

Materials List for:

Generation of a Chronic Obstructive Pulmonary Disease Model in Mice by Repeated Ozone Exposure

Zhongwei Sun^{1,2}, Feng Li³, Xin Zhou³, Wen Wang^{1,2}

¹Cellular Biomedicine Group, Shanghai

²Cellular Biomedicine Group, Cupertino

³Department of Respiratory Medicine, Shanghai General Hospital, Shanghai Jiaotong University

Correspondence to: Wen Wang at Maxwell.Wang@cellbiomedgroup.com

URL: <https://www.jove.com/video/56095>

DOI: [doi:10.3791/56095](https://doi.org/10.3791/56095)

Materials

Name	Company	Catalog Number	Comments
BALB/c mice	Slac Laboratory Animal, Shanghai, China	N/A	7-to-9-week-old female BALB/c mice were used in this study.
Individual ventilated cages	Suhang, Shanghai, China	Model Number: MU64S7	The cages were used for housing mice in the animal facility.
Sealing perspex-box	Suhang, Shanghai, China	N/A	The box was used to contain the ozone generator. Mice were exposed to ozone within the box.
Electric generator	Sander Ozoniser, Uetze-Eltze, Germany	Model 500	The device was used for generating ozone.
Ozone probe	ATi Technologies, Ashton-U-Lyne, Greater Manchester, UK	Ozone 300	The device was used for monitoring and controlling the generation of ozone.
Pelltobarbitalum natricum	Sigma, St. Louis, MO, USA	P3761	Mice were anesthetized by intraperitoneal injection of pelltobarbitalum natricum.
Micro-Computed Tomography	GE Healthcare, London, ON, Canada	RS0800639-0075	This device was used for acquiring images of the lung.
Micro-view 2.01 ABA software	GE Healthcare, London, ON, Canada	Micro-view 2.01	This device was used for reconstruct the lung and analyze volume, LAA of the lung.
Treadmill machine	Duanshi, Hangzhou, Zhejiang, China	DSPT-208	This machine was used for fatigue test.
Body plethysmograph	eSpira™ Forced Manoeuvres System, EMMS, Edinburgh, UK	Forced Manoeuvres System	This device was used to test spirometry pulmonary function.
Ventilator	eSpira™ Forced Manoeuvres System, EMMS, Edinburgh, UK	Forced Manoeuvres System	This device was used to test spirometry pulmonary function.
Slide spinner centrifuge	Denville Scientific, Holliston, MA, USA	C1183	It was used to spin BALF cells onto slides.
Wright Staining	Hanhong, Shanghai, China	RE04000054	It was used to staining macrophages, neutrophils in the suspended BALF.
Hemocytometer	Hausser Scientific, Horsham, PA, USA	4000	It was used to count cells.
IL-1β	Abcam, Cambridge, MA, USA	ab100704	They were used to test the respective factors in serum.
IL-10	Abcam, Cambridge, MA, USA	ab46103	They were used to test the respective factors in serum.
TNF-α	Abcam, Cambridge, MA, USA	ab100747	They were used to test the respective factors in serum.

Paraformaldehyde	Sigma, St. Louis, MO, USA	P6148	The lung was inflated by 4% paraformaldehyde.
Paraffin	Hualing, Shanghai, China	56#	It was used to embed the lung.
Rotary Microtome	Leica, Wetzlar, Hesse, Germany	RM2255	It was used for sectioning the lung.
Hgaematoxylin and Eosin (H&E) staining solution	Solarbio, Beijing, China	G1120	H&E staining was done for morphometric analysis.
Upright bright field microscope	Olympus, Center Valley, PA, USA	CX41	It was used to image the H&E staining slides.
Adobe Photoshop 12	Adobe, San Jose, CA, USA	Adobe Photoshop 12	It was used to count the number of alveoli on the H&E stained images.
GraphPad prism 5	Graphpad Software Inc., San Diego, CA	GraphPad prism 5	It was used for data analysis and production of figures.