

# Yuliang Leon Sun

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## EDUCATION

Boston University School of Medicine  
Doctor of Medicine, Doctor of Philosophy (MD/PhD) 2014- anticipated 05/2022  
PhD in Molecular and Translational Medicine

University of Wisconsin-- Madison, Madison, WI 2010 – 2014  
Bachelor of Science, *Graduated with distinction*, Biochemistry

## HONORS and AWARDS

Radiology Research Fellowship, BUSM 2021  
Jumpstart Award, NH/NHLBI Progenitor Cell Translational Consortium 2019  
NIH/NHLBI F30 Individual NRSA Pre-doctoral Fellowship 2018-2022  
Poster award, Progenitor Cell Translational Consortium 2018  
Molecular and Translational Medicine travel award 2018  
Abstract travel award, FASEB conference: Lung in Health and Disease 2018  
CTSI Symposium Poster Award (3<sup>rd</sup> place), BU Clinical and Translational Sciences Institute 2017  
Rare Lung Disease Consortium, Travel Award 2016  
TL1 TR001410-02 trainee, Boston University Clinical and Translational Sciences Institute 2016  
Graduated with Distinction, University of Wisconsin—Madison 2014  
Summer Cambridge and Oxford Research Experience Award, University of Wisconsin—Madison 2013  
Hilldale Undergraduate/Faculty Research Fellowship, University of Wisconsin-- Madison 2012  
William F Vilas Merit Scholar Award, University of Wisconsin—Madison 2010

## POSITIONS AND EMPLOYMENT

Graduate Research Assistant; Boston University School of Medicine 2016 – 2020  
Graduate Rotation Student; Boston University School of Medicine 2015  
Undergraduate Research Intern; University of Wisconsin-Madison 2011-2014  
Research Intern; University of Cambridge, UK 2013  
Undergraduate Research Intern; University of Wisconsin-Stevens Point 2008-2012

## OTHER EXPERIENCES AND PROFESSIONAL ASSOCIATIONS

Student Committee on Medical School Affairs MD/PhD representative 2014 - present

Massachusetts Medical Society	2014-present
BUSM MD/PhD Student Government Executive Committee Representative	2016-2019
International Society for Stem Cell Research	2017-2018
RNA Society	2012-2013
Botanical Society of America	2012-2013

## LICENSURE

Step 1 – Pass	06/2016
Step 2CK – Pass	06/2021

## RESEARCH EXPERIENCES

### **PhD in Molecular and Translational Medicine** 2016 – 2020

Kotton lab, BUSM Center for Regenerative Medicine

PI: Darrell Kotton, MD

- Generation of patient iPSC-derived AEC2 model to study childhood interstitial lung disease pathogenesis caused by ABCA3 mutations
- Generation of fluorescent fusion reporter platform to study normal biology of ABCA3 in PSC-derived iAEC2s
- Characterization of heterogeneous populations of PSC-derived iAEC2 populations using bi-fluorescent reporter systems
- Skills: CRISP/Cas9 gene-editing, stem cell differentiation, single-cell RNA sequencing, molecular cloning, transmission electron microscopy, immunohistochemistry, fluorescence imaging, lentiviral infection, ELISA, flow cytometry

### **Gummuluru lab, BUSM Department of Microbiology** 2013

PI: Suryaram Gummuluru, PhD

- Studied the role of dendritic cell receptor CD169 for HIV-1 dissemination to T lymphocytes
- Skills: molecular cloning, flow cytometry

### **Ahringer lab, Cambridge University, Gurdon Institute** 2009

PI: Julie Ahringer, PhD

- Studied the role of Let418 transcription factor in the embryonic development of *Caenorhabditis elegans* using RNA interference techniques

### **Hoskins lab, UW-Madison Department of Biochemistry** 2008-2010

PI: Aaron Hoskins, PhD

- Studied the role of Sub2, a key regulatory protein in eukaryotic spliceosome assembly.

- Skills: molecular cloning, protein purification, enzymatic protein assays

## Sun lab, UW-Stevens Point Department of Biology

2007-2009

PI: Qiang Sun, PhD

- Studied the disease mechanism of Pierce's Disease, a grapevine disease caused by bacterial pathogen *Xylella fastidiosa*.
- Skills: scanning electron microscopy, transmission electron microscopy, immunohistochemistry

## PUBLICATIONS

**Sun, Y.L.**, Hurley, K., Villacorta-Martin, C., Huang, J., Hinds, A., Gopalan, K., Caballero, I.S., Russo, S.J., Kitzmiller, J.A., Whitsett, J.A., Beers, M.F., Kotton, D.N., 2021. Heterogeneity in human iPSC-derived alveolar epithelial type II cells revealed with ABCA3/SFTPC reporters. *Am J Respir Cell Molec Biol*. <https://www.bucme.org/live/12827>. Doi: 10.1165/rcmb.2020-0259OC, PMID: 34101541

**Sun, Y.L.**, 2021. Disease modeling of childhood interstitial lung disease caused by ABCA3 mutations in iPSC-derived iAEC2s reveal upregulation of NFκB signaling. *in preparation*

Higgins, MCSS., **Sun, Y.L.**, Rochon, P.J., Deville, C., 2021. Interventional Radiology: Workforce Diversity in North America. Book chapter. *Submitted*.

Hurley, K., Ding, J., Villacorta-Martin, C., Herriges, M.J., Jacob, A., Vedaie, M., Alysandratos, K.D., **Sun, Y.L.**, Lin, C., Werder, R.B., Huang, J., Wilson, A.A., Mithal, A., Mostoslavsky, G., Oglesby, I., Caballero, I.S., Guttentag, S.H., Ahangari, F., Kaminski, N., Rodriguez-Fraticelli, A., Camargo, F., Bar-Joseph, Z., Kotton, D.N., 2020. Reconstructed Single-Cell Fate Trajectories Define Lineage Plasticity Windows during Differentiation of Human PSC-Derived Distal Lung Progenitors. *Cell Stem Cell*. doi:10.1016/j.stem.2019.12.009

Sun, Q., **Sun, Y.**, botany, K.J.J.O.E., 2017, n.d. Immunogold scanning electron microscopy can reveal the polysaccharide architecture of xylem cell walls. *academic.oup.com*. doi:10.1093/jxb/erx103

Sun, Q., **Sun, Y.**, Walker, M.A., Labavitch, J.M., 2013. Vascular Occlusions in Grapevines with Pierce's Disease Make Disease Symptom Development Worse. *Plant Physiology* 161, 1529–1541. doi:10.1104/pp.112.208157

## SELECT PRESENTATIONS

**Sun, Y.**, and Kotton, D. "Using chILD patient-derived induced pluripotent stem cells to model ABCA3 dysfunction in vitro" oral presentation at 3<sup>rd</sup> Annual NHLBI Progenitor Cell Translational Consortium (PCTC) meeting Boston, MA (Sept 2019).

**Sun, Y.**, Jacob, A., Sridharan, A., Whitsett, J., Kotton, D. "Using chILD patient-derived induced

*pluripotent stem cells to model ABCA3 dysfunction in vitro*". Poster presentation at the Rare Lung Diseases Consortium, Covington, KY (Sept 2016).

**Sun, Y.,** Jacob, A., Kotton, D. "Using chILD patient-derived induced pluripotent stem cells to model ABCA3 dysfunction in vitro". Poster presentation at ISSCR Conference, Boston, MA (June 2017).

**Sun, Y.** and Kotton, D. "A Patient iPSC-based disease model for characterization and therapeutic discovery of chILD caused by ABCA3 mutations". Oral presentation at Rare Pediatric Respiratory Disease Conference, San Diego, CA (Jul 2017).

**Sun, Y.** and Kotton, D. "Patient iPSC-based disease modeling of chILD caused by ABCA3 mutations". Oral presentation at National Heart, Lung, and Blood Institute Progenitor Cell Translational Consortium (PCTC), Cincinnati, OH (Sept 2017).

**Sun, Y.,** Labavitch, L., Walker, A., Sun, Q. "Tylose Development and Its Impact on the Water Conduction of *Xylella fastidiosa*-infected Grapevines with Different Pierce's Disease Resistance". Oral presentation at Botany 2012, Columbus, OH. (June, 2012).

**Sun, Y.,** Hoskins, A. "Cloning, Expression, and Purification of the *S. cerevisiae* Sub2 ATPase". Poster presentation at RNA Society, Ann Harbor, MI. (June, 2012).

## **LANGUAGES**

Chinese – fluent (spoken)

Japanese- fluent (spoken, reading, writing, interpreting)

Spanish– beginner