

FARAH DEBA, PH.D.

Assistant professor

*Department of Pharmaceutical Sciences,
Ben and Maytee Fisch College of Pharmacy, University of Texas, at Tyler
3900 University Blvd., Tyler, TX 75799
Email: Fdeba@uttyler.edu*

EDUCATION

- Ph.D.** Applied Molecular and Cellular Biology (Cell Biology)
Kagoshima University, Kagoshima. Okinawa, Japan, 2008.
- M.S.** Bioscience and Biotechnology (Biotechnology), University of the Ryukyus,
Okinawa, Japan, 2005.
- M.Pharm.** Pharmaceutical Science (Pharmacy), University of Science & Technology
Chittagong, Bangladesh, 1999. (Major: Pharmacology)
- B.Pharm.** Pharmaceutical Science (Pharmacy), University of Science & Technology
Chittagong, Bangladesh, 1997. (Courses completed: Organic Chemistry,
Pharmaceutics, Physiology, Physical Pharmacy, Pharmaceutical Technology,
Medicinal Chemistry, and Pharmacology)

ACADEMIC & PROFESSIONAL CAREER

- Jan 2019** –present **Assistant Professor**, Department of Pharmaceutical Sciences, *Department of Pharmaceutical Sciences, Ben and Maytee Fisch College of Pharmacy, University of Texas, at Tyler*
- 2018 – Jan 2019** **Senior Research Associate**, *Department of Pharmaceutical Sciences, Ben and Maytee Fisch College of Pharmacy, University of Texas, at Tyler*
- 2017 - May 2018** **Senior Research Associate**, *Department of Pharmaceutical Sciences, Irma L. Rangel College of Pharmacy, Texas A&M Health Science Center, Kingsville, TX.*
- 2011 - June 2017** **Post-Doctoral Research Associate**, *Department of Pharmaceutical Sciences, Irma L. Rangel College of Pharmacy, Texas A&M Health Science Center, Kingsville, TX.*
- 2009 - Dec 2009** **Foreign Visiting Researcher**, *Department of Bioscience and Biotechnology, University of the Ryukyus, Okinawa, Japan.*
- 2008 - 2009** **Postdoctoral Research Fellow**, *HiPep Laboratories, Okinawa, Japan.*
- 2008** **Ph.D.**, *Applied Molecular and Cellular Biology
Kagoshima University, Kagoshima. Under the University of the Ryukyus, Okinawa, Japan.*
- 2005 - 2008** **Graduate Researcher**, *Laboratory of Molecular and Cellular Biology, University of the Ryukyus, Okinawa, Japan.*
- 2003 - 2005** **M.S.**, *Department of Bioscience and Biotechnology, University of the Ryukyus, Okinawa, Japan.*
- 2000 - 2002** **Quality Control Officer (Method development)**, *Quality Control Department, Beximco Pharmaceuticals Ltd. Dhaka, Bangladesh.*

TEACHING EXPERIENCE

2019 – present Course coordinator and Instructor

PHAR 7201: Pharmaceutical Calculations

PHAR 7192: Non-Sterile Compounding

Department of Pharmaceutical Sciences, Fisch College of Pharmacy, UT Tyler.

2024 – present Course coordinator and Instructor

PHAR 7299: Independent study

Fall - 2020

Instructor

PHAR 7401: Biochemistry (Metabolism)

Department of Pharmaceutical Sciences, Fisch College of Pharmacy, UT Tyler.

Fall -2018

PHAR 7201: Pharmaceutical Calculations (Concentration and Dilution, Electrolyte Solutions)

Department of Pharmaceutical Sciences, Fisch College of Pharmacy, UT Tyler.

2011 - 2017

Teaching Laboratory: Patch Clamp, Two-Electrode voltage Clamp electrophysiological technique and delivered lecture to the undergraduate, graduate, and Pharm.D students on primary cell culture and other allied Cell based assays. Department of Pharmaceutical Sciences, Irma L. Rangel College of Pharmacy, TAMHSC, Kingsville, TX

2005 - 2008

Teaching Assistant: Delivered lecture to the undergraduate students on the application of medicinal and pharmaceutical compounds to bacterial and other eukaryotic cells.

Bioscience and Biotechnology, University of the Ryukyus, Okinawa, Japan.

PUBLICATIONS

1. **Farah Deba**, K. Munoz, E. Peredia, G. Akk , A. Hamouda. (2022) Assessing potentiation of the $(\alpha_4)\beta_2$ nicotinic acetylcholine receptor by the allosteric agonist CMPI. *J. Biol. Chem.* 298:101455.
2. C. Ferrel, S. Rayamajhi, T. Nguyen, R. Marasini, T. Saravanan, **Farah Deba**, and S. Aryal. (2021) Re-engineering a Liposome with Membranes of Red Blood Cells for Drug Delivery and Diagnostic Applications. *Appl. Bio Mater.* 20: 6974-6981.
3. **Farah Deba**, K. Ramos, M. Vannoy, K. Munoz, L. Akinola, M. I. Damaj , A. Hamouda. (2020) Examining the Effects of $(\alpha_4)\beta_2$ Nicotinic Acetylcholine Receptor-Selective Positive Allosteric Modulator on Acute Thermal Nociception in Rats. *Molecules* 20:2923.
4. Wilkerson J. L., **Farah Deba**, Crowley M.L., Hamouda A.K., McMahon L.R. (2020) Advances in the In vitro and In vivo pharmacology of Alpha4beta2 nicotinic receptor positive allosteric modulators. *Neuropharm.* 12; 168:108008.
5. E. Salazar, A. Rodriguez-Acosta, S. Lucena, R. Gonzalez, M.C. McLarty, O. Sanchez, M. Suntravat, E. Garcia, H. J. Finol, M. E. Giron , I. Fernandez, **Farah Deba** , B. F Bessac , E. E. Sánchez. (2020). Biological activities of a new crotamine-like peptide from *Crotalus oreganus helleri* on C2C12 and CHO cell lines, and ultrastructural changes on motor endplate and striated muscle. *Toxicon.*188:95-107.
6. **Farah Deba**, Steven Peterson, Ayman K. Hamouda. (2019). An Animal Model to Test Reversal of Cognitive Decline Associated with Beta Amyloid Pathologies. *Methods in Molecular Biology. Psychiatric Disorders* pp 393-412.
7. **Farah Deba**, H. I. Ali, A. Tairu, K. Ramos, J. H. Ali, A. Hamouda. (2018). LY2087101 and dFBr share transmembrane binding sites in the $(\alpha_4)\beta_2$ Nicotinic Acetylcholine Receptor. *Scientific Reports – Nature* 19: 8(1):1249.

8. Z. J. Wang, Farah Deba*, T. S. Mohamed, D. C. Chiara, K. Ramos, A. Hamouda. (2017). Unraveling amino acid residues critical for allosteric potentiation of (α 4) β 2-type nicotinic acetylcholine receptor responses. *J Biol Chem.* 292(24); 9988-10001.
***FD and ZW made equal contribution to this work.**
This article was Recommended in F1000Prime: <https://f1000.com/prime/727558690>
Ranked in the top 5% of all research outputs scored by The Altmetric Attention Score and in the 99th percentile compared to outputs of same age and source
<https://asbmb.altmetric.com/details/19828251>.
9. K. Hamouda, Farah Deba, Z. J. Wang, J. B. Cohen. (2016). Photolabeling a Nicotinic Acetylcholine Receptor (nAChR) with an (α 4) β 2 nAChR-selective Positive Allosteric Modulator. *Mol Pharmacol.* 89(5):575-84.
10. Farah Deba and B. Bessac. (2015). Anoctamin-1 Cl(-) channels in nociception: activation by an N- arylaminothiazole and capsaicin and inhibition by T16A[inh]-A01. *Mol Pain.* 12; 11(1):55; 2-15.
11. T.D. Khanh, L.C. Cong, T.D. Xuan, Y. Uezato, Farah Deba, T. Toyama and S. Tawata (2009). Allelopathic plants: 20. Hairy Beggarticks (*Bidens pilosa* L.). *Allelopathy Journal*; 24, 243-254.
12. C. Ao, Farah Deba, M. Tako, and S. Tawata (2009). Biological activity and composition of extract from aerial root of *Ficus microcarpa*. *International Journal of Food Science and Technology*; 44, 349-358.
13. S. Tawata, M. Fukuta, T. D. Xuan and Farah Deba (2008). Total Utilization of Tropical Plants *Leucaena leucocephala* and *Alpinia zerumbet*. *Journal of Pesticide Sciences*; 33, 40-43.
14. Farah Deba, T.D. Xuan, M.Yasuda, and S.Tawata (2008). Chemical composition and antioxidant, antibacterial and antifungal activities of the essential oils from *Bidens pilosa* Linn. var. *Radiata*. *Food Control.* 19, 346-352.
15. M. Fukuta, T. D. Xuan, Farah Deba, S. Tawata, T. D. Khanh and I. M. Chung (2007). Comparative efficacies in of antibacterial, fungicidal, antioxidant, and herbicidal activities of momilactones A and B. *Journal of Plant Interactions*; 2, 245-251.
16. Farah Deba, T.D. Xuan, M.Yasuda, and S.Tawata (2007). Herbicidal and fungicidal activities and identification of potential phytotoxins from *Bidens pilosa* L. var. *radiata* Scherff. *Weed Biology and Management*; 7, 77-83.
17. T.D. Xuan, A.A. Elzaawely, Farah Deba, M. Fukuta, and S. Tawata (2006). Mimosine in *Leucaena* as a potent bio-herbicide. *Agronomy for Sustainable Development*; 26, 89-97.
18. Farah Deba, Md. H. Kawsar, (1997). Quality of Marketed Hematinic Preparation (Iron Syrup) in Bangladesh – A Case Study. *Tablet Caplet*; Vol. 2.

COMMUNICATIONS

19. Madhura Maiya, Prathyusha Rama Tulasi Vattikuti , Ana Rivera, Santosh Aryal, Farah Deba (2024). Effect of Varying Cooking and Storing Techniques on Resistant Starch Structure and Concentration in Cooked Starchy Foods. Society of Nutrition-meeting; June 29 -July 02, Chicago, IL.
20. Hope Sabella, Ayaan Khan, Tanvikhaa Saravanan, Farah Deba (2024). Role of Salvianolic Acid Derivatives on Osteoporosis. Presented poster at the East Texas Research Conference at UT at Tyler.
21. Ashir Aryal*, Dinesh Shrestha, Isreal Joshua Santhosh, and Farah Deba (2024). Computational Analysis of Live Cell Imaging Using Image-J to Understand Wound Healing. Poster presenter at the Presented poster in the 9th annual Research Lyceum at UT at Tyler. LA.*= High school student

22. Ayaan Khan, Tanvikhaa Saravanan, **Farah Deba (2023)**. Antioxidant and cytoprotective effects of salvianolic acid derivatives on rat osteoblast cell. Society for Neuroscience – Meetings; November 11–15, Washington, D.C.
23. Ashir Aryal*, Dinesh Shrestha, Isreal Joshua Santhosh, and **Farah Deba (2023)**. Microscopic evaluation of wound healing in the presence and absence of albumin. Poster presenter at 39th Annual Meeting Southern Biomedical Engineering Conference at Kenner, LA.*= High school student
24. Hope Sabella, Gabrielle Thomas, Ayaan Khan, Takova Wallace-Gay, and **Farah Deba (2023)**. Application of Stem Cell Therapy for Osteoarthritis Pain Management. *Biophysical Journal*. [Volume 122, Issue 3, Supplement 1](#), February 2023, Page 111a.
25. Ayaan Khan, Tanvikhaa Saravanan, and **Farah Deba (2023)**. Treatment of Osteoarthritis by Salvianolic Acid Derivatives. *Biophysical Journal*. [Volume 122, Issue 3, Supplement 1](#), February 2023, Page 111a.
26. Gabrielle Thomas, Hope Sabella, Ayaan Khan, Takova Wallace-Gay, and **Farah Deba (2023)**. Application of Stem Cell Therapy for Osteoarthritis Pain Management. *The FASEB Journal*. May 2023.
27. Hope Sabella, Gabrielle Thomas, Ayaan Khan, Takova Wallace-Gay, and **Farah Deba (2023)**. Application of Stem Cell Therapy for Osteoarthritis Pain Management. Presented poster in the 8th annual Research Lyceum at UT at Tyler.
28. Israel Joshua Santhosh, Shoukath Sulthana, Ayaan Khan, **Farah Deba***, Santosh Aryal* **(2023)**. Maximizing Tumor Targeting Using Engineered Extracellular Vesicles Derived From Activated Macrophages. Presented poster in the 8th annual Research Lyceum at UT at Tyler.
29. Hope Sabella, Gabrielle Thomas, Ayaan Khan, Takova Wallace-Gay, and **Farah Deba (2023)**. Application of Stem Cell Therapy for Osteoarthritis Pain Management. Presented poster in the East Texas Research conference at UT at Tyler.
30. Gabrielle Thomas, Hope Sabella, Ayaan Khan, and **Farah Deba (2022)**. Evaluation Of Pain Drug By Mechanical And Thermal Response. Oral presenter at 38th Annual Meeting SOUTHERN BIOMEDICAL ENGINEERING CONFERENCE at Kenner, LA.
31. Gabrielle Thomas, Hope Sabella, Ayaan Khan, Takova Wallace-Gay, and **Farah Deba (2022)**. Osteoarthritis management with stem cell therapy. Oral presenter at 38th Annual Meeting SOUTHERN BIOMEDICAL ENGINEERING CONFERENCE at Kenner, LA.
32. Tanvikhaa Saravanan, Gabrielle Thomas, Saiful M Chowdhury, and **Farah Deba (2022)**. Effect of Caffeic acid analogs on Transient receptor potential melastatin 2 Channel. American Society for Pharmacology and Experimental Therapeutics (ASPET) – Natural product at Philadelphia April 02-05, 2022. *The FASEB Journal*. May 2022.
33. Ayaan Khan, Shoukath Sulthana, Prabhat Kattel, **Farah Deba** and Santosh Aryal **(2022)**. Devising Bacterial Derived Extracellular Vesicle for Cancer Therapy. Presented poster in the 7th annual Research Lyceum at UT at Tyler.
34. Gabrielle Thomas, Hope Sabella, Ayaan Khan, Takova Wallace-Gay, and **Farah Deba (2022)**. Osteoarthritis management with stem cell therapy. Presented poster in the 7th annual Research Lyceum at UT at Tyler.
35. Tanvikhaa Saravanan, Gabrielle Thomas and **Farah Deba (2022)**. Neuroprotective Effect of Caffeic acid analogs on Oxidative Stress-Induced SH-SY5Y Cells. Presented poster in the 7th annual Research Lyceum at UT at Tyler.
36. **Farah Deba**, Gustav Akk, and Ayman K Hamouda **(2020)**. Assessing the CMPI potentiation of $(\alpha 4)\beta 2$ nicotinic acetylcholine receptor using the Monod-Wyman-Changeux allosteric model. *The FASEB Journal*. Vol. 34, Issue 1.
37. Anna Sheraz, Eloisa Peredia, Ayman K. Hamouda, **Farah Deba (2019)**. The Use of Concatemer Subunit Constructs to Study the Pharmacology of $\alpha 4$ Neuronal Nicotinic Acetylcholine Receptor. Presented poster in the 1st East Texas Research Conference at UT at Tyler

38. Nada Qazait, Delight A. Onyejebu, **Farah Deba**, Ayman K. Hamouda (2019). Cholinergic Cognitive Enhancers with Disease Modifying Properties. Presented poster in the 1st East Texas Research Conference at UT at Tyler.
39. Nada Qazait, Delight A. Onyejebu, **Farah Deba**, and Ayman K. Hamouda (2019). Cholinergic Cognitive Enhancers with Disease-Modifying Properties. Presented poster in the 4th annual Research Lyceum at UT at Tyler.
40. **Farah Deba**, Kemberli Munoz, Steven L Peterson, and Ayman K Hamouda (2019). Assessing the Cognitive enhancing effect of desformylflustrabromine in rat model of A β -induced cognitive impairment. *The FASEB Journal*. Vol. 33, Issue 1. Presented poster in the ASPET, Orlando, Florida.
41. Eloisa Peredia, Anna Sheraz, Ayman K. Hamouda, and **Farah Deba** (2019). The Use of Chimeric Subunit Constructs to Study the Pharmacology of $\alpha 6$ Neuronal Nicotinic Acetylcholine Receptor. Presented poster in the 4th annual Research Lyceum at UT at Tyler.
42. Kemberli Munoz, **Farah Deba**, Abisola Tairu, and Ayman K. Hamouda (2018). Agonist-Specific Pharmacological Effects of CMPI and NS9283 at (Alpha4) β 3(Beta2) β 2 Neuronal Nicotinic Acetylcholine Receptors. (2018). The 62nd annual meeting of the Biophysical Society, San Francisco, California. Feb. 17- 21, published in *Biophysical Journal*; 2018.
43. **Farah Deba**, Vannoy M.K., Peterson S. L., and Hamouda A. K. (2017). The Antinociceptive Effects of Desformylflustrabromine in Rat Model of Acute Pain. *Neuroscience*, 465.13.
44. Jackson A., **Farah Deba**, Bagdas D., Vannoy M. K., Peterson S. L., Damaj M. I., and Hamouda A. K. (2017). Animal Studies with Desformylflustrabromine, a naturally occurring Nicotinic Acetylcholine Receptor Positive Allosteric Modulator. *American Society for Pharmacology and Experimental Therapeutics (ASPET) - Academic Drug Discovery Colloquium*.
45. Ang G., **Farah Deba**, Pandhare A., Blanton M., Cohen J.B., and Hamouda A. K. (2017). Photoaffinity Labeling of $\alpha 4\beta 2$ Nicotinic Acetylcholine Receptor using [3H]-Labeled Positive Allosteric Modulators. *Biophysical Journal*; 112, 320a. (**Oral presentation**).
46. Ze-Jun Wang, **Farah Deba**, Tiffany R. Trevino, Kara Ramos, and Ayman K. Hamouda. (2016). Interaction of the Positive Allosteric Modulator LY2087101 with $\alpha 4\beta 2$ Nicotinic Acetylcholine Receptor. 60th Biophysical Society meeting in Los Angeles, California, Feb. 27- Mar. 02, published in *Biophysical Journal*; 2016-110-3supplement1 604a-605a.
47. **Farah Deba** and Bret Bessac (2015). Anoctamin-1 Cl⁻ channel in nociception: inhibition by T16[inh]-A01 and activation by an N-aroylaminothiazole and capsaicin. *Society for Neuroscience Texas A & M University Chapter*. 3rd December 2015.
48. **Farah Deba**, Abisola Tairu, Jihad Ahmed, Tiffany R. Trevino, Ayman K. Hamouda (2015). Interaction of the Positive Allosteric Modulator LY2087101 with $\alpha 4\beta 2$ Nicotinic Acetylcholine Receptor. *Society for Neuroscience Texas A & M University Chapter*. 3rd December 2015.
49. Ze-Jun Wang, Tasnim S. Mohamed, **Farah Deba**, Kara Ramos, Ayman K. Hamouda (2015). 3-(2-chlorophenyl) 5-(5-methyl-1-(piperidin-4-yl)-1H-pyrazol-4-yl)isoxazole(CMPI) is a stoichiometry-selective Nicotinic Acetylcholine Receptor Positive Allosteric Modulator. *Society for Neuroscience Texas A & M University Chapter*. 3rd December 2015.
50. **Farah Deba** and B. Bessac (2015). Anoctamin 1 (ANO1/TMEM16A) activation induces nociception and inhibition attenuates TRPV1-mediated nociception. *Texas A&M institute for neuroscience 7th annual symposium*. March 27th, 2015.
51. **Farah Deba** and B. Bessac (2014). "Pharmaceutical Manipulation of ANO1 Ca²⁺-gated Cl⁻ Channel Activates and Modulates Nociceptive Neurons and Behaviors". the sixty-eighth annual meeting of the society of general physiologists: Sensory Transduction; 68th annual meeting and symposium marine biological laboratory, Woodshole, Massachusetts, Sep. 2-6, published in *J Gen Physiol*; 144:204. July 28, 2014.
52. Shanks, J., To, S. C. Krueger, P.T. Nicola, B.F. Bessac & **Farah Deba** (2013). "Ca²⁺-internal stores and voltage gated Ca²⁺ channels role in TRPV1 and TRPA1 induced intracellular Ca²⁺

- increase in sensory neurons". *Texas A&M HSC Rangel College of Pharmacy 2nd Research Colloquium*. Kingsville, Texas, USA, June 2013.
53. Salinas, S., **Farah Deba**, B.F. Bessac, E. Massa & R. Böhm (2013). "K⁺ channel mutants as Drosophila models of epilepsy and parosymal disorder". *Texas A&M HSC Rangel College of Pharmacy 2nd Research Colloquium*; Kingsville, Texas, USA, June 2013.
 54. N. Brinkley, N. Abraham, C. Smith-Baker, **Farah Deba**, M. Yakubu & B. Bessac (2013). "Lindane (gamma hexachlorocyclohexane) Exposure Impairs Ca²⁺-mediated Vascular Reactivity of the Endothelia and Smooth Muscle by Blocking Ano1 Ca²⁺-gated Cl⁻ channel". *Texas A&M HSC Rangel College of Pharmacy 2nd Research Colloquium*; Kingsville, Texas, USA, June 2013.
 55. **Farah Deba**, & B.F. Bessac (2013). "Ano1 Ca²⁺-gated Cl⁻ channel and intracellular Cl⁻ homeostasis in sensory neuron hypersensitivity/hyperalgesia". *Texas A&M College of Pharmacy 2nd research colloquium*. Kingsville, TX.
 56. **Farah Deba**, Trans Dang Xuan and Shinkichi Tawata (2006). Phytotoxic and fungitoxic activities of *Bidens pilosa* Linn. var. *Radiata*. *11th IUPAC International Congress of Pesticide Chemistry*. Kobe, Japan, p. 46.
 57. **Farah Deba**, Trans Dang Xuan and Shinkichi Tawata. (2007). Allelopathic potential of *Bidens pilosa* L. *Pesticide Science Society of Japan*, p. 80.
 58. **Farah Deba**, Shinkichi Tawata (2006). Herbicidal and Fungicidal activities of allelopathic compound mimosine. *Pesticide Science Society of Japan*, p.122.

BOOK CHAPTER

Farah Deba, Steven Peterson, Ayman K. Hamouda. (2019). An Animal Model to Test Reversal of Cognitive Decline Associated with Beta Amyloid Pathologies. *Methods in Molecular Biology. Psychiatric Disorders* pp 393-412.

TALK IN BIOPHYSICAL SOCIETY ON:

"Photoaffinity Labeling of $\alpha 4\beta 2$ Nicotinic Acetylcholine Receptor using [3H]-Labeled Positive Allosteric Modulators."

Biophysical Journal 112, 320a. 61th Biophysical Society meeting in New Orleans, Louisiana, Feb. 11- 15, 2017.

ORAL RESEARCH PRESENTATION

1. Interaction of LY2087101 with Nicotinic Acetylcholine Receptors. Sep. 28, 2016. Texas A&M RCOP seminar series presentations.
2. Stoichiometry-Dependent Effects of Nicotinic Acetylcholine Receptor Positive Allosteric Modulators, Feb. 03, 2016. Texas A&M RCOP seminar series presentations.
3. Anoctamin 1 Ca²⁺-gated Cl⁻ channel activates and modulates nociceptive neurons and behaviors. Research presented on Sep 12, 2014. Texas A&M RCOP seminar series presentations.
4. Ano1 Cl⁻ Channel role in inflammatory primary hyperalgesia. Research presented on Jan 22, 2014. Texas A&M RCOP seminar series presentations.

AWARDS

2023-2024: Maytee Fisch Professorship in Pharmacy endowment award. **(\$34,151.38)**
2024: **Class of 2024 Pharmaceutical Sciences Teacher of the Year.**

Farah Deba

- 2023:** Summer undergraduate research fellowship fund from the American Society for Pharmacology and Experimental Therapeutics (ASPET). (Summer Salary for Undergraduate student **\$2800**)
- 2022:** Mentor of the year at the UT Tyler Lyceum Research Conference. The Lyceum is an annual conference co-sponsored by the Honors Program and the Center for Excellence in Teaching and Learning.

FELLOWSHIPS

- 2003 - 2004:** Japan Student Services Organization (JASSO) Honors Scholarship (Around US\$ 800/month)
- 2004 - 2005:** Japanese Government (Monbukagakusho) Scholarship (Around US\$ 1,800/month after tuition fees exemption)
- 2005 - 2008:** Japanese Government (Monbukagakusho) Scholarship (Around US\$ 1,800/month after tuition fees exemption)

CERTIFICATES

The Association of College and University Educators (ACUE), 2024
Foundations and Principles and Practices of TBL, Feb 2019.
Fundamentals principles of TBL, TBL Collaborative, March 2019.
TBL 101 and TBL Advanced modules, Sep. 2019.

UNIVERSITY COMMITTEE SERVICE

- 2019- 2023: Member of the Faculty council of Fisch College of Pharmacy
2019- 2023: Member and Vice-chair in the Award Committee of Fisch College of pharmacy
2019- 2021: Member of the Professional and Academic Standards Committee (PASC) of Fisch College of Pharmacy
2019-2020: Member of the Faculty affairs Committee at UT at Tyler
2020-2022: Member of IACUC at UT at Tyler.
2022-: Member of Research Council at UT at Tyler.
2023-: Member of Research and scholarship committee.

SERVICE IN SCIENTIFIC SOCIETY

- 2021,2022: Judge in ASPET
2023: Judge in Biophysical Society
2023: Judge in 39th Annual Meeting Southern Biomedical Engineering Conference

RESEARCH SUPPORT AND/OR SCHOLASTIC PERFORMANCE

Pending

- 1. National Institute of Health-R15.** Regulation of joint pain via natural caffeic acid derivatives
Budget: \$441,000.00` Period: 09/01/2024-08/31/2027 **Role: PI**
- 2. National Institute of Health-R16.** Role of Salvianolic Acids in attenuating Transient Receptor Potential Melastatin-2 mediated neuropathic pain
Budget: \$441,000.00` Period: 04/01/2025-03/31/2029 **Role: PI**
- 3. National Institute of Health-R15.** Re-engineering tumor cell-derived extracellular vesicles with exogenous tags for downstream analysis
Budget: \$441,000.00` Period: 01/12/2025-12/31/2028 **Role: Collaborator**

Funded

1. **UT Tyler Internal Grant.** Effect of varying cooking and storing Techniques on starch structure, concentration, and bacterial degradation.

Budget: \$ 30,000

Period: 07/2023-06/2024

Role: CO-I

2. **Fisch College of Pharmacy Research and Scholarship Grant.** Title: Control of Neuropathic pain by Caffeic Acid Analogs via Nicotinic acetylcholine receptors modulation

Budget: 20,000

Period:2019 to 2023

Role: PI

3. **Fisch College of Pharmacy Research and Scholarship.** Stem Cell Therapy Benefits and Joint Pain Management in Athletes and East Texans.

Budget: 21,500

Period: 2021 to 2023

Role: PI (Multi PI)

4. **UT Tyler New Faculty Grant.** Control of neuropathic pain by modulating TRP Channel using Caffeic Acid Analogues

Budget: \$7,500

Period:2021 to 2022

Role: PI

Grant Submitted (Funding not recommended)

1. **J&J WiSTEM2D Scholars Award Program. Amount.** Search of Novel Natural Phenolics as Drug Targets for Neuropathic Pain

Amount: \$100,000

Period: 2020-2021

Role: PI

2. **PhRMA Foundation.** Search of Novel Natural Phenolics as Drug Target for Neuropathic Pain

Amount: \$100,000

Period: 2020-2021

Role: PI

3. **Muscular Dystrophy Association.** Monitoring progression of Duchenne muscular dystrophy from salivary biomarkers

Amount: \$25,000

Period: 2021-2022

Role: Co- PI

Not funded

4. **American Association of College of Pharmacy (AACP).** Screening Caffeic Acid Analogs as Targeting Drug for Neuropathic Pain

Amount: \$10,000

Period: 2020-2021

Role: PI

5. **American Association of College of Pharmacy (AACP).** Control of Neuropathic Pain by Caffeic Acid Analogs via nicotinic AChRs modulation

Amount: \$10,000

Period: 2021-2022

Role: PI

6. **American Association of College of Pharmacy (AACP).** Control of neurophysiological diseases by salvianolic acid

Amount: \$10,000

Period: 2022-2023

Role: PI

7. **National Institute of Health-R03.** Profiling interactome of TRPM2 ion channel by affinity crosslinking proteomics.

Amount: \$155,194

Period: 09/01/2021 -08/31/2023

Role: CO-PI

8. **National Institute of Health-R21.** Development of transgenic rat model for Alzheimer's disease and evaluation of the positive allosteric modulator in-vivo activity.

Amount: \$275,000.00

Period: 12/01/2023-11/30/2025

Role: PI

9. **National Institute of Health-1R15 NS093590 (re-submission).** Neuronal nicotinic acetylcholine receptors (nAChRs)

Budget: \$449,450

Period: 07/01/2020 to 06/30/2023

Role: CO-PI

10. **National Institute of Health-R15.** Regulation of joint pain via natural caffeic acid derivatives

Budget: \$441,000.00`

Period: 07/01/2023-06/30/2026

Role: PI

11. **National Institute of Health.** Optimizing nanoparticle tumor delivery by using tumor macrophage-derived extracellular vesicles.

Budget: \$ 1470,000.00

Period: 07/2022-06/2026

Role: Collaborator

12. **NSF:** Elucidating unique properties resulting from the interaction of synthetic nanoparticles with exosomes.

Budget: \$ 474,863.00

Period: 06/2024-05/2027

Role: Collaborator

Farah Deba

13. **NSF: MRI: Track #1** Acquisition of Fourier transform infrared Microscopy for
Multidisciplinary Materials

Budget: \$ 398,790

Period: 05/2024-04/2027

Role: PI