# MARIO IGNACIO ROMERO-ORTEGA
**CURRICULUM VITAE**

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**Education**

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|---|---|---|
| Postdoc | 2002 | Univ. of Texas Southwestern Medical School<br>Developmental Biology and Center for Basic Research on Nerve Growth and Regeneration *Mouse "Genetics and Developmental Neurobiology*" Mentor: Luis F. Parada, PhD. |
| Postdoc | 1999 | Univ. of Texas Southwestern Medical School (UTSW). Department of Anesthesiology<br>*"Spinal Nerve Regeneration*" Mentor: George M. Smith, PhD. |
| Ph.D. | 1997 | Tulane University. New Orleans, LA<br>*Neuroscience*. Anatomy Department, Mentor: Carol J. Phelps, PhD.<br>"*The role of prolactin in development of the hypothalamic arcuate nucleus"* |
| B.S. | 1991 | Guadalajara University. Av Enrique Díaz de León Sur, Americana, Guadalajara, Jal., Mexico<br>*Biology*. Summa Cum Laude. |

**Leadership**

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| 2024-present | Arizona Medical Device Manufacturing Multiplier Strategy Development Consortium member |
| 2022 | Strategic Planning for Research in Biomedical Sciences at UH |
| 2020-2021 | Cougar Chairs Leadership Academy. This program is tailored to prepare top faculty at UH for leadership positions. |

## A. Positions and Honors

- Positions and Employment

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|---|---|---|
| • Professor, Dep. Head | 2023- present | University of Arizona. Tucson. AZ. |
| • Founder/CTO | 2022 - present | PioneerNeurotech Inc. Boston, MA. |
| • Undergraduate Director | 2020 – 2023 | Biomedical Engineering. University of Houston |
| • Cullen Endowed Prof. | 2019 – 2023 | Biomedical Engineering/Biomed Sciences. COM Univ. of Houston |
| • Founder/CSO | 2019 - present | Juniper Biomedical Inc, formerly known RBI Medical. Boston, MA. |
| • Affiliated Faculty | 2018 - 2021 | Health Care Sciences Department, UT Southwestern Med. Ctr. |
| • Affiliated Faculty | 2014 - 2020 | Surgery Department. UT Southwestern Medical Center. |
| • Affiliated Faculty | 2014 - 2019 | Behavioral and Brain Sciences Department, Univ. Texas at Dallas |
| • Associate Professor | 2014 - 2019 | Tenured. Bioengineering. Univ. Texas at Dallas |
| • Founder/CTO | 2014 - 2021 | NerveSolutions Inc. Boston, MA. |
| • Partner Researcher | 2013 - 2023 | University of Wollongong, Australia. |
| • Affiliated Faculty | 2013 - 2015 | University of Texas at Arlington Research Institute (UTARI) |
| • Associate Professor | 2012 - 2014 | Tenured. Bioengineering Department. UTA |
| • Associate Professor | 2008 - 2012 | Bioengineering. University of Texas at Arlington (UTA) |
| • Assistant Director | 2006 - 2008 | Research. Plastic Surgery Department, UTSW Medical Center |
| • Consultant | 2006 – 2007 | Advanced Neuromodulation Systems (St. Jude Co) |
| • Assistant Professor | 2005 - 2008 | Biomedical Engineering Department, UTSW Medical Center |
| • Assistant Professor | 2003 - 2008 | Department of Neurology, UTSW Medical School |
| • Director | 2002 - 2008 | Regenerative Neurobiology Research Division. |

-Awards

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| • Neuromodulation Prize Phase II Award | 2024 | NIH SPARC to RBI Medical, DBA Juniper Biomedical |
| • Dr. Eugene Alford Robotics Research Award | 2022 | The Institute for Rehab and Research Foundation |
| • Neuromodulation Prize Phase I Award | 2022 | NIH SPARC to RBI Medical Inc |
| • Exemplary Research Award | 2019 | College of Engineering. UT Dallas |
| • Research Mentoring Award | 2019 | Bioengineering. UT Dallas |
| • Excellence in Research Award | 2014 | College of Engineering. UTA |
| • IMPACT Award, Health Category | 2013 | TECH Fort Worth |
| • Promising Life Science Company Award | 2013 | Texas Life Science Venture Forum |
| • Tech Titans Technology Innovation Award | 2012 | Metroplex Technology Business Council |
| • Young Faculty Award | 2012 | College of Engineering Outstanding, UTA |
| • Teaching Award for e-Course Material | 2012 | College of Engineering, UTA |
| • STARS Award | 2008 | University of Texas System Board of Regents |
| • Outstanding Scientific Achievement Award | 1999 | Texas Neurofibromatosis Foundation |
| • Postdoctoral Fellowship Award | 1997 | Daniel Heumann Spinal Cord Foundation |
| • Adamo-Haarsted Award | 1994 | New Orleans Society for Neuroscience |

- Professional Recognition

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| • Member, Area Editor | 2024-present | Open Journal in Medicine and Biology |
| • Member Awards Committee. | 2024 | IEEE Eng. in Medicine and Biology Soc. |
| • Member, Leadership and Advisory Committee | 2022-2023 | NIH T32 Neural Control. Methodist Res Inst. |
| • President, National Advisory Council BMEN | 2022-2024 | Technological Institute of Monterrey, Mexico |
| • Member, Editorial Board | 2021-present | Open Journal in Medicine and Biology |
| • Member Adcom nominations committee. | 2021-2023 | IEEE Eng. in Medicine and Biology Soc. |
| • Reviewer, R35 Sciences Award | 2020, 2023 | National Institutes of Health |
| • Topic Editor: Electroceuticals | 2020-2022 | Frontiers in Neurology |
| • Member, Task Force on Team Science | 2019-2020 | American Heart Association. |
| • Reviewer, Collaborative Sciences Award | 2019-2020 | American Heart Association. |
| • Standing Member Reviewer NIH Study Sec | 2016-2020 | Engineering of Neuroscience and Vision T |
| • Associate Editor | 2016-present | Frontiers in Neuroscience: Neurotechnology |
| • Advisory Board Member | 2016-2020 | CIMTEC Annual Conferences |
| • Editorial Board Member | 2014-2023 | Journal of Bioelectronic Medicines |
| • Advisory Board Member Bioelectronics Med | 2014-2016 | Feinstein Institute, New York |
| • Associate Editor | 2008- 2015 | Frontiers in Neuroengineering |
| • Editorial Board Member | 2012- 2015 | Revista Mexicana de Ingeniería Biomédica. |
| • Opponent in Doctoral Thesis Defense | 2015 | Miina Björninen, Univ. of Tampere, Finland |
| • Vice-President | 2011- 2014 | Arlington-Fort Worth Chapter Soc for Neurosc |
| • Visiting Scholar | 2014 | Electrical Eng. National Univ. of Singapore |
| • Guest Editor, Nerve Regeneration Issue | 2013 | BioMed Research International. |
| • Nominee, Edith and Peter O'Donnell Award | 2012 | Texas Academy of Medicine, Engin and Sci. |
| • Advisory Board Member | 2008 | NanoTX06 Conference. Dallas, TX |
| • Associate Research Member | 2006 | Christopher Reeve Paralysis Foundation |

- Professional Memberships

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|---|---|---|
| • Member | 1993- present | Society for Neuroscience |
| • Member | 2009- present | IEEE Engineering in Medicine and Biology Society |
| • Member | 2009- present | Biomedical Engineering Society |
| • Member | 2018- 2023 | American Heart Association |
| • Member | 2013- 2015 | Society of Hispanic Professional Engineers |
| • Member | 2012- 2014 | Society for Biomaterials |
| • Member | 2009- 2011 | American Society for Neurochemistry |

- Conference Panels

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| • Conference Chair | 2024 | IEEE EMBS HI-POCT Annual Conference. Tucson AZ. |
| • Program Chair | 2022 | IEEE EMBS HI-POCT Annual Conference. Houston TX. TAMU. |
| • Chair | 2021 | IEEE EMBS Conference on Neural Engineering (NER'21) MiniSymposium Miniaturized neural stimulators for bioelectronic medical applications/ |
| • Chair | 2018 | PNS Transplantation and Regeneration Nanosymposium. Soc. Neuroscience. Oct. |
| • Co-Chair | 2018 | Peripheral Neural Interfaces Track. BMES Atlanta GA. Oct. |
| • Co-Chair | 2017 | Peripheral Nerve Regeneration Track. BMES Phoenix TX. Oct. |
| • Chair | 2017 | Pelvic Floor Translational Workshop. Tlaxcala. México May. |
| • Co-Chair | 2017 | Bioelectronic modulation of the nervous systems. 60th Physiological Sciences. Mexican Society of Physiology. August 15. |
| • Co-Chair | 2014 | Peripheral Nerve Interfaces for Prosthetic Control. 36th Annual International IEEE EMBS Conference. Chicago. |
| • Co-Chair | 2014 | Advanced Neurointerfacing. Neurointerface Conference. Dallas. Texas. |
| • Session Chair | 2011 | 27th Annual Southern Biomedical Engineering Conference. Arlington TX. |
| • Invited participant | 2009 | "PNS Anatomy Sensory and Motor" DARPA-Sponsored Workshop "Reliable Neural Technology (RE-NET). Arlington, VA. |
| • Invited participant | 2009 | "Targeting, Sensitivity and Stability in Regenerative Neural Interfaces" Sandia National Laboratories- Sponsored Neural Restoration Workshop. Nov. |

## B. Scholarship

Brain Encyclopedia

2021 Bioelectronic Medicines Area Editor.

Book Chapters Authored

1. 2014. Romero-Ortega M."Peripheral Nerves, Anatomy and Physiology of. In: Jaeger D., Jung R. (Ed.) Encyclopedia of Computational Neuroscience: Springer-Verlag Berlin Heidelberg, 10.1007/978-1-4614-7320-6-214-1. http://link.springer.com/referenceworkentry/10.1007%2F978-1-4614-7320-6_214-1.
2. 2014. Romero-Ortega M.: Peripheral Nerve Interface, Regenerative. In: Jaeger D., Jung R. (Ed.) Encyclopedia of Computational Neuroscience: Springer-Verlag Berlin Heidelberg, DOI: 10.1007/978-1-4614-7320-6-212-1. http://link.springer.com/referenceworkentry/10.1007%2F978-1-4614-7320-6_212-1

Journal Special Issue Co-Edited

1. 2020 Romero-Ortega MI, Cook, Crook. Research Topic 'Electroceuticals in Neurology' | Frontiers in Neurology.
2. 2014 Xiaofeng Jia, Mario I. Romero-Ortega, and Yang D. Teng, "Peripheral Nerve Regeneration: Mechanism, Cell Biology, and Therapies," BioMed Research International, vol. 2014, Article ID 145304, 2 pages, 2014. doi:10.1155/2014/145304.

**Peer-reviewed Publications**

- In Preparation/ Submitted/ In Review/ In Press:

- Full Articles Published:

1. 2024 Romero K. Gonzalez-Gonzalez MA, Lloyd D, Nguyen K. Eli N, Akay Y, Vongpatanasin, W, Smith S, Akay M, Romero-Ortega MI. "Sub-Chronic Peroneal Nerve Stimulation Lowers Ambulatory Blood Pressure in Spontaneously Hypertensive Rats" *IEEE* Open Journal of Engineering in Medicine and Biology. DOI:10.1109/OJEMB.2024.3477411
2. 2024 Rahman FS, Yousuf Z, F Castelán, Martínez-Gómez M, Akay YM, Zimmern P, Akay M, Romero-Ortega MI. "Neuromodulation Improves Stress Urinary Incontinence-like Deficits in Female

Rabbits" *IEEE* Open Journal of Engineering in Medicine and Biology.DOI: 10.1109/OJEMB.2024.3408454

1. **2**024 Lloyd DA, Gonzalez-Gonzalez MA, Romero-Ortega MI. "AxoDetect: an automated nerve image segmentation and quantification workflow for computational nerve modeling" J. Neural Eng. 21 026017.DOI: 10.1088/1741-2552/ad31c3
2. 2023. Lloyd D, Akay Y, Akay M, Romero-Ortega MI. "Investigating Neuronal Feature Extraction Using Deep Learning Techniques: A Comparative Study" 2023 IEEE EMBS Special Topic Conference on Data Science and Engineering in Healthcare, Medicine and Biology, Malta, 2023, pp. 57-58. No. 10404735
3. 2023 Hernandez-Reynoso AG, Rahman F, Hadden B, Castelan F, Martinez-Gomez M, Zimmern P, Romero-Ortega MI. Secondary urethral sphincter function of the rabbit pelvic and perineal muscles. Front. Neurosci., 16 February. Sec. Autonomic Neuroscience Volume 17. http://doi.org/10.3389/fnins.2023.1111884
4. 2023 Tasmim S, Yousuf Z, Rahman F, Seelig W, Clevenger A, VandenHeuvel S, Ambulo C, Raghavan S, Zimmern PE, Romero-Ortega MI, TH. Ware. "Liquid Crystal Elastomer Based Dynamic Device for Urethral Support: Potential Treatment for Stress Urinary Incontinence" *Biomaterials* 292: 121912. doi.org/10.1016/j.biomaterials.2022.121912. PMID: 36434829
5. 2022 Gonzalez-Gonzalez MA, Beitter J, Romero K, Lloyd D, Miyata D, Hernandez-Reynoso AG, Kanneganti A, Kim HK, C. Bjune,Smith S, 5, Vongpatanasin W, Romero-Ortega MI. Renal nerve activity and arterial depressor responses induced by neuromodulation of deep peroneal nerve in spontaneously hypertensive rats. *Front in Neurol.* 16;16:726467. doi: 10.3389/fnins.2022.726467. PMID: 35651628.
6. 2022 Xiao Liu, Kezhong Wang,MA Gonzalez-Gonzalez1, M. Romero-Ortega, GG. Wallace. "Sensing and stimulating electrodes for Electroceuticals" *Frontiers in Sens* 3:873862. doi.org/10.3389/fsens.2022.873862
7. 2022 Gu X, Carroll Turpin, MA, Romero-Ortega MI. Biomaterials and Regenerative Medicine in Pain Management**.** *Curr Pain Headache Rep* 26, 533–541 doi.org/10.1007/s11916-022-01055-5
8. 2022 Conde SV, Sacramento JF, Melo B, Fonseca-Pinto R, Romero-Ortega MI, Guarino MP. Blood pressure regulation by the carotid sinus nerve: clinical implications for carotid body neuromodulation. Front Neurosci. Jan 10;15:725751. doi:10.3389/fnins.2021.725751.PMID: 35082593
9. 2021. Hernandez-Reynoso AG, Corona-Quintanilla DL, Lopez-Garcia K, Horbovetz A, Castelan F, Zimmern P, Martinez-Gomez M, Romero-Ortega MI. Neuromodulation of the Bulbospongiosus Nerve Improves Voiding Efficiency in Mid-Age Multiparous Rabbits *Sci Rep* **11,** 10615. DOI; 10.1038/s41598-021-90088-8. PMID: 34011938
10. 2021 MA Gonzalez-Gonzalez, GS Bendale, K Wang, G Wallace , M. Romero-Ortega. Platinized graphene fiber electrodes uncover direct spleen-vagus communication. Nature *Commun Biol* **4,** 1097. https://doi.org/10.1038/s42003-021-02628-7. PMID: 34535751
11. 2021 Loper, H., Leinen, M., Bassoff, L. et al. Both high fat and high carbohydrate diets impair vagus nerve signaling of satiety. Sci Rep 11, 10394. https://doi.org/10.1038/s41598-021-89465-0. PMID: 34001925
12. 2020 Ghazavi A, González-González MA, Romero-Ortega MI, Stuart F Cogan. "Intraneural ultramicroelectrode arrays for function-specific interfacing to the vagus nerve" Biosensors and Bioelectronics 170, pg. 112608. doi.org/10.1016/j.bios.2020.112608. PMID: 33035896
13. 2020 Corona-Quintanilla D, López-Juárez R, Pacheco P, Romero-Ortega MI, Castelán F, Martínez-Gómez M. Bladder and urethral dysfunction in multiparous and mature rabbits correlates with abnormal activity of pubococcygeus and bulbospongiosus muscles. Neurourology and Urodynamics: 31, 116-124. PMID: 31578766
14. 2019 Meyers EC , Kasliwal N, Solorzano BR, Lai E, Bendale G, Ganzer P, Berry A, Romero-Ortega M, Rennaker RL, Kilgard MP, Hays SA."Enhancing plasticity in central networks improves motor and sensory recovery after nerve damage". *Nat Commun*. 2019;10(1):5782. Published 2019 Dec 19. doi:10.1038/s41467-019-13695-0. PMID: 31857587
15. 2019 Stiller AM, González-González MA, Boothby JM, Sherman SE, Benavides J, Romero-Ortega MI, Pancrazio JJ, Black BJ. Mechanical Considerations for Design and Implementation of Intraneural Devices. *J Neural Eng*. Sep 3. doi: 10.1088/1741-2552/ab4114. PMID: 31480034

16. 2019 Corona-Quintanilla DL, López-Juárez R, Pacheco P, Romero-Ortega MI, Castelán F, Martínez-Gómez M. "Bladder and urethral dysfunction in multiparous and mature rabbits correlates with abnormal activity of pubococcygeus and bulbospongiosus muscles" *Neurourol Urodyn* Oct 2. doi: 10.1002/nau.24176. PMID: 31578766
17. 2019 Bucksot JE, Wells AJ, Rahebi RC, Sivaji V, Romero-Ortega M, Kilgard MP, Rennaker RL, Hays SA. PLoS One 14(11: e0215191.doi: 10.1371/journal.pone.0215191 PMID: 31738766
18. 2019 Hernandez-Reynoso A, Nandam S, O'Brien J, Kanneganti A, Cogan S, Freeman D, Romero-Ortega MI. Miniature Electroparticle-Cuff for Wireless Peripheral Neuromodulation″ *J Neural Eng*. Apr 24;16(4):046002. doi: 10.1088/1741-2552/ab1c36. PMID: 31018187
19. 2019 Wang K, Frewin CL, Esrafilzadeh D, Wang C, Pancrazio JJ, Romero-Ortega M, Jalili J, Wallace G High performance graphene fiber based neural recording microelectrodes" *Adv. Materials* Apr;31(15):e1805867. doi: 10.1002/adma.201805867. PMID: 30803072
20. 2018 González-González MA, Kanneganti A, Joshi-Imre A, Hernandez-Reynoso AG, Bendale G, Patil L, Modi R, Ecker M, Khurram A, Cogan SF, Voit W, Romero-Ortega MI. "Thin Film Multi-Electrode Softening Cuffs for Selective Neuromodulation" *Scientific Reports* 8 (1), 16390. PMID 30401906.
21. 2018 Castelán F, López-García K, Moreno-Pérez S, Zempoalteca R, Corona-Quintanilla D, Romero-Ortega M, Jiménez-Estrada I, Martínez-Gómez M "Multiparity afects conduction properties of pelvic floor nerves in rabbits" Brain and behavior 8 (10), e01105. PMID 30240150
22. 2018 Alsmadi NZ, Bendale G, Kanneganti A, Shehabeddin T, Nguyen A, Hor E, Dash S, Johnston B, Granja-Vazquez R, Romero-Ortega MI. Glial-derived growth factor and pleiotrophin synergistically promote axonal regeneration in critical nerve injuries. Acta Biomaterialia. PMID 30059799.
23. 2018 Black B, Atmaramani R, Kumaraju R, Plagens S, Romero-Ortega MI, Dussor G, Price T, Campbell Z, Pancrazio J. Adult Mouse Sensory Neurons on Microelectrode Arrays Exhibit Increased Spontaneous and Stimulus-Evoked Activity in the Presence of Interleukin-6. J of Neurophysiology. PMID 29947589.
24. 2018 Shimizu EN, Seifert JL, Johnson K, Romero-Ortega MI. Prophylactic Riluzole Attenuates Oxidative Stress Damage in Spinal Cord Distraction. Journal of Neurotrauma. PMID 29295647.
25. 2017 Freeman DK, O'Brien JM, Kumar P, Daniels B, Irion RA, Shraytah L, Ingersoll BK, Magyar AP, Czarnecki A, Wheeler J, Coppeta JR, Abban MP, Gatzke R, Fried SI, Lee SW, Duwel AE, Bernstein JJ, Widge AS, Hernandez-Reynoso A, Kanneganti A, Romero-Ortega MI, Cogan SF. "A Sub-millimeter, Inductively Powered Neural Stimulator" *Front Neurosci*. Nov 27;11:659. PMID 29230164.
26. 2017 Anand S, Desai,V Alsmadi N, Kanneganti A, Nguyen DH, Tran M, Patil L, Vasudevan S, Xu C, Hong Y, Cheng J, Keefer E, Romero-Ortega MI. "Asymmetric Sensory-Motor Regeneration of Transected Peripheral Nerves Using Molecular Guidance Cues." Scientific Reports 7, 14323. PMID 29085079.
27. 2017 R Jalili, A Kanneganti, MI Romero-Ortega, GG Wallace. "Implantable Electrodes". Current Opinion in Electrochemistry." https://doi.org/10.1016/j.coelec.2017.07.003
28. 2017 Bell J ES, Seifert JL., Shimizu EN, Sucato DJ, Romero-Ortega MI. "Atraumatic Spine Distraction Induces Metabolic Distress in Spinal Motor Neurons." *Journal of Neurotrauma* 34(12): 2034-2044. PMID 28125935.
29. 2017 Meyers, EC, Granja-Vazquez, R, Solorzano, BR., Romero-Ortega, MI, Kilgard, MP, Rennaker, RL, Hays, S. "Median and ulnar nerve injuries reduce volitional forelimb strength in rats." *Muscle and Nerve*. PMID 28120500.
30. 2016 Lozano R, Gilmore K, Thompson B, Gilmore K, Stewart E, Waters A, Romero-Ortega M, Wallace GG. Polypyrrole as an electrical stimulation platform to enhance neuromuscular junction formation. Acta Biomater 45:328-339. PMID 27554016.
31. 2016 Black B, Granja-Vazquez R, Johnston BR, Jones E, and Romero-Ortega. "Anthropogenic radio-frequency electromagnetic fields elicit neuropathic pain in an amputation model" PLoS One 11, 1-17: PMID 26760033. Retracted.
32. 2016 Farajidavar A, Seifert J, Delgado M, Sparagana S, Romero M, Chiao J" Electromagnetic interference in intraoperative monitoring of motor evoked potentials: A telemetric solution" Medical Engineering & Physics. Volume 38, Issue 2, Pages 87–96. PMID 26678325.

33. 2015 Kim YT, Kanneganti A, Nothnagle C, Landrith R, Mizuno M, Wijesundara M, Smith S, and Romero-Ortega MI. "Microchannel Electrode Stimulation of Deep Peroneal Nerve Fascicles Induced Mean Arterial Depressor Response in Hypertensive Rats" Bioelectronic Medicine. 55-62. DOI: 10.15424/bioelectronmed.2015.00001
34. 2015 Lozano R, Stevens L, Gorkin R, Thompson BC, Stewart EM, Gilmore KJ, Panhius M, Romero-Ortega MI, Wallace GG. "Direct 3D printing of layered brain-like structures using Gellan Gum RGD substrates". Biomaterials 07/2015; 67:264-27 PMID 26231917.
35. 2015 Alsmadi NZ, P Lokesh, Hor E, Lofti P, Razal J, Wallace GW, Choung C-J, RomeroOrtega MI "Coiled Polymeric Gradients for Three Dimensional Neural Chemotaxis" Brain Res PMID 25801117.
36. 2015 Gu L, Uhelski, Anand S, RomeroOrtega MI, Kim, Y, Fuchs, PN, Mohanti S. Pain Inhibition by Optogenetic Activation of Specific Anterior Cingulate Cortical Neurons. PLOS ONE 10 (2) p.e0117746 ISSN 1932-6203. PMID 25714399.
37. 2014 Billo RE, Wilson PA, Priest JW, Romero-Ortega MI, Bruskill SR, Keens D. "Slump molding of microchannel arrays in soda-lim glass for bioanalytical device development." J Micro and Nano-Manufacturing. doi:10.1115/1.4028487
38. 2013 Shaun M. Logan, Mario I. Romero, Dianna Nguyen, M. Douglas Benson. Ephrin-B2 expression in the proprioceptive sensory system. Neurosci Lett 545 pp 69-74.
39. 2013 Bouché E*, Romero-Ortega MI*, Henkemeyer M , Catchpole T, Leemhuis J, Frotscher M, May P, Herz J, Bock HH. Reelin induces EphB receptor activation. *= co-first author. Cell Research- Nature. Jan 15. PMID 23318582. Cover illustration.
40. 2012 Kim Y-T, Romero-Ortega MI. Material Considerations for Peripheral Nerve Interfacing. MRS Bulletin. Volume 37, 573 - 580 DOI: 10.1557/mrs.2012.99.
41. 2012 Khan, C. Wildey, R. Francis, F. Tian, M.I. Romero, M.R. Delgado, N.J. Clegg, L. Smith, H. Liu, D.L. MacFarlane, G. Alexandrakis, "Improving optical contact for functional near infrared brain imaging with brush optodes," Biomed. Opt. Express, 3(5):878–898.
42. 2012 Seifert JL, Desai V, Watson RC, Musa T,Kim YT, Keefer EW, Romero MI. Normal molecular repair mechanisms in regenerative peripheral nerve interfaces allow recording of early spike activity despite immature myelination. IEEE Trans Neural Sys & Rehab Eng 20:220-227. PMID 22203723.
43. 2011 Dawood AD, Lotfi P, Dash SN, Kona SK, Nguyen KN, Romero MI. "VEGF Release in Multiluminal Hydrogels Directs Angiogenesis from Adult Vasculature in Vitro. J. Cardiovas Eng Tech. DOI: 10.1007/s13239-011-0048-4. Vol. 2 (3):173-185.
44. 2011 Tansey KE, Seifert JL, Botterman B, Delgado MR, Romero MI. Peripheral nerve repair through multi-luminal biosynthetic implants. Ann Biomed Eng. 39: 1815-1828. PMID 21347549.
45. 2011 Seifert JL, Bell, JE, Elmer BB, Sucato DJ, Romero MI. "Characterization of a novel bidirectional distraction spinal cord injury animal model" J Neurosci Methods 197(1):97-103. DOI: 10.1016/j.jneumeth.2011.02.003.
46. 2011 Lotfi P, Garde K, Chouhan A, Bengali E, Romero MI. "Modality-Specific Axonal Regeneration: Towards Selective Regenerative Neural Interfaces. Front Neuroeng (11): 1-11. PMID 22016734.
47. 2011 Farajidavar A, Seifert JL, Bell JE, Seo YS, Delgado MR, Sparagana S, Romero MI, Chiao JC. A Wireless System for Monitoring Transcranial Motor Evoked Potentials. Ann Biomed Eng 39(1):517-23. DOI: 10.1007/s10439-010-0152-x.
48. 2010 Tian F, Delgado MR, Dhamne1 SC, Khan B, Alexandrakis G, Romero MI, Smith L, Reid D, Clegg NJ, Liu H. Quantification of functional nerar infrared spectroscopy to assess cortical organization in children with cerebral palsy. Optics Exp Vol. 18, Issue 25, pp. 25973-25986.
49. 2010 Khan B, Tian F, Behbehani K, Romero MI, Delgado MR, Clegg NJ, Smith L, Reid D, Liu H, Alexandrakis G "Identification of abnormal motor cortex activation patterns in children with cerebral palsy by functional near-infrared spectroscopy." J Biomed Opt.15(3) 036008-1-14. DOI: 10.1117/1.3432746
50. 2009 Garde, K, Keefer, E, Botterman, B, Galvan, P, Romero MI "Early Interfaced Neural Activity from Chronic Amputated Nerves" Front Neuroeng 2(5):1-11. PMID 16.005.2009.
51. 2009 Romero MI, Ezaki MB. Nerve Pathology in Unregulated Limb Growth (2009). Journal of Bone and Joint Surgery J Bone Joint Surg Am. Jul;91 Suppl 4:53-7.

52. 2008 Keefer E, Botterman, Romero MI, Rossi AF, Gross GW. Carbon nanotube coating improves neuronal recordings. Nature Nanotechnology (3):434:9 PMID 18654569.
53. 2007 Galvan-Garcia P, E. Keefer, F. Yang, Zhang M, Fang S, Zakhidov AA, Baughman RH, Romero MI "Robust Cellular Growth with CNTS, Nanoyarns and Nanosheets" J Biomat Sci Poly Ed. 18 (10), pp. 1245-1261. Invited Contribution. PMID 17939884.
54. 2007 Romero MI, Lu Lin, Lush M, Lei L, Parada LF, Zhu Y. "Deletion of NF1 in Neurons Induces Increased Axon Collateral Branching in Vitro and in Vivo Following Injury" J Neuroscience. (27): 2124-2134. PMID 17314307.
55. 2005 Lei L, Laub F, Lush M, Romero MI, Zhou J, Luikart B, Klesse L, Ramirez F, Parada LF. The zinc finger transcription factor Klf7 is required for TrkA gene expression and development of nociceptive sensory neurons. Genes Dev. 1;19(11):1354-64. PMID 15937222.
56. 2005 Benson MD, Romero MI, Lush ME, Lu QR, Henkemeyer M, Parada LF. "Ephrin-B3 is a myelin-based inhibitor of neurite outgrowth." PNAS. 26;102(30):10694-9. PMID 16020529.
57. 2004 Aimone JB, Leasure JL, Perreau VM, Thallmair M; The Christopher Reeve Paralysis Foundation Research Consortium (Romero MI). Spatial and temporal gene expression profiling of the contused rat spinal cord. Exp Neurol Oct;189(2):204-21.
58. 2003 Phelps CJ, Romero MI, Hurley DL. "Prolactin replacement must be continuous and initiated prior to 21d of age to maintain hypothalamic dopaminergic neurons in hypopituitary mice." Endocrine. 20(1-2):139-148.
59. 2003 Phelps CJ, Romero MI, Hurley DL. "Growth Hormone-Releasing Hormone-Producing and Dopaminergic Neurons in the Mouse Arcuate Nucleus Are Independent Populations." Neuroendocrinology. 15(3):280-288.
60. 2002 Ma L, Harada T, Harada H, Romero MI, Hebert JM, McConnell SK, Parada LF "Neurotrophin-3 is required for appropriate establishment of thalamocortical connections." Neuron 36:623-634.
61. 2001 Romero MI, Rangappa N, Garry MG, Smith GM. Functional regeneration of chronically injured sensory afferents into adult spinal cord following neurotrophin gene therapy. J Neuroscience. 21(21):8408-8416.
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91. 2011 Khobragade N, Vidhi D, Abhyankar P, Nguyen A, Seifert JL, Kim YT, Romero, MI. Neural Activity Decay in Regenerative Peripheral Interfaces Correlates with Axonal Remyelination. Society for Neuroscience. Washington DC. Nov 11-16.
92. 2011 Seifert JL, Collins RW, Kunkel S, Vidhi D, Dutta N, Khobragade N, Young-tae Kim, Romero, MI. The Stability of a Regenerative Multielectrode Interface is Unaffected by either Normal or Excessive Cyclical Limb Stretching Society for Neuroscience. Washington DC. Nov 11-16.
93. 2011 Dash S, Vidhi D, Collins RW, Khobragade N, Nguyen A, Seifert JL, Romero, MI Specific Single Unit Neural Activity Recorded from Regenerative Peripheral Nerve Interface Corresponding With Movement and Response to Mechanical and Thermal Stimulation. Society for Neuroscience. Washington DC. Nov 11-16.
94. 2011 Musa T, Romero-Ortega M, Keefer E. Molecular Profile of Regenerated Peripheral Nerve Responses to Chronic Multi-electrode Arrays. Biomedical Engineering Society. Hartford, Connecticut, October 12-15.
95. 2011 Dash SN, Nguyen, A. Dawood A, Lotfi P, Romero-Ortega M. Sustained Release of VEGF and Pleiotrophin Stimulates Nerve Regeneration across Long Gap Peripheral Nerve Defects. Biomaterials Society. Orlando FL. April 13-16.
96. 2011 Eduardo Martinez, Parisa Lofti, Swarup Dash, and Mario Romero. FEM Optimization of Sustained VEGF Delivery for Angiogenesis Applications. Biomaterials Society. Orlando FL. April 13-16.
97. 2010 Stearns, JE, Elmer B, Seifert, JL, Sucato, D, Romero, MI. Characterization of experimental spinal cord injury caused by graded bilateral spine distraction. Society for Neuroscience. San Diego CA. Nov 14-17. No. 468.20

98. 2010 Benson MD, Romero-Ortega MI, Henkemeyer M, Parada LF. Ephrin-B2 in the spinal cord proprioceptive sensory system. Society for Neuroscience. San Diego CA. Nov 14-17. No. 182.14
99. 2010 Lofti P, Dash S, Romero-Ortega MI. Neurotrophic and pleiotrophic effects observed in sensory and motor neurons. Society for Neuroscience. San Diego CA. Nov 14-17. No. 588.18
100. 2010 Vasudevan, S Karthikeyan, K, Romero-Ortega MI, Y-T Kim. Amigo1 mediates axon-schwann cell interactions. Society for Neuroscience. San Diego CA. Nov 14-17. No. 541.20
101. 2010 B. Khan; F. Tian; K. Behbehani; M.I. Romero-Ortega; N.J. Clegg; M.R. Delgado; H. Liu; and G. Alexandrakis. "Identification of Abnormal Motor Cortex Activation Patterns in Children with Cerebral Palsy by Functional Near Infrared Spectroscopy," in OSA Miami, FL.
102. 2010 M.R. Delgado; M.I. Romero-Ortega; F. Tian; B. Kahn; G. Alexandrakis; and H. Liu. "Early Bilateral Cortical Activation in Children with Subcortical Hemiplegic Cerebral Palsy Revealed by NIRS," in AACPDM, Scottsdale, AZ.
103. 2010 Farajidavar A, Seifert JL, Bell JE, Romero MI, Chiao JC. Electromagnetic Interference on Intraoperative Neurophysiological Monitoring Signals. Biomedical Eng Society. Austin, TX. Oct 6-9
104. 2010 Dash SN, Tran R, Yang J, Romero MI. Transparent CUPE Nerve Guides Allow Evaluation of Luminal Fillers and Mediate Nerve Gap Repair. Biomedical Eng Society. Austin, TX. Oct 6-9
105. 2010 Stearns, JE, Elmer B, Seifert, JL, Sucato, D, Romero, MI. Characterization of High Precision Experimental Model of Graded Bilateral Distraction Spinal Injury Biomedical Eng Soc. TX. Oct 6-9
106. 2010 Seifert, JL, Stearns, JE, Gross, GW, Sucato, D, Romero, MI. Neuroprotection of Spinal Cord Network Activity by Glucose/ATP against Hypoxia. American Society of Neurochem. NM. March.
107. 2009 Watson C, Lozano R, Gross GW, Conrad J, Romero MI. Modulation of Spinal Cord Neuron Network Activity by Skeletal Muscle.Society for Neuroscience. Chicago IL. Oct 3-11
108. 2009 Lofti P, Garde K, Bengali E, Romero MI. Neuron-Specific Growth Factors Segregate Regenerative Axonal Types in the Injured PNS. Society for Neuroscience. Chicago IL. Oct 3-11
109. 2009 Dawood A, Varshney A, Bidic S. Romero MI. Vascular Endothelial Growth Factor (VEGF) and Pleiotrophin (PTN) Stimulate Nerve Regeneration Across Long-Gap Peripheral Nerve Defects. 39th Annual Meeting of the Society for Neuroscience. Chicago IL. Oct 3-11
110. 2009 Stearns JE, Seifert JL, Gross GW, Hynds DL, Sucato D, Romero MI. Neuroprotection of Spinal Cord Network Activity by Glucose/ATP against Hypoxia. 39th Annual Meeting of the Society for Neuroscience. Chicago IL. Oct 3-11.
111. 2009 Dash SN, Tran R, Yang J, Romero MI. Biosynthetic implants for multiluminal nerve gap repair. BMES, Pittsburgh, PA. October 7-10.
112. 2009 Stearns JE, Seifert JL, Gross GW, Sucato D, Romero MI. Animal Modeling of Intraoperative Monitoring During Spinal Distraction Surgery: UT Metroplex Days. March TX.
113. 2009 Dash S.N, Dawood AF, Shah V, Kona S, Galvan P, Nguyen KT, Yang J, Romero MI. Biosynthetic implants for multiluminal nerve gap repair. UT Metroplex Days, March 6,March 24.
114. 2009 Dawood A, Varshney A, Bidic S. Romero MI. Synergistic Effects of Endogenous and Exogenous Growth Factors for Nerve regeneration across Long Gap Injuries. AIMBE Washington. Feb. 12.
115. 2008 Tian, F, Delgado, MR, Clegg, N, M.I. Romero, Liu,H. Investigation of the Motor Cortex Function in Children with Cerebral Palsy Using Functional Near-infrared Spectroscopic Imaging. OSA
116. 2008 P. Galvan-Garcia, E. W. Keefer, R.H. Baughman, K.E. Tansey, M.I. Romero. Directing nerve regeneration: from gap repair to bionics. Christopher Reeve Paralysis Foundation Symposium.
117. 2006 B.A. Israel, M.D. Hurst, P. Galvan-Garcia, D. Muirhead, G. Hughes, C. Smith, Botterman, K. Tansey, M.I. Romero. Long-term assessment of multiluminal nerve gap repair in absence of appropriate target tissue. Society for Neuroscience. Poster 761.12/GG13.
118. 2006 K.E. Tansey , V. Shah, P. Galvan-Garcia, C. Smith, Botterman, B. Blits, D. Pearse , M.I. Romero. Axonal regeneration in spinal cord gap injury using biosynthetic multichanneled hydrogel scaffolds seeded with neutrophin-3 and brain-derived neurotrophic factor-expressing Schwann cells. Society for Neuroscience. Poster 585.17/OO57
119. 2006 P. Galvan-Garcia, E. W. Keefer, S. M. Zhang, S. Fang, AA Zakhidov, R.H. Baughman, M.I. Romero. Pristine carbon nanotube sheets support primary neural growth in long-term cultures. Society for Neuroscience. Abstract 236.13/E19

120. 2006 F. Yang, A. Chohuan, L. Case, D. Muirhead, M. Ezaki, M.I. Romero-Ortega. Perineurioma-like neuropathy in macrodactyly. Society for Neuroscience. Abstract 96.12/OO31
121. 2005 P. Galvan-Garcia, S. M. Zhang, S. Fang, AA Zakhidov, R.H. Baughman, M.I. Romero. Cellular Growth with Carbon-Nanotubes, Nanoyarns and Nanoribbons. The Associated Nanotechnology Congress Meeting. Houston, TX. no. 75 pp. 85
122. 2005 P. Galvan-Garcia, S. A. Pierce,, Larry Watterkote, D. Muirhead, C. Smith, B. Botterman, K.E. Tansey, M.I. Romero. Axonal Regeneration in Multiluminal Biosynthetic Nerve Repair. 11th Symposium of Neural Regeneration. Asilomar, CA. Abstract no. 92 pp. 41
123. 2005 Romero MI, Lu Lin, Lush M, Zhu Y, Parada LF. Neuronal Ras signaling activation in conditional NF1 mutant mice allow for enhanced recovery after spinal cord injury. 11th Symposium of Neural Regeneration. Asilomar, CA. Abstract no. 108 pp. 46
124. 2005 P. Galvan-Garcia, S. A. Pierce, M.R. Allen, Larry Watterkote, D. Muirhead, C. Smith, B. Botterman, K.E. Tansey, M.I. Romero. Axonal Regeneration in Multiluminal Biosynthetic Nerve Repair. Christopher Reeve Foundation Spinal Cord Synposium. No. 1 pp.1 Boston, MA.
125. 2004 P. Galvan-Garcia, S. A. Pierce, M.R. Allen, Larry Watterkote, D. Muirhead, B. Botterman, K.E. Tansey, M.I. Romero. Biomimetic Nerve Repair Through Multiluminal Biosynthetic Prothesis. Annual Meeting of the Tissue Engineering Society International, and the European Tissue Society. Abstract no. 53 pp.52 Lausanne, Switzerland.
126. 2003 C. Engesser-Cesar, R. M. Ichiyama, L.D.F. Moon, M.Romero, S. Thuret, and The Christopher Reeve Research Foundation (2003). Spatial and temporal gene expression profiling of the contused spinal cord: cell death and cell survival. Society for Neuroscience 33:754.14
127. 2003 P. Galvan, M.R. Delgado, K.E. Tansey, M.I. Romero. Three-dimensional Schwann cell cables formed within transparent micro multiluminal scaffolds promote and direct nerve regeneration. Society for Neuroscience 34: 152.13
128. 2001 Liu H. Romero MI. Delgado MR. A transparent multichannel conduit that allows for linear or gradient cellular seeding. J Rehab Res Dev 38: S33, P35.
129. 2001 Romero MI, N. Rangappa, Garry G, Smith GM. Functional regeneration of chronically injured sensory afferents into the adult rat spinal cord following neurotrophin gene therapy. J Rehab Res Dev 38: S40, P48.
130. 2001 Ma L. Romero MI, Herbert J, McConnell SK, Parada LF. Neurotrophin 3 is required for normal dendritic arborization of hippocampal CA-1 pyramidal neurons. SFN 31. Abstract 905.8
131. 2001 Rangappa N, Romero MI, Srivatsan M, Smith GM. Co-expression of cell adhesion molecule L1 modulates nerve growth factor induced axonal sprouting in adult rat spinal cord. Society for Neuroscience 31. Abstract 698.15
132. 2001 Romero MI, Galvan P, Parada LF, Henkemeyer M. Abnormal development of the CA-3 hippocampal subfield in EPH receptor tyrosine kinace mutant mice. SFN 31. Abstract 24.15
133. 2001 Kline G, Garry M, Romero MI, Mitchel JH, Potts JT. Anterograde labeling of cervical dorsal horn (CDH) neurons to the lower brainstem in the rat. FASEB Journal Vol. 15, No. 5, pp. A811
134. 2000 Zhu Y, Romero MI, Ghosh P, Ye Z, Charnay P, Rushing EJ, Marth JD, Parada LF.Neuronal-specific NF-1 mutant display abnormal cerebral cortex and extensive gliosis in the nervous system. Symposium on Molecular Development. Dallas, TX.
135. 2000 Smith GM, Johnson P, Nair A, Romero MI. Targeting axon growth along a preformed pathway from transplanted neurons to a neurotrophic source. J. Neurotrauma 17:991. K7.
136. 2000 Phelps, CJ, Romero MI. Axonal Projections of A12 and A14 dopaminergic neurons: effect of prolactin absence and replacement. Society for Neuroscience 30, Abstract 50.18 pp131.
137. '2000 Romero MI, N. Rangappa, Garry G, Smith GM. Gene Transfer into the adult rat spinal cord revealed distinct responses of intact and chronically injured sensory afferents to nerve growth factor and fibroblast growth factor-2. American Society for Gene Therapy. Vol 3.
138. 1999 Smith GM, Johnson P, Nair A, Romero MI. Targeting axon growth along a preformed pathway from transplanted neurons to a neurotrophic source. Society for Neuroscience 29,.
139. 1999 Romero MI, N. Rangappa, LiL, Lightfoot S, Garry G, Smith GM. NGF Gene transfer induces extensive sprouting of sensory spinal cord afferents and hyperalgesia which can be modulated by the conditional expression of L1. Society for Neuroscience 29, Abstract 711.5.

140. 1999 Romero MI, N. Rangappa, MG Garry, Smith GM. Axonal regeneration of sensory afferents into the adult rat spinal cord mediated by adenoviral gene transfer of L1 and FGF-2. American Society for Gene Therapy. Vol 2. Abstract 201 p.51a.
141. 1998 Romero MI, N. Rangappa, Smith GM. Gene transfer of NILE/L1 and bFGF enhances regeneration of sensory afferents into the adult rat spinal cord, leading to functional recovery. Society for Neuroscience, Vol. 24, part 2. Abstract 519.7.
142. 1997 Romero MI, Smith GM. Adenoviral Gene transfer of neurotrophins and cell adhesion molecules into the adult rat spinal cord and their effect on axonal regeneration. Society for Neuroscience, Vol. 23, part 2. Abstract 573.3.
143. 1998 Phelps CJ, Joseph SR, Romero MI, Robinson ICAF. GHRH immunoreactivity in median eminence axonal terminals: effects of developmentally altered GH or PRL. Endocrine Soc
144. 1996 Phelps, CJ, Romero MI (1996). Postnatal decline in number of hypothalamic tuberoinfundibular dopaminergic (TIDA) neurons in prolactin-deficient mice: correlation of the pattern with maternally-derived serum prolactin levels. Endocrine Soc. Abstract P1-681:305.
145. 1995 Romero MI, Phelps CJ. Neurotrophic effect of neonatal prolactin (PRL) treatment on growth hormone-releasing hormone (GHRH) expression in hypothalamic neurons of normal and Ames dwarf mice. Society for Neuroscience, Vol. 21, part 2. Abstract 421.18.
146. 1995 Romero MI, Phelps CJ. Growth hormone-releasing hormone, somatostatin and dopamine neuronal projections to the median eminence in PRL- and GH-deficient Ames dwarf mice. Endocrine Soc. Abstract P3-107:495.
147. 1995 Phelps, CJ, Romero MI, Hurley DL. Cell death in absence of hormonal target signals: pituitary-regulating neurons in hypopituitary mice. J Cell Biochem. S19B. Abstract B8-442.
148. 1993 Romero MI, Phelps CJ. Prolactin treatment in PRL-deficient adult dwarf mice does not reverse morphological deficits in hypothalamic dopaminergic neurons. Endocrine Soc. Abstract 161:443.
149. 1992 Romero MI, Phelps CJ. Prolactin treatment during development in Ames dwarf mice increase dopamine histofluorescence and tyrosine hydroxylase immunoreactivity in ventral hypothalamus. Society for Neuroscience, Vol. 18, part 1. Abstract 54.4.
150. 1991 Beaz-Zarate C., Romero MI, Rivera TMA., Morales-Villagran A. Effect of the anticonvulsant 4-hidroxy-4ethyl-4 phenyl butiramide (HEPB) on dopamine concentration and release in the corpus striatum of the adult mouse. Revista Cubana de Inv. Cientificas. Vol 10: 77.
151. 1991 Morales A, Aguilar LC, Romero MI, Sanchez J, Beaz C . Effect of the fibroblast growth factor on the choline acetyl transferase and dopamine levels in the CNS of rats that underwent hypoxia and ischemic damage during early postnatal development. Revista Cubana de Inv. Vol. 10 p 115.

## C. Invited Seminars/Workshops

- International

1. 2024 Plenary Speaker. Mexican Society of Biomedical Engineering Annual Conference.
2. 2024 Co-Chair: Neural Engineering Methods and Applications. Mexican Physiology Society. Sept 1-3.
3. 2023 Universidad Veracruzana. Mexico Invited seminar. Feb 7.
4. 2022 Advanced Materials and Electroceuticals Workshop. Wollongong, AU. Nov 17
5. 2022 Plenary Speaker. Mexican Physiology Soc/Latin America Associat of Physiological Sci, Mex. Oct 6
6. 2022 Univ. of Wollongong. Electroceuticals Workshop Wollongong, Australia. July 25
7. 2022 5th International Urinary Incontinence International Forum. UAT. Tlaxcala. Mexico April 27th.
8. 2021 XIII Keynote lecture Biomed Eng. in Covid-19 times. Mexican Universities Consortia Oct. 22
9. 2021 Electronic Medicine Methods and Applications. Technological Institute of Ixtapaluca, Mex. May 22
10. 2019 Enabling electroceuticals with Biosystems workshop. U. Wollongong Australia. Nov. 12
11. 2019 Health Sciences. UAT. 45THAniversary Medical School. Tlaxcala. Mexico Oct 27th.
12. 2019 Universitätsklinikum Würzburg. Germany. March 29
13. 2019 IT'IS Foundation Zurich, Switzerland. March 26
14. 2019 13th Annual International Electromaterials Science Symposium. Geelong Australia. Feb. 11-13
15. 2018 Neural Signal Workshop UNAM. Cocoyoc. Mexico. Oct. 24-26.
16. 2018 Univ. of Wollongong. ACES Symposium Wollongong, Australia. June 15.

17. 2017 Mexican Physiology Society, Monterrey, Mexico. August 15.
18. 2017 Symposium on Bioelectronic Medicine NER 2017, Shanghai, China, May 25-28.
19. 2016 Institute of Biomedical Research, University Center UNAM. Mexico City. August 27
20. 2016 Neurobiology Institute. Natl Autonomous Univ of Mexico (UNAM). Queretaro Mexico. April 29th.
21. 2016 2nd International Urinary Incontinence International Forum. UAT. Tlaxcala. Mexico April 27th.
22. 2015 Keynote Speaker. 30th anniversary CUCBA. University of Guadalajara, Mexico. October 26.
23. 2015 Neural Signal Workshop UNAM. Cocoyoc Oct 28-29
24. 2015 Frontier of Molecular Biology and Bioelectronics. Universidad de Guadalajara. Oct 26
25. 2015 Plenary Talk. 3rd Int IEEE EMBS NeuroTechnologies for BRAIN Initiatives. Milan, Italy. August 26
26. 2014 National Univ. of Singapore "Peripheral Nerve Interfacing: From Bionics to Neuroceuticals" Nov.
27. 2014 CIMTEC 10th International Conference, Montecatini Term Italy. Aug.
28. 2013 4th Nanobionics Symposium University of Melbourne, Australia. Nov.
29. 2013 Mexican Pediatric Neurology Association "Guiding nerve regeneration". Oaxaca, Mex. May.
30. 2012 University of Alberta, Canada. Guiding nerve regeneration" Edmonton CA. Sept
31. 2012 Int. Functional Electrical Stim Socx, "Closed-loop Peripheral Nerve Interfacing" Banff, Sept
32. 2012 Univ of Wollongong "New Materials in Neural Interfacing. ACES Symposium Wollongong, Feb
33. 2011 Technological Institute of Monterrey Academic Leaders Lectures. Guadalajara, Mexico April.
34. 2011 NanobioMedica Conference. Mexico DF. Feb.
35. 2010 University of Wollongong, Australia Asia-Pacific Symposium on Nanobionics Wollongong, Jun.
36. 2009 IEEE Institute Polytecnico Natl "Biosynthetic Nerve Repair." Mexico DF. Apr.
37. 2009 Univ of Wollongong "Separation of Powers" Symp. on Electromaterials. Wollongong, Australia Feb.
38. 2008 IEEE Institute Polytecnico Nacional, Mexico "Neural Control of Advanced Bionic Limbs" DF. Apr.
39. 2007 Centro de Investigaciones en Optica, Mexico "Imaging Neurons During Injury," Oct. Leon, Mex.
40. 2007 NT07, Ouro Preto Brazil "Carbon Nanotube Biology: Cellular Growth and Neurointerfacing".
41. 2007 Low Dim Struct and Devices Conf. Colombia "Biological applications of carbon nanotubes" Apr.
42. 2006 UTD/UdG Workshop, Leon Gto. Mexico "Cellular Growth on Carbon Nanotubes" Sept.
43. 2000 Guadalajara University "Gene therapy in the adult CNS", Mexico.
44. 1999 Guadalajara Univ. "Nerve regeneration in the adult CNS mediated by gene transfer".
45. 1999 Guadalajara University, Mexico "Adenoviral-mediated gene transfer for neuronal regeneration"
46. 1994 Guadalajara University, Mexico "Role of the pituitary gland on the neuronal development"

- National

1. 2025 Case Western Reserve University. April
2. 2024 Oregon Health & Science University. May 3rd.
3. 2023 Zusman Int. Workshop on Neuroregeneration. Houston Methodist Research Institute. March 17
4. 2022 Neuromodulation Colloquium. Medtronic. Virtual. Oct 12.
5. 2022 Neurosurgery Grand Rounds. Houston Methodist Hospital. August 10.
6. 2022 Neurourology: Bridging Basic and Clinical Science to Understand Urologic Disease Workshop. NIH
7. 2021 Mission Connect. Houston. TIRR foundation. March 5
8. 2020 Grand Rounds. College of Medicine. University of Houston. May 5
9. 2020 Boise State University. ECE Department. March 11.
10. 2019 Sim4Life Workshop, Society for Neuroscience. Chicago Oct. 21
11. 2019 9th International IEEE EMBS Conference on Neural Engineering. San Francisco. March 20-23.
12. 2019 Workshop on Recording of peripheral nerve signals. IEEE EMBS. San Francisco. March 20.
13. 2019 University of Connecticut.
14. 2018 Michigan State University. Institute for Quantitative Health Science and Engineering. July 18th.
15. 2018 University of Texas at Austin, CARE initiative seminar. March 7. Texas.
16. 2017 IEEE Advanced NeuroTechnologies for BRAIN Initiatives. Nov 9-10, Washington DC.
17. 2017 Grand Rounds. Obstetrics, Gynecology and Women's Health. University of Louisville. Sep.
18. 2017 Plenary at 7th (US-Turkey) Advanced Institute on Global Healthcare. Harvard University. Jan.
19. 2016 IEEE Advanced NeuroTechnologies for BRAIN Initiatives. Nov 10-11, San Diego CA.
20. 2016 Tulane Universityp. 30th Anniversary of the Neuroscience Program. Oct. 7th.

21. 2014 Cleveland Clinic, Neuroprosthetic Seminar Series. Cleveland OH. Dec.
22. 2014 Case Western University, BME Seminar Series. Cleveland OH. Dec .
23. 2014 Columbia University, Biomedical Engineering. New York. Sep.
24. 2014 Illinois Institute of Technology. Chicago. "Molecular Guidance in Nerve Repair. Jun.
25. 2014 Symposium on Biomedical Technologies. UTA Research Institute. Fort Worth
26. 2014 Florida International University, Biomedical Engineering, Miami, FL " Jan.
27. 2014 University of Texas at Dallas Plenary Talk. The Internet of Things Summit" Jan.
28. 2013 Fort Worth Life Sciences Coalition. "Brain Mapping." Dec.
29. 2013 Society of Hispanic Engineers. Indiana. Engineering Research Symposium. Nov.
30. 2013 6th Int. Neural Engineering conference. CA. Peripheral Neural Interfacing pre-Symposium. Nov
31. 2013 Texas Christian University Dallas. Fort Worth.
32. 2013 MetroCon IEEE Symposium. October.
33. 2013 Symposium on Biomedical Technologies. UTA Research Institute. March 22. Fort Worth
34. 2013 TEDx UTA. The University of Texas at Arlington April 22.
35. 2012 Texas Scottish Rite Hospital for Children, Dallas TX. Dec.
36. 2012 Society for Biomaterials "Stress testing of Regenerative Peripheral Neural Interfacing" Oct
37. 2012 Texas-Korea Nanotech Worshop. Grapevine, TX "Apr
38. 2012 University of Pittsburgh, McGowan Institute Retreat Farmington, PA. Mar .
39. 2011 Baylor School of Dentistry. Dallas, TX. Arlington-Fort Worth SFN Chapter
40. 2011 IEEE Engineering in Medicine and Biology Society. Boston, MA. Aug.
41. 2011 Gordon Research Conference: Biomaterials and Tissue Engineering, Holderness, NH Jul.
42. 2011 Tarrant County College,TX "Reliable Neural Interfaces. Untold Stories Veterans Series." Nov.
43. 2011 Arlington Technology Association, Arlington, TX "Advances in Nerve Regeneration." Nov.
44. 2010 University of Texas at Arlington, TX "Neural Interfaces: Enabling Technology " Nov.
45. 2009 University of Texas at Arlington, "Engineering Materials for Nerve Repair " Mat Sci Eng Dep. Oct.
*46.* 2008 IEEE-Electron Device Soc, Disting Lecturer at "Bio and Nano Contributions" Nov.
47. 2008 Shriners Hospital for Children-JBJS Minneapolis/St Paul. "Congenital Limb Malformations" Nov.
48. 2008 Chicago Rehabilitation Institute, Chicago. IL. Aug.
49. 2008 U. of Texas at Arlington, TX. "Regenerative Neurobiolgy" Bioegineering Dept. Feb.
50. 2008 University of Michigan, Ann Arbor, MI.-Enhanced Neurointerfacing" Mech Eng Dept Jan.
51. 2007 NanoTX07 Dallas, TX. "Connecting Injured Nerves to Computers via Carbon Nanotubes"
52. 2007 U.of Texas at Dallas "Moving things by thought: Nanotools for successful neurointerfacing"
53. 2007 Technion/UTD Workshop. Dallas TX "Neurointerfacing with Carbon Nanotubes" Jan.
54. 2007 The Texas Back Institute, Dallas, TX "Nerve Regeneration and Beyond" Jan.
55. 2006 Zyvex Co. Plano TX "Regenerating nerves without targets" Oct.
56. 2006 Young Presidents Org. Texas Scottish Rite, Dallas TX "Coloring outside the lines" Oct.
57. 2006 Univ. of Texas at Dallas. Cells and CNTs dying or living on the fast lane?. TX Oct 05.
58. 2006 NanoTX06 Dallas TX "Cellular Behavior on carbon Nanotubes" Sept.
59. 2006 Illinois Institute of Technology. IL "Guiding Nerves with Tubes and Molecules" Sep.
60. 2005 Sandia National Laboratories. Albuquerque, NM. "Nanotechnology in Nerve Regenerative Med" Feb.
61. 2005 Zyvex Co. TX "Regenerative Nanomedicine: Applications in Nerve Repair and Biosensors: Feb.
62. 2005 American Academy of Cerebral Palsy and Developmental Medicine. Orlando FL.Sep.
63. 2004 UTSW Medical Center, Dallas Pedriatic Intensive Care. TX Biosynthetic Prosthesis. UTSW
64. 2003 The Miami Project for the Cure of Paralysis, Miami, FL. "Biomimetic scaffolds for nerve repair"
65. 2003 UTSW Medical Center, Dallas TX "Enticing nerve growth through genetically engineered conduits.
66. 1998 Texas Scottish Rite Hospital for Children. TX "Gene therapy for nerve repair ".
67. 1996 UTSW Medical Center, TX "Prolactin on tuberoinfundibular dopaminergic neurons"
68. 1995 Tulane University, New Orleans LA "The role of PRL in the development of the hypothalamus."

- Podium Presentation at Conferences

1. 2023 Z. Rahman. “Sub-chronic Neuromodulation of Bulbospongeosus Nerve Improves deficits associated with Stress Urinary Incontinence in Mature Multiparous Female Rabbits” 8th Annual Meeting. Society for Pelvic Research, December 8. Savannah, GA.
2. 2023 Z. Hosuf. “Innervation of the ovine pelvic floor muscles by levator ani and perineal nerves” Annual Meeting of the Society Pelvic Research, December 8 GA.
3. 2023 Hussein K, Romero-Ortega MI. Sensory and Motor Intent Signals Recorded by Regenerative Multielectrode Arrays. IEEE EMBS NER 23. Baltimore
4. 2022 Lloyd D, González-González MA, Ordonez C, Romero-Ortega MI. Inter-Organ Neuronal Network Features Revealed by High Throughput Data Analysis. IEEE EMBS Hipoct22
5. 2021 Rahman F.S., Hernandez-Reynoso A., et al. Pelvic Floor Muscle Neuromodulation as a Treatment of Stress Urinary Incontinence. Podium speaker and poster presenter at: Mission Connect Annual Symposium; November 2021; Houston, TX
6. 2021 Lloyd, D. A., González-González, M.A., Wang, K., Wallace, G. Romero-Ortega, MI. Coordinated Multi- organ Nerve Activity Revealed by Platinized Graphene Fiber Electrodes., Podium Talk, Mission Connect.
7. 2021 K Romero, Gonzalez-Gonzalez[3], S. Smith, W. Vongapatasin, MI. Romero-Ortega. Miniature Wireless Neuromodulation of the Deep Peroneal Nerve in Fully Awake Spontaneous Hypertensive Rats. BMES Annual Conference.
8. 2021 S. Sharf-Aldin1*, MA. Gonzalez-Gonzalez1, MI. Romero-Ortega. Anatomical Representation of Splenic Nerve Fibers in the Cervical Vagus Nerve. BMES Annual Conference.
9. 2021 MA. Gonzalez-Gonzalez, K. Romero, M Romero-Ortega. “Miniaturized neural stimulators for bioelectronic medical applications” IEEE EMBS NER 21.
10. 2021 MA. Gonzalez-Gonzalez, K Wang, G Wallace, M Romero-Ortega. “Splenic Neurovascular Plexi Activity using Platinized graphene fiber electrodes” IEEE EMBS NER 21.
11. 2020 Zacapa-López DA, Hernández-Bonilla C, Zempoalteca R, Corona-Quintanilla DL, Romero-Ortega M, Castelán F, Martínez-Gómez M. The role of pubococcygeus and bulbospongiosus muscles on vaginal and urethral pressure in the young nulliparous rabbits. Mexican Bioseñales Group. Tlaxcala, Mexico.
12. 2020 Hernández-Bonilla C, Zacapa López DA, Zempoalteca-Ramírez R, Corona-Quintanilla DL, Castelán F, Romero-Ortega M, Martínez-Gómez M. Urethral and vaginal pressure generated during electrical stimulation of the bulbospongiosus nerve of the nulliparous rabbit. Bioseñal group (Tlaxcala, Mexico
13. 2018 Bendale GS, Tran BT, Ryan J, Rahman F, Shimizu E, Anand S, Romero-Ortega MI. “Effect of Neuregulin 1 in repairing a 4 cm gap injury in the rabbit common peroneal nerve” Society for Neuroscience. Washington. Nov.
14. 2017 Shimizu EN, Seifert JL, Johnson K, Romero-Ortega MI. Atraumatic spinal cord injury initiates the oxidative stress pathway and metabolic impairments. Society for Neuroscience. Washington. Nov
15. 2017 Bendale G ,Alsmadi NZ, Granja-Vazquez R, Hor M, Romero-Ortega MI. Delayed radial sorting and re-myelination in a 4cm long gap repair despite synergistic effect of neurotrophins and pleiotrophins in nerve regeneration. Society for Neuroscience. Washington. Nov
16. 2017 Wells A, Sanchez C, Hays S, Kilgard M, Rennaker R, Romero-Ortega MI. Selective Stimulation of A-Fibers in the Vagus Nerve by a Novel Multi-Contact Cuff Electrode. BMES Phoenix. Oct.
17. 2017 Anand S, Romero-Ortega MI. Semaphorin 3A Mediated Inhibition of Ad Fibers in the Transected Peripheral Nerves Using Molecular Guidance Cues. BMES Phoenix. Oct.
18. 2017 Lozano, Rodrigo; Stevens, Leo; Thompson, Dr. Brianna C; Gilmore, Dr. Kerry J.; Gorkin, Dr. Robert; Stewart, Dr. Elise; In het panhuis, Dr. Marc; Romero Ortega, Dr. Mario; Wallace, Prof. Dr. Gordon ”3D Printing of Layered Brain-Like Structures. 2nd International Conference on 3D Printing in Medicine, May 19 – 20. Mainz, Germany
19. 2015 Black B, Granja-Vazques R, RomeroOrtega M. Radiofrequency Electromagnetic Fields Induce Neuroma Pain. NRC Pain Conference UTD August -5-6.

20. 2014 Kanneganti A, Kim YT, Nothnagle C, Wijesundara M, Mizuno M, Scott M, Young Cogan S, Romero-Ortega MI. Depressor Response in Hypertensive Rats Achieved by Electrical Stimulation of Peroneal Nerve Fascicles. North American Neuromofulation Society. Dec.
21. 2014 Kanneganti A, Bendale G, Seifert JL, Desai V, Romero-Ortega MI. Reestablishment of the blood nerve barrier in Regenerative Multielectrode Interface. Biomedical Eng Society. San Antonio,October 22-25.
22. 2014 Seifert J, Bell J, Sucato D, Mario Romero MI. Transient Hypoxia in a Model of Distraction Spinal Cord Injury Results in a Reduction of Ventral Motor Neuron Size. Biomedical Engineering Soc, TX October
23. 2014 Nesreen Alsmadi, Rafael Granja , Benjamin Johnston, Aswini Kanneganti, Geetanjli Bendale, Elijah Hor, Hasan Sumdani, Shannon Trinh, Matthew Le, Mario Romero-Ortega. Synergistic Effects of Neurotrophins and Pleiotrophins in Stimulating Nerve Regeneration across Long Gap Peripheral Nerve Defects. Biomedical Engineering Society. San Antonio, Texas. October.
24. 2012 Johnston B, Dash S, Romero-Ortega MI. Multiluminal Biosynthetic Repair of Long-Gap Peripheral Nerve Injuries. 3rd Asia-Pacific Symposium on Nanobionics. Australian Institute for Innovative Materials (AIIM). Wollongong, Australia. September
25. 2012 Bell JE, Seifer JL, Sucato DJ, Romero-Ortega MI. Characterization of sub-acute secondary injury effects of bidirectional spine distraction. Society for Neuroscience. New Orleans LA.
26. 2012 Anand S, Desai V, Kanneganti A, Vasudevan S, Cheng J, Keefer E, Romero, MI. Modality Specific Neural Interface in the Peripheral nervous system. Biomedical Engineering Society. Atlanta GA, Oct.
27. 2012 Johnston B, Dash S, Granja R, Alsmadi N, Prasad P, and Romero-Ortega MI. Bridging the Gap: Biosynthetic Nerve Implant (BNI) for Regeneration of Nervous Tissue Following Peripheral Nerve Injury. Annual Celebration of Excellence by Students (ACES). Arlington, TX. March,
28. 2011 Desai V, Seifert J,Kim YT, Romero MI. Spike Activity Recorded from Regenerative Peripheral Nerve Interfaces Despite Immature Myelination. Biomedical Engineering Society. Hartford, October.
29. 2010 Modality-Specific Axonal Segregation in Regenerative Peripheral Neurointerfaces. DARPA Reliable Peripheral Interface Proposer's Day. Washington DC. Nov. 19
30. 2010 Early Bilateral Cortical Activation in Children with Subcortical Hemiplegic Cerebral Palsy Revealed by NIRS. American Academy of Cerebral Palsy and Developmental Medicine. 64th Annual Meeting September. Washington, DC.
31. 2009 PNS Anatomy. DARPA Reliable Neural Technology Meeting. Wahisgton DC. Nov
32. 2008 Neurointerfacing Through Carbon Nanotube Yarns and Sheets. 39th American Society of Neurochemistry. San Antonio, TX. March.
33. 2008 Tian F, Delgado MR, Clegg NJ, Romero MI, Liu H. "Investigation of the Motor Cortex Function in Children with Cerebral Palsy Using Functional Near-Infrared Spectroscopic Imaging" Biomedical Optics Topical Meeting (BIOMED). St. Petersburg, Florida, USA March.
34. 2005 Galvan-Garcia P, Zhang M, Fang S, Zakhidov AA, Baughman RH, Romero MI. ″Cellular Growth with CNTS, Nanoyarns and Nanosheets″ Int. Congress of Nanotechnology. San Francisco, CA.
35. 2003 M.I. Romero, Y. Zhu, M. E. Lush, L.F. Parada. Neuron-specific deletion of neurofibromin enhances sprouting of injured sensory afferents into the adult spinal cord. S Neuroscience. New Orleans, LA.
36. 2003 Galvan Pedro, Gerber Jacqueline, Muirhead David, Romero Mario I Controlled Vascular Growth Transparent Multiluminal Biodegradable Hydrogel. Tissue Eng Soc International. Orlando, FL.
37. 1998 Smith GM, Romero MI. Adenoviral gene transfer of neurotrophins and cell adhesion molecules into the adult rat spinal cord and their effect on axonal regeneration. Cold Spring Harbor. NY

38. 1996 Phelps CJ, Romero MI, Effect of genetic prolactin deficiency on hypothalamic dopaminergic neurons: postnatal pattern of decline, correlation with maternally-derived serum prolactin, timing of PRL dependence, and cell death vs. phenotype change. Int. Pituitary Congress, San Diego, CA.
39. 1996 Phelps CJ, Romero MI. Effect of genetic prolactin deficiency on hypothalamic dopaminergic neurons: postnatal cell death vs. phenotype change and correlation with maternally-derived serum prolactin" Gordon Research Conference on Prolactin,Ventura, CA
40. 1995 Phelps CJ, Romero MI. Cell death or phenotype change in absence of hormonal target signals: hypothalamic pituitary-regulating neurons in hypopituitary mice. Recent Progress in Hormone Research Conference, Skamania, WA.
41. 1994 Romero MI, Phelps CJ "Permanent perikaryal and axonal reduction in dopaminergic arcuate neurons of prolactin-deficient adult dwarf mice" Gordon Research Conference on Prolactin,Oxnard, CA.
42. 1993 Phelps CJ, Romero MI, D.L. Hurley. "Role of prolactin in development of hypothalamic dopaminergic neurons" Third Int. Pituitary Congress, Marina Del Rey.

## D. International/ USA Patents

- Granted Patents

1. 2023 Modi R, Voit W, Romero-Ortega MI. "Softening Nerve Cuff Electrodes" UTD Application No. 62355144. US11638816B2
2. 2020 Romero-Ortega MI, G. Wallace, MG Gonzalez, RA Jalili**. "**Methods of making and bioelectronic applications of metalized graphene fibers" US Patent App. 16/691,309
3. 2020 Cogan S, Freeman DK, O'Brian JM. Romero-Ortega MI. "Implantable Wireless Microstimulation for Peripheral Nerves." UTD 17009. 2020 Romero-Ortega MI , Wallace G, Razal J, Dash S, Lotfi P, Johnston B. "Chemical Gradients" Grant US9931432B2 US Patent 10,646,617.
4. 2019 Romero-Ortega MI, Kanneganti A, Landrith R, Kim YT, Robles OR, Baughman R. "CNT based. Nano Antennas for Recording and Stimulation of Elicited Biological Signals" WO2015120102A. US Patent 10,485,482.
5. 2019 YT Kim, M Romero-Ortega, M Wijesundara, C. Nothnagle."Regenerative Interface Electrodes" US Patent 10,406,365
6. 2018 Romero-Ortega MI and Granja R. "Devices and methods for the prevention and treatment of neuromas". Grant US9950099B2. US Patent 9,950,099
7. 2018 Romero-Ortega MI , Wallace G, Razal J, Dash S, Lotfi P, Johnston B. "Chemical Gradients" Grant US9931432B2 US Patent 10,646,617. US Patent 9,931,432

- Pending Patent Applications Academic

1. 2022 MI Romero-Ortega, J. Petruska "Apparatus for Nerve Growth" Application No. 63327464
2. 2022 MI Romero-Ortega, D. Constantine. "Systems and Method of Controlling Bladder and Rectal Function". Attorney Docket: 122289-10403
3. 2019 MI Romero-Ortega, M. Martinez-gomez "Devices and Methods for Neuromodulation" S Patent App. 16/414,169
4. 2019
5. 2019 Romero-Ortega MI, Kanneganti A, Hernadez-Reynoso A. "Devices and Methods for Neuromodulation". US Patent App. 16/185,285
6. 2018 Romero-Ortega MI, Kanneganti A, Anand S, Bendale G "Methods and Devices for Promoting Nerve Growth and Regeneration. UTA 17-49 IP. PCT/US18/55556.

ii.

- Abandoned Applications

1. 2003 Romero, MI. Gavan P. Biomimetic Synthetic Nerve Implant and Casting Device. Application US20080300691A1and Application US20070100358A2.

2. 2017 KD Nelson, BB Crow, NB Griffin, M Romero-Ortega, J Seifert, N Alzoghoul. "Device for Induction of Cellular Activity" US Patent App. 15/524,211

## E. Funding.

Continuously funded for 20 years with 29 grants from private foundations, companies, DoD (DARPA, Sandia), NSF and NIH totaling $25.8 Million dollars

- Active Research Support

2025 NIH NIBIB NIH NIBIB 1R25 EB036422-01 (PI)
*PIs: Romero-Ortega,* 01/01/25- 8/31/2029 $ 1 231,735 0.5 calendar
*MPI: Barton, Subbian*
"Cultivating Pathways to Research in Biomedical Engineering"
This training program will recruit 31 undergraduate students over four years and prepare them for research careers in biomedical engineering focused on those from under representative backgrounds.

2022 **NIH NINDS R41 NS130907-01**
*PI: Romero-Ortega* 01/01/23- 8/31/2025 $ 422, 015.00 0.5 calendar
"Controlled Gradient Release of Biologics: Enhanced Nerve Conduit for Long-Gap Injury Repair"
This study will develop a new nerve conduit with a dual gradient of growth factors for the repair of nerve gap repair.

2022 **NIH NINDS 1R01NS125435- 01A1**
*PI: Francis* 09/01/22- 08/31/2027 $2,500,000.00 (Not transferred to UA)
"Regenerative microelectrode peripheral nerve interface for optimized proprioceptive and cutaneous specific int erfacing" This study will use Regenerative Ultramicro Multielectrode Array (RUMA) designed to discriminate between cutaneous and proprioceptive signals recorded from electrode interfacing of amputated nerves for robotic limb sense/control. Role: Co-I.

2021 **NIH NINDS 1R01NS124222 - 02**
*PI: Romero-Ortega* 09/01/21- 08/31/2026 $2,790,000 (MR 100%, **$1,102,003 at UA**. 2 calendar
"Regenerative Ultramicroelectrode Arrays for Sensory-Motor Specific Interfacing"
This study will use Regenerative Ultramicro Multielectrode Array (RUMA) designed to discriminate between motor and cutaneous neural interfacing by combining it with molecular guidance to biologically engineer the content of sensory-motor axons at the electrode interface for robotic limb sense/control.

- Previous Research Support

2018 - NIH 1 R01 DK120307-05
"Neuromodulation of Individual Pelvic Floor Muscle Activity in Urinary Incontinence"
*PI: Romero-Ortega* 09/24/18- 08/31/24 $2,683,050 (MR 90%) 1 calendar
This study uses miniaturized wireless electrodes for selective neuromodulation of individual pelvic floor muscles, as a potential therapy for drug resistant urinary incontinence by re-establishing their normal strength and specific activity patterns.

2021 Mission Connect Int Perspectives in Spinal Cord Injury Research Award No, 021-111
*PI: Romero-Ortega* 09/01/21- 8/31/2023 $150, 000.00 (MR 100%) 0.5 calendar
"Restoring Urological Dysfunction in SCI through multi-target Neuromodulation"
This study will use advanced graphene fiber electrodes to stimulate at two different frequencies the bladder/external urinary sphincter in a rat model of SCI in order to reverse urinary dysreflexia.

2019 - NIH R21 NIBIB 1R21EB028547-02
*PIs: Ware and Romero-Ortega* 08/01/2019 to 07/31/2023 $601,387.00 (MR 50%) 1 calendar
"Liquid Crystal Elastomer as a Dynamic Treatment of Incontinence in Women"
This study uses liquid crystal elastomers to fabricate urethral slings actuated by light for the treatment of stress urinary incontinence. These new interfaces will reduce the cognitive burden for users of robotic prosthetics, and decrease the abnormal sensations associated with electrical stimulation in the PNS.

2018 American Heart Association Collaborative Sciences Award #18CSA33990385
"Miniature Wireless Neuromodulation for the Treatment of Hypertension"
PI: Romero-Ortega 07/01/18- 12/30/21 $749,000 (MR 86% = 561,165) 1 calendar

2016 NIH 1R56NS095046-01A1
"Neurointerfacing of Motor and Senosory Submodalities Through Molecular Guidance"
PI: Romero-Ortega 09/01/16- 06/31/18 $403,884 (MR 77% = 310,990) 1 calendar

2015 NIH SBIR 1 R43 NS089341-01A1
"Evaluation of Sustained 3D Growth Factor Gradients for Nerve Repair" in collaboration with Tissue Gen.
PI: Romero-Ortega 09/01/15- 08/31/18 $150,000 (MR 55% = 85,048.00) 1 calendar

2016 Draper Labs: "High Fidelity Neural Stimulation Program"
PIs: Cogan/Romero-Ortega 09/01/16- 06/31/17 $200,000 (MR 50% = 100,000) 1 calendar

2015 ElecRx DARPA "Evaluation of Sustained 3D Growth Factor Gradients for Nerve Repair" in collaboration with Tissue Gen.
PI: Rennaker 09/01/15- 12/31/18 $6,400,000 (MR 10% = $640,000) 2 calendar

2016 Scoliosis Research Society: "Neuroprotection Against Oxydative Stress in an Animal Model of Distraction Spinal Cord Injury". This research investigates the use of several neuroprotective strategies in a model of distraction injury to the spinal cord.
PI: Romero-Ortega 10/01/13- 09/1/16 $48,300 (MR 100%) 0.1 calendar

2014 GlaskoSmithKline: "Soft, Conformal Electrodes for Small Nerves and Inoperable Plexi". This study will develop smart polymer substrates with the proper geometry and thermomechanical properties to penetrate through, conform to, or wrap around small visceral nerves and enable controlled electrical interrogation.
PI: Voit/Romero-Ortega 09/10/14- 11/30/16 $263,470 (MR 50%=$131,735.00) 0.5 calendar

2015 Glasko-Smith Kline. (Acc. 2145-8008) Bioelectronic Medicines Innovation Challenge Phase I Award. "Wireless Interfacing of the Carotid Sinus Nerve for Hypoxic Response Modulation. This program will fund specific de-risk task for the development of small wireless neural interfaces for the carotid sinus nerve.
PI: Romero-Ortega 04/17/15- 04/16/16 $199,993 (MR 60%= $119,996) 0.5 calendar

2014 NSF MRI:"iRehab, an Intelligent Closed-loop Instrument for Adaptive Rehabilitation Project" New generation of closed-loop devices for adaptive rehabilitation". *Declined when moved to UTD.*
PI: Makedon (UTA) 10/01/13- 09/30/16 $799,890 ( MR 10%=$79,989.00) 0.1 calendar
Co-PIs: Betke, Margrit Athitsos, Vassilis; Gatchel, Robert J; Huang, Heng; Romero-Ortega, Mario I

2014 PeriphaGen "Viral transfection of DRG neurons from neuroma targets". This study will test the ability of viral vectors to transfect sensory neurons in an animal model of peripheral nerve neuromas. PI: Romero-Ortega 09/01/14- 08/31/15 $45,597 ( MR 100%) 0.5 calendar

2014 TissueGen. (Acc. 2145-8006) "Polymeric Delivery of Growh Factors." We will investigate the polymeric delivery methods for neurotrophic factors to guide nerve regeneration.
PI: Romero-Ortega 08/03/14- 08/31/15 $48,300 (MR 100%) 0.2 calendar

2013 Texas Medical Research Collaborative Program: "Immune-Resistant Carbon Nanotube Sheet Regenerative Multielectrode" This proposal aims at development a novel type of carbon nanotube based electrode for sensitive neural interfacing.
PI: Romero-Ortega 10/01/13- 09/30/14 $69,360 (MR 100%) 0.5 calendar

2013 Texas Medical Research Collaborative Program: "A Novel Glass Microfluidic Neuro-Sensor for Throughput Drug Discovery " This proposal aims to develop and market a glass-based Neuro-Sensor. This transparent device directs the growth of nerve cell projections (i.e., axons or dendrites) through mesa-scale microfluidic channels as a drug testing tool.

Co-PI: Romero-Ortega 10/01/13- 09/30/14 $82,500 (MR 45%=$37,125) 0.5 calendar

2011 NIH/NINDS 1R21NS072955-01A1
"Long-Gap Nerve Regeneration by Pleiotrophic Support in Multiluminal Grafts" Pleiotrophic and neurotrophic growth factors in enticing axonal regeneration across a long (i.e., 3 cm) nerve gap defect.
PI: Romero-Ortega 8/01/11- 5/31/14 $391,219 (MR 100%) 1.2 calendar

2011 DARPA RPI
"Targeted Surgical Placement of Peripheral Nerve Interfaces" Molecular biological cues to guide specific modality-type neurons into specific electrode arrays.
PI: Keefer E, Plexon 11/01/11- 10/31/14 $1,629,067 (MR 80%=$1,303,254) 1.0 calendar
Co-PIs: Cheng (UTSW), Romero-Ortega (UTA)

2011 NIH/NIBIB 1R01EB013313-01
"Functional near infrared imaging to assess motor cortex functions in children with cerebral palsy."
PI: Alexandrakis 11/01/11- 10/31/14 $1,196,830 (MR 10%=$119,683) 0.6 calendar
Co-PIs: Delgado M (TSRH), Liu H, Romero-Ortega (UTA)

2010 DARPA RPI
"Cellular and Molecular Contribution to Signal Instability in Peripheral Regenerative Neurointerfaces" Develop a molecular map of tissue reaction to regenerative peripheral interfaces
PI: Romero-Ortega 1/11/10-30/10/12 $1,557,965 (MR 80%=$1,246,372) 3.6 Calendar
Co-PIs: Kim YT (UTA), Wiggins H, Keefer E (Plexon)

2008 Texas Scottish Rite Hospital:
"Establishment and Characterization of an Animal Model of Acute Spinal Cord Injury.
PI: Romero-Ortega 3/01/08-12/31/11 $50,000 (MR 100%) 0.6 calendar
Co-PIs: Sucato D (TSRH)

2008 United Cerebral Palsy Research and Education Foundation:
"Establishment and Characterization of an Animal Model of Acute Spinal Cord Injury.
PI: Delgado-Ayala (TSRH) 1/01/08-1/31/10 $100,000 (MR 20%=$20,000) 0.5 calendar Co-PIs: Romero-Ortega (UTA)

2008 Sandia National Laboratories:
Neuro-Target Recognition: high-density multielectrode arrays of compartmentalized neural cultures
PI: Romero-Ortega 3/01/08-3/31/10 $60,000 (MR 100%) 0.5 calendar

2008 Carter Chancellor Urschel Neurobiology Research Fundation:
"Chance Motor Solution Initiative" We proposed the development of a research resource network focused in nerve repair and functional recovery.
PI: Romero-Ortega 7/01/06-6/30/08 $80,000 (MR 100%) 0.5 calendar

2005 DARPA HIST
"Neuro-micro-Transponders: Wireless Neural Control of Artificial Arms and Hands. Goal was to developed a novel neural interface to the peripheral nerves of amputees."
PI: Hughes G (Zyvex Inc) 7/01/05-6/30/07 $1'445,872 (MR 100%) 1.0 Calendar
Co-PIs: M. Romero-Ortega (UTSW), Cauller L, JBong (UTD) The total amount of this grant was over 7 Million to Zyvex Inc.

2004 Texas Higher Education Coordinating Board. Advanced Technology /Technology Development and Transfer Program Award.
Genetically Engineered Transparent Biosynthetic Conduits for Directed and Enhanced Nerve Repair."
PI: Romero-Ortega 9/01/04-06/30/06 $205,732(MR100%) 2 calendar

2003 Texas Scottish Rite Hospital:
"Analysis of Peripheral Nerve Regeneration through Biosynthetic Nerve Prostheses Made of Biodegradable Fiber Bundles and Genetically-Engineered Schwann cells.
PI: Romero-Ortega 9/01/03-06/30/08 $450,000 (MR 100%) 8 calendar

- Collaborative Agreements

ACES funding under the ARC Centre of Excellence program. Prof. Gordon Wallace | Australian Laureate Fellow. ARC Centre of Excellence for Electromaterials Science|Intelligent Polymer Research Institute. ANFF Materials Node. AIIM Facility, Innovation Campus
University of Wollongong. Australia. The funding amount is pledged support at UoW per year.
PI: Romero-Ortega 08/03/12- 07/31/16 $30,000 (MR 100%) 1.0 calendar

## F. Teaching

• 29 years of teaching experience to Undergraduate, Graduate, Medical students, and Residents.

| Name | Type | Enrollment | Semester |
|---|---|---|---|
| **University of Arizona: College of Engineering** | | | |
| - BME 596. Bioprinting of Functional Tissues | Graduate. | 6 | Fall 24 |
| - BME 696A Seminar Series | Graduate | 20 | Fall 23, Spring24, |
| | | | |
| **University of Houston: College of Engineering** | | | |
| - BIOE 6397. Neuralenginering Meth and Appl | Graduate | 5 | Fall 22 |
| - BIOE 4397. Neuralenginering Meth and Appl | Undergrad | 16 | Fall 22 |
| - BIOE 6397. Engineering the Human body | Graduate. | 6 | Spring 22 |
| - BIOE 4397. Engineering the Human body | Undergrad | 19 | Spring 22 |
| - BIOE 6397. Neuralenginering Meth and Appl | Graduate. | 4 | Fall 21 |
| - BIOE 4397. Neuralenginering Meth and Appl | Undergrad. | 5 | Fall 21 |
| - COM Neurology Lectures | Medical | 30 | Spring 21 |
| - BIOE 6397. Engineering the Human body | Graduate. | 6 | Spring 21 |
| - BIOE 4397. Engineering the Human body | Undergrad. | 27 | Spring 21 |
| - BIOE 6397. Neuralenginering Meth and Appl | Graduate. | 6 | Fall 20 |
| - BIOE 4397. Neuralenginering Meth and Appl | Undergrad. | 9 | Fall 20 |
| - BIOE 8298 Doctoral Research | Graduate. | 1 | Spring 20. |
| | | | |
| **University of Houston: College of Medicine** | | | |
| - Lower Urinary tract Lecture | Medical. | | Fall 22 |
| - Neurohistology- Lecture | Medical. | | Spring 22, and 23 |
| - Brain Tumors- Lecture | Medical. | | Spring 22, and 23 |
| | | | |
| **UT Dallas** | | | |
| -BMEN 6393.001 Neural Enginering Meth and Appl | Graduate | 9 | Fall 2018 |
| - BMEN 7188.001 Seminars in Biomedical Eng. | Graduate | 20 | Fall 2018 |
| Advanced Seminars in Biomedical Engineering- | Graduate | 4 | Spring 2018 |
| Advanced Seminars in Biomedical Engineering- | Graduate | 22 | Spring 2018 |
| Neural Engineering Methods and Applications- | Graduate | 11 | Fall 2017 |
| Advanced Seminars in Biomedical Engineering- | Graduate | 21 | Fall 2017 |
| Advanced Engineering Physiology of the human body | Undergrad | 36 | Spring 2017 |
| Advanced Seminars in Biomedical Engineering- | Graduate | 25 | Spring 2017 |
| Neural Engineering Methods and Applications- | Graduate | 20 | Fall 2016 |
| Advanced Seminars in Biomedical Engineering- | Graduate | 16 | Fall 2016 |
| Advanced Seminars in Biomedical Engineering- Basic/Translational Frontiers | Graduate | 60 | Spring 2016 |
| Advanced Seminars in Biomedical Engineering- Basic/Translational Frontiers | Graduate | 37 | Fall 2015 |
| Ind. Scientific Research in BE (3 units; Graded) | Graduate | 2 | Fall 2015 |
| Advanced Engineering Physiology of the human body | Undergrad | 39 | Spring 2015 |

| | | | | |
|---|---|---|---|---|
| Engineering Physiology of the human body | | Undergrad | 35 | Fall 2015 |
| | | Undergrad | 40 | Fall 2014 |
| Advanced Research in Biomedical Engineering | | Graduate | 5 | Spring 2015 |
| | | Graduate | 4 | Fall 2014 |

**UT Arlington**

| | | | | |
|---|---|---|---|---|
| - BE 6103-013 | PhD Seminar in Bioengineering | Graduate | 12 | Spring 2010 |
| | | Graduate | 10 | Summer 2010 |
| - BE 5300-013 | Human Physiology for BE | Graduate | 41 | Spring 2014 |
| | | Graduate | | Fall 2013 |
| | | Graduate | | Spring 2013 |
| | | Graduate | | Fall 2012 |
| | | Graduate | | Spring 2012 |
| | | Graduate | 19 | Fall 2011 |
| | | Graduate | 20 | Spring 2011 |
| | | Graduate | 21 | Spring 2010 |
| | | Graduate | 10 | Summer 2010 |
| | | Graduate | 17 | Fall 2010 |
| | | Graduate | 44 | Spring 2009 |
| - BE 5382-013 | Laboratory Principles | Graduate | | Spring 2014 |
| | | Graduate | | Fall 2012 |
| | | Graduate | 11 | Summer 2011 |
| | | Graduate | 27 | Fall 2010 |

- Invited Lectures

| | | |
|---|---|---|
| 2024 Spring | BME 295C Lecture (Dr. Gmitro) | Graduate/Undergraduate |
| 2021-2022 Spring | BIOE 4310-01 and BIO 6310-01. (Dr. Naash). Guest Lecture. UH | Graduate/Undergraduate |
| 2020-2022 Fall | BIOE 2100. Introduction to BME. Guest Lecture. UH | Graduate/Undergraduate |
| 2020 Spring | BIOE 3340 Q Phys. Guest Lecture. UH | Graduate/Undergraduate |
| 2020 Spring | BIOE 4310-01 and BIO 6310-01 Guest Lecture. UH | Graduate/Undergraduate |
| 2012-2013 | BE 1225 Introduction of Bioengineering | Graduate |
| 2008 | Clinical Research Design. Plastic Surgery at UTSW. | Medical/Residents |
| 2004-2007 | Chromosomal Anomalies. Neurology at UTSW | Medical/Residents |
| 2006 | Gross Brain Anatomy. Medical Curriculum at UTSW. | Medical/Residents |
| 2004-2005 | Axon Guidance. Neuroscience Graduate Program at UTSW | Graduate |
| 2004 | Spinal Cord Regeneration, Pediatric Orthopedics, TSRH. | Medical/Residents |
| 2004 | Introduction to Neurogenetics, Neuroscience Program UTSW | |
| 2001-2003 | Organization of Movement. Neuroscience Graduate Program at UTSW | |
| 2001-2003 | Spinal Reflexes and Locomotion. Neuroscience Graduate Program at UTSW | |
| 1999 | Cellular differentiation in the nervous system. Neuroscience Program. UTSW | |
| 1996 | Development of the hypothalamus. Neuroscience Program, Tulane University. | |
| 1995 | High performance liquid chromatography. Neuroscience Program, Tulane Univ. | |
| 1994, 1996 | The pituitary-hypothalamic unit. Neuroscience Program Tulane Univ. | |

## G. Student Mentorship

- Trained 8 postdoctoral students, 13 Doctoral, 24 Masters, and 29 Undergraduate Students
- Student received 18 fellowships and 22 awards. Currently training 8 doctoral students at University of Arizona.

Postdoctoral

| | | | | |
|---|---|---|---|---|
| 1. | Cecilia Hernadez B | 2022-2023 | Neuromodulation of pelvic floor. | Postdoc UNAM |
| 2. | Alejandra Gonzalez | 2016-2022 | Softening and Graphene Electrodes | Postdoc Baylor |
| 3. | Bryan Black | 2014-2015 | Neuroma Pain Model | Principal Investigator |

| | | | | |
|---|---|---|---|---|
| 4. | Rafael Granja | 2012-2014 | Long Gap Nerve Repair | Senior Res. Cleveland Clinic |
| 5. | Jennifer Seifert | 2008-2011 | Spinal Cord Injury: Distraction | Director R&D. TissueGen |
| 6. | Fang Yang | 2005-2008 | Cloning and expression of ECM | Senior Researcher. Biopharma |
| 7. | Edward Keefer | 2006-2008 | Regenerative Neurointerfaces | PI. Nerves Inc |

-Doctoral Current at University of Arizona

| | | | | |
|---|---|---|---|---|
| 1. | Lindsay Stoy | Fall 2024 | PhD | Nerve Regeneration |
| 2. | Shane Holmes | Fall 2024 | PhD | Regenerative Neural Interfaces |
| 3. | Roberto Diaz | Fall 2023 | MD/PhD | Bioelectronics-Interoception |
| 4. | Darian Sanchez | Fall 2023-present | PhD | Regenerative Neural Interfaces |
| 5. | Zuha Yousuf | Sep 2023- present | PhD | Pelvic Innervation in the sheep |
| 6. | Kareem Housein | Sep 2023-present | PhD | Regenerative Neural Interfaces |
| 7. | Kristen Jackson | Sep 2023-present | PhD | Nerve regeneration- In vitro |
| 8. | Paola Castro Flores | Sep 2023-present | PhD | Regenerative Neural Interfaces |

-Doctoral Graduated

| | | | | |
|---|---|---|---|---|
| 1. | David Lloyd | 2019-2024 | Modeling of Splenic Nerves | Postdoc/U. Houston |
| 2. | Xingjian Gu | 2020-2024 | Peripheral Nerve Regeneration | Postdoc/U. Houston |
| 3. | Farial Rahman | 2019-2024 | Materials for urethral support in SUI | Eng. Juniper Biomedical |
| 4. | Ana Hernandez R | 2020-2023 | Neuromodulation of Pelvic Nerve Muscles | Assistant Professor CWU |
| 5. | Geetanjali Bendale | 2019-2022 | Long-gap Nerve Regeneration | Research Scientist, UVA |
| 6. | Eileen Shimizu | 2019-2021 | Neuroprotection of Distraction SCI | Associate DAVA Oncology |
| 7. | Sanjay Anand | 2014-2018 | Molecular Guidance Neurointerfacing | Med. liaison Vanda Pharm. |
| 8. | Aswini Kanneganti | Sep 2016 | Fascicular neurointerfacing | Postdoc/UT Dallas |
| 9. | Vidhi Desai | Aug 2014 | Cell specific guidance of nerve regeneration | Systems Eng. Abbott. |
| 10. | Nesreen Alsmadi | Aug 2014 | Growth factor enhancement of nerve | Research Scientist/UTD |
| 11. | Benjamin Johnston | May 2014 | Peripheral nerve injuries: Pleotrophin mediated | Neurosurgeon. Harvard |
| 12. | Jennifer Bell | Aug 2012 | Characterization of a novel animal model for | Postdoc UTD |
| 13. | Collins Watson | Dec 2012 | | Investigations into causes of |
| | failure of | Medical Student/UTSW | | |
| 14. | Swarup N. Dash | Aug 2012 | Pleoitrophin enhance nerve regeneration | Entrepreneur/Investor |
| 15. | Parisa Lotfi | Dec 2011 | Cell specific guidance of nerve regeneration | Professor. Alaska |

- Master's Graduated

| | | | | |
|---|---|---|---|---|
| 1. | Mason Garcia | May 2022 | Neuromodulation for hypertension | PhD student |
| 2. | Andrew J. Wells | Aug. 2018 | PNS Regeneration comp. collagen | UH Doctoral student |
| 3. | Rajeswari Kumaraju | Dec. 2016 | DRG multielectrode array recording | Research Assistant |
| 4. | Geetanjali Bendale | Apr. 2014 | Nerve blood barrier formation in | Doctoral student |
| 5. | Camilo Sanchez | Dec. 2012 | Characterization of immune response | Doctoral student |
| 6. | Nilanjana Dutta | Dec. 2012 | Regenerative Peripheral | Sr. Researcher |
| 7. | Sara Bhetawal | Dec. 2012 | Evaluation of tissue response | Research Assistant |
| 8. | Princy Prasad | Dec. 2012 | Ankle angle in rabbits. | Research Assistant |
| 9. | Eduardo Martinez | Apr. 2011 | 3D multimedium modeling | St. Jude Medical |
| 10. | An H. Nguyen | Dec. 2010 | Pleiotrophins in nerve repair. | Pfizer |
| 11. | Bradley B. Elmer | Dec. 2010 | Spine distraction device | Reserchер/ Pharma |
| 12. | Abdul F Dawood | Dec. 2009 | VEGF in multichannels | Researcher/MPCP |
| 13. | Kshitija Garde | Aug. 2008 | REMI in Sciatic Nerve | Researcher/ Medtronic |
| 14. | Ebrahim Bengali | Dec. 2006 | In Vitro axonal segregation | |

Master's No Thesis

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|---|---|---|---|
| 1. | 2018-2020 | David Lloyd | --- PhD student at Univ. Houston |
| 2. | 2015-2018 | Sarah Tindle | ---Quality Assurance Coordinator at CoorsTek Medical |

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|---|---|---|---|
| 3. | 2015-2017 | Ashlesha Deshmuk | ---R&D Engineer, Triangle Biosystems |
| 4. | 2014-2016 | Achintyan Gangadharan | ---RA. MD Anderson Cancer Center |
| 5. | 2010-2012 | Sarita Bethawal | ---Research Assistant MD Anderson, Smithville, TX |
| 6. | 2009-2011 | Rozita Shafabakhsh | --- R&D Engineer. Quest Medical Inc |
| 7. | 2010-2012 | Jeff Compton | ---Medical Student. UT. Southwestern Medical Ctr. |
| 8. | 2009-2010 | Tabassum Polara | --- Research Associate Plexon, TX. |
| 9. | 2007-2009 | Rodrigo Lozano | ---PhD Student at University of Wollongong, Australia. |
| 10. | 2006-2007 | Gowrishanka Raman | ---R&D Engineer, Medtronic CA. |
| 11. | 2006-2007 | Amit Chouhan | ---Research Associate, UT San Antonio, TX. |

-PhD Qualifying Exam committee

1. 2023 Mansoor Mughal Member of QE committee at UH
2. 2022 Arjun Vasan. Member of QE committee at UH
3. 2020 Gulash Malgir. Member of QE committee at UH
4. 2014-2019 Member of QE committee at UTD
5. 2013 Harshan Ravi, Tina Jeon, Derek White, Matthew A Cloud, Peter Leboulluec, Dale T Schaper, Amarnath S Yennu.
6. 2012 Homa Homayoni, Altuwaijri, Essam Ahmad; Gyawali, Dipendra Raj; Kavuri, Venkaiah Chowdary; Li, Lin; Yetkin, Oguz.
7. 2011 Michael Palmer, Su Lee-Chun, Srikanth Vasudevan, Jyothi Menon, and Tina Jeon.
8. 2010 Su Lee-Chun, Su Lee-Chun and Yi Zhang.

International PhD thesis committee

1. 2018-2023 Diego Zacapa. Member. Neuromodulation of pelvic floor muscles. Univ. Autonoma de Tlaxcala. UNAM. Mexico. Mentor: Dra. Margarita Martinez Gomez
2. 2020. Marina Cracchiolo. The BioRobotic Institue. Scuola Superiore Dant'Anna. Italy.
3. 2017-2022 Cecilia Hernandez Bonilla.. Member. Neuromodulation of pelvic floor muscles. Univ. Autonoma de Tlaxcala. UNAM. Mexico. Mentor: Dra. Margarita Martinez Gomez.
4. 2013-2017 Oralia Nolasco Jauregui. Member. New Theory on Information coding in sensory neurons. Cinvestav. Guadalajara. Mexico. Mentor: Dr. Jose Luis Leyva
5. 2012-2016 Rodrigo Lozano, MS. Member. 3D neuron printing and multielecrode arrays. U. of Wollogong, Australia. Mentor: Dr. Gordon Wallace

National PhD thesis committee

| | | | |
|---|---|---|---|
| 6. | 2021- 2023 | Crane Ryan | Member. UH student/ Dr. Naash |
| 7. | 2021- 2023 | Omid Dadras-Toussi | Member. UH student/ Dr. Reza |
| 8. | 2020- 2021 | Mohammadjavad Eslamian. | Member. UH student/ Dr. Reza |
| 9. | 2019-2020 | Nicholas C. Dias | Member. UH student/ Dr. Zhang |
| 10. | 2018-2019 | Michael Darrow | Member. UTD student/Dr. Renneker |
| 11. | 2018 | Shou Yang | Outside Chair Examining Committee. Economics. UTD |
| 12. | 2016-2018 | Felix Daku | Member. UTD student/Dr. Cogan |
| 13. | 2016 | Shaikat Hossain | Outside Chair Examining Committee. UTD |
| 14. | 2015-2017 | Eric Mayers | Member. UTD student/Dr. Rennaker |
| 15. | 2015-2017 | Elaine MacAslan | Member. UTSW student/Dr. Steve Cannon Lab (now at UCLA) |
| 16. | 2011-2014 | Bryan Black. | Member. UTA student |
| 17. | 2011-2014 | Bilal Anwar Khan. | Member. UTA student |
| 18. | 2011-2012 | Michael Christensen | Member. University of Utah. External Reviewer |
| 19. | 2009-2011 | Aydin Farajidavar | Chair. UTA student |
| 20. | 2009 | Soujanya Kona, | Member. Doctoral Comprehensive exam II UTA |
| 21. | 2008 | Paul Thevenot | Member. Doctoral Comprehensive exam II UTA |
| 22. | 2008-2009 | Ana Leal | Member. UTSW Bioengineering Graduate Program. |
| 23. | 2006-2007 | George Zinkhan. | Member. UTSW Bioengineering Graduate Program. |

MS thesis committee

| | | | |
|---|---|---|---|
| 1. | 2014 | Lokesh Patil | Member. UTA Master's Thesis |
| 2. | 2013 | Manikandan Ravi. | Member. UTA Master's Thesis |
| 3. | 2012 | Kamal Dhakal | Member. UTA. |
| 4. | 2012 | Tejasvi Gundapuneedi | Chair. UTA Master's Thesis |
| 5. | 2011 | Niranjana Nandakumar | Chair. UTA Master's Thesis |
| 6. | 2011 | Srikanth Vasudevan | Member. UTA Master's Thesis |
| 7. | 2009 | Kailash Karthikeyan | Member. UTA Master's Thesis |
| 8. | 2009 | Swati Goyal | Member. UTA Master's Thesis |
| 9. | 2008 | Aswini Kanneganti. | Member. UTA Master's Thesis |
| 10. | 2008 | Shereen Mohideen. | Member. UTA Master's Thesis |

- Undergraduate Students Graduated

| | | | |
|---|---|---|---|
| 1. | 2021-2022 | Hoang Tran | Biomedical Engineering |
| 2. | 2021-2022 | El-Ali, Nusayba T | Biomedical Engineering |
| 3. | 2021-2022 | Kenneth Nguyen | Biomedical Engineering |
| 4. | 2021-2022 | Laura Rubio | Biomedical Engineering |
| 5. | 2020-2021 | Sharf-Aldin, Sarah M | Biomedical Engineering |
| 6. | 2020-2021 | Katherine Pham | Biomedical Engineering |
| 7. | 2018- 2019 | Sakshi Kulkarni | Biomedical Engineering/ *Research Associate* |
| 8. | 2018- 2019 | Farial S. Rahman | Neuroscience |
| 9. | 2017- 2019 | Jeffrey Miyata | Biology/ *Research Associate* |
| 10. | 2017- 2019 | Livia George | Neuroscience. |
| *11.* | 2017-2019 | Brandon T Tran | Biology: *PhD student Baylor School of Medicine* |
| 12. | 2017- 2019 | Danny Lam | Biomedical Engineering./ *PhD student, CaseWestern University* |
| 13. | 2016-2018 | Kevin Romero | Neuroscience |
| 14. | 2017- 2017 | Nicole Svan | Biology |
| 15. | 2016- 2017 | Shrinevas Nandam | Neuroscience, Green Fellow |
| 16. | 2016- 2017 | Canice Dancel | Health Care Studies |
| 17. | 2016- 2017 | Farhan Sanuouri | Neuroscience'2016- 2017 Michael Tran Neuroscience |
| 18. | 2016- 2017 | Aron Kuo | Neuroscience |
| 19. | 2016- 2017 | Elaine Ramirez | Neuroscience. |
| 20. | 2016- 2017 | Tricia Interino | Neuroscience |
| 21. | 2016-2017 | Kevin Johnson | Biology. Honors Thesis Project |
| 22. | 2014-2015 | Miguel Zavaleta | Neuroma project |
| 23. | 2012-2014 | Martin Q. Tran. | Honors Thesis Project. Green Fellow |
| 24. | 2012-2014 | Dianna Nguyen | Honors Thesis Project. --*Medical Student. UNT Health Sciences* |
| 25. | 2012-2014 | Elijah Hor | |
| *26.* | 2012-2014 | Gaurav Synghal | |
| 27. | 2009-2012 | Tarik Shihabeddin. | ---*Medical Student. UTSW Dallas TX* |
| 28. | 2011-2012 | Priscilla Martinez | |

- Summer Interns

| | | |
|---|---|---|
| 1. | 2022 | STEM Research Inquiry Summer Enrichment (RISE) scholarships: 4 medical students, 4 graduate Students and 6 highschool students. COM UH. |
| 2. | 2021 | Summer research program: 4 Medical Students1 Highschool students COM UH. |
| 3. | 2016 | Kenia Lopez Garcia. Instituto de Investigaciones Biomedicas UNAM. |
| 4. | 2015 | Oralia Jauregui. PhD Student CINVESTAV Mexico. |
| 5. | 2013 | Kristen Abram, NIH High School Fellow, Step-Up Program. UCSF |
| 6. | 2013 | Cyrus Ghaznavi, Senior High School Project. Parish Episcopal School. Dallas. TX |
| 7. | 2009 | Mathew Dalton. Dallas. Texas |

8. 2008 Anubodh Varshney. Washington Univeristy.
9. 2007-2008 Kartik Nakul Rajagopalan. UT Southwestern Medical Ctr.
10. 2004-2005 Lindsay Case. Texas Academy of Math and Science
11. 2004-2005 Samir Sahani. University of North Texas.
12. 2003-2004 Shailvi Gupta. New York University
13. 2004 Mark Allen. Washington and Lee University
14. 2004 Janet Chen. Rice University.
15. 2003 Jacqueline Gerber. Washington University.
16. 2003 Binh Nguyen. PreMed, UTSW Medical Center
17. 2003 Kent Siri. PreMed, Duke Univ.

- Student Awards

- Research Fellowships:
1. 2022 David Lloyd NIH F31HL162516-01A1. Machine learning for multi-organ modulation.
2. 2022 Hoang Tran UH Provost's Undergraduate Research Scholarship
3. 2022 Laura Rubio UH Provost's Undergraduate Research Scholarship
4. 2021 El-Ali, Nusayba T UH Provost's Undergraduate Research Scholarship
5. 2019 Alejandra Gonzalez Grass Summer Research International Fellowship
6. 2018 Farial S. Rahman UTD Undergraduate Research Scholar Awards
7. 2017 Shrinevas Nandam UTD/UTSW Green Fellowship
8. 2014 Michael T. Tran UTD/UTSW Green Fellowship
9. 2014 Aswini Kanneganti $25,000 American Heart Association Predoctoral Fellowship
10. 2014 Nesreen Alsmadi UTA Dissertation Fellowship
11. 2013 Vidhi Desai UTA Dissertation Fellowship
12. 2013 Sanjay Anand Graduate Assistance for Areas of National Need (GAANN) Fellowship.
13. 2013 Benjamin J Johnston Graduate Assistance for Areas of National Need (GAANN) Fellowship.
14. 2013 Sanjay Anand I Engage Mentoring Program UTA for *Dianna H. Nguyen*
15. 2013 Benjamin J Johnston NCIIA Student Ambassador
16. 2012 Vidhi Desai I Engage Mentoring Program UTA for *Gaurav Synghal*.
17. 2011 Jennifer Bell: I Engage Mentoring Program UTA for *Priscila Martinez*
18. 2009 Swarup Dash: I Engage Mentoring Program UTA for *Tarik Shihabeddin*

- Travel Awards:
1. 2018 Danny Lam NCUR 32 at the University of Oklahoma.
2. 2018 Livia George NCUR 32 at the University of Oklahoma.
3. 2017 Eilaine Ramirez NCUR 31 at the University of Memphis.
4. 2016 Eileen Shimizu Betty and Gifford Johnson Student Travel Award at UTD
5. 2014 Aswini Kanneganti North American Neuromodulation Society

- Poster Awards:
1. 2018 Livia George First place. BME undergraduate poster competition
2. 2018 Danny Lam Third place. BME undergraduate poster competition
3. 2017 Tricia Interino First place. BME undergraduate poster competition
4. 2016 Eilaine Ramirez First place. BME undergraduate poster competition.
5. 2014 Benjamin Johnston President's Award. UTA Celebration of Excellence by Students (ACES)
6. 2014 Sounddarya Shankar Dean's Poster Award
7. 2014 Nesreen Alsmadi First Place. Symposium on Biomedical Technologies. Advances in Tissue
8. 2014 Aswini Kenneganti, 2nd Place. 2nd Symposium on Biomedical Technologies. Advances in Tissue
9. 2012 Benjamin Johnston President's Award. UTA Celebration of Excellence by Students (ACES
10. 2011 Jennifer Stearns Dean's Award. UTA Celebration of Excellence by Students (ACES

- Bioengineering Awards:
1. 2014 Vidhi Desai Dr. Alfred Potvin Award

2. 2012 Jennifer Stearns Dr. Alfred Potvin Award
3. 2012 Jeff Compton Dr. Alfred Potvin Award
4. 2011 Eduardo Martinez Dr. Alfred Potvin Award
5. 2011 Princy Prasad Robert and Carol Eberheart Award
6. 2010 Bradley Elmer Dr. Alfred Potvin Award
7. 2010 Nivedita Khobragade Robert and Carol Eberheart Award

- Judge in Student Competitions

2015 Judge at the UTD Senior Design Expo. The Erik Jonsson School of Engineering and Computer Science.
2014 Judging Chair at the Annual Celebration of Excellence by Students (ACES) event at UTA.
2013 Student Poster Competition**.** SHPE 2013 Engineering Research Symposium. 1-2 November. SHPE Indiana

- Promote STEM education in HighSchools

2022 Give a talk to parents and students at Borger Highschool in Texas about STEM and Medical Education.

## H. Service

• Reviewer of more than 68 manuscripts from 32 Scientific Journals:
1) Acta Biomaterialia, 2) Behavioral Brain Research, 3) Biofabrication, 4) Biomedical Materials, 5) Carbon, 6) Cells Tissues Organs, 7) Dev. Brain Res, 8) Experimental Neurology, 9) **The FASEB Journal** 10) Frontiers in Neuroscience, 11) Frontiers in Cellular Neuroscience, 12) J. Biomedical Materials Research: Part B – 13) Applied Biomaterials, 14) J. International Neuroscience, 15) **J. Neural Engineering**, 16) J. Neurochemistry, 17) J. Neural Transmission, 18) Neuroscience Letters, 19) J. Neuroscience Research, 20) J Neuroscience Methods, 21) Nanotechnology, 22) Nanoscale, 23) **New England Journal of Medicine**, 24) IEEE Open Journal of Engineering in Medicine and Biology OJEMB, 25) **Proc Nat Acad Sci**, 26) J. Visualized Experiments, 27) Transactions on Neural Systems & Rehabilitation Engineering, 28)Transactions on Biomedical Engineeing, 29) Sensors and Actuators: B Chemical. 30) Tissue Engineering. **31) Scientific Reports, 32) Science.**

- Reviewer for Grant Proposals and Awards

• Continuously serve as reviewer for federal grants since 2004

- International

2024 Panel Reviewer. Cluster of Excellence Grants. German Research Fundation (DFG). Oct
2018 Ad Hoc Reviewer. IPS Foundation Ontario Canada. August.
2016 Ad Hoc Reviewer. Research Councils UK (RCUK). May 15.
2010 Ad Hoc Reviewer. Innovation and Technology Programme Government of the Hong Kong
2009 Ad Hoc Reviewer, Israel Science Foundation.

-National

2024 Ad Hoc Reviewer Neurological Sciences and Disorders C Study Section. June 10-11
2023 Ad Hoc Reviewer NIH/NINDS R35 panel
2022 Ad Hoc Reviewer: Dept. of Veterans Affairs, Rehabiliation R&D SPIRE program.
2022 Ad Hoc Reviewer: NIH/NINDS Tran Neural, BRAIN, Pain Relief Dev (NSD-C)
2021 Ad Hoc Reviewer: NIH Tran Neural, BRAIN, Pain Relief Dev (NSD-C)
2021 Ad Hoc Reviewer: NIH Kidney and Urological Systems Function and Dysfunction .
2021 Ad Hoc Reviewer: NIH Special Emphasis 2021/01 ZNS1 SRB-H (15)
2020. Ad Hoc Reviewer: NIH Kidney and Urological Systems Function and Dysfunction R(90) .
2029 U.S. Army CDMRP. Washington DC. Oct 27-29
2018 NIH Special Emphasis Panel. 2019/01 ZRG1 DKUS-R (90) S. Oct. 25
2018 Dept. of Veterans Affairs, Rehab Res and Development Service's Regenerative Med Panel. Aug.
2017 NIH. Diversity Council Consortium. EBUILD EXITO at Portland State University.
2017 Review Panel. U.S. Army CDMRP. Washington DC. Nov 15-17
2017 Peer Reviewed Medical Research Program

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|---|---|
| 2016-2020 | Co-Chair and Member Reviewer. NIH Bioeng of Neurosc, Vision and Low Vision Technologies |
| 2016 | Dept. of Veterans Affairs, Rehabilitation Research & Development service SPIRE. Oct 24 |
| 2016 | Review Panel. U.S. Army CDMRP. Washington DC. Nov 20-21 |
| 2016 | Emerging Technologies in Neuroscience [ZRG1 ETTN-D January |
| 2016 | NIH Special Emphasis Panel videoconference review meeting. March |
| 2015 | Review Panel. U.S. Army CDMRP. Washington DC. |
| 2015 | Ad Hoc Reviewer. NIH BNVT. Bioengineering of Neuroscience, Vision and Low Vision Technologies Study Section. Sep 29. |
| 2015 | Ad Hoc Reviewer. SPARC/ETTN-B 54. NIH NINDS August 24, |
| 2015 | Ad Hoc Reviewer. ZRG1 ETTN-C10, Study Sections, Small Business: Clinical Neurophysiology, Devices, Neuroprosthetics, and Biosensors. NIH (SBIR) |
| 2015 | Ad Hoc Reviewer. RR&D Scientific Merit Review Board. Career Development Award. US Depart. Veterans Affairs |
| 2014 | Ad Hoc Reviewer. ZRG1 ETTN-C10, Study Sections, Small Business: Clinical Neurophysiology, Devices, Neuroprosthetics, and Biosensors. NIH (SBIR) |
| 2014 | Ad Hoc Reviewer. NDPR (Neural Differentiation, Plasticity, and Regeneration) |
| 2013 | Ad Hoc Reviewer. ZRG1 ETTN-C10, Study Sections, Small Business: Clinical Neurophysiology, Devices, Neuroprosthetics, and Biosensors. NIH |
| 2012 | Ad Hoc Reviewer. ZRG1 ETTN-K (10, 50 and 51) Study Sections, Small Business: Clinical Neurophysiology, Devices, Neuroprosthetics, and Biosensors. NIH |
| 2012 | Ad Hoc Reviewer. Transformative R01 Roadmap Review Study Section, NIH |
| 2011 | Ad Hoc Reviewer. ZRG1 ETTN-K Study Section, Small Business: Clinical Neurophysiology, Devices, Neuroprosthetics, and Biosensors. NIH |
| 2010-2012 | Member Reviewer. Fellowships: Neurodevelopment, Synaptic plasticity and Neurodegeneration. ZRG1 F03A-N Study Section, NIH. |
| 2010 | Ad Hoc Reviewer. ETTN F02 Study Section, NIH |
| 2009 | Ad Hoc Reviewer. Electrical, Communications & Cyber Systems Panel, NSF |
| 2004-2005 | Ad Hoc Reviewer. Department of Veterans Affairs Rehabilitation Research |
| 2003-2005 | Member. Research Advisory Panel, Texas Scottish Rite Hospital for Children |

- External Reviewer for Promotion and Tenure

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|---|---|
| •2024 | Arizona State University |
| 2024 | Michigan State University |
| • 2021 | Case Western Reserve University School of Medicine. |
| • 2020 | Indiana University-Purdue University Indianapolis |
| • 2017 | New York Institute of Technology. |
| • 2017 | University of Houston. |
| • 2016 | Texas A&M and Baylor. |
| • 2014 | University of Wollongong. Australia. |
| • 2014 | Texas Christian University. Fort Worth, TX. |

- University Committees

| | |
|---|---|
| 2025 | Member search committee for Dean College of Optical Sciences, Univ. Arizona |
| 2022 | Member search committee for Vice Chancellor for Academic Affairs, UH System, and Vice President for Academic Affairs and Provost. U. of Houston |
| 2021-2022 | Chair and member of two search committees for Frontiers Faculty. Univ. Houston |
| 2021-present | Member, Academic Honesty Committee. Univ. Houston |
| 2019 | Reviewer Committee for MEGA Seed Grant. UTD Office of Sponsored Projects |
| 2018 | Chair. Ad Hoc Committee for Tenure and Promotion Associate Professor level. UT Dallas |
| 2018 | Member. Ad Hoc Committee for Mid-Probationary Review. UT Dallas |
| 2017 | Chair. Ad Hoc Committee for Mid-Probationary Review. UT Dallas |
| 2016 | Chair. Ad Hoc Committee for Mid-Probationary Review. UT Dallas |

2015-2106 Lead Core Facility Committees for Histology and Imaging. UT Dallas
2015 Member. Founders Fellowship Candidate Interviews. UT Dallas
2014 Member University Strategic Planning committee. UT. Arlington
2013- 2014 Member, Hispanic Service Institution (HIS) Task Force
2013- 2014 Member, Search committee for College of Nursing Dean. UT. Arlington
2012 Member, University Strategic Planning committee. UT. Arlington
2010-2014 Member, Committee on annual celebration of excellence symposium. UT. Arlington

- College of Engineering

2022-present Member, ENGR College Academic Honesty Hearing.
2021-present Member, Engineering Curriculum Committee. Univ. Houston
2020 Member, Standing committee on Diversity, Equity, and Inclusion. Univ. Houston.
2014 Member, Space committee. UT Dallas
2013- 2014 Member, Search committee Bioengineering Dept. Chair. UT. Arlington
2013 Member, Mock Interview Marshall scholarship. UT. Arlington
2013 Member, Hiring Advisory Committee to the Dean. UT. Arlington
2012- 2013 Member, Strategic Planning committee. UT. Arlington
2012- 2014 Member, Ethics committee. UT. Arlington
2012- 2014 Member, Awards committee. UT. Arlington

- Bioengineering Department

2022-2023 Director Undergraduate Studies
2020-2022 Member, Academic honesty Committee. BMEN. Univ. Houston
2017-2018 Member. BE Strategic committee. UT Dallas
2016-2018 Chair. E Seminar Series committee. UT Dallas
2016 Member Graduate Program committee. UT Dallas
2014 Member, Research committee. UT Dallas
2014 Member, Tenure and promotion committee. UT Dallas
2014 Member, Faculty recruitment committee. UT Dallas
2012- 2014 Member, Tenure and promotion committee. UT. Arlington
2012- 2013 Chair, Faculty recruitment committee. UT. Arlington
2012 Member, Faculty recruitment committee. UT. Arlington
2011 Member, Development of BE undergraduate curriculum committee. UT. Arlington
2011 Member, Non-Thesis Masters curriculum update committee. UT. Arlington
2010-2014 Faculty Advisor to the Biomedical Engineering Student Society at UT. Arlington
2010 Member, PhD curricular restructuration committee. UT. Arlington
2010 Member, Undergraduate curricular development committee. UT. Arlington

## I. Entrepreneurial

2022 Constructive-Destructive Laboratory Toronto NeuroTrack. PioneerNeurotech Inc. Fall
2022-2024 NIH Neuromodulation Prize Program. (RBI Medical Inc)
2017 Mass Challenge Boston. Sep- Nov. Finalist: NerveSolutions Inc
2016-2017 C3i Coulter/NIH Entrepreneurial training. Washington DC. First Place. NerveSolutions Inc
2016 Present to the Cowtown Venture Capital Group. Feb. NerveSolutions Inc