Subhra Mohapatra, Ph.D.

Professor, Dept of Molecular Medicine, Morsani College of Medicine (MCOM), University of South Florida
Director, MCOM Molecular Medicine PhD Program
Research Career Scientist, James A Haley Veterans Hospital, Tampa

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Citizenship

USA

Education

B.S. (Hon) Chemistry, Utkal University, India	1982
M.S. (Chemistry), Utkal University, India	1984
MIS (computer Science), McGill University, Canada	1987
Ph.D. (Immunology), University of Manitoba, Canada	1993

Postgraduate Training

Post-Doctoral Fellow, Manitoba Institute of Cell Biology Winnipeg, Canada	1994-1996
NCI Canada Post-Doctoral Fellow, H. Lee Moffitt Cancer Center, University of South Florida (USF), Tampa, USA	1996-2000
NIH/NCI Organotypic Culture Training, Wistar Institute, Philadelphia	2007
Certificate, Genomic & Proteomic approaches complex heart, lung, blood & sleep disorders, Jackson Laboratory, Bar Harbor, ME	2008

RESEARCH FOCUS:

The research in Dr. Mohapatra's laboratory utilizes integrated cellular and molecular approaches to dissect major signaling pathways, aiming to identify novel drug targets and biomarkers for diagnosing and treating diseases such as cancers, neurodegenerative diseases like traumatic brain injury (TBI), and respiratory infections. In cancer research, her lab focuses on understanding the role of the onco-immune environment in tumor growth and cancer recurrence (JEM 1996, Cancer Res 2008, Nanomedicine 2010, Adv Func. Mater 2011, Stem Cells 2013, PLOS One 2016, Scientific Reports 2019, Frontiers Immunol 2021, Cancers 2023). Her lab pioneered a proprietary nanofiber-inspired smart scaffold-based tumoroid culture technology to amplify cancer-initiating stem cells. This platform has led to the identification of several drug candidates targeting cancer stem cells in breast, colon, and lung cancers, and the study of their mechanisms of action. Regarding neurodegenerative disease research, her lab made a pioneering discovery by identifying a chemokine as a key mediator of inflammation. This discovery has significantly advanced our understanding of the spleen-brain axis involved in the pathogenesis of TBI and the development of novel nanomedicine approaches for drug/gene delivery into the brain (Scientific Reports 2019, J Neuroinflammation 2019, Nanomedicine 2020, Molecular Therapy 2021, Hearing Research 2023). During the pandemic, her lab also pioneered a point-of-care testing device for COVID-19 and developed innovative therapeutics aimed at preventing and/or treating long COVID (Viruses 2022, Mol Ther Methods Clin Dev 2022, Viruses 2023).

Appointments

Principal Research Scientist (GS-15)	Research Service James A Haley Veterans Hospital Tampa, FL	2022-Present
Professor	Department of Molecular Medicine USF Morsani College of Medicine University of South Florida, Tampa	2018-Present
Research Career Scientist	Research Service James A Haley Veterans Hospital Tampa, FL	2018-Present
Principal Research Scientist (GS-14)	Research Service James A Haley Veterans Hospital Tampa, FL	2017-2022
Associate Professor (Tenured)	Department of Molecular Medicine Department of Internal Medicine USF Morsani College of Medicine University of South Florida, Tampa	2013-2018
Associate Professor	Department of Pharmaceutical Sciences USF College of Pharmacy University of South Florida, Tampa	2013-2018
Research Microbiologist (GS-13)	Research Service James A Haley Veterans Hospital Tampa	2012-2016
Assistant Professor (Tenure Track)	Department of Molecular Medicine USF Morsani College of Medicine University of South Florida, Tampa	2009-2013
Assistant Professor	Department of Internal Medicine & Oncologic Sciences USF Morsani College of Medicine University of South Florida, Tampa	2007-2009
Research Biologist (GS-13)	Medical Service James A Veterans Hospital Tampa	2006-2011
Research Assistant Professor	Department of Interdisciplinary Oncology USF Morsani College of Medicine University of South Florida, Tampa	2000-2007

Honors and Awards

- American Association of Cancer Research (AACR) Young Investigator Travel Award 1996
- NIH-NCI Organotypic Culture Training Program Award 2007
- Recognized as one of the top reviewers for the journal “Nanomedicine” 2014
- Excellence in Innovation Award: USF 2014
- Outstanding Performance Rating, Office of Veterans Affairs 2015-2021
- Outstanding Performances in Research and Education, USF Morsani College of Medicine 2016

- Selected for "Faces of Technology" by the Florida High Tech Corridor (https://www.youtube.com/watch?v=m5N-eBPjHR4) 2016
- Excellence in Innovation Award: USF 2018
- Research Career Scientist Award, BLR&D, Dept of Veterans Affairs (Salary Support) 2018-2028
- Fellow, International Academy for Nanobiotechnology 2019
- Senior Member, National Academy of Inventors (NAI) – Inaugural Class 2019
- Vice President & President Elect, USF Academy of Inventors 2020
- Director, Manufacturing Cluster, USF Pandemic Response Research Network (PRRN) Hub on Network "Manufacturing, Innovation and Entrepreneurship" 2020
- Co-Director, Cancer Cluster, USF-PRRN Hub on Network "Microbiology, Immunology, Infection Control." 2020
- Robert J Grasso Award for Outstanding Dedication to Graduate Education 2020
- President, USF Chapter of NAI 2021-2023
- Vice Chair, Appointment, tenure and promotion committee (APT), Morsani College of Medicine, USF-Health 2021
- Elected to Fellow of National Academy of Inventors (NAI) 2021
- Elected to the American Institute for Medical and Biological Engineering (AIMBE) College of Fellows 2022
- Chair, APT committee, Morsani College of Medicine, USF-Health 2022-2023
- Plos One Editorial Board Long Service Award 2023
- Elected to the Academy of Science, Engineering and Medicine of Florida (ASEMFL) 2023
- Elected to the American Association for the Advancement of Science (AAAS) Fellow 2023
- Post-tenure review with 'Exceeds Expectation' rating 2024
- Member, ASEM-FL Membership Committee 2024

Membership in Professional Organizations

International

- World Cancer Congress, Shanghai, China. Session Chair, Title: Better Understanding Carcinogenesis: Breast, lung and Stomach cancers, other cancers and melanoma; 2008. 2008
- International Organizing Committee, NanoBio Collaborative International Conference (NBCIC) 2013, June 27-30, 2013, Trichy, India 2013
- Organizing Committee Member, 17th International Conference and Exhibition on Nanomedicine & Nanotechnology in Healthcare, Melbourne, Australia. 2017

National:

- American Association for Cancer Research (AACR) 2001-Present
- AACR-Tumor Microenvironment Work group 2006-Present
- AACR-Women in Cancer Research Work group 2006-Present
- National Academy of Inventors 2014-Present
- Biomedical Engineering Society 2017-Present
- American Association for the Advancement of Science 2017-Present
- Co-organizer of VA Cellgenomics Collaborative on Colorectal Cancer (VA4C), Chicago, May 6-7, 2017 2017
- Organizer of Field-based Meeting on COVID and Diabetics in Veterans 2021
- Organizing Committee Member of 10th Annual NAI Conference 2021

Statewide:

- Florida Center of Excellence for Biomolecular Identification & Targeted Therapeutics (FCoE-BITT), Tampa — 2007-2010
- Steering Committee member, Florida Association for Nanotechnology — 2019-Present
  - NanoFlorida Conference Academic Committee, NanoFlorida Conference, Sept. 26-28, Tampa, FL — 2012

Regional:

- Tampa Bay Technology Forum — 2007-Present
- Co-Chair, Local Organizing Committee, NanoBio Collaborative International Conference (NBCIC) 2012, Tampa, FL — 2012
- Member-at-large, National Academic of Inventors (NAI), USF-Chapter — 2018-Present
- Vice President, NAI-USF Chapter — 2019
- President, NAI-USF Chapter — 2021-2023

Scholarly Activity (Grant History)

A) Current Grants & Contracts

Agency: National Institute of Health
I.D.# R01 AG086245
Title: "Molecular Targets Modulating Neuro COVID Sequelae Linked to Tauopathy"
P.I. Subhra Mohapatra, PhD
Direct costs per year: $499,996
Total costs for project period: $3,749,970
Project period: 09/15/2024 – 05/31/2029

Agency: Veterans Affairs (VA)
I.D.# IK6BX004212
Title: Research Career Scientist Award
P.I.: Subhra Mohapatra, Ph.D.
Project period: 04/01/2023 – 03/31/2028

Agency: VA Merit Review
I.D.# BX005757
Title: "Anti-inflammatory and hMSC Combination Therapy for Traumatic Brain Injury"
P.I.: Subhra Mohapatra, Ph.D.
Direct costs per year: $300,000
Total costs for project period: $1,200,000
Project period: 06/01/2022 – 05/31/2026

Agency: VA Merit Review
I.D.# BX006456
Title: "Nanoformulations for Respiratory Infections"
P.I.: Shyam Mohapatra, Ph.D.
Role on Project: MPI
Direct costs per year: $215,000
Total costs for project period: $710,000
Project period: 10/01/2024 –09/30/2028

Agency: National Institute of Health

I.D.# R01 DK134000
Title: "Treatment of Lupus nephritis with nanoparticles that selectively target kidney Glomeruli"
P.I.: Ruisheng Liu, M.D.
Role on Project: Co-investigator
Direct costs per year: $407,241
Total costs for project period: $2,896,040
Project period: 04/01/2023 – 03/31/2028

Agency: NIH
I.D.# R03 NS127075-01
Title: "miRNA-Based Therapeutics for SARS-CoV-2 S1 mediated neuroinflammation and beta-amyloid production"
P.I.: Eleni Markoutsa, PhD
Role on Project: Co-investigator
Direct costs per year: $50,000
Total costs for project period: $150,000
Project period: 06/01/2022 – 05/31/2024

Agency: VA Merit Review
I.D.# BX005490
Title: "COVID-19: SARS-CoV-2 Neutralizing Agents"
P.I.: Subhra Mohapatra, Ph.D.
Direct costs per year: $215,000
Total costs for project period: $480,000
Project period: 04/01/2021 – 03/31/2024

Agency: VA Merit Review
I.D.# BX004584
Title: "Unique non-saccharide mimetics of sulfated glycosaminoglycan target colon cancer stem cells"
P.I.: Bhaumik Patel, M.D.
Role on Project: Co-investigator
Direct costs per year: $165,000
Total costs for project period: $710,000
Project period: 10/01/2020 – 09/31/2024

Agency: VA Merit Review
I.D.# BX004890
Title: "Muscarinic Receptors Regulate Colon Cancer Stem Cell Function and Invasiveness"
P.I.: Jean-Pierre Raufman, M.D.
Role on Project: Co-investigator
Direct costs per year: $165,000
Total costs for project period: $710,000
Project period: 07/01/2021 – 06/31/2025

Agency: Dorthy Benjamin Graduate Fellowship in Alzheimer's Disease Research
Title: "Mechanism of SARS-CoV2 Infection-induced Tauopathy"
P.I.: Karthick Mayilsamy, M.S.
Role on Project: Mentor
Direct costs per year: $12,000
Total costs for project period: $24,000

Project period: 08/01/2023 – 07/30/2025

Agency: FL Hi-Tech Corridor/Biom Pharma
I.D.# FHT-22-10
Title: "Efficacy testing of PS121, a broad-spectrum antiviral, against SARS-CoV2 in MA10 animal model"
P.I.: Subhra Mohapatra, PhD
Direct costs per year: $61,922
Total costs for project period: $61,922
Project period: 11/2021 – 04/2024

Agency: FL Hi-Tech Corridor/Agile Diagnostics Inc
I.D.# FHT-22-10
Title: "Efficacy and Safety of BAAN- 01, for COVID-19 in Animal Studies"
P.I.: Subhra Mohapatra, PhD
Direct costs per year: $200,000
Total costs for project period: $200,000
Project period: 09/2022 – 01/2024

B) Past Grants & Contracts (*since 2010; full list available on request*)

Source of Funding	**Grant #**	**Title of Project**	**Role**	**Dates**
USF Signature Fellowship	-	CCL20-CCR6 Axis in TBI	Mentor	July 2022-June 2024
FDOH- James & Esther King Biomedical Research Program	22K09	Mechanism of Neurotropism of Coronaviruses	PI	Apr 2022 - Mar 2023
VA Merit Review	BX005490	COVID-19: SARS-CoV-2 Neutralizing Agents	PI	Apr 2021-Mar 2023
VA Merit Review Supplement	BX002668	Combined Nano and Cell Therapy for the Treatment of TBI	PI	Apr 2020-Mar 2021
VA Merit Review	BX004584	Unique non-saccharide mimetics of sulfated glycosaminoglycan target colon cancer stem cells	Co-I	Oct 2020-Sept 2024
COVID Rapid Funding	IK6BX003778—Suppl	Artificial intelligence-aided chest CT as diagnostic for COVID 19	Co-I	Oct 2020-Sept 2022
VA Merit Review	BX003413	Tumor targeted engineered stem cells for treatment of lung cancer	PI	Oct 2017-Sept 2022
VA Merit Review	BX003685	Nanomicellar antiviral strategies for RSV infection	Co-I	Jul 2017-Jun 2022
VA Merit Review	BX002668	Combined Nano and Cell Therapy for the Treatment of TBI	PI	Jan 2016-Dec 2019
National Science Foundation	6380-1006	Conference Support	Co-PI	Oct 2019-Sept 2020

NIH R01	NS095563	Nanocarriers Designed to Deliver Nucleic Acids to Brain	Co-I	Oct 2015-Sept 2021
Florida Hi- Tech Corridor & SGN Nanopharma	FHT-20-01	Micellar Nanoparticle Nanoformulation Development for treatment of TBI	PI	Feb 2019-Sept 2022
USF PEG	-	COVID-19 Neurotropism	PI	May 2021-Apr 2022
USF-Strategic Investment Pool	18380	Biomarker and Drug Discovery for Repeated TBI-induced Hearing Loss	PI	Apr 2020-Dec 2021
USF PRRN	10009	Antiviral Impermeable Polyimide-Polyurea Films and Nanomembranes for Coating PPE and Packaging: COVID-19	Co-I	Aug 2020-Sept 2021
USF Signature Fellowship	-	Effects of Withaferin and immune-checkpoint inhibitors in lung cancer	Mentor	July 2020-June 2022
NCI- Transgenex Nanobiotech Inc.	SBIR-Phase II HHSN261201700002C	Preclinical Safety and Efficacy of NRI20152	USF-PI	Feb 2017-Jan 2019
FL-Hi-Tech Corridor	FHT-17-18	Preclinical Safety and Efficacy of TN1008	PI	April 2017-Mar 2019
USF-Signature Fellowship	-	Treatment-induced Cardiac Toxicity	Mentor	July 2016-June 2018
Circle of hope	-	Withaferin A and checkpoint inhibitor combination therapy for the treatment of colorectal cancer	Mentor	July 2019-June 2020
VA ShEEP & LAMb Equip Grant	BX003576	High Content Analysis Platform for Cellular Imaging	PI	June 2016-May 2017
American Heart Association-Predoctoral Fellowship	-	Role of NPRA Signaling in the Recruitment of Mesenchymal Stem Cells to Sites of Cardiovascular Injury and Inflammation	Mentor	July 2015-June 2017
NIH/NCI RO1	R01CA152005	An Integrated Nano-Cell Delivery Platform of Theranostics for Lung Cancers	MPI	June 2010-May 2015
NCI- Transgenex Nanobiotech Inc.	SBIR-Phase I HHSN261201500065C	Fiber-inspired Smart Scaffold Platform for Expanding Cancer Stem Cells	USF-PI	Sept 2015-Aug 2016
James Esther King Biomedical Research Program	6JK05	Microfluidic-Acoustic Biosensing Multicell Tumoroid (MABMCT) Platform Targeting TME	MPI	Mar 2016-Aug 2016
FL-Hi-Tech Corridor	FHT-16-14	Fiber-inspired Smart Scaffold Platform for Expanding Cancer Stem Cells	PI	Sept 2015-Aug 2016
NCI- Transgenex Nanobiotech Inc.	SBIR-Phase I HHSN2612	Anti-NPRA Inhibitors Targeting Cancer Stem Cells	USF-PI	Sept 2014-Aug 2015

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NCI- Transgenex Nanobiotech Inc.	SBIR-Phase I HHSN261201400022C	A Biopsy-derived Tumoroid Platform for Personalizing Cancer Treatment	USF-PI	Sept 2014-Aug 2015
FL-Hi-Tech Corridor	FHT-15-13	Anti-NPRA Inhibitors Targeting Cancer Stem Cells	PI	Sept 2014-Aug 2015
FL-Hi-Tech Corridor	FHT-15-12	A biopsy-derived tumoroid platform for personalizing cancer treatment	PI	Sept 2014-Aug 2015
NCI- Transgenex Nanobiotech Inc.	SBIR-Phase I HHSN261201300044C	Fibrous Scaffold-induced spheroids mimicking in vivo TME	USF-PI	Oct 2013-June 2014
FL-Hi-Tech Corridor	FHT-14-06	Fibrous Scaffold-induced spheroids mimicking in vivo TME	PI	Oct 2013-June 2014
Office of Naval Research (ONR)	N00014-10-11008	Differentiation of stem cells to blood cells using nanomatrix scaffolds	Co-PI	July 2010-June 2012
Office of Naval Research (ONR)	N00014-09-1008	MicroRNA Directed Generation of Blood Cells	Co-PI	July 2009-June 2011
NCI- Transgenex Nanobiotech Inc.	R41CA139785	Targeting of curcumin-genistein nanocomplexes for the treatment of prostate cancer	PI	Sept 2009-Aug 2010
FL-Hi-Tech Corridor	FHT-10-10	Development of a theranostic for prostate cancer	PI	Sept 2009-Aug 2010
FL Biomed Res	09BW-08	Nanohole Sensor-based Detection Technology for Cutaneous Metastatic Melanoma	PI	Jan 2010-Dec 2011
FL Biomed Res	09BW-07	Targeted gene therapy by SNAP delivery method for treatment of lung cancer	Co-PI	Jan 2010-Dec 2011
FL Biomed Res -Team Science	07KT-01	Nanoparticle-aided synchronized delivery of combination regimens for prostate cancer	PI	Jan 2007-Dec 2008
Veterans Reintegration Award	USF	Graphene nanoparticle-mediated Delivery of siRNAs to Brain in a Rat Model of Traumatic Brain Injury	PI	May 2011-Apr 2012
NanoBio 2012 Conference Support Grant	USF	NanoBio Collaborative International Conference (NBCIC) 2012	PI	June 2011-May 2012
Florida Biomedical Res Program	New Investigator Grant	Mechanism of down-regulation of X-linked inhibitors of apoptosis by purine analogues	PI	Aug 2004-July 2007
UMSA- H. Lee Moffitt Cancer Center	-	Anti-tumor efficacy of a combination treatment in a xenograft mouse model of prostate cancer	PI	Sept 2007-Aug 2008

Published Bibliography

Total Publications: 112; Refereed articles: 101
Citations: 5920; h-index: 40; i10-index: 104; iCite (Weighted RCR): 108.82
Complete list of Published Work in My Bibliography:
http://www.ncbi.nlm.nih.gov/sites/myncbi/subhra.mohapatra.1/bibliography/45704658/public/?sort=date&direction=descending

Refereed articles: (* Corresponding author)

1. Martinez T, Mayilsamy K, Mohapatra SS and **Mohapatra S***. Modulation of Paracellular Permeability in SARS-CoV-2 Blood-to-Brain Transcytosis. ***Viruses***, 2024 May 15;16(5):785. doi: 10.3390/v16050785.

2. Penn C, Mayilsamy K, Zhu XX, Bauer MA, Mohapatra SS, Frisina RD and **Mohapatra S***. A Mouse Model of Repeated Traumatic Brain Injury-induced Hearing Impairment: Early Cochlear Neurodegeneration in the Absence of Hair Cell Loss. ***Hearing Research***. 2023 Sep 1;436:108832. doi: 10.1016/j.heares.2023.108832.

3. McGill AR, Markoutsa E, Mayilsamy K, Green R, Sivakumar K, **Mohapatra S*** and Mohapatra SS. Linolenic Acid Liposomes Encapsulating Acetate Reduces SARS-CoV-2 and RSV Infection. ***Viruses.*** 2023, 15, 1429. https://doi.org/10.3390/v15071429

4. Khalil R, Green R, Sivakumar K, Varandani P, Bharadwaj S, Mohapatra SS and **Mohapatra S***. Withaferin A Increases the Effectiveness of Immune Checkpoint Blockers for the Treatment of Non-Small Cell Lung Cancer. ***Cancers*** (2023) 15, 3089. https://doi.org/10.3390/cancers15123089

5. Penn C, Katinik C, Cuevas J, Mohapatra SS, **Mohapatra S***. Multispectral Optoacoustic Tomography (MSOT): Monitoring Neurovascular Changes in a Mouse Repetitive Traumatic Brain Injury Model. ***J Neurosci Methods***, (2023) 6;393:109876. doi: 10.1016/j.jneumeth.2023.109876

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7. Green R, Mayilsamy K, McGill AR, Martinez T, Chandran B, Blair LJ, Bickford PC, Mohapatra SS, **Mohapatra S***. SARS-CoV-2 Infection Increases the Gene Expression Profile for Alzheimer's Disease Risk. ***Mol Ther Methods Clin Dev.*** 2022 DOI: 10.1016/j.omtm.2022.09.007

8. Green R, Khalil R, Mohapatra SS, **Mohapatra S**. Role of Cannabidiol for Improvement of the Quality of Life in Cancer Patients: Potential and Challenges. ***Int. J. Mol. Sci.*** 2022, 23, 12956. https://doi.org/10.3390/ijms232112956

9. Jana ID, Bhattacharya P, Mayilsamy K, Banerjee S, Bhattacharje G, Das S, Aditya S, Ghosh A, McGill AR, Srikrishnan S, Das AK, Basak A, Mohapatra SS, Chandran B, Bhimsaria D, **Mohapatra S***, Roy A*, Mondal A*. Targeting an evolutionarily conserved "E-L-L" motif in spike protein to identify a small 2 molecule fusion inhibitor against SARS-CoV-2. ***PNAS Nexus***, 2022 pgac198, https://doi.org/10.1093/pnasnexus/pgac198.

10. Ambardar S, Howell M, Mayilsamy K, McGill A, Green R, **Mohapatra S***, Voronine DV, Mohapatra SS. Ultrafast-UV laser integrating cavity device for inactivation of SARS-CoV-2 and other viruses. ***Scientific Reports.*** 2022, 12: 11935, doi: 10.1038/s41598-022-13670-8.

11. Ramadan A, Mayilsamy K, McGill A, Ghosh A, Giulianotti M, Donow H, Mohapatra SS, **Mohapatra S**, Chandran B, Deschenes R and Roy A. Identification of SARS-CoV-2 spike palmitoylation inhibitors that results in release of attenuated virus with reduced infectivity. ***Viruses*** 2022, *14*(3), 531; https://doi.org/10.3390/v14030531

12. Markoutsa E, Mayilsamy K, Gulick D, Mohapatra SS and **Mohapatra S**. Extracellular vesicles derived from inflammation-educated stem cells reverse brain inflammation- Implication of miRNAs. ***Molecular Therapy*** 30: 1; doi.org/10.1016/j.ymthe.2021.08.008.

13. Howell M, Green R, McGill A, Khalil R, Dutta R, Mohapatra SS and **Mohapatra S**. Activation of Intracellular Complement in Lungs of Patients with Severe COVID-19 Disease Decreases T-Cell Activity in the Lungs. ***Front in Immunol***. 2021, 24 November 2021 https: //doi.org/10.3389/fimmu.2021.700705

14. Dutta R, Khalil R, Mayilsamy K, Green R, Howell R, Bharadwaj S, Mohapatra SS and **Mohapatra S**. Combination Therapy of Mithramycin A and immune checkpoint inhibitor for the treatment of colorectal cancer in an orthotopic murine model. ***Front in Immunol***. 12: Article 706133 (2021), doi: 10.3389/fimmu.2021.706133.

15. Howell R, Green R, McGill A, Khalil R, Dutta R, **Mohapatra S** and Mohapatra SS. SARS-CoV-2 Induced Gut Microbiome Dysbiosis: Implications for Colorectal Cancer. ***Cancers.*** 13(11), 2676 (2021) https://doi.org/10.3390/cancers13112676

16. Sagbas SS, **Mohapatra S**, Ayyala RS, Brethanabotla VR, Sahiner N. A polyphenolic biomacromolecule prepared from a flavonoid: Catechin as degradable microparticles. ***J Appld Pol Sci.*** 138(24):50576 (2021). DOI:10.1002/app.50576

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19. Denmark D, **Mohapatra S** and Mohapatra SS. Point-of-Care Diagnostics: Molecularly Imprinted Polymers and Nanomaterials for Enhanced Biosensor Selectivity and Transduction. ***Eur Biotech***. 2020. DOI: 10.2478/ebtj-2020-0023

20. Markoutsa E, McGill A, Jadav H, **Mohapatra S** and Mohapatra SS. A Multifunctional Nanoparticle as a Prophylactic and Therapeutic approach targeting Respiratory Syncytial Virus. ***Nanomedicine*** 32:102325 (2020) DOI:10.1016/j.nano.2020.102325

21. Mayilsamy K, Markoutsa E, Das M, Chopda P, Puro D, Kumar A, Gulick D, Willing A, Mohapatra SS and **Mohapatra S**. Treatment with shCCL20-CCR6 nanodendriplexes and human

mesenchymal stem cell therapy improves pathology in mice with repeated traumatic brain injury. ***Nanomedicine*** 29: 102247 (2020) DOI: 10.1016/j.nano.2020.102247

22. Wang T, Green R, Howell M, Martinez T, Dutta R, **Mohapatra S**, Mohapatra SS. The Design and Characterization of a Gravitational Microfluidic Platform for Drug Sensitivity Assay in Colorectal Perfused Tumoroid Cultures. ***Nanomedicine*** 30: 102294 (2020) DOI: 10.1016/j.nano.2020.102294

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26. XIAP targeted prostate cancer therapy. **Mohapatra S** and Pledger W. United States Patent: 8716299. Issue Date: 05/06/2014.

International Patents:

1. Three-dimensional Fibrous Scaffolds for cell culture. **Mohapatra S** and Mohapatra SS. Australian Patent: 2,014,296,200. Issue Date: 14/01/2021
2. Formation of Multicellular Tumoroids and Uses Thereof. **Mohapatra S,** Mohapatra SS and Das M. Japanese Divisional Patent Application No. 2021-110827.

INVITED LECTURES AND PRESENTATIONS:

Lectures by Invitation (international, national, regional, local)

International

- Invited Speaker, NanoFlorida International Conference, Tallahassee, Apr 19-21, 2024
- Invited Speaker, Global Nanobiotechnology Consortium Conference, Tampa, Feb 2-4, 2024
- Invited Speaker, International Virtual Meet on Non-Coding RNA in Health and Disease, Oct 12-14, 2022, AIIMS Bhopal, India
- Organizing Committee Member and Session Moderator, Global Nanobiotechnology Consortium Conference April 22-24, 2022, Tampa, FL
- Invited Speaker & Session Chair, European Biotechnology Conference 2020, Prague, Czech Republic, Sept 24-26, 2020
- Invited Speaker & Session Chair, European Biotechnology Conference 2018, Athens, April 26-28, 2018
- Organizing Committee Member & Invited Speaker, USF-FAMU International NanoBio Collaborative Conference, Jan 19-20, 2018
- Organizing Committee Member & Invited Speaker, 17th International Conference and Exhibition on Nanomedicine & Nanotechnology in Healthcare, Melbourne, Australia.
- Invited Speaker, American Association of pharmaceutical Sciences (AAPS) Short Course on 'Targeted Virotherapy-Advances and Challenges', AAPS Annual Meeting, November 12-15, 2017
- Invited Speaker, Inaugural Nanomedicine Symposium, The University of the West Indies, Oct 15, 2017
- AAPS Webinar Speaker: A fiber-inspired smart scaffold-based tumoroid culture platform for interrogating tumor-stroma interactions; July 20, 2017

  (https://www.pathlms.com/aaps/webinars/2198)
- Invited Speaker, The 8th Energy, Materials and Nanotechnology (EMN) meeting in Orlando, FL, November 22-25, 2014: Potential of graphene as nanomaterials for biomedical applications.
- Invited Speaker, Emerging Nanomaterials for Bioimaging, Targeting and Therapeutic Applications at ICMAT 2013 in Singapore, June 30 – July 5, 2013
- Invited Speaker, Novel Solution Process for Nano-/Biomaterials at ICMAT 2013 in Singapore, June 30 – July 5, 2013
- NanoBio Collaborative International Conference 2013, Trichy, India, June 27-29 (2013)
- Conference Co-Chair and Session Chair – NBCIC 2012, Tampa, FL, March 22-24, 2012

- Invited Speaker, NanoDDS11 (The Ninth International Nanomedicine and Drug Delivery Symposium); Title: Advances in Development of Theranostics for Epithelial Cancers. October 15-16, 2011
- Invited Speaker, Translational Research in AIDS/HIV, Goa, India; Session Chair and speaker; Title: Advances in nanotechnology in HIV/AIDS, January 13-14, 2011
- Invited Speaker, The University of Del Norte, Barranquilla, Colombia, South America. Title: Principles and Applications of Nanobiotechnology, September 9, 2010
- Invited Speaker, Clinical Research Methods Training Workshop in Barranquilla, Colombia, South America Title: Formulation of a Clinical Research Protocol; Ethical Issues in Clinical Research, September 10-11, 2010
- Invited Speaker, World Cancer Congress, Shanghai, China. Session Chair, Title: Better Understanding Carcinogenesis: Breast, lung and Stomach cancers, other cancers and melanoma; 2008
- Invited Speaker, World Cancer Congress, Shanghai, China. Title: Natriuretic peptide receptor as a novel anticancer target. 2008
- Invited Speaker, International Congress on Emerging Technology on Gene and Drug Delivery, Greece (Crete). Title: Applications of Nanotechnology for the treatment of lung cancer. September 2-10, 2005

National

- Panelist, Campus to Commerce, 13th National Academy of Inventors Annual Conference, Jun 16-18, Raleigh, NC, 2024
- Panelist, Chapter of Excellence Award, 13th National Academy of Inventors Annual Conference, Jun 16-18, Raleigh, NC, 2024
- Program Committee Member Introduction at the 10th National Academy of Inventors Annual Conference, Oct 31-Nov 3, Tampa, FL, 2021
- Organizer and Speaker: COVID 19 in Diabetic Veterans, May 2021
- Invited presentation at the Capitol Hill, VA Research Day at the Hill on Personalized Medicine, June 2019
- Invited Speaker: 3-D engineered tissue cell cultures in cancer research: Modelling *in vivo* tumors, 2019 In Vitro Biology
  Meeting, June 2019
- Invited Speaker: New Perspective on central and peripheral inflammation in TBI, Tampa, May 17-18, 2018
- Co-organizer and Speaker: VA Cellgenomics Collaborative on Colorectal Cancer (VA^4C), Chicago, May 6-7, 2017
- Cancer Cell Biology Seminar Series, WVU Cancer Institute. West Virginia, Missouri, Sept. 28, 2016
- Second National Veterans Health Affair Conference, Harry S. Truman VA Hospital, Columbia, May 18-19, 2016

- NanoBio Collaborative 2010. Title: Targeted Nanogene Therapy for Cancers, Tampa, FL March 11-12, 2010
- Louisiana State University, Louisiana, Department of Medicine. Title: Natriuretic peptide receptor as a novel anticancer target, 2008
- Wistar Institute, Philadelphia. Title: Combination of roscovitine and tricibine: a novel therapy for metastatic prostate cancer, March 2007
- West Virginia University, Department of Pediatrics. Title: Combination of Roscovitine and Triciribine: A Novel Therapy for Metastatic Prostate Cancer, 2006
- National Functional Genomics Conference, St. Petersberg. Title: Identification of primary cellular targets of purine analogues by microarray analysis, October 2004

Regional

- Invited Seminar, Graduate Research Seminar, Biomedical Engineering & Science, Florida Institute of Technology, Oct 25, 2024.
- NanoFlorida 2023; University of Central Florida Organizing Committee Member and Session Chair, March 3-5, 2023
- Invited Presentation: Florida State University Emergency Medicine Residency Program Annual Research Day 1st June 2022 at Sarasota Memorial Hospital. Title: An Ultra Rapid Point-of-Care Dx for Antigen Testing in Emergency Settings
- Invited Presentation: Florida A&M University U54 RCMI Center 2019 Seminar Series. Title: Targeting Cancer Stem Cells for the Treatment of Drug-resistant Cancers
- Nano Florida 2012; University of South Florida, Title: Cancer Theranostics: Potential Applications and Future Perspectives. September 2012
- Nano Florida 2011; FIU. Title: Multilayered, multifunctional magnetic micelle nanoparticles (4M-NP) theranostics for gene therapy, October 1, 2011
- Joint Cancer Conferences of the Florida Universities. Title: Mechanism of roscovitine-induced apoptosis in HTLV-I-infected Leukemic T cells, Jan 31st-Feb 2nd, 2002

Local

- Moderator of Lecture Series: Maximizing Success for Research Funding, James A Haley VA Hospital, May 5, 2023
- USF Neuroscience Institute Seminar, Byrd Alzheimer's Disease Center, Nov 3, 2022, Tampa, FL
- Planning Committee Member, James A Haley VA Hospital Annual Research Day, May 14-15, 2022, Tampa, FL
- USF Microbiome Research Award Workshop; Title: Long-CoViD: Gut dysbiosis in Diabetes, Jan 21, 2022
- USF Microbiome and Cancer Panel, March 10, 2021
- USF PRRN: A Transdisciplinary Network Seminar, Oct 7, 2020
- USF Molecular Medicine COVID Seminar, June 10, 2020
- USF-College of Pharmacy Graduate Program Seminars, May 20, 2019
- USF-College of Pharmacy Graduate Program Seminars, Apr 20, 2015
- VA-USF Collaborative Symposium 2017 – Combination Therapy for TBI, Tampa, May 23, 2017

- Moderator: James A. Haley Veterans' Hospital and Clinics Annual Research Week Symposium, May 20, 2015
- USF 12th Annual Diversity Summit. Solving Problems. April 20, 2015
- NanoForum 2013, Tampa, FL; Graphene Nanogel for noninvasive controlled drug release, January 2013.
- Pathology & Cell Biology Graduate Seminar: "NPRA signaling modulating tumor microenvironment" October 10, 2013
- Chemistry Department Colloquium, Tampa, FL; Title: Natriuretic peptide receptor signaling: A novel drug target for cancer, April 2012.
- SIPAIID Seminar series; Title: Natriuretic Peptide Receptor A as a candidate for cancer theranostics, April 21, 2011
- Molecular Medicine Graduate Seminar Series; Title: Role of NPRA in tumor angiogenesis, November 2011
- Molecular Medicine Retreat, Title: Role of natriuretic peptide receptor signaling in prostate tumor-stroma interaction. December 2009
- JAH-VA Grand rounds. Title: The Biology of & Challenges in Prostate Cancer Diagnosis & Treatment, November 2009.
- Molecular Medicine Seminar Series. Title: Modulating stromal epithelial interactions in prostate cancer cells, November 2009
- H. Lee Moffitt Cancer Center, Genitourinary Group meeting. Title: Combination of roscovitine and tricibine: a novel therapy for metastatic prostate cancer, June 2006
- H. Lee Moffitt Cancer Center and Research Institute, Research in progress. Title: P53-dependent and –independent apoptosis of tumor cells. May 2006.
- H. Lee Moffitt Cancer Center and Research Institute, Research in progress. Combined inhibition of Cdk9 and Akt induces apoptosis of prostate cancer cells. October 2004.
- H. Lee Moffitt Cancer Center and Research Institute, Research in progress. Roscovitine inhibits Stat5 activity and induces apoptosis in the HTLV-1-transformed cell line MT-2. May 2002.
- H. Lee Moffitt Cancer Center and Research Institute, Research in progress. Title: P27kip1 regulates T cell proliferation, March 2000

TEACHING:

Lectures

Medical Student Teaching, USF Morsani College of Medicine:

Cancer Biology

BMS6816/UME Course 1B; 170 students — 2013-Present
"Adaptive Immunity" 1hr
"Angiogenesis" 1hr
"Metastasis" 1 hr

Small Group Leader: Microbiology & Immunology Small Group

BMS6041; Course 5; 5 hrs; 13 students — 2012-Present
BMS6042; Course 6; 6 hrs 13 students

Small Group Leader:

BMS6837; Evidence Based Clinical Reasoning II (EBCR II) — 2012-Present
25 hrs, 9 students

Small Group Leader:

BMS 6832 Clinical Problem Solving; 16 hours; 6 students — 2010-2011
BMS6920; Colloquium 1 and 2 (Nanomedicine), 2 hrs — 2011-2015
BMS6991R; Scholarly Concentration, 30 hrs, 2 students — 2013-Present

Graduate Student Teaching:

Foundations in Biomedical Sciences 15-30 students — 2010-2016
GMS6001; COM-Molecular Medicine
"Cell Cycle & Apoptosis" 2 hr

Microbiology and Immunology 15 students — 2011
GMS 6103; COM-Molecular Medicine
"Adaptive Immunity" 2 hr

Molecular and Cellular Immunology; 8-19 students — 2011-Present
Co-Course Director; GMS 6101; COM-Molecular Medicine
"Overview of Immune System" 1.5 hr
"Tools of Immunology" 1.5 hr
"B Lymphocyte Activation" 1.5 hr
"T cell Receptor & Accessory Molecules" 1.5 hr
"T-cell Development" 1.5 hr
"T-cell Activation" 1.5 hr
"Autoimmunity" 1.5 hr

Basic Medical Biochemistry 280 students — 2011-2016
GMS 6201; COM-Molecular Medicine MSP3 program
"Cell Cycle & Apoptosis" 2 hr

Introduction to Biotechnology 15-30 students — 2010-Present
GMS6346; COM-Molecular Medicine
"Introduction to Nanotechnology" 2 hr

Introduction to Nanotechnology 5 students — 2016-2017
PHA6146; College of Pharmacy

Microscale-Nanoscale Drug Delivery 5 students — 2017
PHA6119; College of Pharmacy

PhD Student Rotation 1-3 students — 2009-Present
GMS 6942; COM-Molecular Medicine

Biotechnology Internship 1-2 students — 2009-Present
GMS 6943; COM-Molecular Medicine

Dissertation Research 1- 2 students — 2011-Present
GMS 7910; COM-Molecular Medicine

PhD and MS students in Directed Research 2-3 students — 2010-Present
GMS 7910; COM-Molecular Medicine

Vaccines and Applied Immunology 15-17 students — 2018, 2021-Present
GMS 6114; COM-Molecular Medicine
"Vaccine against non-infectious diseases"
"Immunotherapy"

Translational Biotechnology 15-30 students — 2024 -Present
GMS 6069; COM Molecular Medicine

"Spinning Out Academic Inventions"

Teaching: Supervisory

- Doctoral Thesis Advisor: 12 (2010-Present)
- Doctoral Thesis Committee Member: 10
- Postdoctoral Fellow Advisor: 17 (2007-Present)
- MD Candidate Advisor: 3 (2013-Present)
- MS Student Advisor: 29 (2008-Present)
- Undergraduate Student Advisor: 14 (2014-Present)
- High School Student Advisor: 18 (2010-Present)

Predoctoral Trainees:
Undergraduates

Current Undergraduates:

Adiytya Taiwade (2024 – present) Undergraduate at USF

Sashank Bikkasini (2023 – present) Undergraduate at USF

Ayush Kalia (2023 – present) Undergraduate at USF

Awab El Ghissassi (2023 – present) Undergraduate at USF

Adarsh Karthik (2023 – present) Undergraduate at USF

Neha Saraswat (2023 summer) Undergraduate at Georgia Tech

Past Undergraduates:

Ishan Chaplot (2020 – 2023) Undergraduate at USF

Sachita Yerramilli (2022 summer) Undergraduate at USF

Shriya Gullapalli (2022 summer) Undergraduate at UC Berkley

Sri Vaishnavi Rayarao (2019 summer) Undergraduate at USF

Anirudh Satish (2018-2022);
Current: MS in Computer Science, Georgia Tech

Aleksander V Grinchuk (2016-2019)
Current: Pharmacy resident, Nashville, Tennessee

Daniel Corral (2014-2015)
Award: Excellence in scholarly research by The Florida High Tech Corridor Council
Current: Engineer at Lam Research, Stanford

Jit Banerjee (2014-2018)
Award: Engineering Student of the Year (2017)
Excellence in scholarly research by The Florida High Tech Corridor Council

Current PhD Students:

Karthick Mayilsamy, MS (2019) – PhD Candidate
Awards: 2024 GNC Poster Presentation Award; ASNTR Travel Fellowship, USF Signature Fellowship 2022-2024
Dorthy Benjamin Graduate Fellowship in Alzheimer's Disease 2023-2025

Taylor Martinez, MS (2017) – PhD Candidate

Award: Outstanding Poster Presentation Award at VA Research Week, 2023

Torous Washington II, MS (2022) – PhD Candidate; UCSD, CA
Award: 2024 GNC oral Presentation Award

Past PhD Students:

Roukiah Khallil, MS (PhD Student 2017-2023)
Awards: USF Signature Fellowship 2020-2022; Edith Wright-Hartley Medical Research Scholarship, USF Federal Credit Union Best Poster in the Field of Cancer Biology Award USF Signature Fellowship
Current: Scientist, Evolve Immune Therapeutics, NJ

Courtney Penn, MS (PhD Student 2019-2023)
Current: Post-doctoral Fellow

Andrew McGill, MS (PhD Student 2017-2023) Co-mentor
Current: Adjunct Lecturer, Nova South-eastern University, Fort Lauderdale

Robert Vander Velde, (PhD student 2016-2021), Co-Major Professor
Current: Postdoctoral Fellow, UPenn

Mark Howell, MS (PhD student 2014-2019)
Awards: Vice President's Award for Outstanding Graduate Student Oral Presentation, 2017; Travel Award at the 9th Annual Graduate Student Research Symposium, USF, 2017
Current: Postdoctoral Research Associate, Dept of Internal Medicine, USF

Ryan Green, MS (PhD student 2013-2018)
Awards: AHA Predoctoral Fellowship; Poster Presentation Award, NanoBio Collaborative International Conference
-Current: Postdoctoral Research Associate, Dept of Internal Medicine, USF

Michael Cheung (PhD student 2011-2016), Co-mentor
Current Position – Investigator Seqirus, Cambridge, MA

Viviana Sampayo-Escobar (PhD student 2012-2017), Co-mentor,
Awards: Fulbright Scholarship 2011-2016, Outstanding MCOM Doctoral Student Poster Presentation (2017)
Current – Patent Analyst, Global Patent Solutions, AZ

Yvonne Girard, (PhD Student 2010-2013),
Awards: Best poster presentation award, NanoBio Conference March 2010, Tampa,
Best poster presentation, USF Research Day, 2012; National Academy of Inventors Student Award, Tampa, 2012
Current Position – Senior Application Scientist – Beckman Coulter

MS Students:

Current MS Students:

Kristina Tosi - MSPN Student (2023- 2024)
Awards: Poster Presentation Award, NanoFlorida Conference, UCF, 2023
- Selected for 13th Annual Joseph Krzanowski Invited Oral Presentation on USF Research Day, 2023

Sowjanya Lakhinana – MS Biotechnology Student (2024- Present)

Anasthesia Estephan – PharmD Student (2024- Present)

Past MS Students

Shelby Olney - MS (Mol Med) Student (2022-2023)

Current: Biological Scientist III, Florida Department of Health

Sokhna Ndiaye – MS (Mol Med) Student (2022-2023);
Current: MS in Perfusion Science

Payal Varandani – MS Biotechnology Student (2023)
Current: R&D Intern, SGN Nanopharma

Kavya Sivakumar- MSPN Student (2022-2023)
Current: Associate, Pfizer (India) TN, India

Gopika Ashokan – MSPN Student (2022-2023)
Current: Sen Res Asst – Sloan Kettering, NY

Luis Perez – MS Student (Mol Med) (2020-2022)
Current: Res Asst – USF Molecular Medicine

Krishna Sharma – MSPN Student (2020 – 2022)
Current: Res Asst –Belcher Pharmaceuticals)

Lejla Malkoc – MS (Mol Med) Student (2020 – 2021)
Current: Sen Res Associate, Carbon Biosciences, Waltham, MA

Junior Cianne MS (Mol Med) Student (2019 – 2020)
Current: Res Associate – Moffitt Cancer Center

Durga Puro – MSPN Student (2019-2020)
Current: PhD Student – Texas Tech University

Pratik Chopade - MSPN Student (2019 – 2020)
Current: Res Asst – Harvard Medical School

Heta Jadhav - MSPN Student (2019 – 2020)
Current: Res Asst – Dana Faber Cancer Inst

Alejandro Gonzalez Jadhav - MSPN Student (2019 – 2020) -Co-mentor
Current: Res Asst, Quest Diagnostics

Bhavya Shah – MSPN Student (2019 – 2020)
Current: Res Asst –Transgenex Nanobiotech Inc

Nadia Tasnim Ahmed – MSPN Student (2019 – 2020)
Current: PhD Student – Virginia Commonwealth University

Payal Ghosh – MSPN Student (2019-2020)
Current: Senior Res Specialist, Sanford Health

Raajesh Iyer – MSPN Student (2017-2018)
Current: Director, Product Management & Data Science, Prophecy Technology, CA

Karthick Mayilsamy – MS Biotechnology Student (2016-2018)
Current: PhD Candidate Bioscience Graduate Program, USF

Sara Cooper – MS Biotechnology Student (2013-2014)
Current: Scientist at Umoja Biopharma

Bhanu Katiri – MS Biotechnology Student (2012-2013)
Current: Research Assistant, Univ South Florida

Pallavi Mohapatra - MS Biotechnology Student (2009-2010)
Current: Regulatory Compliance Specialist at University of Michigan based in Ann Arbor, Michigan

Murali Kanakenahalli - MS Biotechnology Student (2009-2010)
Current: Stat Program Manager, Kite Pharma, Olathe, Kansas

Ronil Patel - MS Biotechnology Student (2008-2009)
Current: Senior Vice-President, Business Development and Market Strategy at Ocuphire Pharma

RISE (MD) Students:

Sriram Velamuri- RISE Student (2013-2016)
Current: Diagnostic Radiologist, Atlanta, GA

Miqi Wang – RISE Student (2014 - 2016)
Current: Orthopedic Surgeon, Gainesville, FL

Syed Adnan – RISE Student (2016-2017)
Current: Emergency Medicine Physician, Upstate NY

Postdoctoral Trainees:

Current Postdocs

William Lawless, PhD- Postdoctoral Fellow (2024-Present)

Ekta Kumari, PhD – Postdoctoral Fellow (2023 – Present)

Ryan Green, PhD – Postdoctoral Fellow (2022-Present)

Past Postdocs:

Rinku Dutta, PhD – Postdoctoral Fellow (2018 – 2021)
Award: Circle of Hope for Cancer Research Grant
Current: Scientist, Product Design & Development, Takara Bio

Eleni Markoutsa, PhD – Postdoctoral Fellow (2018 – 2021), Co-mentor
Award: Irene Diamond Fund/AFAR postdoctoral Transition Award (2019)
Current: Res Asst Professor, USF Taneja College of Pharmacy

Mahasweta Das, PhD - Postdoctoral Fellow (2017 – 2021)
Award: Excellence in scholarly research by The Florida High Tech Corridor Council
Current: Scientist AACR

Tao Wang, PhD - Postdoctoral Fellow (2016 – 2020)
Award: Best Oral Presentation at Nano Florida Conference, 2019
Current: Sr. Microfluidic Engineer, Vantiva, Camarillo, CA

Selin Sagbas, PhD – Postdoctoral Fellow (2020)
Award: Postdoctoral Research Program, Science and Technology Research Council, Turkey
Current: Scientist, Canakkale Onsekiz Mart University Terzioglu Campus, Turkey

Waise Quarni, PhD - Postdoctoral Fellow (2017 – 2019)
Award: Selected for 9th Annual Joseph Krzanowski Invited Oral Presentation on USF Research Day, 2019
Current: Postdoctoral Research Associate, St. Jude Children's Research Hospital

Eva Samal, PhD - Postdoctoral Fellow (2017-2018)
Current: Postdoctoral Research Associate, Heart Institute, Tampa

Xiaolan Tang, PhD - Postdoctoral Fellow (2016 – 2018)
Current: Internal Medicine Physician, Moffitt Cancer Center

Tuhin Das, PhD - Postdoctoral Fellow (2015)

Current: Sr. Research Scientist at Tavotek Biotherapeutics

Chunyan Wang, PhD – Postdoctoral Fellow (2010 - 2014)
Current: Board Certified Acupuncture Physician, Tampa, FL

Jaya Mallela, MBBS PhD – Postdoctoral Fellow (2010 – 2013)
Award: Selected for 3rd Annual Joseph Krzanowski Invited Oral Presentation on USF Research Day, 2013
Current: Internal Medicine Resident, Stillwater Medical School, Stillwater, OK

Hongyu Zheng, PhD – Postdoctoral Fellow (2008-2009)
Current: Research Associate, Univ of Alabama

Xiaoquin Wang, PhD – Postdoctoral Fellow (2007 – 2010)
Current: Associate Prof. Xian University, China

SERVICE

National Review Committees

2009	NIH-RC1 grants
2012	Oak Ridge Associated Universities (ORAU) Grants
2012	Congressionally Directed Medical Research program (CDMRP), Prostate Cancer Research Program (PCRP) Cell and Molecular Genetics Panel
2012	AHA Greater Southeast Affiliate- Suncoast Cardiovascular Research & Education Foundation - Peer Review Committee
2012	Peer Reviewed Medical Research Program (PRMRP), Nanomedicine for Drug Delivery Science
2012	American Heart Association (AHA), Bioeng Bsc 4
2013	AHA Student Undergraduate Fellowship Committee, SURF
2013	Multidisciplinary research Grant, North Carolina Biotechnology Cent
2014-2018	Member, BLRD study section, Cellular and Molecular Medicine (CAMM)
2015	Adhoc Member, Cell Biology, Developmental Biology, and Bioengineering ZRG1 NIH-F05-R (20) L Study Section 2015
2015	Adhoc Member, NCI Special Emphasis Panel ZCA1 TCRB-T (O2) Study Section
2017-2020	Adhoc Member, NCI Special Emphasis Panel: NCI Clinical and Translational Exploratory/Developmental Studies (R21) and NCI small Grants Program for Cancer Research (RO3) 2018/01 ZCA1 TCRB-V (J1) S
2021	Member, NCI Innovative Molecular Analysis Technologies (IMAT) program
2022	Member, IMST-U55 Innovative Research in Cancer Nanotechnology Review Panel
2022-2023	Member, Selection Committee for AIMBE College of Fellows: Drug Delivery
2023	Adhoc Member, ZRG1 NV-G (13), Small Business: Neuroscience Assays, Diagnostics, Instrumentation and Interventions
2023	Adhoc Member, CDMRP peer Revied Medical Research Program (PRMRP) ND-4 Panel
2023	Reviewer for Welcome Trust- DBT India Alliance
2023-24	Adhoc Member, ZRG1 MCST-U (55), Cancer Nanotechnology Study Section Panel

Editorial Boards & Editorial Service

2008-2012	Associate Editor, Genetic Vaccines and Therapy
2009- 2013	Editorial Board, Journal of European Medical Students' Association
2011-2013	Editorial Board, The Scientific World Journal
2012-2013	Guest Editor, Journal of Drug Delivery and Translational Research
2013	Guest Editor, Special Issue on NanoBio Interface, Volume 3, Issue 4, 2013, Drug Delivery and Translational Research (An Official Journal of the Controlled Released Society by Springer)
2014-Present	Academic Member, PLOS One

2019 Guest Editor of Special Issue "Advances in Translational Nanotechnology" in Applied Sciences

Reviewer: 2000-Present
ACS Nano, ACTA Biomaterials, Advances in Condensed Matter Physics, Adv Functional Materials, Advanced Science, Apoptosis, Biomaterials, BMC-Cancer, Brain Research, Cancer Cell International, Cellular Biochemistry, Chemical Science, Colloids, Current Cancer Drug Targets, Drug Delivery Letters, European J Pharmaceutics, Food and Chemical Toxicology, Frontiers in Nutrition, Genetic Vaccines and Therapy, International Nano Letters, International J of Cancer, Journal of Applied Polymer Chemistry, Journal of Molecular Medicine, Journal of Controlled Release, Laboratory Investigation, Lungs, Materials Chemistry, Molecular Neurodegeneration, Molecular Pharmaceutics, Nanomedicine, Nature Communications, Neuroimmunology and Neuroinflammation Oncotarget, Peptides, PLOS ONE, Scientific Report, Scientific World Journal, Stem Cells, Vaccine

SERVICE TO Veterans Affairs (National)

2014-2018 Member, BLRD study section, Cellular and Molecular Medicine (CAMM)
2017 Co-organizer and Speaker of VA Cellgenomics Collaborative on Colorectal Cancer (VA4C), Chicago, May 6-7, 2017
2021 Organizer, Session Chair and Speaker of the Field-based Meeting on COVID and Diabetics in Veterans. May 14, 2021
2022- Member, BLRD study Section, Neurobiology C (NURC)
2024- Member, ORD Centralized Positions Panel

SERVICE TO Local VA

2007-2009 Member, JAH-VA RDC Committee
2007-2009 Member, Ethics Committee (JAH VA Hospital)
2015-Pres Member, JAH-VA SRS Committee
2015-2016 Member, JAH-VA RDC Committee
2021-Pres Member, Research Subcommittee of the JAHVA Clinical AI Consortium
2022 Member, GS-15 Selection Committee
2022-Pres JAHVA representative, Scientific Member, USF Institutional Biosafety Committee
2022-2024 Member, Organizing Committee for the VA Research Day
2024-2029 Executive Committee Member, Summer TRIP, JAHVA

SERVICE TO USF
University of South Florida Assignments

2008-2019 Member, Institutional Animal Care and Use (IACUC) Committee
2011-2014 Member, USF Faculty Council on Technology for Instruction and Research
2014-2020 Executive Member, USF-Interdisciplinary Data Science Consortium (IDSC)
2014-2017 Member, USF Faculty Senate
2015-Pres Member, USF Research Advisory Committee
2014-2017 Member, USF Research Council
2017- Member, USF Committee on Committees
2017 Member, Review Panel for USF Excellence in Research & Innovation Awards
2019 Member, Executive Committee of USF Chapter of NAI
2019-Pres Reviewer for USF Excellence in Innovation Awards
2020 Vice President, USF Chapter of NAI
2020-2021 Manufacturing Cluster Coordinator, USF Pandemic Response Research Network (PRRN) Hub on Network "Manufacturing, Innovation and Entrepreneurship"
2020- Cancer Cluster Coordinator, USF PRRN Hub on "Microbiology, Immunology, Infection Control."

2021-2023 President, USF Chapter of NAI
2022-2025 Scientific Member, USF Institutional Biosafety Committee (IBC)

College of Medicine Assignments

2011-2013 Member, Research Committee, Morsani College of Medicine, USF
2011-2013 Member, Bylaws Committee, Morsani College of Medicine, USF
2010- Pres Judge, USF Health Research Day Poster Presentation
2011- Pres Member, Graduate Program Recruitment Committee
2013-2014 Chair, Bylaws Committee, College of Medicine, USF
2013 Judge, 4th Annual Joseph Krzanowski USF Health Invited Oral Presentation
2015-2016 Member, Search Committee for COP Graduate Program Faculty
2017-2021 Member, MCOM-FC Nominating Committee
2018-2021 Member, Appointment, Promotion & Tenure Committee
2021- 2022 Vice Chair, Appointment, Promotion & Tenure Committee
2022-2023 Chair, Appointment, Promotion & Tenure Committee, MCOM
2024-2027 Member, Appointment, Promotion & Tenure Committee, MCOM
2024- Pres Member, MCOM Curriculum Committee
2023- Pres Director, MCOM Molecular Medicine PhD Program
2025- Pres Member, MCOM MD-PhD Selection Committee

Departmental Assignments

2010-2013 Member, PhD Dissertation Committee for Yvonne Davis, Doctoral Student Biomedical Science PhD Program, USF College of Medicine
2011-Pres Member, Graduate Admissions Committee, PhD in Biomedical Science, Department of Molecular Medicine, College of Medicine
2010-2014 Member, PhD Dissertation Committee for Terianne Wong, Doctoral Student Biomedical Science PhD Program, USF College of Medicine
2012-2013 Member, PhD Dissertation Committee for Pedro J. Villalba, USF College of Biomedical Engineering
2013-2014 Member, PhD Dissertation Committee for Vinny Carias, USF College of Biomedical Engineering
2014-2015 Member, PhD Dissertation Committee for Jagannath Devkota, USF College of Physics
2015-2017 Member, PhD Dissertation Committee for Waise Quarni, Doctoral Student Biomedical Science PhD Program, USF College of Medicine
2016 Department Representative for Qualifying Examination for Stephanie Buttermore, Doctoral Student Biomedical Science PhD Program, USF College of Medicine
2019-2022 Member, PhD Dissertation Committee for Ashley Lui, Doctoral Student Biomedical Science PhD Program, USF College of Medicine
2021-pres Member, PhD Dissertation Committee for Nana Adjoa Ben-Crentsil, Doctoral Student Biomedical Science PhD Program, USF College of Medicine
2021-2023 Member, PhD Dissertation Committee for Emma Adhikari, Cancer Biology Program, Moffitt Cancer Center
2021-pres Member, PhD Dissertation Committee for Ridita Khan, Doctoral Candidate at Advanced Materials Bio and Integration Research Laboratory, College of Engineering, USF
2022 Chair, Qualifying examination for Alexis Ominus, Doctoral Student Biomedical Science PhD Program, USF College of Medicine
2022-pres Member, PhD Dissertation Committee for Oluwaseyl Oluwatola, Doctoral Student Biomedical Science PhD Program
2022 External Chair, Dissertation Defense for Jennifer Pineros, Global Center for Hearing & Speech Research, USF Biomedical Engineering
2023 Chair, Qualifying examination for Brandi Miller, Doctoral Student Biomedical Science PhD Program, USF College of Medicine

2023-pres Member, PhD Dissertation Committee for Krystal Villalobos-Ayala, Doctoral Student Biomedical Science PhD Program

2023-Pres Graduate Director, Biomedical Sciences PhD Program, Molecular Medicine Concentration

2024 External Chair, Dissertation Defense for Ting-Hung Liu, Dept of Electrical Engineering, USF College of Engineering

2024 Chair, Microbiology/Immunology Search Committee, Dept of Molecular Medicine, MCOM