

SIOBHAN MALANY, Ph.D.

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EDUCATION

Ph.D. University of Iowa, Department of Chemistry **1997**
(Thesis: Electrostatic Influences on the Catalytic Efficiency of Acetylcholinesterase)
B.S. Cum Laude Augustana College, Rock Island, IL, Chemistry (minor English) **1992**

PROFESSIONAL EXPERIENCE

2019-	Associate Professor, College of Pharmacy, University of Florida
2018-2019	Research Associate Professor, College of Pharmacy, University of Florida
2015-2018	Principal Investigator and Director of Translational Biology, Sanford Burnham Prebys Medical Discovery Institute
2010-2015	Chemical Biology Leader Sanford Burnham Prebys Medical Discovery Institute
2007-2010	Principal Scientist, Tanabe Research Laboratories, San Diego, CA
2003-2007	Research Scientist II, Neurocrine Biosciences, San Diego, CA
2002-2003	Research Scientist, Structural Informatics, San Diego, CA
2000-2002	Postdoctoral Research Fellow, Max-Plank Institute for Brain Research, Frankfurt, Germany
1997-2000	Postdoctoral Fellow University of California School of Medicine, San Diego, CA
1994-1997	Graduate Student Fellow, University of Iowa Chemistry Department
1992-1994	Teaching Assistant Organic Chemistry, University of Iowa

FELLOWSHIPS

2000-2002	Alexander von Humboldt Foundation Research Fellowship, Germany, MPIH
1997-2000	Tobacco-Related Disease Research Program postdoctoral fellowship (simultaneously awarded NIH and AHA fellowships), UCSD
1993-1997	Center for Biocatalysis and Bioprocessing graduate student fellowship, Univ of Iowa
1991	Petroleum Research Fund undergraduate award, Northwestern University
1990	PEW Research Fund undergraduate award, Northwestern University

AWARDS

2023	UF President Strategic Fund award \$1.5M to initiate the In-Space Biomanufacturing of Human Health Innovation Hub
2021	UF College of Pharmacy Media Award for SpaceX CRS 21 stories
2021	Team Teaching Award PH5155 Pharmacology and MedChem II
2012-2014	Awarded Space Florida International Space Station Research Competition, KSC, FL
2014-2015	Awarded FTRP Grant to identify inhibitors of cell death in hiPSC-derived cardio cells
2014-2016	Winner of GSK Fast Track Challenge to identify inhibitors for resistant hypertension
2015-2017	Awarded Diversified Translational Laboratory (DTL) Initiative grant from SBP
2015-2017	Recipient of Space Florida-Israel Innovation Program 2 nd call
2016-2018	Awarded CASIS Organ-on-Chip Grand Challenge
2016-2017	Awarded Florida Translational Research Program grant to identify inhibitors of CXCR6 receptor for fibrosis
2017	Featured in Florida High Tech Magazine Faces of Technology
2017	Featured in Florida Trend Magazine
2017-2018	Recipient of Space Florida-Israel Innovation Program 4 th call
2018	Recipient of Mayoral Proclamation for STEM Research, Springfield, IL

SERVICE

2022 – 2023	Research Integrity Office – Scientific Misconduct Committee Chair
2023	Lake Nona High School STEAM Night Vendor
2023	Lake Nona Middle School STEAM Night vendor
2022	CASIS Ad Hoc Reviewer: In space biomanufacturing grants
2019-present	American Society for Gravitational and Space Research Member
2019	NIH Peer Review Committee: Small Business: Biological Chemistry, Biophysics and Assay Development, reviewer
2020	Women in Science and Engineering Symposium (6-12 grades) keynote speaker
2020	STEM day lead at Lincoln Magnet Middle School (6-8 th grades)
2021	Lego League workshop lead with 3-5 th grade girls planning a project on ISS
2018	Florida High Tech Corridor STEMConnect volunteer
2017	Member of Central Florida Foundation 100 Women Strong, Orlando, FL
2016	Champion to Stop Diabetes/Century Cyclist – Raised \$1000 for Tour de Cure, Orlando, FL
2016	Scientific Reviewer for NIDDK DiaComp Pilot and Feasibility Funding Program
2015-2016	Reviewer for <i>J. Biomol. Screen.</i> , <i>PLOS one</i> , <i>Toxicol. Appl. Pharm.</i> , <i>Stem Cell Reports</i> , <i>Scientific Reports</i> , <i>Frontier Journal</i> , <i>IJMS</i> , <i>Biology Open</i> , <i>Bioengineering and Translational Medicine</i>
2014-2015	Technical review board member for Florida Translational Research Program
2013-2014	Scientific reviewer for Small Business: Biological Chemistry, Biophysics, and Drug Discovery
2008-2009	Board member for Association for Women in Science, San Diego, CA

TEACHING

2020-present	PHA5155 Pharmacology and Medicinal Chemistry II
2022-2023	PHA6935 (Life Cycle of a Drug)
2019-present	PHA6521L Department Laboratory Rotation course
2019 – present	PHA7939 Journal Colloquy
2001	Introduction to Enzyme Kinetics – Darmstadt University, Germany
1993-1993	Teaching Assistant - General Chemistry
1993-1994	Teaching Assistant - Organic Chemistry for chemistry and pre-med students
1993-1995	Teaching Assistant - Introduction to Organic Chemistry for nursing students

Payloads to ISS

- SpaceX CRS-4 Protein binding stability in microgravity detected by florescence Polarization; Implementation partner: NanoRacks
- SpaceX CRS-9 Florescence Intensity modes in 382 well: validation of M5 plate reader on ISS; Implementation partner: NanoRacks
- Cygnus NG-10 Development and validation of lab-on-chip to culture human skeletal muscle cells in microgravity. Implementation partner(s): SpacePharma/Space Tango
- SpaceX CRS-21 Electrical Stimulation of Human Myocytes in Microgravity: An In Vitro Model to Evaluate Therapeutics to Counteract Muscle Wasting; Implementation partner: Space Tango
- SpaceX CRS-25 Electrical Stimulation of Human Myocytes in Microgravity: An In Vitro Model to Evaluate Therapeutics to Counteract Muscle Wasting; Implementation partner: Space Tango
- SpaceX CRS-26 Electrical Stimulation of Human Myocytes in Microgravity: An In Vitro Model to Evaluate Therapeutics to Counteract Muscle Wasting; Implementation partner: Space Tango

Media

- Cade Museum podcast November 25, 2020 [Space Pod: Using Microgravity in Space to Advance and Improve Health on Earth \(buzzsprout.com\)](#)
- “Houston We Have a Podcast” is the official podcast of the NASA Johnson Space Center December 18, 2020 <https://www.nasa.gov/johnson/HWHAP/muscles-on-chips-in-space>
- UF communications April 13, 2021 (667,058 views) <https://www.youtube.com/watch?v=jfZRqWDDGpY>
- **Orlando Sentinel:** Orlando Sentinel: <https://www.orlandosentinel.com/space/os-bz-spacex-iss-resupply-mission-sunday-20201206-x6o22244tnfeloa7jxgin2iwhu-story.html>

- WMFE: <https://www.wmfe.org/central-floridians-heading-to-space-this-weekend-well-just-their-muscle-cells/170073>
- Authority Magazine: <https://medium.com/authority-magazine/wisdom-from-the-women-leading-the-space-industry-with-dr-siobhan-malany-founder-and-president-of-5771d9626602>

Select Publications and patents A complete list of published work in MyBibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/siobhan.malany.1/bibliography/public/>

- Parafati M, Giza S, Shenoy TS, Mojica-Santiago JA, Hopf M, Malany LK, Platt D, Kuel P, Moore I, Jacobs Z, Barnett G, Schmidt CE, McLamb B, Clements T, Coen PM, Malany S. Validation of Human Skeletal Muscle Tissue Chip Autonomous Platform to Model Age-Related Muscle Wasting in Microgravity. *NPJ Microgravity*, 77, 2023
- Giza, S, Mojica-Santiago, JA, Parafati, M; Malany, LK; Platt, D; Schmidt, CE; Coen PM; and Malany, S. Microphysiological system for studying contractile differences in young, active and old, sedentary adult derived skeletal muscle cells. *Aging Cell* 202; Jul;21(7)
- S. Jeson Sangaralingham, S.J, Whig, W, Peddibhotla, S, Kirby, R.J, Sessions, H., Maloney, P. R, Hersherberger, P.M, Mose-Yates, H, Hood, B. L, Vasile, S, Pan, S, Zheng, Y, **Malany, S***, Burnett Jr, J. C*. *Co-Senior authors. Discovery of Small Molecule Guanylyl Cyclase A Receptor Positive Allosteric Modulators. *Proc. Natl. Acad. Sci.* 2021; 118: 1-9.
- Marc A. Giulianotti et al. Biomanufacturing in low Earth orbit for regenerative medicine 2021. *Stem Cell Reports*. 2022; 17:1-13.
- Parafati, M, and **Malany, S.** 2021. “iPSCs in Tissue Engineering: iPSC Derived 3D Human Fatty Liver Models” in *Advances in Stem Cell Biology*, edited by Alexander Birbrair, Elsevier Publishing Oxford UK, August 2021, 271-285.
- Parafati M, Bae SH, Kirby RJ, Fitzek M, Iyer P, Engkvist O, Smith DM, and **Malany S.** Pluripotent Stem Cell-Derived Hepatocytes Phenotypic Screening Reveals Small Molecules Targeting the CDK2/4-C/EBPα/DGAT2 Pathway Preventing ER-Stress Induced Lipid Accumulation. *Int J Mol Sci.* 2020; 21: 9557-9577.
- Parafati M, Kirby RJ, Khorasanizadeh S, Rastinejad R, **Malany S.** A nonalcoholic fatty liver disease model in human induced pluripotent stem cell-derived hepatocytes, created by endoplasmic reticulum stress-induced steatosis. *Disease Models and Mechanisms* 2018; 11: 1-15.
- Kirby RJ, Divlianska DB, Whig K, Bryan N, Morfa CJ, Koo A, Nguyen KH, Maloney P, Peddibhotla M, Sessions EH, Hersherberger PM, Smith LH, **Malany S.** Discovery of Novel Small Molecule Inducers of Heme Oxygenase-1 that Protect Human iPSC-derived Cardiomyocytes from Oxidative Stress. *J Pharmacol Exp Ther* 2017; 364:1-10.
- Kirby RJ, Qi F, Phatak S, Smith LH, **Malany S.** Assessment of drug-induced arrhythmic risk using limit cycle and autocorrelation analysis of human iPSC-cardiomyocyte contractility. *Toxicol and Appl Pharmacol* 2016; 305: 250-258.

Patents

- Liechty KW, Peddibhotla S, Zgheib C, Malany, S. SMALL MOLECULE CXCR4 AGONISTS, METHOD OF SYNTHESIS, AND METHOD OF USE. United States Patent Application Serial No: 63/307,314. Filed February 7, 2022.
- Malany S, Sangaralingham SJ, Burnett JC Jr. Enhancers of Particulate Guanylyl Cyclase Receptor A. PCT Patent Application No: PCT/US2022/07039. Filed November 24, 2022.
- Sangaralingham SJ, **Malany S**, Sessions H, Peddibhotla S, Herberger P, Maloney P, Burnett JC Jr. Enhancers of the Particulate Guanylyl Cyclase Receptor A. PCT Patent Application No: PCT/US2021/034889 2021.
- Preparation of azabicyclononanes and diazabicyclononanes as CXCR6 inhibitors and methods of use. Peddibhotla, Satyamaheshwar; Hersherberger, Paul M.; Kirby, Richard Jason; **Malany, Siobhan**; Smith, Layton H.; Maloney, Patrick R.; Sessions, Hampton; Divlianska, Daniela; Pinkerton, Anthony B. From PCT Int. Appl. (2021), WO 2021007208 A1 20210114.