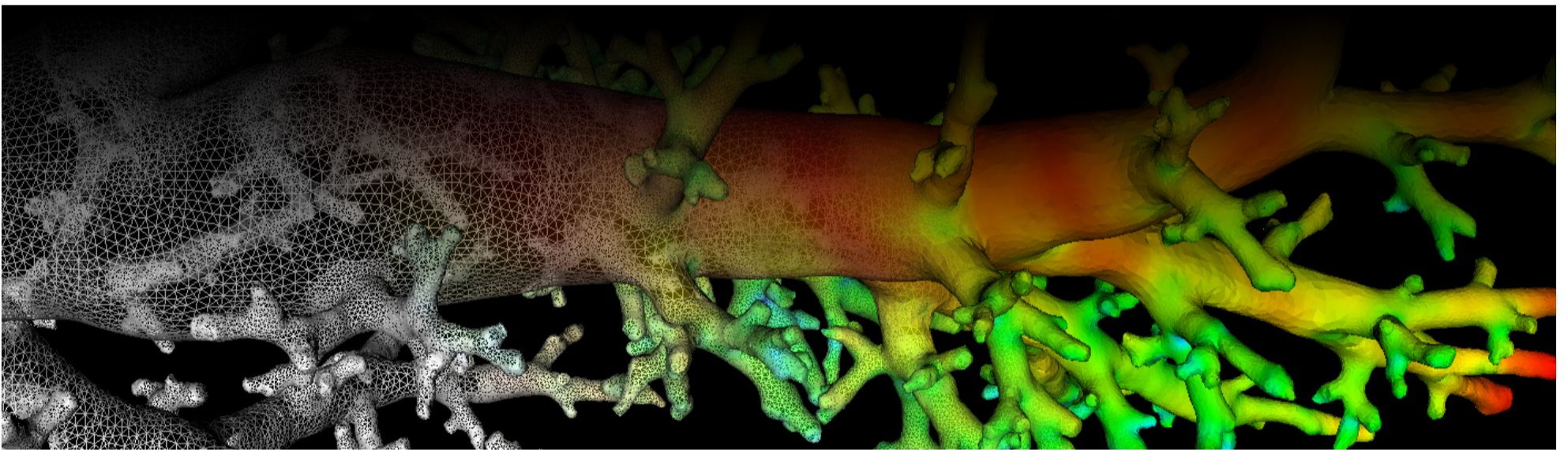
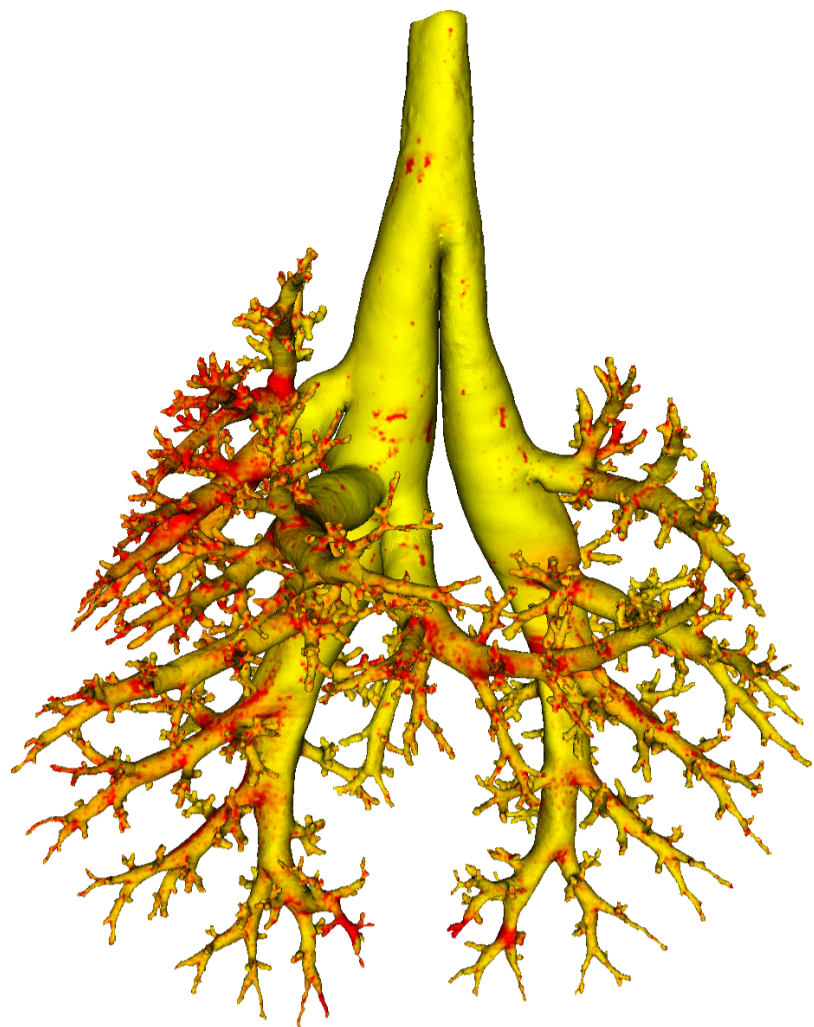


# Lung Anatomy + Particle Deposition (lapd) Mouse Archive for Modeling and Computational Toxicology



m16

[Go to data folder](#)



## Mouse Physiologic Parameters

- Sex: Male
- Strain: C57BL/6
- Weight (g): 22.0
- 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	286	0.23	64.9	0.80
Post 5min Aerosol	281	0.23	65.6	0.79
Post 10min Aerosol	270	0.25	67.5	0.79

## 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

	mt	ol	fl	rd	Notes
white	20	125	5000	167	Rhodamine B in OCT
cal	20	167	67	400	
images		67	15000	500	
darks		67	15000	500	

- Notes regarding slicing:
  - Very light aerosol signal
  - Good sample.

## Airway Segmentation

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- Total centerline length: 699.275 mm
- Number of branches: 2211
- Number of terminal branches: 1109
- Maximum generation number: 27
- Number of outlet areas: 2327

## Compartment Sizes and Aerosol Deposition

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- Lung volume: 1122.84 (mm<sup>3</sup>)

Compartments	Count	Volume (mm <sup>3</sup> )
Lung	1	1122.84
Lobes	5	224.57±106.12
Sublobes	52	20.88±20.97
Near acini	230	4.59±3.44

Lobe	Volume (mm <sup>3</sup> )	Average aerosol deposition
left	381.07	0.86±5.49
cranial	187.50	1.64±5.51
middle	127.18	1.40±2.72
caudal	315.30	1.30±6.22
accessory	111.78	1.11±3.31

## Additional Notes

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- Overall quality: A
- Skeletonization for first bifurcation in left lobe looks off