Segmentation

- Total centerline length: 658.742 mm
- Number of branches: 1849
- Number of terminal branches: 927
- Maximum generation number: 25
- Number of outlet areas: 2004

Compartment Sizes and Aerosol Deposition

- Lung volume: 1154.35 (mm³)

Compartments	Count	Volume (mm ³)
Lung	1	1154.35
Lobes	5	230.87±103.71
Sublobes	56	19.99±21.32
Near acini	414	2.63±1.50

Lobe	Volume (mm ³)	Average aerosol deposition
left	389.46	1.19±1.52
cranial	193.90	1.33±2.22
middle	142.97	1.02±1.21
caudal	311.40	1.23±1.84
accessory	116.63	1.11±1.31

Additional Notes

- Overall quality: A

Updated: 7/24/19
2018 r2b