Curriculum Vitae and Bibliography

Shanta Dhar, PhD

Present Academic Rank and Position

Associate Professor (Tenured), Department of Biochemistry and Molecular Biology, University of Miami Miller School of Medicine (UMMSOM), Miami, Florida 2016-Present
Assistant Director of Technology and Innovation, Sylvester Comprehensive Cancer Center (SCCC), UMMSOM, Miami, Florida 2016-Present
Adjunct Faculty Member, Department of Chemistry, University of Miami 2018-Present
Adjunct Faculty Member, Biomedical Engineering, University of Miami 2019-Present

Education

University of North Bengal, Darjeeling, India**,** Master of Science in Chemistry 1996-1998
Indian Institute of Science, Bangalore, India, PhD, 2000-2005
Johns Hopkins University; Baltimore, Maryland, Postdoctoral Fellow 2006-2007
Massachusetts Institute of Technology; Anna Fuller Postdoctoral Fellow 2007-2010

Honors and Awards

Admitted as a Fellow to Royal Society of Chemistry 2021
Elected as a Full Member of Sigma XI 2021
Women in Academic Medicine Trailblazer Award at the UMMSOM 2020
One of the top 5% of authors, highly cited in the Royal Society of Chemistry Journals 2019
Cancer Epigenetics Pilot Project grant for FY2020 from SCCC 2020
Tumor Biology Research Program grant for FY2020 from SCCC 2019
Sylvester NCI/NIH Funding Program Award for FY2020 from SCCC 2019
Florida Department of Health Bankhead-Coley Cancer Research Grant 2018
Tenure at University of Miami Miller School of Medicine effective June 2016 2018
Barth Syndrome Foundation grant 2017
Florida Department of Health Zika Research Grant 2017
Young Career Focus by Synform, Thieme Chemistry 2016
Thieme Chemistry Journal Award 2015
NIH-R01 grant from the NINDS 2015
Georgia's best and brightest: 2014 Georgia Trend's list of 40 Under 40 2014
One of the Georgia top medical researchers by Atlanta Business Chronicle 2014
NIH-R56 (NIH High priority award) grant from the NHLBI 2014
Seahorse Bioscience Young Scientist Travel Award 2014
National Scientist Development Award, American Heart Association. 2013
Targeting Mitochondria 2012 Scientific Contribution Award 2012
Department of Defense CDMRP Prostate Cancer Idea Development Award. 2012
Ralph E. Powe Junior Faculty Enhancement Awards, ORAU 2011
Anna Fuller Postdoctoral Fellowship in Molecular Oncology, MIT 2008
Prof. S. Sunderajan Best thesis award in the chemical science division, Indian Institute of Science, Bangalore, India. 2005
Vasudevamurthy-soundararajan Prize for the best performance during Ph.D, Indian institute of Science, Bangalore, India. 2001
Qualified National test "GATE-2000" India. 2000
Gold medal in M.Sc examination of University of North Bengal, India. 1998
Silver medal in B.Sc examination of University of North Bengal, India. 1996
National merit scholarship, Government of India. 1993-1998

Previous Professional Positions and Major Appointments

Assistant Professor, Department of Chemistry, University of Georgia (UGA), GA 2010-2016

Adjunct Assistant professor, Department of Physiology and Pharmacology, College of Veterinary Medicine, UGA, Athens, GA 2011-2016
Faculty member, Nanoscale Science and Engineering Center, UGA, GA 2011-2016
Faculty member, Preadipocyte Targeted Pharmaceuticals, UGA Obesity Initiative 2011-2016
Faculty member, Center for Drug Discovery, UGA, Athens, GA 2012-2016
Faculty member, UGA Cancer Center, UGA, Athens, GA 2012-2016
Faculty member, UGA Regenerative Bioscience Center, UGA, Athens, GA 2013-2016
Faculty member, UGA Center for Metalloenzyme Studies, Athens, GA 2013-2016
Faculty member, UGA Interdisciplinary Life Science Program 2014-2016
Faculty member, Interdisciplinary Toxicology Program, UGA 2014-2016
Leader of UGA Chemical Biology Interdisciplinary Group 2014-2015
Member, Franklin College Faculty Senate, UGA 2011-2016
Member, Committee on Planning and Evaluations UGA, 2013-2016
Member, Ad hoc committee on the University Computer Policy, UGA 2012-2013
Member, Grants Portal Steering Committee, UGA 2013-2016
Co-founder of Partikula LLC, Sunrise, FL 2014-2017
Chair of Scientific Advisory Board, Partikula LLC, Sunrise, FL 2014-2016

Service

Professional Memberships and Societies (National and International)

Founding Chair, Nervous System Delivery Focus Group, CRS 2021-Present
Co-leader, Engineering Cancer Cures™, Sylvester Comprehensive Cancer Center 2021-Present
Editorial Board Member, Tissue Barriers 2022-Present
Member of American Chemical Society (ACS) 2010-Present
Member of American Heart Association (AHA) 2011-Present
Member of American Association for Cancer Research (AACR) 2008-Present
Member of Scientific Committee & Advisory Board of 7th World Congress on Targeting Mitochondria 2015-Present
Member of International Brain Barrier Society 2020-Present
Member of AAAS 2021-Present
Fellow and Member of Royal Society of Chemistry 2021-Present
Member, Franklin College Faculty Senate, UGA 2011-2016
Member, Committee on Planning and Evaluations, Faculty Senate, UGA, 2013-2016
Member, Ad hoc committee on the University Computer Policy, UGA 2012-2013
Member, Grants Portal Steering Committee, UGA 2013-2016

Grant Review Committees

1. North Carolina Biotechnology Center Multidisciplinary Research Grant program 2012
2. Department of Defense CDMRP BCRP program 2013-2014
3. The Medical Research Council (MRC), UK 2014
4. Prayers from Maria, Children's Glioma Cancer Foundation 2014
5. NIH BMBI Study Section 2014-2015
6. NIH BNVT Study Section 2015
7. National Institute of Health, Nano (NANO) Study Section 2016
8. American Heart Association's Fellowship Bioeng BSc1 Study Group 2018
9. Florida Academic Cancer Center Alliance Grants 2019
10. Special Emphasis Panel/Scientific Review Group 2019/05 ZCA1 RTRB-U (M1) R 2019
11. NCI Clinical and Translational R21 and Omnibus R03, ZCA1 SRB-K (O1), SEP-3 2019
12. American Heart Association's Fellowship Bioeng BSc1 Study Group 2019
13. UMMSOM internal grants (team science, CTSI grants) 2019-2020
14. Tumor Biology Grant Program 2019- 2020
15. NCI Fellowships: ZRG1 F09C-Q (20) L 2020
16. NCI Clinical and Translational R21 and Omnibus R03, ZCA1 SRB - E (M2), SEP-7 2021

17. NIH CSR Special Emphasis Panel, IMST-U (55) Cancer Nanotechnology, February 2022

Journal Reviewer

Proceedings of the National Academy of Sciences of the United States of America (2015-2015), Journal of the American Chemical Society (2009-2016), Angewandte Chemie International Edition (2012-2016), Inorganic Chemistry (2011-2016), ACS Nano (2013-2016), Chemical Science (2015-2016), ACS Chemical Biology (2015-2015), ACS Applied Materials & Interfaces(2010-2016), Chemical Communications (2015-2016), Dalton Transactions (2012-2016), Molecular Cancer Therapeutics (2012-2012), Molecular Pharmaceutics (2013-2016), Scientific Reports (2014-2016), Nanomedicine: Nanotechnology, Biology, and Medicine(2013-2013), RSC Advances(2013-2013), Biomaterials (2014-2014), Small (2015-2016), Nanoscale (2014-2016), Advanced Healthcare Materials (2015-2016), Chemistry European Journal (2014-2016), Biomacromolecules (2014-2015), Theranostics (2015-2016), Journal of Biological Inorganic Chemistry (2014-2015), Bioconjugate Chemistry (2014-2016), Langmuir (2015-2015), Journal of Medicinal Chemistry (2015-2015), Journal of Chemical Education (2015-2015), Analytical Chemistry (2016-2016), WIRES: Nanomedicine Nano biotechnology (2015), ACS Nano (2013-Present).

UGA service

Member, Franklin College Faculty Senate, UGA (2011-2016); Member, Committee on Planning and Evaluations, Franklin College Faculty Senate, UGA, (2013-2016); Member, Ad hoc committee on the University Computer Policy, UGA 2012-2013; Member, Grants Portal Steering Committee, UGA 2013-2016; Member, Graduate Recruiting and Admissions Committee (2014); Member, Proteomics and Mass Spectrometry Facility Advisory Committee (2011-2016); Member, Proteomics Scientist Search Committee: hired Dr. Chau-Wen Chou**;** Member, Faculty Search Committee for a Chemical Educator: hired Prof. Nobert Pienta**;** Member, Faculty Search Committee for a Senior Organic Chemist: hired Prof. Eric Ferreira; Member, Chemistry Department Safety Committee (2012-2016); Ph.D. Committees for 10 Chemistry and Pharmaceutical and Biomedical Sciences graduate students (2010-2016)**;** Regenerative Bioscience Center (RBC) Committee: RBC Undergraduate Research Symposium Committee, 2015; Integrated Life Sciences Committees: Chair, Chemical Biology IG (2014-2016)

UM service

Sylvester Comprehensive Cancer Center

Assistant Director of Technology and Innovation, June 2016-Present; Team Science Grant Committee

Department of Biochemistry and Molecular Biology, Miller School of Medicine: BMB Direct PhD Graduate Recruitment Committee: Chair and member, June 2016-Present; BMB Curricula Committee Member, Spring 2019-Present; BMB Diversity Committee: Member, 2021-Present; BMB Award Committee: Member, 2021-Present; BMB Safety Committee: Member, 2021-Present; BMB Operating Committee: Member, Spring 2019-Present; Involved in creating a Master Program in BMB; Space committee, 2019-Present

Research Grants Awarded

Active Grants

1. Co-Investigator, Childhood Cancer Research Foundation, 2022- 2024
2. Co-Investigator, Firefighter Cancer Initiative, Investigate effect of heavy metal exposure in health of Florida Firefighters, 2021-2023
3. Principal Investigator, Bridge Funding Program Award from Sylvester Comprehensive Cancer Center, 2021-2022
4. Principal Investigator, Multifunctional Nanoparticle for Targeted Combination Therapy of Prostate Cancer, 8BC10, Bankhead Coley Cancer Research Program, Florida Department of Health, 04/11/2018 – 03/31/2021
5. Co-Investigator, Prevention of HIV and drug abuse-induced brain pathology by targeting mitochondria, 1R01DA044579, NIH/NIDA, PI: Toborek, 07/01/2017 – 05/31/2023
6. Co-Investigator, Targeting inflammasomes in substance abuse and HIV, R01DA050528, NIH/NIDA, PI: Toborek; 7/15/2020-5/31/2025

7. Co-Investigator, University of Miami kidney innovative & interdisciplinary medical education in research activities, T35DK121678, NIH/NIDDK, PI: Fornoni, 8/1/2020-7/31/2025
8. Co-Investigator, (PQ12) Targeting SMPDL3b to Prevent Radiation-Induced Nephrotoxicity, 1R01CA227493, NIH/NCI, PI: Marples, 07/01/2018 - 06/30/2023
9. Principal Investigator, Startup funds to set up nanotherapeutics research laboratory, Sylvester Comprehensive Cancer Center and BMB, 06/01/2016 - 05/31/2021

Completed Grants

1. Principal Investigator, Cardiolipin Enhancing Biodegradable Nanoparticle for Barth Syndrome, Barth Syndrome Foundation 2016 Grant, Dhar (PI), 04/01/2017 – 03/31/2019; Role: PI
2. Principal Investigator, Nano-formulations of Anti-helminthic drugs for Zika Therapy and Prevention, 7ZK28, Florida Department of Health Zika Initiative Grant, Dhar (PI), 03/07/2017 – 06/30/2018, Florida Department of Health
3. Principal Investigator, Sylvester NIH Funding Program Award, 06/01/2019-05/31/20200
4. Co-Principal Investigator, Sylvester Inter-Programmatic Research Grant, MPI: Dhar and Caban-Martinez, 06/01/2019-05/31/2020
5. Co-Principal Investigator, Sylvester Cancer Epigenetics Research Program, MPI: Dhar and Cimmino, 06/01/2019-05/31/2020
6. Principal Investigator, Combined Nanoparticle and Neural Stem Cell Therapies in a Pig Model of Stroke, R01NS093314, NIH/NINDS, MPI: Dhar and West, 09/30/2015 – 07/31/2016
7. Principal Investigator, A high-density lipoprotein-based theranostic nanoparticle platform for atherosclerosis, R56HL121392, NIH/NHLBI; 09/30/2014 – 08/31/2016
8. Principal Investigator, A high-density lipoprotein mimicking synthetic nanoparticle platform for atherosclerosis, American Heart Association NCRO Summer 2013 Scientist Development Grant (14SDG18690009): 01/01/2014-12/31/2018
9. Principal Investigator, Combined chemo and anti-inflammatory therapy for metastatic castration-resistant prostate cancer (CRPC) using a nanoparticle platform, Department of Defense-PCRP Idea Development Award (W81XWH-12-1-0406): 9/30/2012 to 9/29/2015
10. Co-Investigator, Epigenetic priming in pancreatic cancer chemotherapy, R01CA188464, NIH/NCI, PI: Govindarajan 09/16/2014-08/31/2019
11. Principal Investigator, Nanoparticles for delivery of BCl2 inhibitors, Georgia Research Alliance Phase 1B (GRA.VL15.D5): 07/14/2014-12/31/2015.
12. PI, Contract Based Research for nanoparticles through Partikula LLC; 5/1/2014-6/30/2016
13. Principal Investigator, Amgen Foundation Donation, 2015
14. Principal Investigator, Contract work for platinum prodrugs with Partikula LLC, 2014-2016
15. PI, Nanoparticles for delivery of BCl2 inhibitors GRA: Phase 1A: 2013-2014
16. Principal Investigator, Nano-sensors for apoptosis detection in atherosclerotic plaques, matching fund from OVPR, UGA, 07/012011-06/30/2012.
17. Principal Investigator, Nano-sensors for apoptosis detection in atherosclerotic plaques, Ralph E Powe Junior Faculty Enhancement Award, ORAU 07/012011-06/30/2012.
18. Principal Investigator, Lab Startup fund from UGA; 08/012010-07/31/2013.
19. Principal Investigator, Anna Fuller Postdoctoral Fellowship in Molecular Oncology, the David H. Koch Institute for Cancer Research, MIT, 08/01/2008-07/31/2010.

Patents

1. Orally administrable nano-medicine for viral diseases, by Dhar, S.; Surnar, B.; Jayaweera, D.; Daunert, S.; and Deo, S. PCT Int. Appl., 2021, WO 2021055467 A1 20210325.
2. Modification of drugs for incorporation into nanoparticles by Dhar, S.; Kalathil, A. A.; Banik, B.; Kumar, A.; U.S. Pat. Appl. Publ., 2017, US 20170087167 A1 20170330.
3. Platinum prodrugs and methods of making and using thereof by Dhar, S.; and Pathak, R. K. PCT Int. Appl., 2016, WO 2016144889 A1 20160915.
4. Nanoparticles for lipid homeostasis By Dhar, S.; W.; Marrache, S.; Wen, R; Banik, B. PCT Int. Appl. 2016, WO 2016106328 A1 20160630.
5. Therapeutic nanoparticles for accumulation in the brain By Dhar, S.; W., Emily L.; Marrache, S.; West, F. D. PCT Int. Appl. 2016, WO 2016022462 A1 20160211.

6. Mitochondria-targeting platinum(IV) prodrug By Dhar, S.; Pathak, R.; Marrache, S., PCT Int. Appl. 2015, WO 2015157409 A1 20151015.
7. Produg for release of cisplatin and cyclooxygenase inhibitor by Dhar, S.; and Pathak, R. K. PCT Int. Appl., 2015, WO 2015089389 A1 20150618.
8. Precise delivery of therapeutic agents to cell mitochondria for anti-cancer therapy by Dhar, S. and Pathak, R. K., PCT Int. Appl., 2015, WO 2015002996 A1 20150108.
9. Combination therapeutic nanoparticles by Dhar, S. and Pathak, R. K. PCT Int. Appl., 2014, WO 2014169007 A2 20141016.
10. Generation of Functional Dendritic Cells By Dhar, S., Marrache, S. Harn, D.A., and Tundup, S. PCT Int. Appl., 2014, WO 2014124425 A1 20140814.
11. Mitochondrial delivery of 3-bromopyruvate By Dhar, S. and Marrache, S. 2013, PCT Int. Appl., 2015, WO 2015138992 A1 20150917.
12. Platinum(IV) compounds and methods of making and using same By Dhar, S.; Pathak, R. K., McNitt C., and Popik, V. V. PCT Int. Appl., 2015, WO 2015134599 A2 20150911.
13. Nanoparticles for mitochondrial trafficking of agents By Dhar, S. and Marrache, S. PCT Int. Appl., (2013), WO 2013123298 A1 20130822.
14. Apoptosis-targeting nanoparticles By Dhar, S. and Marrache, S. PCT Int. Appl. (2013), WO 2013033513 A1 20130307.
15. Immune-stimulating photoactive hybrid nanoparticles By Dhar, S. Choi, J.; Marrache, S. PCT Int. Appl. (2013), WO 201312628 A120130124.
16. Nanoparticle functionalized with polyvalent polynucleotide conjugates with platinum coordination complex as delivery vehicles for a chemotherapeutic agent By Mirkin, C. A.; Giljohann, D. A.; Daniel, W. L.; Lippard, S. J.; Dhar, S. PCT Int. Appl. (2011), WO 2011028847 A1 20110310.
17. Particles for multiple agent delivery By Farokhzad, O. C.; Kolishetti, N.; Dhar, S.; Lippard, S. J. and Langer, R. PCT Int. Appl. (2011), WO 2011084620 A2 20110714.
18. Nanostructures for drug delivery By Lippard, S. J.; Dhar, S.; Farokhzad, O. C.; Kolishetti, N.; Gu, F. X. PCT Int. Appl. (2010), WO 2010047765 A2 20100429.
19. Platinum (IV) complexes for use in dual mode pharmaceutical therapy By Lippard, S. J.; Dhar, S. PCT Int. Appl. (2010), WO 2010027428 A1 20100311.

Bibliography: Peer-reviewed Articles (h-index = 40, Citations > 8200)

1. Spencer, A.; Surnar, B.; Kolishetti, N.; Toborek, M., **Dhar, S.** Restoring the Neuroprotective Capacity of Glial Cells Under Opioid Addiction, *Addiction Neuroscience*, **2022**, *4*, 100027.
2. Ciciriello, A. J.; Surnar, B.; Giovanni, D. M. Su, X.; **Dhar, S**.; Dumont, C. **2022**, *Acta Biomaterialia*, Under Revision.
3. Hamdan, S., Surnar, B., Kafkoutsou, A.L., Deo, S., Dushyantha, J., **Dhar, S.,** Daunert, S. "Transformation of Amphiphilic Antiviral Drugs into New Dimensional Nanovesicles Structures" *ACS Omega*, **2022**, *7*, 21359-21369.
4. Shah, A.S., Surnar, B., Kolishetti, N., and **Dhar, S**. "The Intersection of Inorganic Chemistry and Nanotechnology for the Creation of New Cancer Therapies" *Acc. Mat. Res.* **2022**, *3,* 283-296.
5. Deo, S., **Dhar, S.,** Daunert, S. "Drug delivery: Challenges and nanotechnology-based solutions" *Molecular Aspects of Medicine*, **2022**, *83,* 101051.
6. Costoya, J., Surnar, B., Kolishetti, N., and **Dhar, S**. "Controlled Release Nanoplatforms for Three Most Commonly Used Chemotherapeutics" *Molecular Aspects of Medicine*, **2022**, *83,* 101043.
7. Kolishetti, N., Vashist, A., Yndart Arias, A., Atluri, V., **Dhar, S.,** Nair, M. "Recent advances, current status and opportunities of magneto-electric nanocarriers for biomedical applications" *Molecular Aspects of Medicine*, **2022**, *83,* 101046.
8. Shah, A.; Lopez, I.; Surnar, B. Sarkar, S.; Pillai, A.; Salguero, T.T. and **Dhar, S.** "Turning the Tide for Mothers in STEM: A Post-pandemic Perspective on Supporting Female Scientists" *ACS Nano*, **2021**, *15*, 18647–18652.
9. Olagunju, M.; Zahran, E.; Zeynaloo, E.; Shukla, D.; Cohn, J.; Surnar, B.; **Dhar, S.**; Bachas, L.; Knecht, M. "Design of Pd-decorated SrTiO3/BiOBr Heterojunction Materials for Enhanced Visible Light-based Photocatalytic Reactivity" *Langmuir,* **2021**, *37,* 11986-11995.

10. Surnar, B.; Shah, A.; Park, M.; Kalathil, A.; Kamran, M. Z.; Jaime Ramirez, R.; Toborek, M.; Nair, M.; Kolishetti, N.; **Dhar, S. "**Brain Accumulating Nanoparticles for Assisting Astrocytes to Reduce HIV and Drug Abuse-Induced Neuroinflammation and Oxidative Stress in the Central Nervous System" *ACS Nano*, **2021**, *15,* 15741-15753. Highlighted in Nature Rev Materials (Impact Factor: 66.31).
11. Surnar, B., Shah, A.S., Guin, S., Kolishetti, N., Fornoni, A., and **Dhar, S**. "Blending of Designer Synthetic Polymers to a Dual Targeted Nanoformulation For SARS-CoV-2 Associated Kidney Damage" *Biomacromolecules.* **2021**, *22,* 4244-4250.
12. Olagunju, M.; Zahran, E.; Reed, J. M.; Zeynaloo, E.; Shukla, D.; Cohn, J. L.; Surnar, B.; **Dhar, S.**; Bachas, L. G.; Knecht, M. R. "Halide effects in $BiVO_4$/BiOX heterostructures decorated with Pd nanoparticles for photocatalytic degradation of rhodamine B as a model organic pollutant" *ACS Appl. Nano Mater.,* **2021,** *4*, 3262-3272.
13. ElMetwally, A. E.; Zeynaloo, E.; Shukla, D.; Surnar, B.; **Dhar, S.**; Cohn, J. L.; Knecht, M. R.; Bachas, L. G. "Cu_2O cubes decorated with azine-based covalent organic framework spheres and Pd nanoparticles as tandem photocatalyst for light-driven degradation of chlorinated biphenyls" *ACS Appl. Nano Mater.,* **2021,** 4, 2795-2805.
14. Sarmah, D.; Banerjee, M.; Datta, A.; Kalia, K.; **Dhar, S.**; Yavagal, D. R.; and Bhattacharya, P. "Nanotechnology in the diagnosis and treatment of stroke" *Drug Discov. Today,* **2021,** 26*, 585-592.*
15. Surnar, B.; Kamran, M. Z.; Shah, S. A.; and **Dhar, S**. "Clinically Approved Anti-Viral Drug in an Orally Administrable Nanoparticle for COVID-19" *ACS Pharmacol. Transl. Sci.,* **2020**, *3*, 1371-1380.
16. Kolb, D.; Kolishetti, N.; Surnar, B.; Sarkar, S.; Guin, S.; Shah, S. A.; and **Dhar, S.** "Metabolic modulation of the tumor microenvironment leads to multiple checkpoint inhibition and immune cell infiltration" *ACS Nano*, **2020**, *14*, 11055-11066.
17. Olagunju, M.; Poole, X.; Blackwelder, P.; Thomas, M. P.; Guiton, B. S.; Shukla, D.; Cohn, J. L.; Surnar, B.; **Dhar, S.;** Zahran, E.; Bachas, L. G.; Knecht, M. R. "Size-controlled $SrTiO_3$ nanoparticles photodecorated with Pd co-catalysts for photocatalytic organic dye degradation" *ACS Appl. Nano Mater.*, **2020**, *3*, 4904-4912.
18. Banik, B.; Surnar, B.; Askins, B. W.; Banerjee, M.; and **Dhar, S**. "Dual Targeted Synthetic Nanoparticle for Cardiovascular Diseases" *ACS Appl. Mater. Interfaces*, **2020**, *12*, 6852-6862
19. Surnar, B.; Kamran, M. Z.; Shah, A.; Basu, U.; Kolishetti, N.; Deo, S.; Jayaweera, D.R.; Daunert, S.; and **Dhar, S.** "Orally Administrable Therapeutic Synthetic Nanoparticle for ZIKA" *ACS Nano*, **2019**, *13*, 11034-11048.
20. Velichkovska, M.; Surnar, B.; Nair, M.; **Dhar, S.;** and Toborek, M. "Targeted Mitochondrial CoQ10 delivery attenuates antiretroviral drug-induced senescence of neural progenitor cells" *Mol. Pharmaceut*. **2019**, *16*, 724-736.
21. Surnar, B.; Basu, U.; Banik, B.; Ahmad, A.; Marples, B.; Kolishetti, N.; and **Dhar, S**. "Nanotechnology-mediated crossing of two impermeable membranes to modulate the stars of the neurovascular unit for neuroprotection" *Proc. Natl. Acad. Sci. USA*, **2018**, *115*, E12333-E12342.
22. Surnar, B.; Kolishetti, N.; Basu, U.; Ahmad, A.; Goka, E.; Marples, B.; Kolb, D.; Lippman, M.; and **Dhar, S.** "Reduction of cisplatin induced ototoxicity without compromising its antitumor activity" *Biochemistry*, **2018**, *57*, 6500–6513.
23. Pathak, R. K.; Basu, U.; Ahmad, A.; Sarkar, S.; Kumar, A.; Surnar, B.; Ansari, S.; Wilczek, K.; Ivan, M. E.; Marples, B.; Kolishetti, N.; and **Dhar, S.** "A designer bow-tie combination therapeutic platform: An approach to resistant cancer treatment by simultaneous delivery of cytotoxic and anti-inflammatory agents and radiation" *Biomaterials*, **2018**, *187*, 117-129
24. Goodwin, J.; Choi, H.; Hsieh, M-H.; Neugent, M. L.; Ahn, J-M.; Hayenga, H. N.; Singh, P. K.; Shackelford, D. B.; Lee, I-K.; Shulaev, V.; **Dhar, S.;** Takeda, N.; and Kim, J-W. "Targeting hypoxia-inducible factor-1α/pyruvate dehydrogenase kinase 1 axis by dichloroacetate suppresses bleomycin-induced pulmonary fibrosis" *Am. J. Respir. Cell. Mol. Biol*., **2018**, *58*, 216-231.
25. Banik, B.; Wen, R.; Marrache, S.; Kumar, A.; Kolishetti, N.; Howerth, E.; and **Dhar, S**. "Core hydrophobicity tuning of a self-assembled particle results in efficient lipid reduction and favorable organ distribution" *Nanoscale*, **2018**, *10*, 366-377.

26. Banik, B.; and **Dhar, S.** "Centrifugation free magnetic isolation of functional mitochondria using paramagnetic iron oxide nanoparticles" *Curr. Protoc. Cell Biol.,* **2017**, *76*, 25.4.1-25.4.20.
27. Marples, B.; and **Dhar, S**. "Radiobiology and the renewed potential for nanoparticles" *Int. J. Radiation Oncol. Biol. Phys.,* **2017**, *98*, 489-491.
28. Pathak, R. K.; Wen, R.; Kolishetti, N.; and **Dhar, S**. "A prodrug of two approved drugs, cisplatin and chlorambucil, for chemo war against cancer" *Mol. Cancer Ther.,* **2017**, *16*, 625–636.
29. Banik, B.; Askins, B. W.; and **Dhar, S.** "Mito-magneto: a tool for nanoparticle mediated mitochondria isolation". *Nanoscale*, **2016**, *8*, 19581-19591.
30. Basu, U.; Banik, B.; Wen, R.; Pathak, R. K., and **Dhar, S**. "The Platin-X Series: Activation, Targeting, and Delivery". *Dalton Trans*, **2016**, *45*, 12992-13004.
31. Wen, R.; Dhar, S. "Turn Up the Cellular Power Generator with Vitamin E Analogue Formulation". *Chem. Sci.* **2016**, *7*, 5559-5567.
32. Pathak, R.; **Dhar, S.** "Combined Chemo-Anti-Inflammatory Prodrugs and Nanoparticles" *Synlett* **2016**, *27*, 1607-1612.
33. Wen, R.; Umeano, A. C.; Francis, L.; Sharma, N.; Tundup, S.; **Dhar, S.** "Mitochondrion: a Promising Target for Nanoparticle-based Vaccine" *Vaccines 2016*, 4(2), 10.3390/vaccines4020018.
34. Chaudhary, A.; Bhat, T.; Kumar, S.; Kumar, A., Kumar, R.; Underwood, W.; Koochekpour, S.; Shourideh, M.; Yadav, N.; **Dhar, S.;** Chandra, D. "Mitochondrial dysfunction-mediated apoptosis resistance associates with defective heat shock protein response in African–American men with prostate cancer" *Br. J. Cancer* **2016**, *114*, 1090-1100.
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36. Pathak, R. K.; **Dhar, S.** "Unique use of alkylation for chemo-redox activity by a Pt(IV) prodrug" *Chem. Eur. J.* **2016**, *22*, 3029-3036.
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38. Pathak, R. K. and **Dhar, S**. "A Nanoparticle Cocktail: Temporal Release of Predefined Drug Combinations", *J. Am. Chem. Soc.* **2015**, *137*, 8324–8327.
39. Feldhaeusser, B.; Platt, S. R.; Marrache, S.; Kolishetti, N.; Pathak, R. K.; Montgomery, D. J.; Reno, L. R.; Howerth, E., and **Dhar, S.** "Evaluation of Nanoparticle Delivered Cisplatin in Beagles", *Nanoscale*, **2015**, *7*, 13822–13830.
40. Marrache, S.; and **Dhar, S.** "The energy blocker inside the power house: Mitochondria targeted delivery of 3-bromopyruvate" *Chem. Sci.,* **2015**, *6*, 1832-1845.
41. Marrache, S.; Tundup, S.; Harn, D. A.; and **Dhar, S.** "*Ex vivo* generation of functional immune cells by mitochondria-targeted photosensitization of cancer cells" *Methods Mol. Biol*., **2015**, *Vol 1265*, 113-122.
42. Marrache, S.; Pathak, R. K.; and **Dhar, S.** "Formulation and optimization of mitochondria-targeted polymeric nanoparticles". *Methods Mol. Biol.,* **2015**, *Vol 1265*, 103-112.
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Book Chapters

1. **Dhar, S.**; Daniel, W. L.; Giljohann, D. A.; Mirkin, C. A. and Lippard, S.J. "Polyvalent oligonucleotide gold nanoparticle conjugates as delivery vehicles for platinum(IV) warheads" C. A. Mirkin Ed. In *Spherical Nucleic Acids,* **2020***, Vol 4, Chapter 91,* pp 1585-1591*.*
2. Wen, R.; Umeano, A. C.; and **Dhar, S.** “Accessing mitochondrial targets using nano cargos” Prokop, Weissig Eds. Intracellular Delivery III; Springer publishers, **2016**, pp 229-254.
3. **Dhar, S.** and Lippard, S. J. In “Current status and mechanism of action of platinum-based anticancer drugs”, E. Alessio Eds. Bioinorganic Medicinal Chemistry; Wiley-VCH publishers, **2011**, pp 79-95.
4. **Dhar, S.** and Lippard, S. J. In “Structural and mechanistic studies of anticancer platinum drugs: Uptake, activation, and the cellular response to DNA binding”, A Bonetti et al. Eds. Platinum and other heavy metal compounds in cancer chemotherapy; Humana Press, NJ, 2009, pp 135-147.

Teaching

Mentoring Activity List:
Junior Faculty: 2; **Assistant Scientist:** 2; **Postdoc:** 12; **PhD Students:** 15; **MD-PhD Student:** 1; **MD Student:** 1; **DVM Student:** 1; **MS Student:** 8; **Undergraduate Researcher:** 50; **High School Student**: 1; **Visiting Scientist:** 2

Teaching Awards Received:

- A UGA Class of 2015 student identified Dr. Dhar as a person who contributed greatly to their career development.
- A UGA Class of 2013 student identified Dr. Dhar as a person who contributed greatly to their career development.
- Featured faculty speaker for Honors Lunchbox Lecture Series, Fall 2014.
- Lead speaker Georgia Junior Science & Humanities Symposium, 2014.
- Student nominated talk at the Center for Excellence in Nanomedicine and Engineering 2014 Series: Clinically Promising Technologies University of California SanDiego on May 07, 2014.
- Invited Guest instructor for Integrative Graduate Education and Research Traineeship Nanomedicine Science and Technology Education Program supported by NCI and NSF. **g.** Nanoscale Informal Science Education Network featured radio interview.
- Guest Instructor for Integrative Graduate Education and Research Traineeship (IGERT) Nanomedicine Science and Technology education program supported by the National Cancer Institute and the National Science Foundation

Teaching Specialization (courses taught):

2022/Fall	BMB 610/710 Graduate Course on Nanomedicine, UM
2022/Spring	BMB 518 Undergraduate Course on Nanomedicine, Coral Gables, UM
2021/Fall	BMB 610/710: Graduate Course on Metal and Nanotechnology in Medicine, UM
2021/Spring	BMB 518 Undergraduate Course on Nanomedicine, Coral Gables, UM
2020/Fall	BMB 610: Graduate Course on Nanomedicine, Miller School of Medicine
2020/Spring	BMB 511: Undergraduate Course on Nanomedicine, Coral Gables, UM
2019/Fall	BMB 610/710: Graduate Course on Nanomedicine, Miller School of Medicine
2019/Spring	BMB 511: Undergraduate Course on Nanomedicine, Coral Gables, UM
2019/Spring	BMB 710: Graduate Course on Nanomedicine, Coral Gable, UM
2017/Fall	OPH 3: Graduate course on Ocular Pharmacology, Epidemiology and Biostatistics
2016/Fall	BMB 710: Graduate Course on Nanomedicine, Miller School of Medicine
2016/Spring	CHEM 6400: Modern Inorganic Chemistry-Undergraduate Course
2016/Spring	CHEM 3400: Modern Inorganic Chemistry-Undergraduate Course
2015/Fall	VPHY 8010: Mammalian Cellular Physiology-Graduate Course
2015/Fall	CHEM 8210: Chemical Applications of Group Theory-Graduate Course
2014/Fall	CHEM 6400: Modern Inorganic Chemistry-Undergraduate Course
2014/Fall	CHEM 3400: Modern Inorganic Chemistry-Undergraduate Course
2014/Spring	CHEM 8120: Inorganic Chemistry Seminar- Graduate Course
2014/Spring	CHEM 8290: Nanomedicine-Graduate Course
2013/Fall	VPHY 8010: Mammalian Cellular Physiology [Guest Instructor]
2013/Fall	CHEM 8210: Chemical Applications of Group Theory-Graduate Course
2013/Spring	CHEM 8290: Nanomedicine-Graduate Course
2012/Fall	CHEM 8210: Chemical Applications of Group Theory-Graduate Course
2012/Spring	CHEM 6400: Modern Inorganic Chemistry-Undergraduate Course
2012/Spring	CHEM 3400: Modern Inorganic Chemistry -Undergraduate Course
2010/Fall	CHEM 8210: Chemical Applications of Group Theory-Graduate