Munmun Chattopadhyay, M.Sc., Ph.D.
Associate Professor,
Center of Emphasis in Diabetes and Metabolism
Paul L. Foster School of Medicine
Texas Tech University Health Sciences Center
El Paso (TTUHSC El Paso)
5001 El Paso Drive, El Paso, Texas 79905

Office: MSBI Room 4111
Lab: MSBI, Room 4210
Ph: (915) 215 4170 (O)
Email: munmun.chattopadhyay@ttuhsc.edu
https://elpaso.ttuhsc.edu/research/MTM/coe/diabetes-and-metabolism/faculty.aspx

Education and Training

Sept.1988-Aug.1991	B.Sc. (Zoology Hons.) University of Calcutta Calcutta, India
Sept.1991- Aug.1993	M.Sc. (Zoology) Jiwaji University Gwalior, India
Sept.1993- Aug.1995	Junior Research Fellow University Grants Commission
Sept.1995- Mar.1998	Senior Research Fellow University Grants Commission
May 1998	Ph.D. (Neurosciences) Jiwaji University Gwalior, India
Apr.1998- Nov.1999	Post-doctoral Research Fellow Molecular Genetics National Institute of Immunology Delhi, India
Dec.1999-Jun. 2004	Post-doctoral Research Fellow Department of Neurology University of Pittsburgh Pittsburgh, Pennsylvania

Academic Appointments

Jul. 2004 – Aug. 2010	Research Investigator Department of Neurology University of Michigan Ann Arbor, Michigan
Sept. 2010 – Mar. 2014	Research Assistant Professor Department of Neurology University of Michigan Ann Arbor, Michigan

Apr. 2014 – Aug.2021	Assistant Professor Center of Emphasis in Diabetes and Metabolism Paul L. Foster School of Medicine Graduate School of Biomedical Sciences Texas Tech University Health Sciences Center El Paso, El Paso, Texas.
Sept. 2017 – Current	Assistant/Associate Professor (Adjunct) Graduate School, Biomedical Engineering The University of Texas at El Paso (UTEP) El Paso, Texas
Sept. 2021 – Current	Associate Professor Center of Emphasis in Diabetes and Metabolism Paul L. Foster School of Medicine Graduate School of Biomedical Sciences Texas Tech University Health Sciences Center El Paso, El Paso, Texas.

Administrative Appointments

Sept. 2020 – Current	Chair Institutional Animal Care and Use Committee Texas Tech University Health Sciences Center El Paso, El Paso, Texas

Teaching Interests and Experiences

1. Neurobiology
2. Cell Biology
3. Biochemistry
4. Immunology
5. Medical Physiology, Anatomy, Space health
6. Epigenetics, nutrition and human diseases

Previous teaching experience: From September 1994-April 1998 to senior year Graduate students at School of Studies in Zoology, Jiwaji University, Gwalior, India. I taught introductory cellular biology, comparative vertebrate anatomy and introductory neurobiology for three semesters every year. At University of Michigan, my teaching responsibilities involved training undergraduate and graduate students to perform research independently. Since April 2014, I am actively teaching many classes at the graduate school. I spend 12-15 hours every week to teach in class as well as train medical and graduate students in the lab to perform research.

Current Teaching Responsibilities at GSBS, TTUHSC El Paso (Aug 2014 – present)

Course number: GSBS 5224, Course Name: Cellular and Molecular Neuroscience (Pain and Degeneration-regeneration).

Course number: GBSE 5301, Course Name: Biochemistry (Lipid structure & function and Lipid Biosynthesis)

Course number: GBSE 5302, Course Name: Cell Biology (Biomembrane Structure & Function and Integrating Cells into Tissue/Extracellular Matrix).

Course number: GSBS 5223, Course Name: Nutrition, Epigenetics and Human diseases **(Course Director).**

Course number: GSBS 5201, Course Name: Lab methods in Biosciences (Epigenetic methodologies).

Course number: GSBS 5222, Course Name: Advanced Human Genetics (Genetics of Diabetes).

Course number: GSBS 5104, Course Name: Seminars in Biomedical Sciences (Diabetic neuropathy).

Course number: GSBS 5225, Course Name: Immunology (Inflammatory diseases and allergies).

Course number: GSBS 5227, Course Name: Medical Physiology (Metabolism).

Undergraduate and Graduate student research training (2004-present)

I have trained 42 undergraduate students (2004-2023) and graduate student for lab rotations from graduate program, University of Michigan (U of M) (2006 - 2009), TTUHSC GSBS (2014-2020) as well as medical students TTUHSC PLFSOM (2015-2020). Under my guidance, these students learnt how to compile results, analyze and present data. I have trained them to perform animal behavior experiments. All the students were also trained in tissue culture techniques and procedures.

	Name	Years in the lab	Current Position
1.	Sophia Gonzalez	(05/23-Present)	Graduate Student, TTUHSC, El Paso, TX
2.	Eileen Chen	(03/23-Present)	Medical Student, TTUHSC, El Paso, TX
3.	Kathryn Mcgrath	(03/23-Present)	Medical Student, TTUHSC, El Paso, TX
4.	Ryan Cain	(03/23-Present)	Medical Student, TTUHSC, El Paso, TX
5.	Condey Calhoun	(05/22-05/23)	Graduate Student, TTUHSC, El Paso, TX
6.	Rory McLeod	(08/22-05/23)	Graduate Student, TTUHSC, El Paso, TX
7.	Phong Nguyen	(08/20-Present)	Medical Student, TTUHSC, El Paso, TX
8.	Calandra Jones	(09/20-05/22)	Graduate Student, TTUHSC, El Paso, TX
9.	Rupsikha Bora	(09/20-05/22)	Graduate Student, TTUHSC, El Paso, TX
10.	Jesus Gurora	(08/20-05/21)	Research Associate, TTUHSC, El Paso, TX
11.	Nmesoma Nwokoye	(03/20-05/21)	Graduate Student, TTUHSC, El Paso, TX
12.	Samantha Lujan	(03/20- 11/20)	Medical Student, TTUHSC, El Paso, TX
13.	Mariella Weber	(03/20- 11/20)	Medical Student, TTUHSC, El Paso, TX
14.	Narah Alcoreza	(09/18-05/20)	Research Associate, TTUHSC, El Paso, TX.
15.	Diana Sandoval	(08/19-05/20)	Research Associate, Dallas, TX.
16.	Deborah Aldrete	(11/19-05/20)	Graduate Student, TTUHSC, El Paso, TX.
17.	Natalie Satterfield	(03/19- 11/19)	Medical Student, TTUHSC, El Paso, TX.
18.	Hiral Waghela	(03/19- 11/19)	Medical Student, TTUHSC, El Paso, TX.
19.	Robert Martinez	(05/18- 05/19)	Graduate Student, TTUHSC, El Paso, TX.
20.	Jasmine Cazares	(08/18- 05/19)	Graduate Student, TTUHSC, El Paso, TX.
21.	Bryan Koppa	(03/18- 11/18)	Medical Student, TTUHSC, El Paso, TX.
22.	Carly Levin	(03/18- 11/18)	Medical Student, TTUHSC, El Paso, TX.
23.	Mona Heydarian	(03/17- 05/18)	Academic Tutor, EPCC, El Paso, Texas.
24.	Elizabeth McCain	(03/17- 11/17)	Medical Student, TTUHSC, El Paso, TX.
25.	Huma Butta	(03/17- 11/17)	Medical Student, TTUHSC, El Paso, TX.

26. Josue Enriquez	(03/16 – 05/17)	Ph.D. Student, TTUHSC, Lubbock, TX.
27. Pompeyo Quesada	(03/16 – 11/19)	Medical Student, TTUHSC, El Paso, TX.
28. Roberto Solis	(03/16 – 11/17)	PGY-1, Otolaryngology, UC Davis, CA.
29. Mona Heydarian	(06/16 - 08/16)	Academic Tutor, EPCC, El Paso, Texas.
30. Swetak Pradhan	(06/15- 12/15)	Medical Student, Baylor College of Medicine, TX.
31. Amanda Yanez	(08/14 – 05/15)	Technical staff, VA Hospital, El Paso, TX.
32. Aviance Ramsey	(06/14-08/14)	Graduate Student, UTEP, Texas.
33. HaeJee Yoon	(08/12- 03/14)	Research Assistant, U of M, Michigan.
34. Danielle Isham	(08/12- 03/14)	Research Scholar, Michigan Nanotechnology Inst. U of M, Michigan.
35. Rayen Patnaik	(08/12- 12/13)	Business Associate, Michigan.
36. Mona Fayad	(03/11-03/14)	PGY1, Medicine, Icahn School of Medicine, NY.
37. Christina Galloway	(04/10- 08/12)	Nurse, U of M, Michigan.
38. Deborah Blumenthal	(05/08- 08/10)	Business Analyst, Washington.
39. Blair Sutton	(08/08- 05/09)	Field Medical Affairs Manager, Depomed, Inc.
40. Priyanka Jain	(08/08- 06/09)	Internist, Mercy Health Physicians, Toledo, OH.
41. Kathryn Maier	(04/07-04/10)	Pediatric Ophthalmologist, UT, Houston.
42. Micheal Mooney	(04/07- 05/09)	Neurosurgeon, Barrow Neurological Institute, AZ.
43. Jasprit Maraher	(08/07- 05/08)	ICU RN, Rush University Medical Center, Chicago.
44. Yurika Gunawan	(01/06- 05/07)	Attending Physician, Medical School, Singapore.
45. Jeffery Collins	(08/05- 08/07)	Asst. Professor, Emory University, Atlanta.
46. Claire Walter	(09/04- 05/08)	Clinical Pharmacy Specialist in Cardiology, Allegheny General Hospital, Pittsburgh, PA.

I have published my work with my student as a first and second author in peer-reviewed journals. I have presented a number of abstracts at scientific meetings and conferences with my students as first or second contributors. My student received Best Poster Award in Undergraduate Research Opportunity Program Symposium at University of Michigan, Ann Arbor.

Papers published with students (in bolds)

1. Thakur V., Gonzalez M., **Parada M**., **Martinez R**. and **Chattopadhyay M.*** (2023) Role of class I histone deacetylase in diabetic painful neuropathy. In press. Molecular Neurobiology.

2. Thakur V., Bashashati M, **Enriquez J; Chattopadhyay M.*** (2022). Inhibiting fatty acid amide hydrolase ameliorates enteropathy in diabetic mice: a cannabinoid 1 receptor mediated mechanism. Journal of Veterinary Sciences. 2022, 9(7), 364; (Impact factor 2.58)

3. **R. El Khoury**, N. Nagiah, J. Mudloff, V. Thakur, **M. Chattopadhyay,** B. Joddar (2021). 3D Bioprinted Spheroidal Droplets for Engineering the Heterocellular Coupling between Cardiomyocytes and Cardiac Fibroblasts. Cyborg and Bionic Systems. Vol 2021; 9864212. https://doi.org/10.34133/2021/9864212.

4. V. Thakur, **N. Alcoreza,** J. Cazares and **M. Chattopadhyay*** (2021). Changes in Stress-Mediated Markers in a Human Cardiomyocyte Cell Line under Hyperglycemia. Int J Mol Sci, 2021, 22 (19):10802. doi: 10.3390/ijms221910802. (Impact factor 5.9)

5. V. Thakur, N. **Alcoreza, M. Delgado, B**. Joddar, **M. Chattopadhyay*** (2021). Cardioprotective

Effect of Glycyrrhizin on Myocardial Remodeling in Diabetic Rats. Biomolecules 11 (4), 569. Doi: https://doi.org/10.3390/biom11040569.

6. **M. Alonzo, M. Delgado, C**. Cleetus, S. Anil Kumar, V. Thakur, **M. Chattopadhyay,** B. Joddar (2020). Methods for Histological Characterization of Cryo-Induced Myocardial Infarction in a Rat Model. Acta Histochemica; Oct. 2020; 122 (7). https://doi.org/10.1016/j.acthis.2020.151624.

7. Anil Kumar, S; **Alonzo, M**; Allen, S; Abelseth, L; Thakur, V; Akimoto, J; Ito, Y; Willerth, S; Suggs, L; **Chattopadhyay, M;** Joddar, B (2019). A visible light crosslinkable, fibrin-gelatin based bioprinted cardiac patch with human cardiomyocytes and fibroblasts. ACS Biomaterials Science & Engineering 2019, 5, 9, 4551-4563. doi: 10.1021/acsbiomaterials.9b00505.
8. Anil Kumar S, Allen SC, **Tasnim N**, Akter T, Park S, Kumar A, **Chattopadhyay M**, Ito Y, Suggs LJ, Joddar B (2019). The applicability of furfuryl-gelatin as a novel bioink for tissue engineering applications. J Biomed Mater Res B Appl Biomater. 2019 Feb; 107(2):314-323. doi: 10.1002/jbm.b.34123.

9. **Tasnim N**., Thakur V., **Chattopadhyay M.*,** Joddar B*. (2018). The efficacy of Graphene-foams towards the adhesion, proliferation, and expression of neuronal-phenotype by dopaminergic neurons differentiated from mesenchymal stem cells. Stem Cell International. 2018 Jun 3; 2018: 3410168. doi: 10.1155/2018/3410168.

10. Joddar B.*, **Tasnim N.**, Thakur V., Kumar A., Mccallum R., **Chattopadhyay M.*** (2018) Delivery of mesenchymal stem cells from gelatin-alginate hydrogels to stomach lumen for treatment of gastroparesis. Bioengineering: 2018; 5(1).

11. Thakur V., Nargis S., Gonzalez M., **Pradhan S**., and **Chattopadhyay M.*** (2017) Role of Glycyrrhizin in the reduction of inflammation in diabetic kidney disease. Nephron: 2017; 137 (2):137-147. doi: 10.1159/000477820.

12. **Yoon H**, Thakur V, **Isham D, Fayad, M** and **Chattopadhyay M*** (2015). Moderate exercise training attenuates inflammatory mediators in DRG of Type 1 diabetic rats. ***Experimental Neurology***, 267: 107-114.

13. **Ortmann K.M.** and **Chattopadhyay M.*** (2014). Decrease in neuroimmune activation by HSV-mediated gene transfer of TNFα soluble receptor alleviates pain in rats with diabetic neuropathy. ***Brain, Behavior and Immunity*****,** 41:144-51.

14. **Chattopadhyay M*, Walter C,** Mata M, and Fink DJ. Neuroprotective effect of herpes simplex virus-mediated gene transfer of erythropoietin in hyperglycemic dorsal root ganglion neurons. ***Brain***, 2009 132(4):879-888. **Editorial Comments in: Brain**, 132(4):825-826.

Abstracts published with students (in bolds)

1. **C. Jones,** V. Thakur, and M. Chattopadhyay. Role of Endoplasmic Reticulum Stress in Hyperglycemic Sensory Neurons. 11th Annual GCC Translation Pain Research Conference, April 14, 2022.
2. **R. Bora**, V. Thakur and M. Chattopadhyay. Hyperglycemia Induced Endoplasmic Reticulum Stress in Cardiomyocytes. 14th Annual Research Symposium, Paul L. Foster School of Medicine, TTUHSC, El Paso, TX; April 18th-20th 2022.
3. **Waghela, H**., Thakur, V. and Chattopadhyay, M. Effects of Hyperglycemia-Induced Stress in a Human Cardiomyocyte Cell Line. 81st Scientific Sessions; Annual Meeting of American Diabetes Association, Virtual, June 25-29, 2021. Diabetes 70 (Supplement 1).

4. **Satterfield, N**., Thakur, V. and Chattopadhyay, M. Histone Modifications and CXCR4 Chemokine Receptor Signaling in Hyperglycemic DRG Neurons. 81st Scientific Sessions; Annual Meeting of American Diabetes Association, Virtual, June 25-29, 2021. Diabetes 70 (Supplement 1).

5. **Matthew Alonzo**, Shweta Anil Kumar, Munmun Chattopadhyay, Yoshihiro Ito, Stephanie Willerth, Laura Suggs, Binata Joddar. A next generation 3D bioprinted cardiac patch with human cardiomyocytes and fibroblasts. Materials Science & Technology; Sept 29-Oct 03, 2019; Portland, OR, USA.

6. Binata Joddar, **Shweta Anil Kumar, Matthew Alonzo**, Vikram Thakur, Munmun Chattopadhyay. A 3D bioprinted human cardiac cell platform to model the pathophysiology of diabetes. Basic Cardiovascular Sciences Scientific Sessions: Emerging Opportunities in Cardiovascular Diseases. July 27–30, 2020; Virtual Event, American Heart Association.

7. Vikram Thakur, **Narah Alcoreza, Bryan Koppa** and Munmun Chattopadhyay. Epigenetic changes in DRG neuronal cells under hyperglycemia. 13th Annual TTUHSC Research Colloquium; Paul L. Foster School of Medicine, TTUHSC, El Paso, TX. April 17-19, 2019.

8. **P. R. Quesada, R.N. Solis,** V. Thakur, M. A. Gonzalez, **J. Enriquez,** M. Chattopadhyay. The Role of Histone Deacetylases in the Development of Diabetic Complications: Faces of Diabetes Conference, El Paso, TX; Oct 21st 2016. ***2nd Place Poster Award.***

9. **J. Enriquez,** V. Thakur, M. A. Gonzalez, M. Chattopadhyay. Role of HMGB1 Inhibitor Glycyrrhizin in Diabetic Nephropathy: Faces of Diabetes Conference, El Paso, TX; Oct 21st 2016. ***3rd Place Poster Award.***

10. V. Thakur, M. Gonzalez, **J. Enriquez** and M. Chattopadhyay. The Role of Histone Deacetylases in the Development of Diabetic Complications: 11th Annual TTUHSC Research Colloquium; Paul L. Foster School of Medicine, TTUHSC, El Paso, TX; April 20th 2017.

11. V. Thakur, **J. Enriquez,** M. Gonzalez, and M. Chattopadhyay. Epigenetic Modifications in Diabetic Nephropathy. 77th Annual Meeting of American Diabetes Association, San Diego, CA, USA, June 9-13, 2017.

12. **Amanda Yanez** and Munmun Chattopadhyay. Role of Neuropeptides in the Gastrointestinal Tract Disorder of Diabetic Rats. Research Colloquium, Graduate School of Biomedical Sciences (GSBS); TTUHSC Lubbock, TX. March 12, 2015.

13. **Aviance Ramsey** and Munmun Chattopadhyay. Exercise training attenuates inflammatory mediators in DRG and spinal cord of Type 1 diabetic rats. Summer Accelerated Biomedical Research (SABR) Program, Graduate School of Biomedical Sciences (GSBS); TTUHSC El Paso, TX. June –August 2014.

14. **Isham D.** and Chattopadhyay, M. Anti-inflammatory effects of exercise in rats with painful diabetic neuropathy. Undergraduate Research Opportunity Program, University of Michigan, Ann Arbor, MI USA, April 2013. ***Best Poster Award.***

15. **Pattnaik R.** and Chattopadhyay, M. Behavioral effects of exercise in rats with painful diabetic neuropathy. Undergraduate Research Opportunity Program, University of Michigan, Ann Arbor, MI USA, Dec 2012.

16. Meyers, J., **Galloway, C.** and Chattopadhyay, M. Role of exercise in the reduction of inflammatory mediators in painful diabetic neuropathy. 42nd Annual Meeting of Society for Neuroscience, New Orleans, LA, USA, Oct 13-17, 2012.

17. Chattopadhyay M., **Galloway C., Maier K.,** Mata M., and Fink D.J. Decrease in neuroimmune activation by HSV-mediated gene transfer of TNFsR alleviates pain in rats with diabetic neuropathy. Program in Biomedical Sciences Recruit, Ann Arbor, MI, USA, Feb 4th, 2012.

18. **Galloway C.,** Chattopadhyay M. Inflammatory mediators in the pathogenesis of pain in Type 2 diabetic neuropathy. Neuroscience Graduate Program Recruit, Ann Arbor, MI, USA, Jan 14, 2012.
19. Chattopadhyay, M. and **Fayad, M.** Role of Exercise in the Reduction of Inflammatory Mediators in Painful Diabetic Neuropathy. Spring Forum, Undergraduate Research Opportunity Program, University of Michigan, Ann Arbor, MI USA, April 2012.
20. **Galloway C.,** Chattopadhyay M. Role of inflammatory mediators in development of pain in Type 2 diabetic neuropathy. Peripheral Nerve Society Biennial meeting. Potomac, MD, USA, Jun 24-29, 2011.
21. **Galloway C.,** Chattopadhyay M. Role of inflammatory mediators in development of pain in Type 2 diabetic neuropathy. Winter Symposium 2011; Michigan Diabetes Research Training Center, Ann Arbor, USA, March 12, 2011.
22. Chattopadhyay M., **Maier K.,** Mata M., Fink D.J. Decrease in neuroimmune activation by HSV-mediated gene transfer of TNFsR alleviates pain in rats with diabetic neuropathy. Winter Symposium 2011; Michigan Diabetes Research Training Center, Ann Arbor, USA, March 12, 2011.
23. Chattopadhyay M., **Maier K.,** Mata M., Fink D.J. Regulation of Nav1.7 in painful diabetic neuropathy by GPCR activation. Peripheral Nerve Society Biennial meeting, Wurzburg, Germany, July 4-8, 2009.
24. Chattopadhyay M, **Walter C,** Mata M, and Fink DJ. Continuous delta opioid receptor activation reduces neuronal voltage gated sodium channel (Nav1.7) levels through activation of protein kinase c and p38 in painful diabetic neuropathy. 12th World Congress on Pain; International Association for the Study of Pain, August 17-22, 2008, Glasgow, Scotland.
25. Chattopadhyay M., **Walter C.,** Mata M., Fink D.J. Continuous Production of Enkephalin by HSV-mediated Gene Transfer Blocks Phosphorylation of p38 MAPK and PKC in Painful Diabetic Neuropathy. 37th Annual Meeting of Society for Neuroscience, San Diego, CA, USA, Nov 3-7, 2007.
26. Chattopadhyay M., **Walter C.,** Glorioso J., Mata M., Fink D.J. HSV-mediated gene transfer of erythropoietin to prevent degeneration in diabetic neuropathy, Peripheral Nerve Society Biennial meeting, Snowbird, UT, USA, July 14-18, 2007.
27. Chattopadhyay M., **Walter C.,** Mata M., Fink D.J. HSV-mediated transfer of TNFα soluble receptor to DRG reduces pain-related behaviors in diabetic neuropathy, 36th Annual Meeting of Society for Neuroscience, Atlanta, GA, USA, Oct. 14-18, 2006.

Mentorship

Thesis Co-advisor: Shweta Anil Kumar, Doctoral candidate in Materials Science and Biomedical Engineering, UTEP El Paso, TX.
Title: Bio-fabrication of a functional cardiac tissue-on-a-chip.

Thesis Co-advisor: Matthew Alonzo, Doctoral candidate in Materials Science and Biomedical Engineering, UTEP El Paso, TX.
Title: Engineering cardiac tissues with three-dimensional bio-printing for biomedical applications.

Thesis Co-advisor: Monica Delgado, Doctoral candidate in Materials Science and Biomedical Engineering, UTEP El Paso, TX.
Title: Integration Of Biomedical Engineering And Computer Vision For Morphological Alteration Identification In Diabetic Cardiomyopathy: An Analysis And Evaluation Strategy

Research Interests

1. Diabetic complications: Neuropathy, GI disorders, Cardiovascular and Neurovascular.
2. Nerve injury, Pain, Inflammation, Oxidative stress.
3. Epigenetic mechanisms, Tissue engineered disease models, Space biology and health.

Current Research Support

1. **NIH R01; PI: Mohammed, Co-PI: Chattopadhyay** *09/07/23-08/31/28*

   Targeting methylglyoxal-induced diabetic neuropathic pain through the integrated stress response. Total Costs: $1,045,000; 20% effort.

2. **NSF/CASIS, PI: Chattopadhyay** *09/01/19-08/31/23*

   Collaborative Proposal: ISS: Studying the Effects of Microgravity on 3D Cardiac Organoid Cultures; *Total Costs: $256,892;* 15% effort.

3. **TTUHSC El Paso Seed SARP Grant; PI: Chattopadhyay** 06/01/21-07/31/23
   Hyperglycemia mediated changes in cardiomyocyte function. Total Costs: $4,000.

Pending grant applications

1. NIH-R15. PI: Chattopadhyay
   Role of HMGB1 in diabetic neuropathy
   Discussed, scored; waiting for council review.

2. NASA: Space Biology Research Studies; PI: Chattopadhyay
   Epigenetic changes in sensory neurons due to environmental stressors in spaceflight.
   Invited for full proposal.

Completed Research Support

1. **TTUHSC El Paso / UTEP Joint Seed Grant, PI: Chattopadhyay/Joddar** 06/01/21-12/15/22

   Application of a tissue-engineered gastric patch for regeneration of interstitial cells of Cajal (ICC) in a gastroparetic mouse model. Total Costs: $25,000.

2. **TTUHSC El Paso Seed SARP Grant; PI: Chattopadhyay** *06/01/19-07/31/22*
   CXCR4 Receptor Signaling and Histone Modifications in Hyperglycemic Cardiomyocyte and Sensory Neuronal Cell Lines; Total Costs: $4,000.

3. **Edward N. and Margaret G. Marsh Foundation; PI: Chattopadhyay 12/01/19-11/30/21**
   Gastroparesis, a Mysterious Stomach Disorder and its Prevalence in Women; Total Costs: $100,429; 15% effort.

4. **TTUHSC El Paso Seed SARP Grant; PI: Chattopadhyay 06/01/18-07/31/21**
   Role of histone modifications in hyperglycemic dorsal root ganglia neurons and NRK52E kidney cells; Total Costs: $3,000.

5. **TTUHSC El Paso Seed SARP Grant; PI: Chattopadhyay 06/01/17-07/31/20**
   Role of histone deacetylases in the brain in diabetic painful neuropathy; Total Costs: $3,000.

6. **TTUHSC El Paso Seed SARP Grant; PI: Chattopadhyay 6/01/16-07/31/19**
   Role of Inflammatory Mediators in Diabetic complications. Total Costs: $4,000.

7. **Lizanell and Colbert Coldwell Foundation Grant; PI: Chattopadhyay 3/01/17-07/31/18**
   Epigenetic changes in the gut of diabetic gastroparesis patients; 10% effort; *Total Costs: $100,000*

8. **TTUHSC El Paso Seed Grant, PI: Chattopadhyay 9/01/17-08/31/18**
   Role of histone deacetylases in nerve injury and pain: Grant # 183329-533312-20 *Total Costs: $29,000.*
9. **TTUHSC El Paso Mini Seed Grant PI: Chattopadhyay 3/01/17-08/31/17**
   A mesenchymal stem cell based tissue engineered patch to restore normal gastric histology; Total costs $5,500
10. **Periphagen Inc; (PI: Chattopadhyay) 12.1.14-8.31.17**
    Direct injection of HSV vector in DRG of neuroma animals. Grant # PGN-14-1880 Total costs $125,000; 10% effort.
11. **American Diabetes Association: Basic Science Award. (PI: Chattopadhyay) 7.1.12 –6.30.16**
    The role of neuroinflammation in the pathogenesis of pain in diabetic neuropathy. Grant #7-12-BS-021; Total costs $345,000; 20% effort.
12. **TTUHSC El Paso Seed Grant PI: Chattopadhyay 5/01/15-04/30/16**
    Identification of inflammatory markers in kidney of diabetic rats; Total Costs: $24,000
13. **Michigan Diabetes Research and Training Center PI: Chattopadhyay** (12/1/09-/28/11) *Role of neuroinflammation in painful neuropathy in Type 2 diabetes. Grant # R000617 Total costs $75,000;*
14. **Diabetes Action Research and Education Foundation (PI: Chattopadhyay)** (1/1/06 – 12/31/08)
    Erythropoietin Gene Transfer for Diabetic Neuropathy. Total costs $50,000; Grant # 05-4921

Publications

Peer Reviewed articles

1. Thakur V., Gonzalez M., **Parada M**., **Martinez R**. and **Chattopadhyay M.*** (2023) Role of class I histone deacetylase in diabetic painful neuropathy. *In press*. Molecular Neurobiology.
2. Thakur V., Bashashati M, Enriquez J; **Chattopadhyay M.*** (2022). Inhibiting fatty acid amide hydrolase ameliorates enteropathy in diabetic mice: a cannabinoid 1 receptor mediated mechanism. ***Journal of Veterinary Sciences***. 2022, 9(7), 364. doi.org/10.3390/vetsci9070364.
3. Alonzo, M; El Khoury, R; Nagiah, N; Thakur, V; **Chattopadhyay, M***. and Joddar, B* (2022). 3D Biofabrication of a cardiac tissue construct for sustained longevity and function. ***ACS Applied Materials & Interfaces***; *14, 19, 21800–21813*. https://doi.org/10.1021/acsami.1c23883.
4. R. El Khoury, N. Nagiah, J. Mudloff, V. Thakur, **M. Chattopadhyay,** B. Joddar (2021). 3D Bioprinted Spheroidal Droplets for Engineering the Heterocellular Coupling between Cardiomyocytes and Cardiac Fibroblasts. ***Cyborg and Bionic Systems***. Vol 2021; 9864212. https://doi.org/10.34133/2021/9864212.
5. V. Thakur, N. Alcoreza, J. Cazares and **M. Chattopadhyay*** (2021). Changes in Stress-Mediated Markers in a Human Cardiomyocyte Cell Line under Hyperglycemia. ***Int J Mol Sci***, 2021 22(19):10802. doi: 10.3390/ijms221910802.
6. P. Dubey, S. Reddy, S. Boyd, C. Bracamontes, S. Sanchez, **M. Chattopadhyay**, A. Dwivedi (2021). Effect of Nutritional Supplementation on Oxidative Stress and Hormonal and Lipid Profiles in PCOS-Affected Females. ***Nutrients*** 2021, 13(9), 2938; https://doi.org/10.3390/nu13092938.
7. V. Thakur, N. Alcoreza, M. Delgado, B. Joddar, **M. Chattopadhyay*** (2021). Cardioprotective Effect of Glycyrrhizin on Myocardial Remodeling in Diabetic Rats. ***Biomolecules*** 11 (4), 569. Doi: https://doi.org/10.3390/biom11040569.
8. M. Alonzo, M. Delgado, C. Cleetus, S. Anil Kumar, V. Thakur, **M. Chattopadhyay**, B. Joddar

(2020). Methods for Histological Characterization of Cryo-Induced Myocardial Infarction in a Rat Model. ***Acta Histochemica***; Oct. 2020; 122 (7). https://doi.org/10.1016/j.acthis.2020.151624.

9. Dubey P., Thakur V. and **Chattopadhyay M.*** (2020). Role of Minerals and Trace Elements in Diabetes and Insulin Resistance. ***Nutrients*** 2020 Jun 23; 12(6). doi: 10.3390/nu12061864.

10. Thakur V, Sadanandan J, **Chattopadhyay M.*** (2020) High-Mobility Group Box 1 Protein Signaling in Painful Diabetic Neuropathy. ***Int J Mol Sci***. 2020 Jan 30; 21(3). doi: 10.3390/ijms21030881.

11. Anil Kumar, S; Alonzo, M; Allen, S; Abelseth, L; Thakur, V; Akimoto, J; Ito, Y; Willerth, S; Suggs, L; **Chattopadhyay, M**; Joddar, B (2019). A visible light crosslinkable, fibrin-gelatin based bioprinted cardiac patch with human cardiomyocytes and fibroblasts. ***ACS Biomaterials Science & Engineering*** *2019*, 5, 9, 4551-4563. doi: 10.1021/acsbiomaterials.9b00505.

12. Anil Kumar S, Allen SC, Tasnim N, Akter T, Park S, Kumar A, **Chattopadhyay M**, Ito Y, Suggs LJ, Joddar B (2019). The applicability of furfuryl-gelatin as a novel bioink for tissue engineering applications. ***J Biomed Mater Res B Appl Biomater***. 2019 Feb; 107(2):314-323. doi: 10.1002/jbm.b.34123.

13. Tasnim N., Thakur V., **Chattopadhyay M***. Joddar B*. (2018). The efficacy of Graphene-foams towards the adhesion, proliferation, and expression of neuronal-phenotype by dopaminergic neurons differentiated from mesenchymal stem cells. ***Stem Cell International***. 2018 Jun 3; 2018: 3410168. doi: 10.1155/2018/3410168

14. Thakur V, **Chattopadhyay M*** (2018). Early urinary markers for diabetic and other kidney diseases. ***Current drug targets***. 19 (7), 825-831.

15. Joddar B.*, Tasnim N., Thakur V., Kumar A., Mccallum R., **Chattopadhyay M**.* (2018) Delivery of mesenchymal stem cells from gelatin-alginate hydrogels to stomach lumen for treatment of gastroparesis. ***Bioengineering***: 2018; 5(1).

16. Thakur V., Nargis S., Gonzalez M., Pradhan S., and **Chattopadhyay M**.* (2017) Role of Glycyrrhizin in the reduction of inflammation in diabetic kidney disease. ***Nephron*****:** 2017; 137 (2):137-147. doi: 10.1159/000477820.

17. Thakur V, Gonzalez M, Pennington K, Nargis S, **Chattopadhyay M.*** (2016). Effect of exercise on neurogenic inflammation in spinal cord of Type 1 diabetic rats. ***Brain Research***: 2016; 1642:87-94.

18. Thakur V, Gonzalez M, Pennington K, **Chattopadhyay M.*** (2016). Viral vector mediated continuous expression of interleukin-10 in DRG alleviates pain in type 1 diabetic animals. ***Mol Cell Neurosci.*** 2016; 72:46-53.

19. Subramani R, Gangwani L, Nandy SB, Arumugam A, **Chattopadhyay M,** Lakshmanaswamy R. **(**2015). Emerging roles of microRNAs in pancreatic cancer diagnosis, therapy and prognosis (Review). ***Int J Oncol****. 2015 Aug 21.*

20. Yoon H, Thakur V, Isham D, Fayad M, and **Chattopadhyay M*** (2015). Moderate exercise training attenuates inflammatory mediators in DRG of Type 1 diabetic rats. ***Experimental Neurology***, 2015; 267:107-114.

21. Yoon H, Thakur V and **Chattopadhyay M* (**2015). Role of neuroinflammation in the pathogenesis of painful neuropathy in Type 2 diabetes. ***Clinical Journal of Allergy and Immunology***, 1(2): 012.

22. **Chattopadhyay M*** (2014). 'Diabetic Neuropathy: Is there a pain free solution?' ***Austin J Neurological Disorders and Epilepsy***. 2014; 1(2): 2.

23. Ortmann K.M. and **Chattopadhyay M*.** (2014). Decrease in neuroimmune activation by HSV-mediated gene transfer of TNFα soluble receptor alleviates pain in rats with diabetic neuropathy. ***Brain, Behavior and Immunity***, 41:144-51.

24. **Chattopadhyay M*.** (2013). Targeted delivery of growth factors by HSV-mediated gene transfer for peripheral neuropathy. ***Current Gene Therapy*** 13 (5): 315 – 321.

25. **Chattopadhyay M.,** Zhou Z., Hao S., Mata M., Fink D.J. (2012). Reduction of voltage gated sodium channel protein in DRG by vector mediated miRNA reduces pain in rats with painful diabetic neuropathy. ***Molecular pain****;* 8(1):17.

26. **Chattopadhyay M.,** Mata M., Fink D.J. (2011). Vector-mediated release of GABA attenuates pain-related behaviors and reduces Nav1.7 in DRG neurons. ***European Journal of Pain***; 15(9):913-20.

27. **Chattopadhyay M.***, Walter C., Mata M., Fink D.J. (2009). Neuroprotective effect of herpes simplex virus-mediated gene transfer of erythropoietin in hyperglycemic dorsal root ganglion neurons. ***Brain***, 2009; 132(4):879-888. **(*Corresponding Author)**. **Editorial Comments in: *Brain,* 132(4):825-826.**

28. Mata M., **Chattopadhyay M.**, Fink D.J. (2008). Gene therapy for the treatment of diabetic neuropathy. ***Curr Diab Rep*** 8(6):431-6.

29. **Chattopadhyay M**., Mata M., Fink D.J. (2008). Continuous delta opioid receptor activation reduces neuronal voltage gated sodium channel levels through activation of protein kinase C in painful diabetic neuropathy. ***J Neurosciences*** 28(26):6652-8.

30. **Chattopadhyay M,** Mata M, Goss J, Wolfe D, Huang S, Glorioso J.C., and Fink D.J. (2007). Prolonged preservation of nerve function in diabetic neuropathy in mice by herpes simplex virus-mediated gene transfer. ***Diabetologia*** 50 (7):1550-8.

31. Mata M, **Chattopadhyay M**, and Fink D.J. (2006). Gene therapy for the treatment of sensory neuropathy. ***Expert Opin Biol Ther*** 6(5):499-507.

32. **Chattopadhyay M.;** Wolfe D., Huang S., Glorioso J.C; Mata M.; and Fink D.J. (2005). Long-term neuroprotection achieved with latency-associated promoter-driven herpes simplex virus gene transfer to the peripheral nervous system. *Molecular Therapy* 12(2):307-13.*)*

33. **Chattopadhyay M.**, Krisky D., Glorioso J.C., Mata M., and Fink D.J. (2005). HSV-mediated gene transfer of fascular endothelial growth factor to dorsal root ganglia prevents diabetic neuropathy. ***Gene Therapy*** 12(18):1377-84. **Editorial Comments in: *Gene Therapy* 12(18):1161-2.**

34. Prasanth S.G., **Chattopadhyay M.,** Bhat K.V. and Ali S. (2004). Expression of protooncogene c-kit receptor in rat testis and uniqueness of extracellular domain across the species with potential in molecular phylogeny. ***DNA and Cell Biology*** 23(1):35-43.

35. Bhatnagar S., Bashamboo A., **Chattopadhyay M**., Gangadharan S., Ali S. (2004). A 1.3 kb satellite DNA from Bubalus bubalis not conserved evolutionarily is transcribed. ***Zeitschrift für Naturforschung [C]*** 59(11-12):874-9.

36. **Chattopadhyay M.**, Goss J., Wolfe D., Huang S., Goins W.; Glorioso J.C., Mata M., and Fink D.J. (2004). Protective effect of HSV-mediated neurotrophin gene transfer in cisplatin neuropathy. ***Brain*** 127(4): 929-39.

37. **Chattopadhyay M.**, Goss J., Goins W.; Glorioso J.C., Mata M., and Fink D.J. (2003). Protective effect of HSV-mediated gene transfer of nerve growth factor in pyridoxine neuropathy demonstrates

functional activity of trkA receptors in large sensory neurons of adult animals. ***Eur J Neurosci,*** 17(4):732-40.

38. **Chattopadhyay M**, Wolfe, D., Huang, S., Goss, J., Glorioso, J.C., Mata, M., Fink, D.J. (2002). In vivo gene therapy o f pyridoxine-induced neuropathy b y H S V -mediated gene transfer of neurotrophin-3***. Annals of Neurology*** 51:19-27. **Editorial Comments in:** ***Annals of Neurology*** 51(1):8-11.

39. **Chattopadhyay M**., Gangadharan S., Kapur V., Azfer M.A., Prakash B. and Ali S. (2001). Satellite tagged transcribing sequences in the bulaline *Bubalus bubalis* genome undergo programmed modulation in the meiocytes: Possible implication in transcriptional inactivation. ***DNA and Cell Biology*** 20(9):587-93.

40. Ali S., Gangadharan S., **Chattopadhyay M**., Kaur S., Azfer M. A. and Mattapallil M.J. (2001). Molecular mining of the bubaline *Bubalus bubalis* genome through repetive DNA. ***Proc Natl Acad Sci (India)*** 71(b):1-13.

41. Ray P., Gangadharan S., **Chattopadhyay M**., Bashamboo A., Bhatnagar S., Malik P.K. and Ali S. (1999). A bubaline derived satellite DNA probe uncovers generic affinities of gaur with other bovids. ***J Biosciences*** 24(3):295-299.

42. Patro, I.K., **Chattopadhyay, M.** and Patro, N. (1999). Flunarizine enhances functional recovery following sciatic nerve crush lesion in rats. ***Neuroscience Letters*** 263:97-100.

43. Patro, N., Mishra, S.K., **Chattopadhyay, M**., and Patro, I.K. (1997). Neurotoxicological effects of deltamethrin on postnatal development of cerebellum of rat. ***J Biosciences****;* 22 (2):117-130.

Book Chapters

1. Nishat Tasnim, **Munmun Chattopadhyay**, Binata Joddar (2019) Scaffolds for tissue engineering of stomach. *Handbook of Tissue Engineering Scaffolds Volume 2, Part 11: Scaffolds for Digestive System. https://doi.org/10.1016/B978-0-08-102561-1.00025-7.* Woodhead Publishing Series in Biomaterials; 2019, Pages 633-646.

2. **Munmun Chattopadhyay**; (2022) Emerging Role of Satellite and Schwann Cells of Peripheral Neuroglial System in Nerve Repair. *The Biology of Glial Cells: Recent Advances*. Springer-Nature Publishing company. https://link.springer.com/chapter/10.1007/978-981-16-8313-8_21.

Nucleotide sequence submission

GenBank: AF156978.1 **Chattopadhyay, M.**, Gangadharan, S. and Ali, S. (1999) cDNA of testis beta- actin sequence from Bubalus bubalis derived from PCR amplification using heterologous primers derived from mouse.

Honors and Awards

- Best Student Organizer; National Conference on Gerontology and Symposium on Molecular Markers of Aging, Jiwaji University, Gwalior, India, April 7-9, 1997.
- Best Graduate Student Presenter, Symposium on Frontiers of Neuroscience, Jiwaji University, Gwalior, India, Dec. 8, 1997.
- Junior Research Fellowship, University Grants Commission, India; 09/1993-08/1995 Senior Research Fellowship, University Grants Commission, India; 09/1995-04/1998 Peripheral Nerve Society Fellow for the year 2007.
- Peripheral Nerve Society Fellow for the year 2009. Peripheral Nerve Society Fellow for the year 2011.

- **Faculty Service Award**, Student Government Association, TTUHSC El Paso for the year 2020. 3D Printing for a Better World (nominated) 3D Printing Industry Awards for the year 2021.
- **Women Worth Watching in STEM in Profiles in Diversity Journal for the year 2022.**

Academic and Professional Services

Editorial Board Member: World Journal of Diabetes, Baishideng Publishing Group Inc. 2012 – Present.
Editorial Board Member: Austin Journal of Neurological Disorders & Epilepsy, Austin Publishing Group. 2014 – Present.
Editorial Board Member: Bioengineering, MDPI (Basel, Switzerland) 2022 – Present.
Academic Editor: Journal of Diabetes Research, Hindawi Publishing Corporation; 2015 – Present.
Assistant Editor: International Journal of Diabetes Sciences, Prime Publications, 2019 – Present.
Topics Board Editor: Bioengineering, MDPI (Basel, Switzerland) 2020 – Present.
Review Editor: Frontiers in Pain Research, March 2021- Present.

As Peer-reviewer:

I have been reviewing many manuscripts for peer reviewed journal since 2006. Some of the highlighted journals are Journal of Pain, Functional and Integrative Genomics, Neurotoxicity Research. Expert Opinion on Biological Therapy, Current Diabetes Reviews, Journal of Neurochemistry, Brain, Behavior, and Immunity, Experimental Neurology, European Journal of Pain, Journal of Physiology and Biochemistry, PLOS ONE, Diabetologia, E-Biomedicine, Canadian Journal of Diabetes, Gene Therapy, Current Proteomics, Journal of Diabetes Research, BMC Neurology, Frontiers in Neuroscience, Journal of Investigative Medicine, Journal of Pain Research, Frontiers in Pain Research, Journal of Neuroinflammation, Brain Research Bulletin, Journal of Physiological Sciences.

Scientific achievements highlighted by news and media

1. Abstract selected for press release for public awareness. 39th Annual Meeting of Society for Neuroscience, Chicago, USA, 2009; Control Number: 14538. "Vector-mediated knockdown of NaV in DRG reduces pain-related behaviors in painful diabetic neuropathy".
2. Web release of Diabetes Research Grants – 2006; Diabetes Action Research and Education Foundation, Bethesda, MD. https://diabetesaction.org/research-2006
3. Web release of PLFSOM TechView: Dr. Munmun Chattopadhyay is First Faculty Researcher in COE in Diabetes and Obesity. May 29, 2014. http://eptechview.ttuhsc.edu/uncategorized/dr- munmun-chattopadhyay-is-first-faculty-researcher-in-coe-in-diabetes-and-obesity/
4. Web release of American Diabetes Association: The Role of Neuroinflammation in the Pathogenesis of Pain in Diabetic Neuropathy;

   http://professional.diabetes.org/ResearchDB_Detail.aspx?rdbid=211&returnTo=ResearchDB_AlphabeticalSearch.aspx?SelectedText=All&pageIndex=0
5. Web release of PLFSOM TechView: Adventure for Your Future Event A Success; Feb. 13th 2015. http://eptechview.ttuhsc.edu/uncategorized/adventures-for-your-future-event/
6. Press release discussing my work on pain in the official magazine of ADA, Diabetes Forecast:

   Treating Nerve Pain; Issue: Jan 2017: http://www.diabetesforecast.org/2017/jan-feb/treating-nerve-pain.html
7. Press release discussing my expertise on pain research in Science News Magazine: Vol. 191 No. 2, February 4, 2017, p. 6; https://www.sciencenews.org/article/pain-promoter-also-acts-pain-reliever. https://www.sciencenewsdigital.org/sciencenews/february_4__2017?search_term=chattopadhyay&doc_id=-1&search_term=chattopadhyay&pg=8#pg8

8. PLFSOM Medical Student got selected for national symposium presentation. http://eptechview.ttuhsc.edu/ttuhsc-el-paso/2019-sarp-symposium-winners-announced/

9. Announcement for a $100,429 grant award from the Edward N. and Margaret G. Marsh Foundation for my research project, "Gastroparesis, a Mysterious Stomach Disorder and its Prevalence in Women." http://eptechview.ttuhsc.edu/ttuhsc-el-paso/ttuhsc-el-paso-professor-receives-award-for-research-on-diabetes-related-digestive-disorder/

10. Being one of the four faculty members in the Paul L. Foster School of Medicine to be awarded a total of $29,000 in institutional funds to jump-start innovative research ideas during the 2017-18 academic year. http://eptechview.ttuhsc.edu/ttuhsc-el-paso/ttuhsc-el-paso-faculty-awarded-seed-grants/

11. Being recognized as a national expert in neuropathy and pain management. Following a recent publication of a paper in the field, I was contacted by Science News to comment on the significance of the research findings. http://eptechview.ttuhsc.edu/ttuhsc-el-paso/diabetes-research-recognized-nationally/

12. The fourth annual interactive conference which introduced El Paso area sixth and seventh grade students a hands on training to health sciences career. http://eptechview.ttuhsc.edu/uncategorized/adventures-for-your-future-event/

13. Three TTUHSC PLFSOM students and one research technician from my lab walked away at Faces of Diabetes Conference with cash awards for their research on diabetes. http://eptechview.ttuhsc.edu/ttuhsc-el-paso/ttuhsc-el-paso-students-research-tech-receive-awards-for-diabetes-research/

14. The three-year project, funded by the National Science Foundation (NSF) and the space station's U.S. National Laboratory, to TTUHSC El Paso faculty scientist Munmun Chattopadhyay, Ph.D., and UTEP biomedical engineer Binata Joddar, Ph.D. is to create tiny (less than 1-millimeter-thick) heart-tissue structures, known as cardiac organoids, using human stem cells and 3D bioprinting technology to study microgravity effect in the international space station. A number of international media covered this work including Mexico, Canada, Germany, India and Italy. The links for the publications are given below.

    http://eptechview.ttuhsc.edu/ttuhsc-el-paso/ttuhsc-el-paso-and-utep-team-up-for-international-space-station-research/;

    http://www.elpasoinc.com/news/business_announcements/texas-tech-professor-receives-grant/article_e0ef7ada-179f-11ea-993d-6307b49a2bdf.html

    https://www.eldiariodechihuahua.mx/el-paso/texas-tech-y-utep-hacen-equipo-20200122-1618148.html

    https://www.montrealtimes.news/el-paso-scientists-to-deliver-3d-bioprinted-miniature-hearts-to-the-iss-3d-printing-industry/

    https://3druck.com/forschung/forscher-aus-el-paso-schicken-3d-gedrucktes-mini-herz-zur-iss-2387892/

    https://www.3dprintingmedia.network/el-paso-researchers-bioprinted-mini-hearts-iss/

    https://timesofindia.indiatimes.com/city/kolkata/duos-mini-hearts-in-space-to-test-zero-gravity-effect/articleshow/74532231.cms

15. Profiles in Diversity Journal recognizes high-achieving women in STEM who are blazing trails for other women in their organization and across the globe. I have been selected for ***Women Worth Watching in STEM Award for the year 2022***. https://issuu.com/diversityjournal/docs/pdj-q2_22. https://www.elpasoinc.com/news/business_announcements/ ; https://elpasoheraldpost.com/ttuhsc-el-paso-associate-professor-among-26-women-worth-watching-in-stem/; https://womenworthwatching.com/munmun-chattopadhyay-phd/

Invited Talks/Seminar Lectures (International, National)

1. ***Neuroprotective effect of HSV mediated neurotrophin gene transfer in cisplatin neuropathy.*** 32nd Annual Meeting, Society for Neuroscience, Orlando, FL, USA (Nov. 2-7, 2002).
2. ***Neuroprotective effect of HSV-mediated neurotrophin gene transfer in drug-induced neuropathy.*** 11th Annual Congress of the European Society for Gene Therapy, Edinburgh, UK, Nov. 15, 2003.
3. ***Neuroprotective Effect of HSV Mediated Gene Transfer in Peripheral Neuropathy.*** Department of Neurology, University of Pittsburgh, Pittsburgh, PA, February 13, 2004.
4. ***Extinguishing the fire of painful diabetic neuropathy: Continuous expression of enkephalin modifies voltage-gated sodium channel levels in DRG neurons;*** Department of Neurology, University of Michigan, MI, USA January 25, 2008.
5. ***NaV1.7 in painful diabetic neuropathy;*** Department of Neurology, University of Michigan, MI, USA January 28, 2011.
6. ***Novel Strategies for Alleviating Pain in Diabetic Neuropathy.*** Department of Pharmacology and Toxicology, University of Kansas, KS; Oct 30, 2012.
7. ***Novel Strategies for Alleviating Pain in Diabetic Neuropathy.*** Paul L Foster School of Medicine, Texas Tech University Health Sciences Center, El Paso, TX; August 27, 2013.
8. ***Novel Approaches to Ameliorate Pain in Diabetic Neuropathy.*** Department of Physiology, Wayne State University, Detroit, MI; November 21, 2013.
9. ***Diabetes and Neuroinflammation: Can we avoid the complications?*** Women in Medicine and Science, Paul L Foster School of Medicine, TTUHSC, El Paso, TX; August 27, 2014.
10. ***Here's to Your Health.*** 4th Annual Adventure for Future Workshop; The Greater El Paso Chamber of Commerce and TTUHSC, El Paso, TX; January 31, 2015.
11. ***Diabetes and inflammation.*** Seminar on Neuroscience (invited talk). School of Studies in Neuroscience; Jiwaji University; Gwalior, India. July 15, 2016.
12. ***Diabetic complications: dealing with it every day.*** Invited talk. Rotary Club of West El Paso; El Paso, TX. August 15, 2016.
13. ***The Role of Histone Deacetylases in the Development of Diabetic Complications:*** 11th Annual TTUHSC Research Colloquium; Paul L. Foster School of Medicine, TTUHSC, El Paso, TX; April 20, 2017.
14. ***Neuroinflammation and Diabetic Neuropathy.*** Translational Neuroscience and Pharmacology Seminar Series: Distinguished Speaker. TTUHSC, Lubbock, TX; August 15th 2017.
15. ***Diabetes research at TTUHSC EP.*** Obesity Research Cluster, TTUHSC Lubbock. May 9, 2018.
16. ***Diabetes and Nutrition.*** Guest Lecture in Graduate School seminar series. Ravenshaw University, Orissa, India. Sept. 16th, 2020. ***(International)***
17. ***Can we out a brake in diabetic complications?*** Guest Lecture in undergraduate biology seminar series at Northern New Mexico College, Española, New Mexico. Sept. 17th, 2020.
18. ***Alterations in Histone Acetylation and Neuroinflammation in Diabetic Painful Neuropathy.*** Invited Speaker; GCC Texas Pain Research Highlights 2021 Conference, April 7-8, 2021.
19. ***Differential expression of genes in gastric antral smooth muscle of gastroparetic patients with or without diabetes.*** Invited Guest Speaker; 14th Semi Annual Research Day, Department of Surgery, TTUHSC El Paso, May 20, 2021.

20. ***Alleviation of Stress-mediated Changes in Sensory Neurons Under Hyperglycemia***. Invited Guest Speaker. 11th Annual GCC Translation Pain Research Conference, April 14, 2022.

CME lectures

21. ***Importance of recognition by institution and peers.*** Office of Faculty Development. TTUHSC El Paso. Institutional Faculty Development Course (IFDC) XV. How to recruit and retain good faculty conference. May 12, 2017. *CME credit* 0.5.
22. ***Enhancing Basic Science Faculty Success.*** Office of Faculty Development. TTUHSC El Paso. Institutional Faculty Development Course (IFDC) XVI. Tips for Faculty Success. May 11, 2018. *CME credit* 0.5.
23. ***Global diabetes: impact of race, gender and culture.*** Office of Diversity, Inclusion and Global Health, TTUHSC El Paso. Nov. 15, 2018. *CME credit* 1.
24. ***Can we put a brake on diabetic complications in diverse Populations?*** Office of Diversity, Inclusion and Global Health, TTUHSC El Paso. Nov. 12, 2020. CME credit 1**.**
25. ***Writing a balanced discussion section: Writing Interest Group Course.*** Office of Faculty Development. TTUHSC El Paso. Institutional Faculty Development Program XIX. Continuing online course; 2021. CME credit 0.5.

Academic Public Service

Institutional Animal Care and Use Committee (IACUC), Veteran Affairs Ann Arbor Health system, Ann Arbor, MI. Committee service: Scientific member. 07/2005 - March 2014.

Advisory Committee on Primary Research Appointments, Promotions, and Titles (APRAPT) Medical School, University of Michigan; Ann Arbor, MI. Member; 2011- March 2014.

Ad-hoc Scientific Reviewer, IACUC, Emory University, Atlanta, GA; 2012- current; Committee service: Scientific member (Ad-hoc).

Undergraduate Research Opportunity Program (UROP), University of Michigan, Ann Arbor, MI. Mentor: 2005-2014. Poster judge: 2009- March 2014.

Career Panel Advisor: Undergraduate Research Opportunity Program (UROP), University of Michigan; Ann Arbor, MI. 2012-March 2014.

Faculty Judge: Annual Research Colloquium; **Paul L. Foster School of Medicine,** Texas Tech University Health Sciences Center, El Paso, TX. May 2014 – Present.

Library Council Member: Texas Tech University Health Sciences Center, El Paso, TX. Member: May 2014– Present.

Medical School Admissions Committee: Paul L. Foster School of Medicine, Texas Tech University Health Sciences Center, El Paso, TX. Member: June 2015 – June 2019.

Graduate School of Biomedical Sciences Admissions Committee: Paul L. Foster School of Medicine, Texas Tech University Health Sciences Center, El Paso, TX. Member: June 2014 – Present.

PLFSOM Women in Medicine and Science Research Collaborations Committee (WIMS): Paul L. Foster School of Medicine, Texas Tech University Health Sciences Center, El Paso, TX. Member: August 2014- Present.

Institutional Animal Care and Use Committee (IACUC), TTUHSC. Committee service: Scientific member. September 2014 –Present.

Faculty Judge: Scholarly Activity and Research Program (SARP) Symposium; **Paul L. Foster School of Medicine**, Texas Tech University Health Sciences Center, El Paso, TX. November 2014-

present.

Director of COE in Diabetes and Metabolism Search Committee: Paul L. Foster School of Medicine, Texas Tech University Health Sciences Center, El Paso, TX. Member: January 2015 – July 2016.

Veterinarian Search Committee: Paul L. Foster School of Medicine, Texas Tech University Health Sciences Center, El Paso, TX. Member: November 2014 – March 2016.

Grant Reviewer (*ad-hoc*): National Institute of Health, SCS study section, 2015-2016.

Grant Reviewer (*ad-hoc*): National Institute of Health, Brain Disorders and Clinical Neuroscience IRG, 2015 - 2016.

Medical School Admissions Committee: Paul L. Foster School of Medicine, Texas Tech University Health Sciences Center, El Paso, TX. Member: June 2015 – Present.

Research Symposium Moderator: 9th Annual TTUHSC Research Colloquium; Paul L. Foster School of Medicine, TTUHSC, El Paso, TX; May 2015.

ADA Research Grant Review Committee: American Diabetes Association, Alexandria, VA. Member: Jan 01, 2016- December 31, 2018.

Chair: WIMS Research Collaborations Committee, TTUHSC, El Paso, TX. November 2016-October 2017.

Graduate: FDCXIII Career Scholarship Development. TTUHSC, El Paso, TX. Nov 2014-July 2015.

Thesis Committee member: Nishat Tasnim, Doctoral candidate in Materials Science and Biomedical Engineering, UTEP El Paso, TX. September 2017.

Research Grant Reviewer (external): Indiana Diabetes Research Center (IDRC), Indiana University, IN. May 2016- May 2017.

Graduate Council Member: Graduate School of Biomedical Sciences, Texas Tech University Health Sciences Center, El Paso, TX. Member: Jan 2017 – Present.

Senator: Faculty Senate; Texas Tech University Health Sciences Center, El Paso, TX. Member: Jan 2018 – Present.

Member: Excellence in Education Subcommittee 2020-2025 TTUHSC El Paso Strategic Plan, TTUHSC El Paso, TX. Sept 2019- August 2020.

Institutional Animal Care and Use Committee (IACUC), TTUHSC. Chair. September 2020 – Present.

Grant Reviewer: Peer Reviewed Medical Research Program, Department of Defense. September 2020; May 2021.

Executive Steering Committee Member at Gulf Coast Consortia Texas Pain Research, 2020-Present.

Grant Reviewer: National Institute of Health, ad hoc reviewer for ZRG1 Digestive, Kidney and Urological Systems IRG, 2021.

Grant Reviewer: National Institute for Health Research, UK as ad hoc reviewer for Central Commissioning Facility, Birmingham Region BRC in Inflammation: Women's Metabolic Health; December 2021.

Member: Curriculum and Educational Policy Committee (CEPC); Paul L. Foster School of Medicine, TTUHSC El Paso, TX. March 2022 - Present.

Grant Reviewer: National Institute of Health, ad hoc reviewer for Digestive and Nutrient Physiology

and Diseases Study Section, Oct. 2022 - Present.

Member: TTUHSC El Paso Academic Council; TTUHSC El Paso, TX. Jan 2023- Present.

Member: PLFSOM Distinction in Research and Scholarship committee; TTUHSC El Paso, TX. Jan 2023- Present.

Grant Reviewer: National Science Centre, Poland; Reviewer OPUS-24 Panel: NZ5 (Human and animal noninfectious diseases), April 2023.

Grant Reviewer: National Science Foundation, Reviewer FY23 CASIS TE/MB Virtual Panel, April 26-28, 2023.

Abstracts (peer-reviewed)

1. Patro, I.K., **Chattopadhyay, M**., Singhal, P. And Patro, N. (1995). Estimates of total neuron counts: The physical dissector method with examples. National symposium on neural and endocrine physiology, Jiwaji University, Gwalior, India (March 21-23, 1995).
2. **Chattopadhyay, M**., Patro, N. and Patro, I.K. (1997). Flunarizine removes age-pigment and prevents neuron loss in spinal cord and spinal ganglia: a preliminary report. National Conference on gerontology and symposiumon molecular markers of aging, Jiwaji University, Gwalior, India (April 7-9, 1997).
3. **Chattopadhyay M.**, Azfer M.A. and Ali S. (1998). Isolation of satellite associated transcribing sequences from the bubaline Bubalus bubalis genome. 67th AGBM of Society of Biological Chemists (Dec. 19-21, 1998).
4. **Chattopadhyay M.**, Mata M., Goss J., Goins W., Glorioso J. and Fink D.J. (2001). A genomic HSV-1 Vector expressing Nerve Growth Factor prevents Pyridoxine-induced neuropathy in rat. Science 2001: A Research Odessey, University of Pittsburgh, Pittsburgh, USA (September 12- 14, 2001).
5. **Chattopadhyay M.**, Wolfe, D., Huang, S., Goss, J., Glorioso, J.C. Mata, M., Fink, D.J. (2001). In vivo gene therapy of pyridoxine-induced neuropathy by HSV-mediated gene transfer of neurotrophin-3. Annual meeting of American Academy of Neurology, Chicago, IL. October, 2001.
6. Glorioso J., Wolfe D., Goins W., Goss J., Hao S., **Chattopadhyay M.**, Mata M., Fink D. (2001). Applications of HSV gene vectors to nervous system disease, 9th Annual meeting of ESGT, Antalya, Turkey (Nov. 2-4, 2001).
7. **Chattopadhyay M**., Mata M., Wolfe D., Huang S., Gloriosco J. and Fink D.J. (2001). HSV- mediated gene transfer of neurotrophin-3 prevents pyridoxine neuropathy in rats. 31st Annual Meeting Society for Neuroscience, San Diego, CA, USA (Nov. 10-15, 2001).
8. **Chattopadhyay M**., Mata M., Goins W., Wolfe D., Huang S., Glorioso J., Fink D.J. (2002). Neuroprotective effect of HSV mediated neurotrophin gene transfer in cisplatin neuropathy. 32nd Annual Meeting, Society for Neuroscience, Orlando, FL, USA (Nov. 2-7, 2002).
9. **Chattopadhyay M.**, Krisky D.M., Wolfe D.P., Goss J., Mata M., Glorioso J.C. and Fink D.J. (2003). HSV-mediated VEGF gene transfer can prevent experimental diabetic neuropathy in mice. 6th Annual Meeting of the American Society of Gene Therapy, Washington, DC, USA (June 4-8,2003), Molecular Therapy Vol. 7, No. 5, May 2003
10. Glorioso J.C., Krisky D., Wolfe D., Goins W., Goss J., Hao S., **Chattopadhyay M**., Mata M. and Fink D. (2003) Treatment of sensory neuron disease using HSV gene vectors. 2nd International Symposium on Molecular diagnostics and skin gene therapy, Dusseldorf, Germany (27-29 March 2003), J. Gene Med 5: S15; 2003.
11. **Chattopadhyay M.**, Krisky D.M., Wolfe D.P., Goss J., Glorioso J.C., Mata M., and Fink D.J. (2003). HSV-mediated VEGF gene transfer can prevent experimental diabetic neuropathy in mice. 33rd

Annual Meeting, Society for Neuroscience, New Orleans, LA USA (Nov 7-12, 2003).

12. **Chattopadhyay M**., Mata M., Goins W., Wolfe D., Huang S., Glorioso J., Fink D.J. (2003) Neuroprotective effect of HSV-mediated neurotrophin gene transfer in drug-induced neuropathy. 11th Annual Congress of the European Society for Gene Therapy, Edinburgh, UK (Nov 14-17, 2003).
13. **Chattopadhyay M.**, Wolfe D.P., Goins W., Huang S., Glorioso J.C., Mata M. and Fink D.J. Prolonged bioactive transgene expression driven by the HSV Latency Active Promoter 2 (LAP2) in the peripheral nervous system. 7th Annual Meeting of the American Society of Gene Therapy, Minneapolis, MN, USA (June2-6, 2004).
14. **Chattopadhyay M.,** Goss J., Wolfe DP., Goins W., Huang S., Krisky D., Glorioso JC., Mata M., and Fink DJ. HSV-Medicated Prolonged Bioactice Transgene Expression in Diabetic Neuropathy. 34th Annual Meeting of Society for Neuroscience, San Diego, CA, USA (Oct 23- 27, 2004).
15. **Chattopadhyay M**., Mata M., Glorioso J.C., Fink D.J. Differential Pathophysiological Mechanisms in the Treatment of Painful Diabetic Neuropathy Using HSV-Mediated Proenkephalin and GAD-67-Expressing Vectors. 35th Annual Meeting of Society for Neuroscience, Washington, DC, USA, Nov. 12-16, 2005.
16. **Chattopadhyay M**., Walter C., Mata M., Fink D.J. HSV-mediated transfer of TNFα soluble receptor to DRG reduces pain-related behaviors in diabetic neuropathy, 36th Annual Meeting of Society for Neuroscience, Atlanta, GA, USA, Oct. 14-18, 2006.
17. NIDDK Workshop: Advances toward measuring diabetic retinopathy and neuropathy; National Institutes of Health, Bethesda, MD; April 4-5, 2007.
18. **Chattopadhyay M.**, Walter C., Glorioso J., Mata M., Fink D.J. HSV-mediated gene transfer of erythropoietin to prevent degeneration in diabetic neuropathy, Peripheral Nerve Society Biennial meeting, Snowbird, UT, USA, July 14-18, 2007.
19. **Chattopadhyay M**., Walter C., Mata M., Fink D.J. Continuous Production of Enkephalin by HSV-mediated Gene Transfer Blocks Phosphorylation of p38 MAPK and PKC in Painful Diabetic Neuropathy. 37th Annual Meeting of Society for Neuroscience, San Diego, CA, USA, Nov. 3- 7, 2007.
20. **Chattopadhyay M**., Walter C., Mata M., Fink D.J. Continuous delta opioid receptor activation reduces neuronal voltage gated sodium channel (Nav1.7) levels through activation of protein kinase c and p38 in painful diabetic neuropathy. 12th World Congress on Pain; International Association for the Study of Pain, Aug. 17-22, 2008; Glasgow, Scotland.
21. **Chattopadhyay M.**, Mata M., Fink D.J. GABAB receptor mediated changes in neuronal voltage gated sodium channel ($Na_v1.7$) levels in painful diabetic neuropathy. 38th Annual Meeting of Society for Neuroscience, Washington DC, USA, Nov. 15-19, 2008.
22. **Chattopadhyay M.**, Maier K., Mata M., Fink D.J. Regulation of $Na_v1.7$ in painful diabetic neuropathy by GPCR activation. Peripheral Nerve Society Biennial meeting, Wurzburg, Germany, July 4-8, 2009.
23. **Chattopadhyay M.**, Zhou Z., Mata M., Fink D.J. Vector-mediated knock down of Na_V in DRG reduces pain-related behaviors in rats with painful diabetic neuropathy. 39th Annual Meeting of Society for Neuroscience, Chicago, USA, Oct. 17-20, 2009.
24. **Chattopadhyay M.**, Maier K., Mata M., Fink D.J. Decrease in neuroimmune activation by HSV-mediated gene transfer of TNFsR alleviates pain in rats with diabetic neuropathy. 40th Annual Meeting of Society for Neuroscience, San Diego, USA, Nov. 12-16, 2010.
25. **Chattopadhyay M.**, Maier K., Mata M., Fink D.J. Decrease in neuroimmune activation by HSV-mediated gene transfer of TNFsR alleviates pain in rats with diabetic neuropathy. Winter Symposium 2011; Michigan Diabetes Research Training Center, Ann Arbor, USA, March 12, 2011.

26. Galloway C., **Chattopadhyay M.** Role of inflammatory mediators in development of pain in Type 2 diabetic neuropathy. Winter Symposium 2011; Michigan Diabetes Research Training Center, Ann Arbor, USA, March 12, 2011.
27. Chemotherapy-Induced Peripheral Neuropathy (CIPN) Workshop, National Cancer Institute; National Institutes of Health, Rockville, MD; June 24th 2011.
28. Galloway C., **Chattopadhyay M.** Role of inflammatory mediators in development of pain in Type 2 diabetic neuropathy. Peripheral Nerve Society Biennial meeting, Potomac, MD, USA, Jun 24-29, 2011.
29. Galloway C., **Chattopadhyay M.** Inflammatory mediators in the pathogenesis of pain in Type 2 diabetic neuropathy. Neuroscience Graduate Program Recruit, Ann Arbor, MI, USA, Jan 14, 2012.
30. **Chattopadhyay M.,** Galloway C., Maier K., Mata M., Fink D.J. Decrease in neuroimmune activation by HSV-mediated gene transfer of TNFsR alleviates pain in rats with diabetic neuropathy. Program in Biomedical Sciences Recruit, Ann Arbor, MI, USA, Feb 4th, 2012.
31. **Chattopadhyay, M.** and Fayad, M. Role of Exercise in the Reduction of Inflammatory Mediators in Painful Diabetic Neuropathy. Spring Forum, Undergraduate Research Opportunity Program, University of Michigan, Ann Arbor, MI USA, April 2012.
32. **Chattopadhyay M.**, Mata M., Fink D.J. Alteration of inflammatory mediators in Type 1 and 2 painful diabetic neuropathy. 42nd Annual Meeting of Society for Neuroscience, New Orleans, USA, Oct. 13-17, 2012.
33. Meyers, J. Galloway, C. and **Chattopadhyay, M**. Role of exercise in the reduction of inflammatory mediators in painful diabetic neuropathy. 42nd Annual Meeting of Society for Neuroscience, New Orleans, USA, Oct. 13-17, 2012.
34. Pattnaik R. and **Chattopadhyay, M.** Behavioral effects of exercise in rats with painful diabetic neuropathy. Undergraduate Research Opportunity Program, University of Michigan, Ann Arbor, MI USA, Dec 2012.
35. Isham D. and **Chattopadhyay, M.** Anti-inflammatory effects of exercise in rats with painful diabetic neuropathy. Undergraduate Research Opportunity Program, University of Michigan, Ann Arbor, MI USA, April 2013; ***Best poster presentation*** award.
36. Yoon H., Thakur V. and **Chattopadhyay M**. Changes in Inflammatory Mediators in DRG of Type 1 Diabetic Animals with Neuropathy. 74th Annual Meeting of American Diabetes Association, San Francisco, USA, June 13-17, 2014.
37. Gonzalez M, Thakur V. and **Chattopadhyay, M**. Effect of Moderate Exercise in Diabetic Neuropathy. 11th Annual Faces of Diabetes Symposium, El Paso, TX; Oct 24th 2014***. 3rd Prize winner for best poster.***
38. Participant in ***Thirteenth Faculty Development Course***; Faculty Affairs & Development, TTUHSC, El Paso, TX. November 2014-July 2015.
39. Participant in ***1st Annual WIMS Professional Development Program*** by Dr. Luanne E. Thorndyke; Organized by Women in Medicine and Science, TTUHSC, El Paso, TX. November 22, 2014.
40. Aviance Ramsey and **Munmun Chattopadhyay**. Exercise training attenuates inflammatory mediators in DRG and spinal cord of Type 1 diabetic rats. Summer Accelerated Biomedical Research (SABR) Program, Graduate School of Biomedical Sciences (GSBS); TTUHSC El Paso, TX. June – August 2014.
41. 13th Faculty Development Course: Paul L. Foster School of Medicine, Texas Tech University Health Sciences Center, El Paso, TX. Participant: Nov 05, 2014-July 22nd 2015.

42. 1st PLFSOM Women in Medicine and Science Research Professional Development Course: Doubletree Hotel, Paul L. Foster School of Medicine, Texas Tech University Health Sciences Center, El Paso, TX. Participant: Nov 22, 2014.

43. Thakur, V. and **Chattopadhyay, M.** Alterations of Inflammatory Mediators in DRG of Type 1 Diabetic Animals with Neuropathy. 97th Annual Meeting of Endocrine Society, San Diego, USA March 5-8, 2015.

44. Amanda Yanez and **Munmun Chattopadhyay**. Role of Neuropeptides in the Gastrointestinal Tract Disorder of Diabetic Rats. Research Colloquium, Graduate School of Biomedical Sciences (GSBS); TTUHSC Lubbock, TX. March 12, 2015.

45. Vikram Thakur, Mayra Gonzalez and **Munmun Chattopadhyay**. Role of TLR4 and HMGB1 in Changes in Pain in Type 1 and Type 2 Diabetic Animals. 75th Annual Meeting of American Diabetes Association, Boston, USA, June 5-9, 2015.

46. **2nd PLFSOM Women in Medicine and Science Research Professional Development Course.** Country Inn, Sunland Park. Paul L. Foster School of Medicine, Texas Tech University Health Sciences Center, El Paso, TX. Participant: Sept 25, 2015.

47. Kristen Pennington, Vikram Thakur and **Munmun Chattopadhyay**. Changes in Inflammatory Mediators in DRG of Type 1 Diabetic Animals with Neuropathy. 2nd BBRC Symposium, El Paso, TX, USA. Sept 27-29, 2015.

48. Mayra Gonzalez, Vikram Thakur, Kristen Pennington, and **Munmun Chattopadhyay**. Role of Neuropeptides in the Gastrointestinal Tract Disorder of Diabetic Rats. 2nd BBRC Symposium, El Paso, TX, USA. Sept 27th -29th 2015.

49. Vikram Thakur, Syeda Nargis, Kristen Pennington, Mayra Gonzalez and **Munmun Chattopadhyay**. Role of HMGB1 inhibitor Glycyrrhizin in Diabetic complications. 45th Annual Meeting of Society for Neuroscience, Chicago, USA, Oct. 17-21, 2015.

50. Thakur V, Nargis S, Gonzalez M, Pennington K, **Chattopadhyay M.** Role of HMGB1 Inhibitor Glycyrrhizin in Diabetic Nephropathy. Elsevier Miami Winter Symposia: Inflammation Causes, Prevention and Cure. Miami, USA; Jan 24-27 2016.

51. V. Thakur, M. Gonzalez, S. Nargis and **M. Chattopadhyay**. Role of inflammatory Mediators in Diabetic Nephropathy. 76th Annual Meeting of American Diabetes Association, New Orleans, USA, June 10-14, 2016.

52. P. R. Quesada, R.N. Solis, V. Thakur, M. A. Gonzalez, J. Enriquez, **M**. **Chattopadhyay**. The Role of Histone Deacetylases in the Development of Diabetic Complications. Faces of Diabetes Conference, El Paso, TX; Oct 21st 2016. **2nd Place**.

53. J. Enriquez, V. Thakur, M. A. Gonzalez, **M**. **Chattopadhyay**. Role of HMGB1 Inhibitor Glycyrrhizin in Diabetic Nephropathy. Faces of Diabetes Conference, El Paso, TX; Oct 21st 2016. **3rd Place**.

54. The Role of Histone Deacetylases in the Development of Diabetic Complications: V. Thakur, M. Gonzalez, J. Enriquez and **M. Chattopadhyay**. 11th Annual TTUHSC Research Colloquium; Paul L. Foster School of Medicine, TTUHSC, El Paso, TX; April 20th 2017.

55. Inspiring Intersections: A Call to Collaborate, Challenge, and Change. A Summit Sponsored by GDI and GWIMS, AAMC. May 4th-7th 2017; Palm Springs, CA, USA.

56. V. Thakur, J. Enriquez, M. Gonzalez, and **M. Chattopadhyay**. Epigenetic Modifications in Diabetic Nephropathy. 77th Annual Meeting of American Diabetes Association, San Diego, CA, USA, June 9-13, 2017.

57. Learn Serve Lead: The AAMC Annual Meeting. November 3-7, 2017; Boston, MA, USA.

58. V. Thakur, J. Sadanandan, M. Gonzalez, R. Solis, P. Quesada and **M. Chattopadhyay**. Alterations in inflammatory mediators and histone acetylation in diabetic painful neuropathy. Epigenetics and

Epigenomics: Implications for Diabetes and Obesity; American Diabetes Association Research Symposium, Nov 17-19, 2017. Boston, MA, USA.

59. V. Thakur, M. Gonzalez, J. Sadanandan, M. Gonzalez and **M. Chattopadhyay.** Role of inflammation and histone acetylation in diabetic painful neuropathy: 12th Annual TTUHSC Research Colloquium; Paul L. Foster School of Medicine, TTUHSC, El Paso, TX; April 18th 2018.
60. V. Thakur, and **M. Chattopadhyay**. Alterations in Histone Acetylation in Diabetic Painful Neuropathy. 78th Annual Meeting of American Diabetes Association, Orlando, FL, USA, June 22-26, 2018.
61. **M. Chattopadhyay**, C. Levin and V. Thakur. The role of epigenetic modifications in diabetic complications. 6th annual meeting of the international cytokine & interferon society. Boston, USA 27- 30 Oct 2018.
62. V. Thakur, and **M. Chattopadhyay**. Epigenetic changes in DRG neurons under hyperglycemia. 48th Annual Meeting of Society for Neuroscience, San Diego, USA, Nov. 3-7, 2018.
63. Vikram Thakur, Irene Sarosiek, Richard W. McCallum, **Munmun Chattopadhyay**. Epigenetic Changes in Gastric Antral Smooth Muscle of Patients with Severe Gastroparesis of both Idiopathic and Diabetic Etiology. Digestive Disease Week, San Diego, CA, USA May 18–21, 2019.
64. Matthew Alonzo, Shweta Anil Kumar, **Munmun Chattopadhyay**, Yoshihiro Ito, Stephanie Willerth, Laura Suggs, Binata Joddar. A next generation 3D bioprinted cardiac patch with human cardiomyocytes and fibroblasts. Materials Science & Technology; Sept 29-Oct 03, 2019; Portland, OR, USA.
65. V. Thakur, and **M. Chattopadhyay**. Role of histone acetylation in diabetic painful neuropathy. 48th Annual Meeting of Society for Neuroscience, Chicago, IL, USA, Oct 19-23, 2019.
66. Binata Joddar, Shweta Anil Kumar, Matthew Alonzo[1], Vikram Thakur, **Munmun Chattopadhyay**. A 3D bioprinted human cardiac cell platform to model the pathophysiology of diabetes. Basic Cardiovascular Sciences Scientific Sessions: Emerging Opportunities in Cardiovascular Diseases. July 27–30, 2020; Virtual Event, American Heart Association.
67. V Thakur, I Sarosiek, B Davis, R McCallum, **M Chattopadhyay**. Epigenetic alterations of inflammatory markers in diabetic and idiopathic gastroparesis; 4th International Meeting of the Federation of Neurogastroenterology and Motility, 14-17 Apr 2021; Adelaide, Australia (Virtual) Neurogastroenterology and Motility 32.
68. V Thakur, BR Davis, I Sarosiek, RW McCallum, **M Chattopadhyay**. Alterations in Epigenetic Modifiers in Gastric Antral Smooth Muscle of Patients with Diabetic Gastroparesis Compared To Idiopathic Etiology. Digestive Disease Week 2020, Virtual, May 2-5 2020; Gastroenterology 158 (6), S-1052.
69. Waghela, H., Thakur, V. and **Chattopadhyay, M**. Effects of Hyperglycemia-Induced Stress in a Human Cardiomyocyte Cell Line. 81st Scientific Sessions; Annual Meeting of American Diabetes Association, Virtual, June 25-29, 2021. Diabetes 70 (Supplement 1).
70. Satterfield, N., Thakur, V. and **Chattopadhyay, M**. Histone Modifications and CXCR4 Chemokine Receptor Signaling in Hyperglycemic DRG Neurons. 81st Scientific Sessions; Annual Meeting of American Diabetes Association, Virtual, June 25-29, 2021. Diabetes 70 (Supplement 1).
71. V. Thakur, B. Joddar and **M. Chattopadhyay**. Cardioprotective Effects of Glycyrrhizin On Hyperglycemic Cardiac Tissues. American Heart Association Scientific Sessions; November 13-15 2021, Boston, MA
72. V. Thakur, C. Jones, M. S. Yousuf, T. Price, **M. Chattopadhyay**. Role of Endoplasmic Reticulum Stress in Hyperglycemic Sensory Neurons. 11th Annual GCC Translation Pain Research Conference,

April 14, 2022.

73. R. Bora, V. Thakur and **M. Chattopadhyay**. Hyperglycemia Induced Endoplasmic Reticulum Stress in Cardiomyocytes. 14th Annual Research Symposium, Paul L. Foster School of Medicine, TTUHSC, El Paso, TX; April 18th-20th 2022.

74. V Thakur, B Davis, I Sarosiek, R McCallum, S Roy, **M Chattopadhyay**. Differential expression of macrophages and inflammatory mediators in gastric antral smooth muscle of patients with idiopathic gastroparesis compared to diabetic etiology. Digestive Disease Week 2022, Chicago, IL May 6-9, 2022; Gastroenterology 162 (7), S-313-S-314.

75. B Joddar, I Singh, V Thakur, **M Chattopadhyay**. Hyperglycemia mediated changes in a human cardiomyocyte cell model. American Heart Association BCVS 2022 Scientific Sessions, Chicago, IL; July 25–28, 2022. Circulation Research. 2022; 131:AP2116.

76. **M. Chattopadhyay**. Exercise Mediated Alleviation of Sensory Neuropathy in Diabetes. Obesity Research Institute 8th Annual Meeting; May 3, 2023.TTUHSC Lubbock.

77. C. Calhoun, V. Thakur, **M. Chattopadhyay**. Role of Green Tea Extract, Epigallocatechin Gallate in Hyperglycemic Sensory Neurons. Obesity Research Institute 8th Annual Meeting; May 3, 2023.TTUHSC Lubbock.

Memberships in Professional Societies American Society for Gene Therapy (2001-2012)
American Diabetes Association (Since 2010) Society for Neuroscience (Since 2000)
European Society for Gene Therapy (2003) Gerontology Society of India (Life member since 1994)
Peripheral Nerve Society (Since 2005)
Neuropathy Association (Since 2005) Endocrine Society (2014-2016)

Public Service

1. ***Organizer: Swajan of Great Lakes: Kid's Chapter (Oct 2009-March 2014)***
   Organize volunteer activities for kids to make blankets for cancer patients in the U of M hospital, make greeting cards for the senior center, bake cookies for the Ronald McDonald house patients' families.
2. ***Special Science session: Ann Arbor Public School (Jan 2012-Feb 2014)***
   Teaching kids about neuroscience.
3. ***Emphasis on nutrition: "The right choice" TTUHSC administration and employees (Sept 5th and Oct 31st 2014)***
   Provided personal experience and interests on nutrition and cooking related to nutrition and how to increase the health benefit from food that we eat regularly.
4. ***Career Emphasis counseling: Latinitas- Aim High Workshop (Nov 2014-Present)***
   The Aim High Conference was geared toward encouraging pre-teen and teen girls ages 9-17 to aim high and dream big by setting high goals for themselves, achieving in academic realms and exploring professional opportunities for their future success. As presenters, we place a strong emphasis on careers where women are underrepresented such as science, technology, engineering and math.
5. ***Workshop Presenter and Counselor: Adventure for Your Future Program (Jan 31, 2015)***
   This interactive conference was to introduce and build the interest of El Paso area sixth and seventh grade students to the field of health sciences careers. During the conference, students and parents had the opportunity to attend workshops presented by local health science professionals and educators on a wide range of topics including heart health, nutrition, medical terminology, medical transport, the brain, and many more.
6. ***Demonstrator and guide: Nutrition & Diabetes Exploration Texas Tech-EPISD (July22-23 2015)***
   A number of high school teachers registered for this workshop. Dr. Chattopadhyay demonstrated the

relation between nutrition and diabetes, while Dr. Janssen demonstrated the pathophysiology of diabetes in this workshop. The curriculum also offered some hands-on experience and small experiments that could be implemented in the high school classrooms. The teachers present in this workshop showed a great interest in learning about diabetes and nutrition.

7. ***Career Emphasis Guidance Talk: Double T collegiate students (Oct 2015-Present)***

   The Double T collegiate students are geared towards selecting medicine or related field as a career by setting high goals for themselves, achieving in academic realms and exploring professional opportunities for their future success. I presented my research work in this workshop.

8. ***Science Fair Judge: El Paso Country Day School (Dec 16, 2015)***

   Provided intellectual comments and judged scientific posters for 7th and 8th grade students.

9. ***Rotary Club of West El Paso***; El Paso, TX. August 15th 2016. Monthly meeting.

   Diabetic complications: dealing with it every day: Provided awareness on diabetes and complications. Discussed on exercise, nutrition and lifestyle changes. Demonstrated on how to get health benefit from exercising regularly and eating nutritious food.

10. ***TTUHSC El Paso Summer Camp, El Paso, TX. (June - July 2017, June - July 2018, June-July 2019, July 2020, June-July 2021, July 2022)***

    Presented Bio-wellness lecture in the first half with hands-on experiments. Second half of the lecture is on Diabetes and complications along with hands-on experiments. The curriculum consists of interactive presentations with health career professionals, field trips, a mock crime scene investigation, financial aid information, and a reality store exercise (simulation of life expenses).