Manuel F. Navedo, Ph.D., F.A.H.A.

Research/Academic Interests

Research in the Navedo Lab aims to determine the cellular and molecular mechanisms regulating arterial smooth muscle excitability and vascular reactivity. Innovative techniques and approaches are used to specifically examine the mechanisms by which local and global calcium signals regulate excitation-contraction coupling and excitation-transcription coupling in arterial smooth muscle cells during physiological and pathological conditions such as hypertension and diabetes. The overarching objective is to uncover regulatory signaling pathways of vascular (dys)function that could help identify new targets for exploitation as novel therapeutic interventions to treat vascular complications during hypertension and diabetes.

Title

Professor

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Languages

Spanish

Education

Ph.D., Neurobiology, University of Puerto Rico, San Juan PR 2003
B.S., University of Puerto Rico, San Juan PR 1998

Fellowships

PBio/Vascular Biology, University of Washington, Seattle WA 2004-2007

Professional Memberships

American Heart Association
American Physiological Society
European Calcium Society

Honors and Awards

Fellow of the American Heart Association, 2019
Charter Member, National Institutes of Health Vascular Cell and Molecular Biology Study Section, 2016, 2017, 2018, 2019, 2020, 2021, 2022
UCD Academic Senate Research Travel Award, 2016
National Institutes of Health Early Career Reviewer Program Alumni, 2015

Select Recent Publications

To view a complete list of Dr. Navedo's publications, please click here.

Nieves-Cintron M, Santana LF, Navedo MF. TRPML1ng on sparks. Sci Signal. 2020 Jun 23;13

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Syed AU, Reddy GR, Ghosh D, Prada MP, Nystoriak MA, Morotti S, Grandi E, Sirish P, Chiamvimonvat N, Hell JW, Santana LF, Xiang YK, Nieves-Cintrón M, Navedo MF. Adenylyl cyclase 5-generated cAMP controls cerebral vascular reactivity during diabetic hyperglycemia. J Clin Invest. 2019 Jun 4;129(8):3140-3152. doi:10.1172/JCI124705. PMID:31162142. Highlighted by several news outlets and commentary on Journal of Diabetes Investigations. Reviewed by F1000. PMC6668679.

Prada MP, Syed AU, Buonarati OR, Reddy GR, Nystoriak MA, Ghosh D, Simó S, Sato D, Sasse KC, Ward SM, Santana LF, Xiang YK, Hell JW, Nieves-Cintrón M, Navedo MF. A Gs-coupled purinergic receptor boosts Ca2+ influx and vascular contractility during diabetic hyperglycemia. Elife. 2019 Mar 1;8:e42214. doi:10.7554/eLife.42214. PMID:30821687.

Nystoriak MA, Nieves-Cintrón M, Patriarchi T, Buonarati OR, Prada MP, Morotti S, Grandi E, Fernandes JD, Forbush K, Hofmann F, Sasse KC, Scott JD, Ward SM, Hell JW, Navedo MF. Ser1928 phosphorylation by PKA stimulates the L-type Ca2+ channel CaV1.2 and vasoconstriction during acute hyperglycemia and diabetes. Sci Signal. 2017 Jan 24;10(463):eaaf9647. doi:10.1126/scisignal.aaf9647. PMID:28119464. This article was highlighted in the cover and podcast of the journal and by Faculty of 1000. PMC5297430.

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