

Calum Wilson  
Research Fellow  
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## Employment

**Research Fellow**  
Strathclyde Institute Of Pharmacy And Biomedical Sciences  
University Of Strathclyde  
United Kingdom  
16 Feb 2015 → present

## Research outputs

**Hydrogen peroxide depolarizes mitochondria and inhibits IP<sub>3</sub>-evoked Ca<sup>2+</sup> release in the endothelium of intact arteries**  
Zhang, X., Lee, M. D., Wilson, C. & McCarron, J. G., 31 Dec 2019, In : Cell Calcium. 84, 12 p., 102108.

**FK506 regulates IP3 evoked Ca<sup>2+</sup> release independently of FKBP in endothelial cells**  
Buckley, C., Wilson, C. & McCarron, J. G., 8 Nov 2019, In : British Journal of Pharmacology. 19 p.

**Multi-plane remote refocussing epifluorescence microscopy to image dynamic Ca<sup>2+</sup> events**  
Lawton, P. F., Buckley, C., Saunter, C. D., Wilson, C., Corbett, A. D., Slater, P. S., McCarron, J. G. & Girkin, J. M., 1 Nov 2019, In : Biomedical Optics Express. 10, 11, p. 5611-5624 14 p.

**Endothelial TRPV4 channels modulate vascular tone by Ca<sup>2+</sup>-induced Ca<sup>2+</sup> release at inositol 1,4,5-trisphosphate receptors**  
Heathcote, H. R., Lee, M. D., Zhang, X., Saunter, C. D., Wilson, C. & McCarron, J. G., 30 Sep 2019, In : British Journal of Pharmacology. 176, 17, p. 3297-3317 21 p.

**Increased vascular contractility in hypertension results from impaired endothelial calcium signaling**  
Wilson, C., Zhang, X., Buckley, C., Heathcote, H. R., Lee, M. D. & McCarron, J. G., 23 Sep 2019, In : Hypertension. 74, 5, p. 1200-1214 15 p.

**Heterogeneity and emergent behaviour in the vascular endothelium**  
McCarron, J. G., Wilson, C., Heathcote, H. R., Zhang, X., Buckley, C. & Lee, M. D., 30 Apr 2019, In : Current Opinion in Pharmacology. 45, p. 23-32 10 p.

**VasoTracker, a low-cost and open source pressure myograph system for vascular physiology**  
Lawton, P. F., Lee, M. D., Saunter, C. D., Girkin, J. M., McCarron, J. G. & Wilson, C., 21 Feb 2019, In : Frontiers in Physiology. 10, FEB, 17 p., 99.

**Mitochondrial ATP production provides long-range control of endothelial inositol trisphosphate-evoked calcium signaling: mitochondrial control of endothelial Ca<sup>2+</sup> signaling**  
Wilson, C., Lee, M. D., Heathcote, H. R., Zhang, X., Buckley, C., Girkin, J. M., Saunter, C. D. & McCarron, J. G., 18 Jan 2019, In : Journal of Biological Chemistry. 294, 3, p. 737-758 22 p.

**Spatially-structured cell populations process multiple sensory signals in parallel in intact vascular endothelium: stimulus-specific sensory cells in the intact vascular endothelium**  
Lee, M. D., Wilson, C., Saunter, C. D., Kennedy, C., Girkin, J. M. & McCarron, J. G., 18 Dec 2018, In : Science Signaling. 11, 561, eaar4411.

**The endothelium solves problems that endothelial cells do not know exist**

McCarron, J. G., Lee, M. D. & Wilson, C., 16 Feb 2017, In : Trends in Pharmacological Sciences. 38, 4, p. 322-338 17 p.

**Advancing age decreases pressure-sensitive modulation of calcium signaling in the endothelium of intact and pressurized arteries**

Wilson, C., Saunter, C. D., Girkin, J. M. & McCarron, J. G., 30 Jan 2017, In : Journal of Vascular Research. 53, 5-6, p. 358-369 12 p.

**Acetylcholine released by endothelial cells facilitates flow-mediated dilatation**

Wilson, C., Lee, M. D. & McCarron, J. G., 14 Dec 2016, In : Journal of Physiology. 594, 24, p. 7267-7307 41 p.

**Clusters of specialized detector cells provide sensitive and high fidelity receptor signaling in intact endothelium**

Wilson, C., Saunter, C. D., Girkin, J. M. & McCarron, J. G., 12 Feb 2016, In : FASEB Journal. 30, 5, p. 2000-2013 14 p.

**Pressure-dependent regulation of Ca<sup>2+</sup> signaling in the vascular endothelium**

Wilson, C., Saunter, C. D., Girkin, J. M. & McCarron, J. G., 15 Dec 2015, In : Journal of Physiology. 593, 24, p. 5231-5253 23 p.

**From structure to function: mitochondrial morphology, motion and shaping in vascular smooth muscle**

McCarron, J. G., Wilson, C., Sandison, M. E., Olson, M. L., Girkin, J. M., Saunter, C. & Chalmers, S., Oct 2013, In : Journal of Vascular Research. 50, 5, p. 357-371 15 p.

**Examining the role of mitochondria in Ca<sup>2+</sup> Signaling in native vascular smooth muscle**

McCarron, J. G., Olson, M. L., Wilson, C., Sandison, M. E. & Chalmers, S., May 2013, In : Microcirculation. 20, 4, p. 317-329 13 p.

**Mitochondrial motility and vascular smooth muscle proliferation**

Chalmers, S., Saunter, C., Wilson, C., Coats, P., Girkin, J. M. & McCarron, J. G., Dec 2012, In : Arteriosclerosis Thrombosis, and Vascular Biology. 32, 12, p. 3000-3011 12 p.

**Mitochondrial motility and vascular smooth muscle proliferation**

Chalmers, S., Saunter, C., Wilson, C., Coats, P., Girkin, J. & McCarron, J., Dec 2012, In : Arteriosclerosis Thrombosis, and Vascular Biology. 32, 12, p. 3000-3011 12 p.

## Prizes

**American Physiological Society International Early Career Physiologist Travel Award**

Calum Wilson (Recipient), 1 Mar 2018

**AAAS/Science Program for Excellence in Science**

Calum Wilson (Recipient), 2016

**American Association of Anatomists (AAA) Best Poster Award**

Calum Wilson (Recipient), 2015

**ECPS 2014 Best Oral Presentation Award**

Calum Wilson (Recipient), 2014

**ECPS 2016 Best Oral Presentation Finalist**

Calum Wilson (Recipient), 2016

**SULSA Postdoctoral and Early Career Researcher Exchange Award**

Calum Wilson (Recipient), 2016

**Santander Mobility Award**

Calum Wilson (Recipient), 16 Mar 2017

**Sir Henry Wellcome Postdoctoral Fellowship**

Calum Wilson (Recipient), 17 Apr 2017

**The Journal of Physiology Early Investigator Prize 2015**

Calum Wilson (Recipient), 20 Jul 2016

**The Journal of Physiology Early Investigator Prize 2016**

Calum Wilson (Recipient), 17 May 2017

**The Journal of Physiology Editorial Board Fellowship**

Calum Wilson (Recipient), 1 Jun 2018

**Awards**

**Optical dissection of endothelial calcium signalling**

Wilson, C.

Wellcome Trust: £250,000.00

17/04/17 → 16/04/21