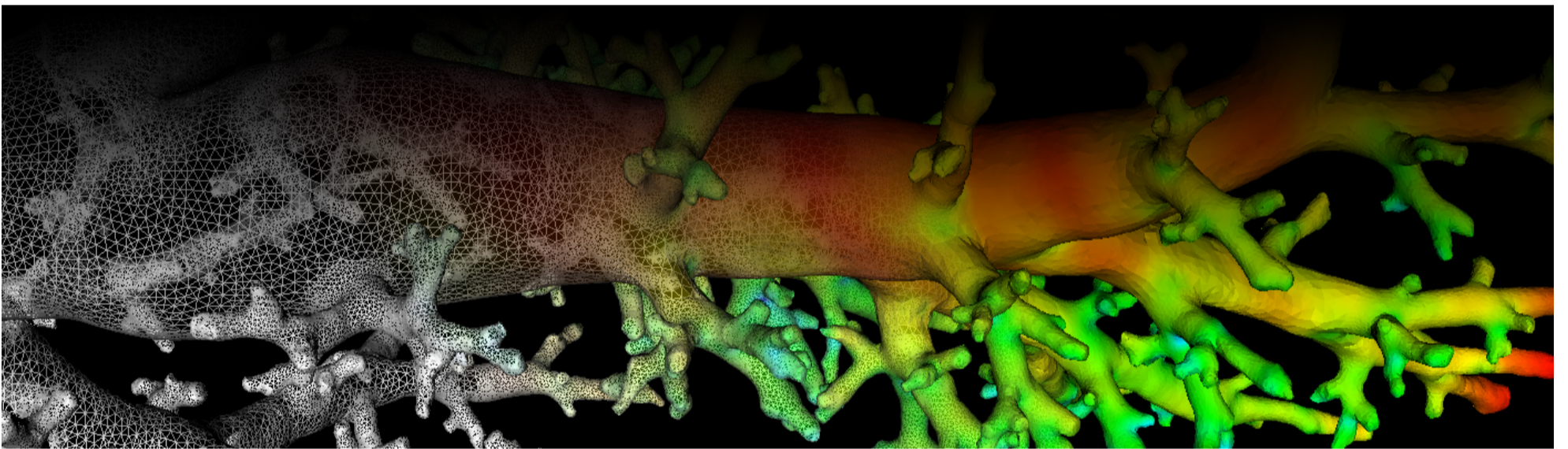
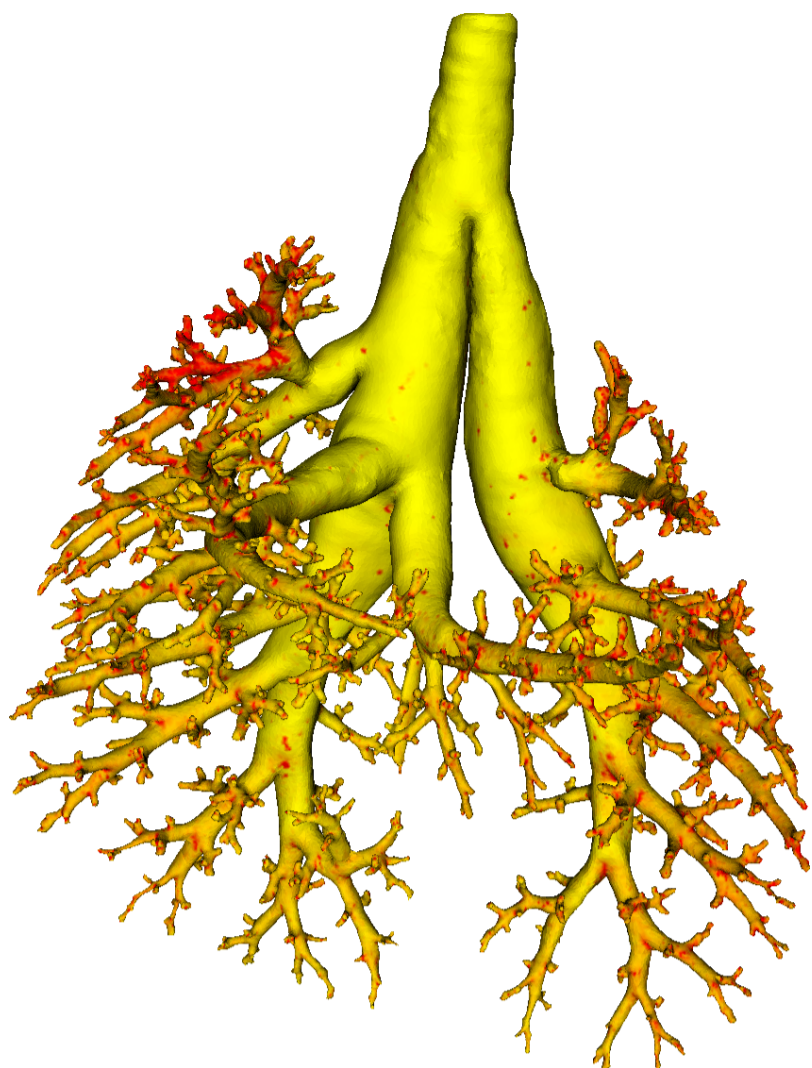


# Lung Anatomy + Particle Deposition (lapd) Mouse Archive for Modeling and Computational Toxicology



m07

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## Mouse Physiologic Parameters

- Sex: Male
- Strain: C57BL/6
- Weight (g): 24.1
- 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: unknown

Time	RR (bpm)	Vt (ml)	VE (ml/min)	I:E
Pre Aerosol	273	0.26	71.9	0.78
Post 5 Aerosol	218	0.22	48.7	0.74
Post 10 Aerosol	225	0.23	51.2	0.70

## Slicing Info

- Approximate lung orientation: LAS
- Camera: D7100, 14-bit, 200mm Nikkor Macro lens, f/16
- Voxel size: 4.64 x 4.564x 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)
<b>Image</b>	<b>Exp</b>	<b>Exp</b>	<b>Exp</b>	<b>Exp</b>	<b>Notes</b>

	mt	ol	fl	rd	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:
  - Except for one long cryomicrotome stoppage at slice 903, this sample looks good.

## Airway Segmentation

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- Total centerline length: 571.87 mm
- Number of branches: 1564
- Number of terminal branches: 784
- Maximum generation number: 27
- Number of outlet areas: 1680

## Compartment Sizes and Aerosol Deposition

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- Lung volume: 1116.76 (mm<sup>3</sup>)

Compartments	Count	Volume (mm <sup>3</sup> )
Lung	1	1116.76
Lobes	5	223.35±102.09
Sublobes	56	19.37±20.65
Near acini	392	2.70±1.43

Lobe	Volume (mm <sup>3</sup> )	Average aerosol deposition
left	367.59	1.41±1.35
cranial	183.05	1.54±1.75
middle	134.39	0.96±0.89
caudal	319.92	0.94±0.82
accessory	111.81	1.01±0.98

## Additional Notes

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- Overall quality: A

Updated: 7/24/19  
2018 r2b