

# Curriculum Vitae

**Joshua P. Scallan, Ph.D.**

*Assistant Professor* (Tenure and Promotion Approved)

University of South Florida, Morsani College of Medicine, Tampa, Florida

## Address

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## Education

<u>Institution</u>	<u>Degree</u>	<u>Major</u>	<u>Dates</u>
University of Missouri at Columbia	Ph.D.	Physiology	2005-2010
Centenary College of Louisiana	B.S.	Biology	2001-2005

## Postgraduate Training

<u>Institution</u>	<u>Location</u>	<u>Level</u>	<u>Field of Study</u>	<u>Dates</u>
St. Jude Children's Research Hospital	Memphis, TN	Postdoc	Developmental Biology	2010-2011
University of Missouri	Columbia, MO	Postdoc	Physiology & Genetics	2011-2015

## ORCID ID

orcid.org/0000-0002-1190-7308

## Doctoral Dissertation

"Collecting Lymphatic Vessel Permeability to Albumin and its Modification by Natriuretic Peptides"  
May 05, 2010  
Mentor: Virginia H. Huxley, Ph.D.

## Academic, Professional, and Research Appointments

<u>Position</u>	<u>Institution</u>	<u>Dates</u>
Assistant Professor (Tenure-track)	University of South Florida, Department of Molecular Pharmacology and Physiology	2015-present
Research Assistant Professor	University of Missouri, Department of Medical Pharmacology and Physiology	2014-2015
Postdoctoral Fellow	University of Missouri, Department of Medical Pharmacology and Physiology	2011-2015
Postdoctoral Fellow	St. Jude Children's Research Hospital, Department of Genetics and Tumor Cell Biology	2010-2011
Graduate Fellowship	University of Missouri, Department of Medical Pharmacology and Physiology	2005-2010
Teaching Assistant	University of Missouri, Physiology Laboratory	2005-2006
Internship	Louisiana State University Health Sciences Center, Department of Molecular and Cellular Physiology	2004-2005

Internship Louisiana State University Health Sciences Center, Department of Molecular and Cellular Physiology 2003-2004

### Membership in Professional Societies

American Physiological Society (APS)	2006-present
Microcirculatory Society (MCS)	2006-present
Sigma Xi Scientific Honor Society (by nomination)	2006-present
Society for Developmental Biology (SDB)	2011-2012
North American Vascular Biology Organization (NAVBO)	2015-present
Lymphatic Education and Research Network	2016-present

### Awards, Honors, Honorary Society Memberships

Alpha Epsilon Delta Premedical Honor Society	2004
Benjamin Zweifach Travel Award, Microcirculatory Society	2010
Hartwell Fellowship, St. Jude Children's Research Hospital	2011
MU Postdoctoral Association Travel Award	2012
Cardiovascular Day Poster Award, 1 <sup>st</sup> Place, University of Missouri	2013
Kaley Young Investigator Travel Award, Microcirculatory Society	2013
Caroline tum Suden Travel Award, American Physiological Society	2013
Microcirculatory Society Travel Award	2013
MU Postdoctoral Association Travel Award	2013
Outstanding Poster Award, North American Vascular Biology Org	2014
Invited Oral Presentation at Gordon Conference on Lymphatics	2014
Invited Oral Presentation at Gordon Conference on Lymphatics	2016
Lymphatic Research Recognition Award, Microcirculatory Society	2019
Invited Oral Presentation at Gordon Conference on Lymphatics	2020

## Teaching, Lecture

### University of South Florida

<u>Course #</u>	<u>Course Name</u>	<u>Type of Course</u>	<u># Students</u>	<u>Dates</u>
GMS 7930	Lymphatic Function in Organ Homeostasis, Metabolism, and Immunology	Graduate	3	2022 Spring
GMS 6440	Basic Medical Physiology	MSP3, Masters	171	2022 Spring
GMS 6440	Basic Medical Physiology	Online	58	2021 Fall
GMS 6410	Cardiovascular Regulation	Graduate	3	2021 Fall
BMS 6640	Musculoskeletal, Course 1a	Medical	192	2021 Fall
GMS 6440	Basic Medical Physiology	MSP3, Masters	227	2021 Spring
BMS 6640	Musculoskeletal, Course 1a	Medical	180	2020 Fall
GMS 6440	Basic Medical Physiology	Online	34	2020 Fall
GMS 6440	Basic Medical Physiology	MSP3, Masters	211	2020 Spring
GMS 6410	Cardiovascular Regulation	Graduate	5	2019 Fall
GMS 6440	Basic Medical Physiology	Online	29	2019 Fall
BMS 6640	Musculoskeletal, Course 1a	Medical	188	2019 Fall
GMS 6461	Systems Physiology and Pharmacology	Online	10	2019 Summer
GMS 6440	Basic Medical Physiology	MSP3, Masters	171	2019 Spring
GMS 6410	Cardiovascular Regulation	Graduate	3	2018 Fall
GMS 6440	Basic Medical Physiology	Online	37	2018 Fall
BMS 6640	Musculoskeletal, Course 1a	Medical	185	2018 Fall

GMS 6461	Systems Physiology and Pharmacology	Online	5	2018 Summer
GMS 6440	Basic Medical Physiology	MSP3, Masters	158	2018 Spring
GMS 6440	Basic Medical Physiology	Online	51	2017 Fall
GMS 6410	Cardiovascular Regulation	Graduate	4	2017 Fall
BMS 6640	Musculoskeletal, Course 1a	Medical	185	2017 Fall
GMS 6461	Systems Physiology and Pharmacology	Online	9	2017 Summer
GMS 6440	Basic Medical Physiology	MSP3, Masters	192	2017 Spring
BMS 6640	Musculoskeletal, Course 1a	Medical	237	2016 Fall

### University of Missouri

<u>Course #</u>	<u>Course Name</u>	<u>Type of Course</u>	<u># Students</u>	<u>Dates</u>
MPP 9434	Microcirculatory Function	Graduate	8	2012-2015
	Physiology Laboratory	Undergraduate	16	2005-2006

## Teaching, Supervisory

### Dissertation Committees

<i>Student Name</i>	<i>Role</i>	<i>Dates</i>
Mariana Burgos Angulo, B.S.	Primary Mentor	2016-2018
Andrew Koutnik, B.S.	Committee member (Ph.D. conferred)	2017-2019
Ezinne Mong, B.S.	Committee member (Ph.D. conferred)	2017-2019
Zeinab Motawe, B.S.	Committee member (Ph.D. conferred)	2017-2020
Drishya Iyer, B.S.	Primary Mentor (post CQE)	2019-present
William Steele Fisher, B.S.	M.D. Candidate Mentor	2019-2020
Scott Kemp, B.S.	Committee member (Ph.D. conferred)	2019-2021
Diandra Mastrogiacomo, B.S.	Primary Mentor	2021-present

### Graduate Student Lab Rotations

<i>Student Name</i>	<i>Dates</i>
Austin Nenninger, B.S.	2016
Mariana Burgos Angulo, B.S.	2016
Drishya Iyer, B.S.	2018
Lian Jacobs, B.S.	2021
Diandra Mastrogiacomo, B.S.	2021

### Postdoctoral Fellows

<i>Student Name</i>	<i>Current Position</i>	<i>Dates</i>
Melanie Jannaway, Ph.D.	Research Associate, Scallan Lab, University of South Florida	2019-2022

### Lectures by Invitation

#### Institutional Seminars:

“Ex vivo Transgenic Models of Lymphatic Endothelial Permeability and Contractile Activity Reveal Unexpected Roles for Nitric Oxide”, Washington University in St. Louis, St. Louis, MO	Oct 2013
“Lymphatic Vascular Permeability is Compromised in Genetic Models of Metabolic Disease”, West Virginia University, Morgantown, WV	Sept 2014

“Lymphatic Vascular Defects in Genetic Models of Metabolic Disease”, University of Rochester, Rochester, NY	March 2015
“Lymphatic Vascular Dysfunction in Genetic Models of Metabolic Disease”, University of South Florida, Tampa, FL	April 2015
“Lymphatic Vascular Defects in Genetic Models of Metabolic Disease”, Pennsylvania State University, Hershey, PA	May 2015
“Lymphatic Vascular Defects in Genetic Models of Metabolic Disease”, Texas A&M University, College Station, TX	June 2015
“Regulation of Vascular Permeability”, University of South Florida, Tampa, FL	Feb 2017
“Mechanotransduction Regulates Lymphatic Valve Formation and Maintenance”, Bench-to-Bedside Lecture, Tampa General Hospital, Tampa, FL	June 2018
“Lymph Flow and How It Regulates Lymphatic Function”, Lymphatic Education and Research Network Invited Livestream	Jan 2020
“The Role of Junction Proteins in the Lymphatic Vasculature”, Tulane University, New Orleans, LA (virtual)	Oct 2020
“Adherens Junction Proteins in the Lymphatic Vasculature”, Zoom Lymphatic Seminar Series, University of Southern California (virtual)	Nov 2020
“Unexpected Roles of Lymphatic Junction Proteins”, University of Missouri, Columbia, MO	Nov 2021
“Novel Roles of VE-cadherin and VEGFR3 Signaling in the Lymphatic Vasculature”, Louisiana State University Health, Shreveport, LA	Sept 2022
“Cell-Cell Junctions Control the Development of the Lymphatic Vasculature”, Temple University, Philadelphia, PA (virtual)	Nov 2022

Invited Talks at Meetings and Conferences:

“Lymphatic Myogenic Mechanisms and the Role of Basal Nitric Oxide”, Lymphatic Symposium, Aarhus University, Aarhus, Denmark	Jan 2013
“Role of Basal Nitric Oxide in Murine Collecting Lymphatics”, Experimental Biology Meeting, Boston, MA	April 2013
“Endothelial Permeability of Isolated Murine Collecting Lymphatic Vessels is Elevated by Nitric Oxide and Histamine”, Vascular Biology Meeting hosted by NAVBO, Cape Cod, MA	Oct 2013
“Lymphatic Vascular Integrity is Disrupted in Diabetes and Restored by Phosphodiesterase Inhibition”, Vascular Biology Meeting hosted by NAVBO, Asilomar, CA	Feb 2014

“Lymphatic Function in Type 2 Diabetes and Other Metabolic Diseases”, American Heart Association Meeting, Orlando, FL	Nov 2015
“Regulation of Collecting Lymphatic Vessel Permeability by Dendritic Cells Expressing CCR7 and IRF4”, Gordon Research Conference on Lymphatics, Ventura, CA	March 2016
“Lymphatic Vascular Integrity is Disrupted in Diabetes: Dual Roles for Nitric Oxide”, Experimental Biology Meeting, San Diego, CA	April 2016
“Regulation of Lymphatic Vascular Permeability”, Lymphatic Forum Meeting, Chicago, IL	June 2017
“Mechanotransduction Regulates Lymphatic Valve Formation and Maintenance”, MPP Departmental Retreat, University of South Florida, Tampa, FL	Nov 2017
“VE-cadherin Controls Mechanotransduction Signaling in Embryonic and Postnatal Lymphatic Valves”, Experimental Biology Meeting, San Diego, CA	April 2018
“Regulation of Vascular and Lymphatic Permeability”, Vasculata Meeting, Washington University in St. Louis, St. Louis, MO	July 2018
“Role of VE-cadherin in Shear Stress Signaling in the Lymphatic Vasculature”, MPP Departmental Retreat, University of South Florida, Tampa, FL	May 2019
“VE-cadherin is Required for Lymphatic Valve Formation and Maintenance”, Lymphatic Forum Meeting, Austin, TX	May 2019
“Lymphatic Junction Molecules and Signaling Regulators”, Gordon Conference on Lymphatics, Ventura, CA	March 2020
“Lymphatic Adherens Junctions Regulate Growth and Function”, Vascular Biology Meeting hosted by NAVBO (virtual)	Oct 2020
“VEGFR3 Deletion Dysregulates Lymphatic Permeability and Valve Development”, Lymphatic Forum Meeting (virtual), invited talk by Melanie Jannaway (Postdoctoral Fellow)	June 2021
“Methods to Study Lymphatic Contractile Function and Permeability”, Lymphangiomas & Gorham’s Disease Alliance/Lymphatic Malformation Institute Research Symposium (virtual)	Oct 2021
“Molecular Regulation of Button Junctions in the Lymphatic Vasculature”, NIH Workshop <i>Yet to be Charted: Lymphatic System in Health and Disease</i> , (virtual)	Sept 2022

## Scholarly Activity

### Grant Funding

#### A) Current Grants

Agency: NIH/NHLBI

I.D.# R01 HL142905 (17<sup>th</sup> percentile)

Title: "Pathways Regulating Lymphatic Vessel Permeability and Valve Formation"  
 P.I.: Joshua Scallan, Ph.D.  
 Percent effort: 22.5%  
 Direct costs per year: \$310,631  
 Total costs: \$2,205,602  
 Project period: 05/24/2019 – 04/30/2024

Agency: DOD/USAMRAA  
 I.D.# W81XWH2110653 (Avg. Score, 1.6)  
 Title: "Repurposing MEK-inhibitors for lymphatic malformations"  
 P.I.: Joshua Scallan, Ph.D.  
 Percent effort: 22.5%  
 Direct costs per year: \$246,945  
 Total costs: \$1,476,732  
 Project period: 09/01/2021 – 08/31/2025

Agency: NIH/NHLBI  
 I.D.# R01 HL164825 (10<sup>th</sup> percentile)  
 Title: "VEGFR Signaling Controls Lymphatic Junctions"  
 P.I.: Joshua Scallan, Ph.D.  
 Percent effort: 30%  
 Direct costs per year: \$442,080  
 Total costs: \$2,650,270  
 Project period: 07/01/2022 – 06/30/2026

Agency: American Heart Association  
 I.D.# Predoctoral Fellowship (827540)  
 Title: "eNOS Regulates Lymphatic Valve Development During Embryogenesis"  
 P.I.: Drishya Iyer, B.S.  
 Role on project: Mentor  
 Percent effort: N/A  
 Total costs: \$31,520  
 Project period: 04/01/2021 – 03/31/2023

#### B) Past Grants

Agency: St. Jude Children's Research Hospital  
 I.D.# Hartwell Fellowship 181133010  
 Title: "Role of Prox1 in Lymphatic Development"  
 P.I.: Joshua Scallan, Ph.D.  
 Percent effort: 100%  
 Total costs: \$50,000  
 Project period: 02/16/2011 – 08/07/2011

Agency: NIH/NHLBI  
 I.D.# K99 HL124142  
 Title: "Lymphatic Endothelial Permeability as a Regulator of Mesenteric Adipose Deposition"  
 P.I.: Joshua Scallan, Ph.D.  
 Percent effort: 75%  
 Total costs: \$89,999  
 Project period: 09/01/2014 – 11/30/2015

Agency: NIH/NHLBI  
I.D.# R00 HL124142  
Title: "Lymphatic Endothelial Permeability as a Regulator of Mesenteric Adipose Deposition"  
P.I.: Joshua Scallan, Ph.D.  
Percent effort: 75%  
Direct costs per year: \$166,555  
Total costs: \$768,430  
Project period: 04/09/2016 – 03/31/2020

Agency: NIH/NHLBI  
I.D.# R01 HL131652  
Title: "Defining the Mechanisms of Lymphatic and Lymphovenous Valve Development"  
P.I.: Sathish Srinivasan, Ph.D.  
Role on Project: Consortium Lead Investigator  
Percent effort: 5%  
Direct costs per year: \$10,010  
Total costs: \$30,246  
Project period: 07/01/2018 – 06/30/2020

## Published Bibliography

### Peer-Reviewed Research Articles:

1. Davis MJ, Lane MM, **Scallan JP**, Gashev AA, Zawieja DC. An automated method to control preload by compensation for stress relaxation in spontaneously contracting, isometric rat mesenteric lymphatics. *Microcirculation*. 14(6):603-12, 2007.
2. **Scallan JP**, Huxley VH. In vivo determination of collecting lymphatic vessel permeability to albumin: a role for lymphatics in exchange. *J Physiol*. 588(1):243-54, 2010.
3. Yang Y, Garcia-Verdugo JM, Soriano-Navarro M, Srinivasan RS, **Scallan JP**, Singh MK, Epstein JA, Oliver G. Lymphatic endothelial progenitors bud from the cardinal vein and intersomitic vessels in mammalian embryos. *Blood*. 120(11):2340-8, 2012.
4. **Scallan JP**, Wolpers JH, Muthuchamy M, Zawieja DC, Gashev AA, Davis MJ. Independent and interactive effects of preload and afterload on the pump function of the isolated lymphangion. *Am J Physiol Heart Circ Physiol*. 303(7):H809-24, 2012.
5. Davis MJ, **Scallan JP**, Wolpers JH, Muthuchamy M, Gashev AA, Zawieja DC. Intrinsic increase in lymphatic muscle contractility in response to elevated afterload. *Am J Physiol Heart Circ Physiol*. 303(7):H795-808, 2012.
6. **Scallan JP**, Wolpers JH, Davis MJ. Constriction of isolated collecting lymphatic vessels in response to acute increases in downstream pressure. *J Physiol*. 591(Pt 2):443-59, 2013.
7. **Scallan JP** and Davis MJ. Genetic removal of basal nitric oxide enhances contractile activity in isolated murine collecting lymphatic vessels. *J Physiol*. 591(Pt 8):2139-56, 2013.

8. **Scallan JP**, Davis MJ, Huxley VH. Permeability and contractile responses of collecting lymphatic vessels elicited by atrial and brain natriuretic peptides. *J Physiol.* 591(Pt 20):5071-81, 2013.
9. **Scallan JP**, Hill MA, Davis MJ. Lymphatic vascular integrity is disrupted in type 2 diabetes due to impaired nitric oxide signaling. *Cardiovasc Res.* 107(1):89-97, 2015.
10. Sabine A, Bovay E, Demir CS, Kimura W, Jaquet M, Agalarov Y, Zangger N, **Scallan JP**, Graber W, Gulpinar E, Mäkinen T, Ortega S, Delorenzi M, Kiefer F, Davis MJ, Djonov V, Miura N, Petrova TV. FOXC2 and fluid shear stress stabilize postnatal lymphatic vasculature. *J Clin Invest.* 125(10):3861-77, 2015.
11. \*Ivanov S, \***Scallan JP**, Kim K, Werth K, Johnson MW, Saunders BT, Wang PL, Kuan EL, Straub AC, Ouhachi M, Weinstein EG, Williams JW, Briseño C, Colonna M, Isakson BE, Gautier EL, Förster R, Davis MJ, Zinselmeyer BH, Randolph GJ. Role of CCR7 and IRF4-dependent dendritic cells in the regulation of lymphatic collecting vessel permeability. *J Clin Invest.* 126(4):1581-91, 2016. \***Co-first authors.**
12. \*Behringer EJ, \***Scallan JP**, Jafarnejad M, Castorena Gonzalez JA, Zawieja SD, Moore JE, Davis MJ, Segal SS. Calcium and electrical dynamics in lymphatic endothelium. *J Physiol.* 595(24):7347-7368, 2017. \***Co-first authors.**
13. Zawieja SD, Castorena Gonzalez JA, **Scallan JP**, Davis MJ. Differences in L-type calcium channel activity partially underlie the dichotomy in robust contractility and pumping behavior between murine somatic and visceral lymphatic collecting vessels. *Am J Physiol Heart Circ Physiol.* 314(5):H991-H1010, 2018.
14. Suarez-Martinez AD, Peirce SM, Isakson BE, Nice M, Wang J, Lounsbury KM, **Scallan JP**, Murfee WL. Induction of microvascular network growth in the mouse mesentery. *Microcirculation.* 25(8):e12502, 2018.
15. Yang Y, Cha B, Motawe ZY, Srinivasan RS, **Scallan JP**. VE-cadherin is required for lymphatic valve formation and maintenance. *Cell Rep.* 28(9):2397-2412.e4, 2019.
16. **Scallan JP**, Knauer LA, Hou H, Castorena-Gonzalez JA, Davis MJ, Yang Y. Foxo1 deletion promotes the growth of new lymphatic valves. *J Clin Invest.* 131(14):142341, 2021.
17. Jannaway M and **Scallan JP**. VE-cadherin and vesicles differentially regulate lymphatic vascular permeability to solutes of various sizes. *Front Physiol.* 12:687563. 2021.
18. **Scallan JP**, Bouta EM, Rahimi H, Kenney HM, Ritchlin CT, Davis MJ, Schwarz EM. Ex vivo demonstration of functional deficiencies in popliteal lymphatic vessels from TNF-Tg mice with inflammatory arthritis. *Front Physiol.* 12:745096. 2021.
19. Czepielewski RS, Erlich EC, Onufer EJ, Young S, Saunders BT, Han YH, Wohltmann M, Wang PL, Kim K, Kumar S, Hsieh CS, Yang Y, **Scallan JP**, Zinselmeyer BH, Davis MJ, Randolph GJ. Tertiary lymphoid organs orchestrate altered gut to lymph node communication through association with collecting lymphatic vessels. *Immunity.* 54(12):2795-2811.e9. 2021.
20. Nielsen NR, Harris NR, Pawlak JB, Xu W, Dy DM, Ratra D, Hurr SH, **Scallan JP**, Caron KM. VE-cadherin is required for cardiac lymphatic maintenance and signaling. *Circ Res.* 130(1):5-23. 2022.



21. Sung DC, Chen X, Chen M, Yang J, Schultz S, Babu A, Xu Y, Gao S, Stevenson Keller TC, Mericko P, Lee M, Yang Y, **Scallan JP**, Kahn ML. VE-cadherin enables trophoblast endovascular invasion and spiral artery remodeling during placental development. *eLife*. 11:e77241. 2022.
22. Sung DC, Chen M, Dominguez MH, Mahadevan A, Chen X, Yang J, Gao S, Ren AA, Tang AT, Mericko P, Patton R, Lee M, Jannaway M, Nottebaum A, Vestweber D, **Scallan JP**, Kahn ML. Sinusoidal and lymphatic vessel growth are controlled by reciprocal VEGF-C-CDH5 inhibition. *Nature Cardiovasc Res*. [Accepted]. 2022.
23. Jannaway M, Iyer D, Mastrogiacomo D, Li K, Sung DC, Yang Y, Kahn ML, **Scallan JP**. VEGFR3 is required for button junction formation in lymphatic vessels. *Cell Rep*. [In revision]. 2023.

Peer-Reviewed Articles – Invited Reviews:

1. Huxley VH and **Scallan JP**. Lymphatic Fluid: Exchange mechanisms and regulation. *J Physiol*. 589(12):2935-2943, 2011.
2. **Scallan JP**, Zawieja SD, Castorena-Gonzalez J, Davis MJ. Lymphatic pumping: Mechanics, mechanisms, and malfunction. *J Physiol*. 594(20):5749-5768, 2016.
3. Randolph GJ, Ivanov S, Zinselmeyer BH, **Scallan JP**. The Lymphatic System: Integral Roles in Immunity. *Annu Rev Immunol*. 35:31-52, 2017.
4. Castorena-Gonzalez JA, **Scallan JP**, Davis MJ. Methods for Assessing the Contractile Function of Mouse Lymphatic Vessels Ex Vivo. *Methods Mol Biol*. 1846:229-248, 2018.
5. Breslin JW, Yang Y, **Scallan JP**, Sweat RS, Adderley SP, Murfee WL. Lymphatic Vessel Network Structure and Physiology. *Compr Physiol*. 9(1):207-299, 2019.
6. Iyer D, Jannaway M, Yang Y, and **Scallan JP**. Lymphatic Valves and Lymph Flow in Cancer-Related Lymphedema. *Cancers*. 12(8):E2297. 2020.
7. Jannaway M and **Scallan JP**. Lymphatic vascular permeability determined from direct measurements of solute flux. *Methods Mol Biol*. [Accepted]. 2022.
8. **Scallan JP** and Jannaway M. Lymphatic vascular permeability. *Cold Spring Harb Perspect Med*. 12(8):a041274. 2022.

Books, Chapters, and Editorials:

1. **Scallan JP**, Huxley VH, Korthuis RJ. *Capillary Fluid Exchange: Regulation, Functions, and Pathology. Integrated Systems Physiology: From Molecules to Function* eBook series, edited by Granger DN and Granger JP, Morgan-Claypool, 2010.
2. **Scallan JP** and Huxley VH. The lymphatic vasculature as a participant in microvascular exchange. *Annual Update in Intensive Care and Emergency Medicine*. 1:287-96, 2011.
3. **Scallan JP** and Davis MJ. Itching for answers: how histamine relaxes lymphatic vessels. *Microcirculation*. 21(7):575-7, 2014.

4. Cifarelli V, Chen H, **Scallan JP**. The role of the lymphatic system in lipid and energy metabolism, and immune homeostasis during obesity and diabetes. *Front Physiol.* 12:652461, 2021.

Papers in Press:

1. Jannaway M, Iyer DS, Mastrogiacomo D, Li K, Sung DC, Yang Y, Kahn ML, **Scallan JP**. VEGFR3 is required for button junction formation in lymphatic vessels. *Cell Rep.* [Submitted].
2. Iyer DS, Yang Y, Li K, **Scallan JP**. Endothelial nitric oxide synthase regulates lymphatic valve specification during embryogenesis through beta-catenin signaling. *Genes Dev.* [In preparation].
3. Choi D, Park E, Lu R, Zhao L, Lee S, Yu J, Seong YJ, **Scallan JP**, Lee E, Hong YK. Activation of Piezo1 rapidly enhances lymphatic cerebrospinal fluid outflow and ameliorates hydrocephalic brain. *JCI Insight.* [Submitted].

Meeting Abstracts:

1. **Scallan JP** and Huxley VH. Assessing Rat Mesenteric Collecting Lymphatic Permeability to Albumin. *Microcirculation.* 14:511, 2007.
2. **Scallan JP** and Huxley VH. Role of collecting lymphatics in exchange. *Microcirculation.* 16:757, 2009.
3. **Scallan JP** and Huxley VH. Collecting lymphatic permeability response to atrial natriuretic peptide. *FASEB J.* 24:972.5, 2010.
4. Yang Y, Srinivasan S, **Scallan J**, Oliver G. Characterization of the mechanisms involved in the early specification and migration of Prox1-expressing lymphatic endothelial cells. *Dev Biol.* 356(1):171, 2011.
5. Davis MJ, Moore JE, Zawieja DC, Gashev AA, **Scallan JP**. Lymphatic valve lock in response to modest gravitational loads: a contributing mechanism to peripheral lymphedema? *FASEB J.* 26:677.2, 2012.
6. **Scallan JP** and Davis MJ. The lymphatic myogenic constriction depends upon conduction across intraluminal valves. *Microcirculation.* 20(1):42-109, 2013.
7. **Scallan JP** and Davis MJ. Mouse collecting lymphatic vessels exhibit contractile activity regulated by nitric oxide. *Microcirculation.* 20(1):42-109, 2013.
8. Behringer EJ, **Scallan JP**, Davis MJ, Segal SS. Depolarization of collecting lymphatic endothelium with acetylcholine or TRPV4 activation. *FASEB J.* 27:678.3, 2013.
9. **Scallan JP** and Davis MJ. Basal nitric oxide production in mouse collecting lymphatics does not enhance contractile activity. *FASEB J.* 27(7):575-7, 2014.
10. **Scallan JP**, Sabine A, Petrova TV, Lapinski P, King P, Davis MJ. Lymphatic pump and valve dysfunction in genetic models of lymphatic disease. *Acta Physiologica.* 215(706):36, 2015.
11. **Scallan JP**, Hill MA, Davis MJ. Lymphatic vascular integrity is disrupted in a mouse model of diabetes: dual regulation by nitric oxide. *FASEB J.* 30(1):950.9, 2016.

12. **Scallan JP**, Yang Y, Cha B, Burgos Angulo M, Srinivasan S. VE-cadherin controls mechanotransduction signaling in embryonic and postnatal lymphatic valves. *FASEB J.* 32(1);843.16, 2018.

13. Suarez-Martinez AD, Peirce-Cottler SM, Isakson BE, **Scallan JP**, Murfee WL. Induction of microvascular network growth in the mouse mesentery. *FASEB J.* 32(1);573.6, 2018.

## Service

### Committees and Other Professional Activities

Communications Committee, Microcirculatory Society	2017-2018
Executive Council Member, Microcirculatory Society	2018-2021
Membership Committee Member, Microcirculatory Society	2018-2021
Awards Committee, American Physiological Society, Water and Electrolyte Homeostasis Section	2020-present
Education Committee Member, North American Vascular Biology Organization	2021-present
Chair of the Membership Committee, Microcirculatory Society	2021-present

### NIH Study Section and Other National Grant Review

National Institutes of Health, Vascular Cell and Molecular Biology Study Section [VCMB], Early Career Grant Reviewer	June 2018
National Institutes of Diabetes and Digestive and Kidney Diseases, Special Emphasis Panel ZDK1 GRB-1 (O2), Lymphatics in Health and Disease, Grant Reviewer	May 2019
National Aeronautics and Space Administration (NASA), Crew Health Step-2 Reviews [19-20_HEROAB_2], Grant Reviewer	Feb 2020
National Institutes of Health, Vascular Cell and Molecular Biology Study Section [VCMB], Ad Hoc Grant Reviewer	July 2020
National Aeronautics and Space Administration (NASA), [19-20_HEROEF_2], Grant Reviewer	Oct 2020
American Heart Association, Career Development Awards (CDA), Grant Reviewer	May 2021
Lymphatic Malformations Institute, Grant Reviewer	July 2021
National Heart Lung and Blood Institute, Special Emphasis Panel ZHL1 CSR-C O2 2, R13 Grant Reviewer	Aug 2021
National Heart Lung and Blood Institute, Special Emphasis Panel ZHL1 CSR-F F1, R33 Grant Reviewer	Oct 2021

### International Grant Review

NWO, The Netherlands, NWA-ORC, Invited Grant Reviewer	Mar 2020
Wellcome Trust, UK, Invited Grant Reviewer	Mar 2020

### Editorial Activities

Editorial Board Member, Microcirculation Journal	2020-present
Special Editor for Frontiers in Physiology, section Lipid and Fatty Acid Research	2019-2021

### Invitations for Peer Review

<u>Journal Title</u>	<u>Impact Factor</u>	<u># Reviewed</u>
Immunity	43.47	1
Science Translational Medicine	19.31	1
Nature Communications	17.69	1
Journal of Clinical Investigation	19.45	2
Journal of Clinical Investigation Insight	9.48	3
Cellular and Molecular Life Sciences	9.20	3
Cardiovascular Research	13.08	2
Journal of Inflammation Research	4.63	1
Journal of Physiology (London)	6.22	2
American Journal of Physiology Heart and Circulatory Physiology	5.12	5
American Journal of Physiology Endocrinology and Metabolism	5.90	2
Microcirculation	2.67	14
Cells	7.66	2
Lymphatic Research & Biology	2.34	1
Journal of Biomechanical Engineering	1.89	2
Bioessays	4.65	2
Federation of American Societies for Experimental Biology Journal (FASEB J)	5.83	2
Scientific Reports	4.99	4
Journal of Visualized Experiments	1.42	1
Cellular and Molecular Gastroenterology and Hepatology	8.79	1
PLOS One	3.75	1
Frontiers in Cardiovascular Medicine	5.84	1

### University Committees

Faculty Council Representative, Department of Molecular Pharmacology and Physiology, University of South Florida	2017-2021
College of Medicine Committee on Research, University of South Florida Morsani College of Medicine	2019-2021
Faculty Search Committee, Department of Pathology and Cell Biology, University of South Florida	2019
Faculty Interviewer for Integrated Biomedical Sciences Graduate Student Recruitment, Office of Graduate and Postdoctoral Affairs, University of South Florida	2022

### Organizing Roles in Scientific Meetings and Symposia

Co-Chair for Gordon Research Seminars on Lymphatics	2016
Co-chair for Symposium on Vascular Permeability, Experimental Biology Meeting	2016
Chair for Microcirculatory Society Online Seminar Series "Frontiers in Lymphatic Research"	2020