

Curriculum Vitae

ALEXANDER GEORGE RABCHEVSKY, Ph.D.

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EDUCATION

1990 - 1995 Ph.D. (Neuroscience), University of Florida, Dept Neuroscience, Gainesville, FL
1983 - 1988 B.S. (Biology), Hampden-Sydney College, Hampden-Sydney, VA

PROFESSIONAL EXPERIENCE AND ACADEMIC APPOINTMENTS

2013 - present *Professor (tenured)*; Department of Physiology, Endowed Chair #1 in the Spinal Cord & Brain Injury Research Center, University of Kentucky Chandler Medical Center
2007 - 2013 *Associate Professor (tenured)*; Department of Physiology, Spinal Cord & Brain Injury Research Center, University of Kentucky College of Medicine
2002 - 2007 *Assistant Professor*, Department of Physiology, Spinal Cord & Brain Injury Research Center, University of Kentucky College of Medicine
1999 - 2001 *Research Associate*, Department of Anatomy & Neurobiology, University of Kentucky College of Medicine
1997 - 1999 *Postdoctoral Scholar*, Sanders-Brown Center on Aging, University of Kentucky
1995 - 1997 *Foreign Postdoctoral Fellow*, INSERM Unité 421, University of Paris XII, Creteil, France
1992 - 1995 *Graduate Teaching Assistant*, Medical & Veterinary Neuroscience, University of Florida College of Medicine, Gainesville, FL
1990 - 1995 *Graduate Research Assistant*, University of Florida College of Medicine, Gainesville, FL
1988 - 1990 *Biological Laboratory Technician*, Department of Pharmacology, Uniformed Services University of the Health Sciences, Bethesda, MD

AWARDS AND HONORS

2023 - 2024 Unite 2 Fight Paralysis, President of Board of Directors, Minneapolis, MN
2022 - present International Symposium for Neural Regeneration, scientific advisory board member
2023 Visiting Professorship, University of British Columbia, International Collaboration on Repair Discoveries (ICORD), Vancouver, BC
2020 Albert Nelson Marquis Lifetime Achievement Award, Marquis Who's Who
2019 Tom Gravitt Advocacy Award, Kentucky Congress on Spinal Cord Injury, KY
2019 Friend of Year Award, Friends for Michael, Inc. Spinal cord injury organization, KY

Alexander G. Rabchevsky, Ph.D.

2018 - 2022	Unite 2 Fight Paralysis, Board of Directors, Minneapolis, MN
2018 - present	NextStep Raleigh, Board of Directors, Raleigh, NC
2018 - 2020	North American Spinal Cord Injury Consortium (NASCI), Executive Council
2017 - 2023	Independence Place KY, Inc., Chairman, Board of Directors, Lexington, KY
2016 - 2019	National Neurotrauma Society, Council Member
2016 - present	Rabchevsky Foundation established, a Donor Advised Fund of Renaissance Charitable Foundation; Alexander G. Rabchevsky
2013	James W. Holsinger Award for Excellence in Teaching, Department of Physiology and the College of Medicine, University of Kentucky
2010 - 2018	No Barriers USA, Board of Directors member, Fort Collins, CO
2008	James W. Holsinger Award for Excellence in Teaching, Department of Physiology and the College of Medicine, University of Kentucky
2006	Abraham Flexner Master Educator Award for Outstanding Teaching Contribution, Center for Excellence in Medical Education, University of Kentucky
2004 - 2023	Charles T. Wethington Award, Excellence in Research, University of Kentucky
2004	Appointment to SCoBIRC Endowed Chair #1, University of Kentucky
2004	Provost Retention Award, College of Medicine, University of Kentucky
1999	National Research Service Award, Postdoctoral Fellowship, NIH/NINDS (University of Kentucky), Mechanisms of bFGF effects after spinal cord injury. <u>Declined</u>
1994	Poster Excellence Award, 12 th National Neurotrauma Society Symposium, Miami, FL
1994	Graduate Assistant Teaching Award, Medical Neuroscience, University of Florida, Gainesville, FL
1991 - 1993	Pre-Doctoral Studentship Award, Rick Hansen Man in Motion Legacy Fund, Canada, Dept of Neuroscience, College of Medicine, University of Florida, Gainesville, FL
1988	Graduated semester behind class despite missing entire academic year following accident rendering paraplegia in 1985, Hampden-Sydney College, VA
1988	Presidential Award for Courageousness, Hampden-Sydney College, VA
1987	Fellowship in Molecular Genetics, Biology Department, Emory University, Atlanta, GA
1987	Presidential Award for Leadership and Character, Hampden-Sydney College, VA

RESEARCH INTERESTS

Autonomic pathophysiology after spinal cord injury. *Cardiophysiology, molecular genetics, histology*

Pharmacotherapeutics and gene therapy for autonomic dysreflexia. *Cardiophysiology, recombinant viral genetics*

Mitochondrial dysfunction in neuropathology of acute spinal cord and brain injury. *Bioenergetics, histopathology*

MitoCeuticals as neuroprotective strategies. *Locomotor behavior, redox biology, molecular biology, histopathology*

Alleviation of muscle spasticity after spinal cord injury. *Electromyography, pharmacokinetics, histopathology*

DOCTORAL DISSERTATION

Intraspinal transplantation of microglia: Studies of host cellular responses and effects on neuritic growth. University of Florida, Dept. Neuroscience, College of Medicine (1995) Thesis Advisor: Paul J. Reier, Ph.D.

PATENTS

Provisional patent application EFS ID: 43936305, Application Number: 63251770 October 4
“Bioerodible life support hydrogels for the delivery of viable mitochondria.” (2022)

PEER REVIEW ACTIVITIES

Journal Editor

2023 - present OBM Neurobiology, *Editorial Board*, Professor Bart Ellenbroek, Editor-in-Chief

2022 - present Frontiers in Physiology, section Integrative Physiology, *Associate Editor*

2014 - present Public Library of Science (PLOS) One, *Editorial Board member*

2012 - 2013 Frontiers in Integrative Physiology: *Guest Editor* of Special Topic Series
Plasticity of primary afferent neurons and sensory processing after spinal cord injury

2011 - 2021 Frontiers in Physiology, section Integrative Physiology, *Review Editor*

BIBLIOGRAPHY

Calculated h-Index of **42** (Web of Science, 07/2024).

URL publication list: <https://pubmed.ncbi.nlm.nih.gov/?term=Rabchevsky>

h-Index=47/i10-Index=67; 7,580/5,022 citations (Google Scholar/Web of Science-Thomas Reuters)

Mean RCR=2.31 Icite <https://icite.od.nih.gov>

PUBLICATIONS (peer-reviewed)

1. Helke C.J. and **Rabchevsky A.** (1991) Axotomy alters putative neurotransmitters in visceral sensory neurons of the nodose and petrosal ganglia. *Brain Research* 551(1-2): 44-51. 1991 Epub Jun 14 PMID: 1680528
2. Ichikawa H., **Rabchevsky A.** and Helke C.J. (1993) Presence and coexistence of putative neurotransmitters in carotid sinus baro- and chemoreceptor afferent neurons. *Brain Research* 611(1): 67-74. Epub 1993 May 14 PMID: 8100177
3. **Rabchevsky A.G.** and Streit W.J. (1997) Grafting of cultured microglial cells into the lesioned spinal cord of adult rats enhances neurite outgrowth. *Journal of Neuroscience Research* 47(1): 34-48. Epub 1997 Jan 1 PMID: 8981236
4. **Rabchevsky A.G.**, Weinitz J.M., Couplier M., Fages C., Tinel M. and Junier M.P. (1998) A role for transforming growth factor alpha as an inducer of astrogliosis. *Journal of Neuroscience* 18(24): 10541-10552. Epub 1998 Dec 16 PMID: 9852591 PMCID: PMC6793335

5. **Rabchevsky A.G.**, Degos J.D. and Dreyfus P.A. (1999) Peripheral injections of Freund's adjuvant in mice provoke leakage of serum proteins through the blood-brain barrier without inducing reactive gliosis. *Brain Research* 832(1-2): 84-96. Epub 1999 Jun 22 PMID: 10375654
6. Sullivan P.G., Bruce-Keller A.J., Rabchevsky A.G., Christakos S., St. Clair D.K., Mattson M.P. and Scheff S.W. (1999) Exacerbation of damage and altered NF-kappa B activation in mice lacking tumor necrosis factor receptors after traumatic brain injury. *Journal of Neuroscience* 19(15): 6248-6256. Epub 1999 Jul 22 PMID: 10414954 PMCID: PMC6782813
7. **Rabchevsky A.G.**, Fugaccia I. Fletcher-Turner A., Blades D.A., Mattson M.P. and Scheff S.W. (1999) Basic fibroblast growth factor (bFGF) enhances tissue sparing and functional recovery following moderate spinal cord injury. *Journal of Neurotrauma* 16(9): 817-830. Epub 1999 Nov 16 PMID: 10521141
8. **Rabchevsky A.G.**, Fugaccia I. Fletcher-Turner A., Blades D.A., Mattson M.P. and Scheff S.W. (2000) Basic fibroblast growth factor (bFGF) enhances functional recovery following severe spinal cord injury to the rat. *Experimental Neurology* 164(2): 280-291. Epub 2000 Aug 1 PMID: 10915567
9. Sullivan P.G., **Rabchevsky A.G.**, Hicks M.R.R., Gibson T., Fletcher-Turner A. and Scheff S.W. (2000) Dose response curve and optimal dosing regimen of cyclosporin A after traumatic brain injury in rats. *Neuroscience* 101(2): 289-295. Epub 2000 Nov 14 PMID: 11074152
10. Zhang P., Abraham V.S., Kraft K.R., **Rabchevsky A.G.**, Scheff S.W. and Swain J.A. (2000) Hyperthermic preconditioning protects against spinal cord ischemic injury. *Annals Thoracic Surgery* 70(5): 1490-1495. Epub 2000 Nov 28 PMID: 11093475
11. **Rabchevsky A.G.**, Fugaccia I., Sullivan P.G. and Scheff S.W. (2001) Cyclosporin A (CsA) treatment following spinal cord injury to the rat: behavioral effects and stereological assessment of tissue sparing. *Journal of Neurotrauma* 18(5): 513-22. Epub 2001 Jun 8 PMID: 11393254
12. **Rabchevsky A.G.**, Fugaccia I., Sullivan P.G., Blades D.A. and Scheff S.W. (2002) Efficacy of methylprednisolone therapy for the injured rat spinal cord. *Journal of Neuroscience Research* 68(1): 7-18. Epub 2002 Apr 5. PMID: 11933044
13. Scheff S.W., **Rabchevsky A.G.**, Fugaccia I., Main J.A. and Lumppp J.E. (2003) Experimental modeling of spinal cord injury: characterization a force-defined injury device. *Journal of Neurotrauma* 20(2): 179-193. Epub 2003 Apr 5 PMID: 12675971
14. **Rabchevsky A.G.**, Sullivan P.G., Fugaccia I. and Scheff S.W. (2003) Creatine diet supplement for spinal cord injury in rats: influences on functional recovery and tissue sparing. *Journal of Neurotrauma* 20(7): 659-669. Epub 2003 Aug 12 PMID: 12908927
15. Hynds D.L., Rangappa N., Ter Beest J., Snow D.M. and **Rabchevsky A.G.** (2004) Microglia enhance dorsal root ganglion outgrowth in Schwann cell cultures. *Glia* 46(2): 218-223. Epub 2004 Mar 26 PMID: 15042588
16. Sullivan P.G., **Rabchevsky A.G.**, Keller J.N., Lovell M.A., Sodhi A., Hart R.P. and Scheff S.W. (2004) Intrinsic differences in isolated brain and spinal cord mitochondria: Implication for therapeutic interventions. *Journal of Comparative Neurology* 474(4): 524-534. Epub 2004 Jun 3 DOI: 10.1002/cne.20130 PMID: 15174070
17. Cameron A.A., Smith G.M., Randall D.C., Brown D.R. and **Rabchevsky A.G.** (2006) Genetic manipulation of intraspinal plasticity after spinal cord injury alters the severity of autonomic dysreflexia. *Journal of Neuroscience* 26(11): 2923-2932. Epub 2006 Mar 17 PMID: 16540569, PMCID: PMC3535471

18. Xiong Y., **Rabchevsky A.G.** and Hall E.D. (2007) Role of peroxynitrite in secondary oxidative damage after spinal cord injury. *Journal of Neurochemistry* 100(3): 639-649. Epub 2006 Dec 22 DOI: 10.1111/j.1471-4159.2006.04312.x PMID: 17181549
19. **Rabchevsky A.G.**, Sullivan P.G. and Scheff S.W. (2007) Temporal-spatial dynamics in oligodendrocyte and glial progenitor cell numbers throughout ventrolateral white matter following contusion spinal cord injury. *Glia* 55(8): 831-843. Epub 2007 Mar 29 PMID: 17390308 DOI: 10.1002/glia.20508
20. Sullivan P.G., Krishnamurthy S., Patel S.P., Pandya J.D. and **Rabchevsky A.G.** (2007) Temporal characterization of mitochondrial bioenergetics after spinal cord injury. *Journal of Neurotrauma* 24(6): 991-999. Epub 2007 Jun 30 DOI: 10.1089/neu.2006.0242 PMID: 17600515
21. *Ziemba K.S., Chaudhry N., **Rabchevsky A.G.**, Jin Y. and Smith G.M. (2008) Targeting axon growth from neuronal transplants along preformed guidance pathways within the adult CNS. *Journal of Neuroscience* 28(2): 340-348. Epub 2008 Jan 11 PMID: 18184776, PMCID: PMC6670506 *Featured article
22. Hou S.P., Duale H., Cameron A.A., Abshire S.M., Lyttle T.S. and **Rabchevsky A.G.** (2008) Plasticity of lumbosacral propriospinal neurons is associated with the development of autonomic dysreflexia after thoracic spinal cord transection. *Journal of Comparative Neurology* 509(4): 382-399. Epub 2008 June 3 PMID: 18512692, PMCID: PMC2536612
23. Patel S.P., Pandya J.D., Sullivan P.G. and **Rabchevsky A.G.** (2009) Differential effects of the mitochondrial uncoupling agent, 2,4-dinitrophenol, or the nitroxide antioxidant, Tempol, on synaptic or nonsynaptic mitochondria after spinal cord injury. *Journal of Neuroscience Research* 87(1): 130-140. Epub 2008 Aug 19 PMID: 18709657, PMCID: PMC5291118
24. Patel S.P., Gamboa J.L., McMullen C.A., **Rabchevsky A.G.** and Andrade F.H. (2009) Lower respiratory capacity in extraocular muscle mitochondria: evidence for intrinsic differences in mitochondrial composition and function. *Investigative Ophthalmology & Visual Science* 50(1): 180-186. Epub 2008 Sep 16 PMID: 18791171, PMCID: PMC2615070
25. Hou S.P., Duale H. and **Rabchevsky A.G.** (2009) Intraspinal sprouting of unmyelinated pelvic afferents after complete spinal cord injury is correlated with autonomic dysreflexia induced by visceral pain. *Neuroscience* 159(1): 369-379. Epub 2008 Dec 24. PMID: 19146928, PMCID: PMC3546483
26. Duale H., Hou S.P., Derbenev A.V., Smith B.N. and **Rabchevsky A.G.** (2009) Spinal cord injury reduces the efficacy of pseudorabies virus labeling of sympathetic preganglionic neurons. *Journal of Neuropathology and Experimental Neurology* 68(2): 168-178. Epub 2009 Jan 20 PMID: 19151624, PMCID: PMC2748969
27. Derbenev A.V., Duale H., **Rabchevsky A.G.** and Smith B.N. (2010) Electrophysiological characteristics of identified kidney-related neurons in adult rat spinal cord slices. *Neuroscience Letters* 474(3): 168-172. Epub 2010 Mar 18. PMID: 20303390, PMCID: PMC2863015
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29. Duale H., Lyttle T.S., Smith B.N. and **Rabchevsky A.G.** (2010) Noxious colorectal distention in spinalized rats further reduces pseudorabies virus labeling of sympathetic neurons. *Journal of Neurotrauma* 27(8): 1369-1378. Epub 2010 Jun 7 PMID: 20528165, PMCID: PMC2967825
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- Kitzman P.H., Burke D.A. (2011) Horizontal ladder task-specific re-training in adult rats with contusive thoracic spinal cord injury. *Restorative Neurology & Neuroscience* 29(4): 275-86. Epub 2011 Jun 24 PMID: 21697591, PMCID: PMC3544551
32. Zhang X., Patel S.P., McCarthy J.J., **Rabchevsky A.G.**, Goldhamer, D.J. and Esser K.A. (2012) A non-canonical e-box within the myod core enhancer is necessary for circadian expression in skeletal muscle. *Nucleic Acids Research* 1-12, Advance Access published December 30, 2011. Epub 2012 Jan 3 PMID: 22210883, PMCID: PMC3333858
33. Patel S.P., Sullivan P.G., Lyttle T.S., Magnuson D.S.K. and **Rabchevsky A.G.** (2012) Acetyl-l-carnitine treatment following spinal cord injury improves mitochondrial function correlated with remarkable tissue sparing and functional recovery. *Neuroscience* 210: 296-307. Epub 2012 Mar 15. PMID: 22445934, PMCID: PMC3358433
34. **Rabchevsky A.G.**, Patel S.P., Lyttle T.S., Eldahan K.C., O'Dell C.R., Zhang Y., Popovich P.G., Kitman P.H., and Donohue, K.D. (2012) Effects of gabapentin on muscle spasticity and both induced as well as spontaneous autonomic dysreflexia after complete spinal cord injury. *Frontiers in Physiology* 3: 329-350. Epub 2012 Aug 31 PMID: 22934077, PMCID: PMC3429097
35. *Zhang Y., Guan Z., Reader B., Shawler T., Mandrekar-Colucci S., Huang K., Weil Z., Bratasz A., Wells J., Powell N.D., Sheridan J.F., Whitacre C.C., **Rabchevsky A.G.**, Nash M.S. and Popovich P.G. (2013) Autonomic dysreflexia causes chronic immune suppression after spinal cord injury. *Journal of Neuroscience* 33(32): 12970-12981. Epub 2013 Aug 9 PMID: 23926252, PMCID: PMC3735880 *Featured article
36. Nielson J.L., Guandique C.F., Liu A.W., Muraru V., Burke D.A., Lash A.T., Kline R.H. IV, Moseanko R., Hawbecker S., Strand S.C., Zdunowski S., Irvine K.A., Brock J.H., Rosenzweig E.S., Nout Y.S., Gensel J.C., Anderson K.D., Magnuson D.S.K., Whittemore S.R., McTigue D.M., Popovich P.G., **Rabchevsky A.G.**, Steward O., Courtine G., Edgerton V.R., Tuszynski M.H., Beattie M.S., Bresnahan J.C. and Ferguson A.R. (2014) Development of a database for translational spinal cord injury research. *Journal of Neurotrauma* 31: 1789-1799 Epub 2014 July 31 PMID: 25077610, PMCID: PMC4186058
37. #Patel S.P.*, Sullivan P.G.*, Pandya J.D., Goldstein G.A., VanRooyen J.L., Yonutas H.M., Eldahan K.C., Morehouse J., Magnuson D.S.K. and **Rabchevsky A.G.** (2014) N-acetylcysteine amide preserves mitochondrial bioenergetics and improves functional recovery following spinal trauma. *Experimental Neurology* 257: 95-105. Epub 2014 May 5 PMID: 24805071, PMCID: PMC4114148 #Featured in editorial (Semple B.D. *Exp Neurol* 261: 291-97) *authors contributed equally
38. #Pandya J.D., Readnower R.D., Patel S.P., Yonutas H.M., Pauly J.R., Goldstein G.A., **Rabchevsky A.G.** and Sullivan P.G. (2014) N-acetylcysteine amide confers neuroprotection, improves bioenergetics and behavioral outcome following TBI. *Experimental Neurology* 257: 106-113 Epub 2014 May 1 PMID: 24792639, PMCID: PMC4086163 #Featured in editorial (Semple B.D. *Exp Neurol* 261: 291-97)
39. Patel S.P.*, Smith T.D.*, VanRooyen J.L., Powell D., Cox D.H., Sullivan P.G. and **Rabchevsky A.G.** (2016) Serial diffusion tensor imaging in vivo predicts long-term functional recovery and histopathology in rats following different severities of spinal cord injury. *Journal of Neurotrauma* 33:917-928 Epub 2015 Dec 9 PMID: 26650623, PMCID: PMC4876527 *authors contributed equally
40. Visavadiya N.P.*, Patel S.P.*, VanRooyen J.L., Sullivan P.G. and **Rabchevsky A.G.** (2016) Cellular and subcellular oxidative stress parameters following severe spinal cord injury. *Redox Biology* 8: 59-67. Epub 2015 Dec 30 PMID: 26760911, PMCID: PMC4712315 *authors contributed equally
41. Rau K.K., Hill C.E., Harrison B.J., Venkat G., Koenig H.M., Cook S.B, **Rabchevsky A.G.**, Taylor B.K., Hai T. and Petruska J.C. (2016) Cutaneous tissue damage induces long-lasting nociceptive sensitization

- and regulation of cellular stress- and nerve injury-associated genes in sensory neurons. *Experimental Neurology* S0014-4886(16)30159-5. Epub 2016 June 2 PMID: 27264359, PMCID: PMC4992590
42. Zhang Z., Shen M., Gresch P., Ghamari-Langroudi M., **Rabchevsky A.G.**, Emeson R. and Stamm S. (2016) Oligonucleotide-induced alternative splicing of serotonin 2C receptor reduces food intake. *EMBO Molecular Medicine* 8(8): 878-894. Epub 2016 June 9 PMID: 27406820, PMCID: PMC4967942
 43. Patel S.P.*, Cox D.H.*, Gollihue J.L., Bailey W.M., Geldenhuys W.J., Gensel J.C., Sullivan P.G. and **Rabchevsky A.G.** (2017) Pioglitazone treatment following spinal cord injury maintains acute mitochondrial integrity and increases chronic tissue sparing and functional recovery. *Experimental Neurology* 293 74-82. Epub 2017 March 30 PMID: 28365473, PMCID: PMC5473659 *authors contributed equally
 44. Gollihue J.L., Patel S.P., Mashburn C., Eldahan K.C., Sullivan P.G. and **Rabchevsky A.G.** (2017) Optimization of mitochondrial isolation techniques for intraspinal transplantation procedures. *Journal of Neuroscience Methods* 287: 1-12. Epub 2017 May 26 PMID: 28554833, PMCID: PMC5533517
 45. Eldahan K.C., Cox DH, Gollihue, J.L., Patel S.P. and **Rabchevsky A.G.** (2017) Rapamycin exacerbates cardiovascular dysfunction after complete high-thoracic spinal cord injury. *Journal of Neurotrauma* 35:842-853. Epub 2017 Dec 15 PMID: 29205090, PMCID: PMC5863090
 46. Gollihue J.L., Patel S.P., Mashburn C., Eldahan K.C., Cox D.H., Donahue R.R., Taylor B.K., Sullivan P.G. and **Rabchevsky A.G.** (2018) Effects of mitochondrial transplantation on bioenergetics, cellular incorporation and functional recovery after spinal cord injury. *Journal of Neurotrauma* 35:842-853. Epub 2017 Dec 15 PMID: 29205090, PMCID: PMC6053898
 47. Scholpa N.E., Williams H., Wang W., Corum D., Narang A., Tomlinson S., Sullivan P.G., **Rabchevsky A.G.** and Schnellmann R.G. (2019) Pharmacological stimulation of mitochondrial biogenesis using the FDA-approved β_2 -adrenoreceptor agonist formoterol for the treatment of spinal cord injury. *Journal of Neurotrauma* 36:962-972. Epub 2018 Nov 16 PMID: 30280980, PMCID: PMC6484358
 48. Owen A.M., Patel S.P., Smith J.D., Belasuriya B.K., Mori S.F, Hawk G.S., Stromberg A.J., Kuriyama N., Kaneki M., **Rabchevsky A.G.**, Butterfield T.A., Esser K.A., Peterson C.A., Starr M.E. and Saito H. (2019) Chronic muscle weakness and mitochondrial dysfunction in the absence of sustained atrophy in a preclinical sepsis model. *eLife* v. 8, e49920, p. 1-25. Epub 2019 Oct 19 DOI: 10.7554/eLife.49920 PMID: 31793435, PMCID: PMC6890461
 49. Eldahan K.C., Williams H.C., Cox D.H., Gollihue J.L., Patel S.P. and **Rabchevsky A.G.** (2020) Paradoxical effects of continuous high dose gabapentin treatment on autonomic dysreflexia after complete spinal cord injury. *Experimental Neurology* 209: 59-70. Epub 2019 Oct 31 PMID: 31678138, PMCID: PMC9204647
 50. Hart S.H., Patel S.P., Michael F.M., Stoilov P., Leow C.J., Hernandez A., Jolly A., de la Grange P., **Rabchevsky A.G.**, Stamm S. (2022) Rat spinal cord injury associated with spasticity leads to widespread changes in the regulation of retained introns. *Neurotrauma Reports* 3(1): 105-121. Epub 2022 Mar 4 DOI: 10.1089/neur.2021.0042 PMCID: PMC8985541
 51. Patel S.P., Michael F.M., Khan M.A., Duggan B., Wyse S., Darby D., Chaudhuri K., Pham J., Gollihue J., DeRouchey J.E., Sullivan P.G., Dziubla T.D. and **Rabchevsky A.G.** (2022) Erodible thermogelling hydrogels for localized mitochondrial transplantation to the spinal cord. *Mitochondrion* 64: 145-155. Epub 2022 April 6 <https://doi.org/10.1016/j.mito.2022.04.002> PMCID: PMC9154311
 52. Velmurugan G.V., Hubbard W.B., Prajapati P., Vekaria H.J., Patel S.P., **Rabchevsky A.G.** and Sullivan P.G. (2023) LRP1 deficiency promotes mitostasis in response to oxidative stress: Implications for mitochondrial targeting after traumatic brain injury. *Cells* 12, 1445. <https://doi.org/10.3390/cells12101445>

53. Michael F.M., Patel S.P., Bachstetter A.D. and **Rabchevsky A.G.** (2023) Proinflammatory and immunomodulatory gene and protein expression patterns in spinal cord and spleen following acute and chronic high thoracic injury. *Journal of Inflammation Research* 16: 3341–3349 PMID: 37576153, PMCID: PMC10423003
54. Warner F.M., Tong B., McDougall J., Ginis K.M., **Rabchevsky A.G.**, Cragg J.J., Kramer J.L.K. (2023) Perspectives on data sharing in persons with spinal cord injury *Neurotrauma Reports* 9;4(1):781-789. DOI: 10.1089/neur.2023.0035 PMID: 38028277, PMCID: PMC10659015
55. Malik Raza N., Samejima S., Shackleton C., Miller T., Pedrocchi A.L.G., **Rabchevsky A.G.**, Moritz C.T., Darrow D., Field-Fote E.C., Guanziroli E., Ambrosini E., Molteni F., Gad P., Mushahwar V. K., Sachdeva R. and Krassioukov A.V. (2024) REPORT-SCS: Minimum reporting standards for spinal cord stimulation studies in spinal cord injury. *J. Neural Engineering* 2024 Feb 7;21(1) DOI 10.1088/1741-2552/ad2290 PMID: 38271712

REVIEWS AND BOOK CHAPTERS (peer-reviewed)

1. Streit W.J., **Rabchevsky A.G.**, Theele D.P. and Hickey W.F. (1995) Immunohistochemistry of leukocyte antigens in the rat brain. In: *Neuroimmunology. Methods in Neurosciences*. Phillips M.I. & Evans D. (Eds.), Academic Press, pp. 272-280.
2. **Rabchevsky A.G.** and Streit W.J. (1998) Role of microglia in postinjury repair and regeneration of the CNS. *Mental Retardation and Developmental Disabilities Research Reviews*, 4: 187-192.
3. **Rabchevsky A.G.** and Smith G.M. (2001) Therapeutic interventions following mammalian spinal cord injury. *Archives of Neurology*, 58: 721-726. Epub 2001 May 18 PMID: 11346366
4. **Rabchevsky A.G.** (2002) Influences of activated microglia/brain macrophages on spinal cord injury and regeneration. In: *Microglia in the regenerating and degenerating central nervous system*. Streit W.J. (Ed.), Springer-Verlag: New York. pp. 209-226.
5. **Rabchevsky A.G.** (2004) SCI – My path to scientific discovery. In: *From there to here: Stories of adjustment to spinal cord injury*. Karp G. & Klein S. (Eds.), No Limits Communications. pp. 76-81.
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28. Jones, Richard D. (2024) Where There's a Wheel, There's a Way: A Profile of Alexander "Sasha" Rabchevsky '88. *Journal of the Sciences* 13; Hampden-Sydney College <https://blogs.hsc.edu/sciencejournal/wp-content/uploads/sites/6/2024/04/Jones.pdf>

PRESS/MEDIA RELEASES/PUBLIC PRESENTATIONS

- | | |
|---------|---|
| 03/2023 | The Ups and Downs of a Visiting Professor at University of British Columbia
<i>The ICORDian Spring 2023</i> https://icord.org/the-icordian-spring-2023/#DrRabchevsky |
| 01/2020 | Albert Nelson Marquis Lifetime Achievement Award, Marquis Who's Who
<i>United Press</i> http://www.24-7pressrelease.com/press-release-service/470075 |
| 11/2016 | Getchell Memorial Award Honors Graduate Scientist's Persistence in Seeking National Funding
<i>UK Now, University of Kentucky News</i> http://uknow.uky.edu/research/getchell-memorial-award-honors-graduate%E2%80%99s-persistence-seeking-national-funding |
| 06/2016 | Mentoring a Key Factor in Spinal Cord Researcher's Success
<i>UK Now, University of Kentucky</i> http://uknow.uky.edu/content/mentoring-key-factor-spinal-cord-researchers-success |
| 02/2016 | Motivated by Personal Experience, Scientist Seeks Answers About Spinal Cord Injury
<i>UK Now, University of Kentucky</i> http://uknow.uky.edu/content/motivated-personal-experience-scientist-seeks-answers-about-spinal-cord-injury ; https://youtu.be/938-NOmZkso
<i>Spinal Cord Injury Zone</i> , http://www.spinalcordinjuryzone.com/videos/16181/motivated-by-personal-experience-scientist-seeks-answers-about-spinal-cord-injury |
| 11/2015 | Extraordinary Medicine Episode (12) on SCI/TBI
Documentary of Drs. Rabchevsky & Sullivan's work on mitochondria-targeted interventions for SCI & TBI. <i>FBR licensed series to Discovery Network, Australia and Latin America</i> , Liz Hodge, Director/Producer, FBR Media |
| 10/2015 | Two University of Kentucky Researchers Awarded Grants from Conquer Paralysis Now |

Alexander G. Rabchevsky, Ph.D.

UK Now, University of Kentucky News <http://uknow.uky.edu/content/two-university-kentucky-researchers-awarded-grants-conquer-paralysis-now>

08/2013 *Acetyl-L-Carnitine PN/Paraplegia News Magazine* <http://pvamag.com/pn/article/5680/acetyllcarnitine>;
<http://www.healingtherapies.info/Acetyl-L-Carnitine.htm>

The Lane Report http://www.lanereport.com/56323/2015/10/two-uk-researchers-awarded-grants-from-conquer-paralysis-now/?utm_source=Faster%20Lane%20Newsletter&utm_medium=Email&utm_campaign=oct-28-2015

10/2012 J. Allyn Taylor International Prize in Medicine Symposium 2012
Western University, Ontario, Canada https://youtu.be/nQL_1Px54UY

09/2011 Commonly Used Supplement May Improve Recovery from Spinal Cord Injuries
UK Now, University of Kentucky <http://uknow.uky.edu/content/commonly-used-supplement-may-improve-recovery-spinal-cord-injuries>
Science Daily, <http://www.sciencedaily.com/releases/2011/09/110928185025.htm>

GRANT SUPPORT

Completed

\$11,306,540 (includes PI only since 2000)

Title: Function of ceramide in extracellular vesicle-mediated neurodegenerative disease
PI: Bieberich E.
Agency: National Institute on Aging (1R01 AG078338)
Period: 09/01/2022 – 08/31/2025
Total: \$2,746,370

Goal is to inhibit or disrupt this binding by developing novel drugs that antagonize ceramide to delay the onset of or prevent neurodegeneration in AD. Specific Aim 1 characterization and neurotoxicity in neurons (Specific Aim 2) to prevent AD pathology will test improved cognition independent of sex (Specific Aim 3).
Role: Co-I, 0.4 calendar months

Title: Novel experimental models to study the effect of extracellular vesicles on neurons
PI: Bieberich E.
Agency: National Institute on Aging (1R21 AG078601)
Period: 08/17/2022 - 07/31/2024
Total: \$420,750

Goal is to establish novel techniques to determine the in vivo function of astrosomes. We propose to establish novel techniques and models for EV functional analysis. We developed mouse models with astrocyte specific nSMase2 deficiency (loss-of-function) models and secretion of fluorescently labeled astrosomes (reporter models) in order to understand the significance of endogenous astrosomes for normal neuronal function. We will study the function of astrosomes in physiological conditions (e.g., aging).
Role: Co-I, 0.4 calendar months

Title: Enhanced mitochondrial viability via engineered hydrogels for intrathecal spinal cord delivery
MPI: Rabchevsky A.G., Patel S.P.
Agency: National Institute of Health/NINDS (5R01 NS119337)
Period: 10/01/2020 - 06/30/2025
Total: \$2,253,674

Goal is to test whether administration of NACA or ALC, in combination with intrathecal injection of

isolated muscle mitochondria embedded in a biochemically active, thermo-gelling erodible hydrogel foster neuroprotective efficacy.

Role: MPI, 2.4 calendar months

Title: Neurobiology of CNS Injury & Repair Training Grant

MPI: Alilain, W.J., Gensel J.C., Saatman K.E.

Agency: National Institutes of Health/NINDS (2T32 NS077889)

Period: 07/01/2017 - 06/30/2027

Total: \$208,626 per year

Broad-based training in modern research concepts regarding the pathophysiology of neurotrauma.

Role: Training Faculty, effort as needed

Title: Macrophage depletion therapy for spinal cord injury

MPI: Gensel J., Alilain W.

Agency: National Institute of Health/NINDS (5R01 NS116068)

Period: 03/01/2021 - 11/30/2025

Total: \$3,122,635

Investigate MD strategies to modify inflammatory responses after spinal cord after injury. Aim 1: Determine the effects of acute MD on myelopoiesis, biodistribution, and toxicity after SCI. Aim 2: Evaluate the effects of acute MD on recovery of locomotor, sensory, and autonomic function in chronic SCI rats. Aim 3:

Determine efficacy of acute MD on recovery of respiratory motor and forelimb function after cervical SCI.

Role: Co-I, 0.9 calendar months

Title: Mitochondrial transplantation & mitochondrial-targeted pharmaceuticals to treat spinal cord injury

PI: Rabchevsky A.G.

Agency: Department of Defense-CDMRP/SCIRP (W81XWH2010347)

Period: 06/01/2020 - 05/31/2023

Total: \$764,927

The proposed experiments were designed to test the protective efficacy of mitoceticals both alone and in combination with novel mitochondrial transplantation (MitoTxp) into the spinal cord, as well as minimally invasive subdural delivery of mitochondria within specialized polymer hydrogels.

Role: PI, 2.4 calendar months

Title: TBI-induced exosome release accelerates Alzheimer's disease pathology

PI: Bieberich E.

Agency: Veterans Administration Medical Center, Lexington, KY (1 I01 BX003643-01A2)

Period: 04/01/19 - 03/31/23

Total: \$942,187

Goal was to interrupt TBI-induced exosome secretion to prevent or delay onset of Alzheimer's disease.

Role: Co-I, 0.3 calendar months

Title: Pharmacological inhibition of ceramide production in mitochondria as treatment for Alzheimer's disease

PI: Crivelli, S. (Bieberich sponsor)

Agency: BrightFocus Foundation

Period: 09/01/2020 - 01/31/2023

Total: \$200,000

Goal was to test whether pharmacological inhibition of ceramide production in mitochondria may inform possible interventions in Alzheimer's disease models.

Alexander G. Rabchevsky, Ph.D.

Role: Co-I, effort as needed

Title: Chemogenetic silencing of interneurons to modulate autonomic dysreflexia

PI: Michael, F.M.

Agency: Craig H. Neilsen Foundation (Postdoctoral Fellowship #651019)

Period: 06/01/20 - 07/31/2022

Total: \$150,000

Goal was to employ recombinant DREADD viral vectors to target and chemogenetically silence putative ascending propriospinal in the lumbosacral spinal cord to delineate contribution to autonomic dysreflexia.

Role: Sponsor

Title: Neurobiology of CNS Injury & Repair Training Grant

MPI: Hall, E.D., Geddes, J.W.

Period: 07/01/2017 - 06/30/2022

Agency: National Institutes of Health/NINDS (T32 NS077889)

Total: \$1,200,467

Broad-based training in modern research concepts regarding the pathophysiology of neurotrauma.

Role: Training Faculty, 0.2 calendar months

Title: Pharmacological induction of mitochondrial biogenesis for the treatment of spinal cord injury

P.I.: Schnellmann R.

Agency: Department of Defense (CDMRP/SCIRP; W81XWH1910175)

Period: 10/01/2019 - 05/31/2022

Total: \$350,000

Goal was to determine whether promoting mitochondrial biogenesis with formoterol post-SCI in male and female mice promotes locomotor recovery, vascular recovery and blood-spinal cord barrier integrity.

Role: Co-I, 0.24 calendar months

Title: Chronic muscle weakness in sepsis survivors

PI: Saito, H.

Agency: National Institutes of Health-NIGMS (R01 GM126181)

Period: 09/15/2017 - 08/31/2021

Total: \$1,162,800

These studies investigated sarcomeric protein damage and causal mechanisms long after recovery from sepsis in sepsis-surviving mice, and formulated therapeutics to ameliorate post-sepsis chronic muscle weakness.

Role: Co-I, 0.2 calendar months

Title: Pioglitazone fosters neuroprotection via specific interaction with mitoNEET

PI: Rabchevsky A.G.

Agency: Craig H. Neilsen Foundation (Senior Investigator Award #476719)

Period: 07/31/2017 - 07/30/2021 NCE

Total: \$599,781

These studies directly tested whether pioglitazone affords neuroprotection following SCI by ameliorating mitochondrial dysfunction via interactions with mitoNEET using a novel transgenic model (mitoNEET null), as well novel specific mitoNEET ligands and antagonists to mechanistically test our hypotheses.

Role: PI, 2.0 calendar months

Title: 26th Annual Kentucky Spinal Cord and Head Injury Research Trust (KSCHIRT) Symposium

PI: Rabchevsky, A.G.

Agency: Craig H Neilsen Foundation
Period: 02/2020 – 09/2020
Total: \$10,000 (No Award Number))

Goal of Symposium was to expose attendees to recent research directions and advances of internationally-recognized scientists at the forefront of cell and molecular biology of spinal cord and brain injury research.

Role: PI, 0.1 calendar months

Title: Mitochondrial transplantation strategies to promote recovery after spinal cord injury

PI: Rabchevsky A.G.

Agency: National Institutes of Health/NINDS (R21 NS096670)

Period: 04/01/2016 - 04/30/2019 *NCE*

Total: \$413,875

This grant comparatively assessed transplantation of mitochondria derived from two cell-type sources (autologous muscle vs cultured cells) in order to provide additional analysis and outcome measures for long-term behavioral studies to generate robust pre-clinical data.

Role: PI, 3.0 calendar months

Title: Changing serotonin receptor 2C splice variants to combat spasticity after spinal cord injury

MPI: Rabchevsky A.G. and Stamm S.

Agency: National Institutes of Health/NINDS (R21 NS098186)

Period: 04/01/2017 - 03/31/2019

Total: \$413,875

The aims of these studies were to intrathecally inject oligonucleotides, designed by the MPI (Stamm), to inactivate constitutively active 5HT_{2C} receptors in the injured spinal cord thought to underlie tail muscle spasticity in chronic stages of SCI utilizing a complete S2 transection SCI model (Rabchevsky).

Role: MPI, 1.0 calendar months

Title: Mitochondrial transplantation and alternative biofuel administration to treat spinal cord injury

PI: Patel S.P.

Agency: University of Kentucky (Center for Clinical and Translational Science #1013176200)

Period: 08/15/2017 - 02/14/2019 Pilot and Innovation Research Program Award

Total: \$50,000

Goal was to treat with ALC to promote energy production (ATP) will maintain bioenergetics of both endogenous and transplanted mitochondria to promote greater functional neuroprotection after SCI.

Role: Co-I, 1.0 calendar months

Title: Continuous sensor-based home-cage recordings for SCI research

PI: Rabchevsky A.G.

Agency: Craig H. Neilsen Foundation (Senior Investigator Award #T659612 - Subcontract)

Period: 08/31/2016 - 08/30/2018

Total: \$39,916; \$600,000 (University Kentucky subcontract of Emory University - Hochman S. - PI)

These studies tested miniaturized sensor technologies that report on an individual's physio-behavioral variables to develop an animal-model prototype – in a home-cage – to test its efficacy in assessing physiologic dysfunction after SCI. Subcontract to calibrate sensors using our telemetry.

Role: PI, 1.0 calendar months

Title: Mitochondria transplantation for functional recovery after spinal cord injury

PI: VanRooyen J.

Agency: National Institutes of Health/NINDS (F31 NS093904)

Period: 04/01/2016 - 08/28/2017

Total: \$93,420

This proposal was designed to study dose-response transplantation of tGFP mitochondria (culture-derived) to optimize acute bioenergetics to inform effective dosage for long-term behavioral improvements.

Role: Sponsor

Title: Autologous mitochondrial replacement strategies to promote recovery after spinal trauma

PI: Rabchevsky A.G.

Agency: Conquer Paralysis Now (Out of the Box Grant award)

Period: 09/01/2015 - 08/31/2016

Total: \$49,981

This proposal tested whether supplementing healthy mitochondria isolated from exogenous sources into the contused rat spinal cord maintains bioenergetics and promotes functional recovery.

Role: PI, 3.0 calendar months

Title: Ketone body administration to treat spinal cord injury

PI: Patel S.P.

Agency: Craig H. Neilsen Foundation (Pilot Research Grant #260771)

Period: 07/01/2013 - 06/30/2016

Total: \$298,026

These studies assessed whether ketone body administration post-SCI improves acute mitochondrial respiration and whether prolonged treatment results in chronic tissue sparing and hind limb recovery.

Role: Co-I, 1.0 calendar months

Title: Mitochondrial targeted therapeutics for treatment of spinal cord injury

MPI: Rabchevsky A.G., Sullivan P.G.

Period: 05/01/2013 - 12/31/2015

Agency: National Institutes of Health/NINDS (3R01NS069633-03S1) *Supplement for MRI imaging*

Total: \$74,177

Using serial MRI imaging we evaluated DTI-based fractional anisotropy in vivo to predict both terminal histopathology and behavioral recovery in the NACA/ALC studies.

Role: MPI, 2.0 calendar months

Title: Mitochondrial targeted therapeutics for treatment of spinal cord injury

MPI: Rabchevsky A.G., Sullivan P.G.

Agency: National Institutes of Health/NINDS (R01NS069633)

Period: 06/15/2011 - 12/31/2015

Total: \$1,299,376

Evaluated the efficacy ALC and/or NACA on bioenergetics of synaptic and non-synaptic mitochondria to establish a therapeutic time window of ALC/NACA combinatorial administration after acute SCI.

Role: MPI, 2.0 calendar months

Title: Pathophysiology of sensory and sympathetic neurons in SCI-induced autonomic dysreflexia

PI: Petruska J.C.

Agency: Kentucky Spinal Cord and Head Injury Research Trust (Grant #10-10)

Period: 01/15/2011 - 01/14/2015

Total: \$146,874 (U. Louisville subcontract)

These studies examined the influence of peripheral inflammation on the severity of autonomic dysreflexia in relation to cardiac output as well as the function of both sensory and sympathetically correlated neurons.

Role: Co-I, 1.5 calendar months

Title: Mitochondrial-targeted neuroprotection following spinal cord injury

PI: Rabchevsky A.G.

Agency: Craig H. Neilsen Foundation (Pilot Research Grant #190115)

Period: 09/01/2011 - 08/31/2014

Total: \$274,964

These studies evaluated ALC and/or NACA efficacy on bioenergetics of total mitochondria (mixed synaptic and non-synaptic) to establish a therapeutic time window of ALC/NACA combinatorial administration after acute SCI and whether prolonged ALC treatment results in chronic tissue sparing and hind limb recovery.

Role: PI, 3.0 calendar months

Title: Effects of acetyl-L-carnitine treatment on mitochondrial function, tissue sparing and hind limb locomotor recovery following contusion spinal cord injury

PI: Rabchevsky A.G.

Agency: Kentucky Spinal Cord and Head Injury Research Trust (Grant #8-13)

Period: 01/15/2009 - 01/14/2012

Total: \$298,848

These studies evaluated ALC efficacy of bioenergetics on total mitochondria (mixed synaptic and non-synaptic) to establish a therapeutic time window of ALC administration after acute SCI and whether prolonged ALC treatment results in increased tissue sparing and hind limb recovery after chronic SCI.

Role: PI, 2.0 calendar months

Title: Intraspinal plasticity contributing to autonomic dysreflexia following SCI

PI: Duale H.

Agency: Paralyzed Veterans of America Research Foundation (Fellowship Grant # 2561)

Period: 01/01/2008 - 12/31/2009

Total: \$98,820

Pseudorabies virus (PRV) expressing either PRV-GFP or PRV-RFP was injected into the left kidney and distal colon two weeks after thoracic (T4) transection. Dual labelled lumbosacral propriospinal neurons (GFP & RFP) were quantified using stereology to assess dynamic synaptic remodeling after SCI.

Role: Sponsor

Title: Therapeutic Strategies for Neurodegeneration Training Grant

P.I. Hall E.D.

Agency: National Institutes of Health/NIDA (1T32 DA022738)

Period: 02/01/2006 – 1/31/2011

Total Direct: \$1,200,467

Broad-based training in modern research concepts regarding the pathophysiology of neurotrauma and neurodegenerative disorders and potential molecular targets for discovery of pharmacological and gene therapies by which the effects of these conditions can be ameliorated.

Role: Training Faculty, 0.2 calendar months

Title: University of Kentucky Spinal Cord & Brain Injury Research Center Core Grant

PI: Hall E.D.

Agency: National Institutes of Health/NINDS (2P30 NS051220-07)

Period: 05/01/2005 - 12/31/2015

Total: \$3,441,126

The Core D was designed to maintain a state-of-the-art microscopy and imaging analysis core.

Role: Assistant Director, 1.5 calendar months

Title: Role of intraspinal plasticity in autonomic dysreflexia
PI: Rabchevsky A.G.
Agency: National Institutes of Health/NINDS R01 (NS049901)
Period: 08/02/2004 - 4/30/2011
Total: \$1,841,250

This study employed viral-mediated gene therapy in conjunction with retrograde and anterograde tracing to characterize visceral afferents and lumbosacral relay neurons after SCI which become hyperactive upon noxious stimulation below the SCI level, leading to autonomic dysreflexia.

Role: PI, 3.0 calendar months

Title: Transplantation of glial progenitor cells from human embryonic stem cells into injured rat spinal cord
PI: Rabchevsky A.G.
Agency: Geron Corporation, Menlo Park, CA (Contract)
Period: 01/31/2004 - 09/30/2005
Total: \$99,730

Differentiated human GPCs from purified human ESCs were transplanted near the injury site in attempts to improve recovery of hind limb locomotion following contusion SCI in adult rats.

Role: PI, 4.0 calendar months

Title: Influence of neurotrophins on intraspinal plasticity modulating autonomic dysreflexia
PI: Rabchevsky A.G.
Agency: Kentucky Spinal Cord and Head Injury Research Trust (Grant #3-11)
Period: 01/15/2004 - 10/14/2007
Total: \$297,000

Used recombinant adenoviruses (Adts) to over-express control GFP, NGF or Semaphorin 3a in the dorsal horns to modulate post-traumatic intraspinal sprouting to mitigate hypertensive autonomic dysreflexia.

Role: PI, 3.0 calendar months

Title: Growth factor-mediated gene therapy for spinal cord injury
PI: Rabchevsky A.G.
Agency: American Paraplegia Society (Seed Grant #908)
Period: 11/01/2003 - 10/31/2004
Total: \$16,800

Adenovirus over-expression of FGF2 near the site of injury, alone or with other growth factors affecting differentiation, was done to replenish lost oligodendrocytes and improve functional recovery.

Role: PI, 3.0 calendar months

Title: Gene therapy to improve remyelination and function after spinal cord injury
PI: Rabchevsky A.G.
Agency: University of Kentucky (Medical Center Research Foundation Grant #1051)
Period: 07/15/2003 - 06/30/2003
Total: \$13,500

FGF2 was over-expressed using adenovirus and we examined the behavioral and histological effects of controlled growth factor expression at the injury site or at more distal locations.

Role: PI, 5.0 calendar months

Title: Mechanisms of autonomic dysreflexia following spinal cord injury

Alexander G. Rabchevsky, Ph.D.

PI: Rabchevsky A.G.
Agency: International Spinal Research Trust, UK (Grant #STR063)
Period: 07/12/2002 - 06/11/2005
Total: \$213,705

Modified endogenous cells in the T-4 transected rat spinal cord using adenoviral vectors for NGF and Semaphorin 3a to abolish central sprouting of pain fibers below the level of SCI, which we correlated with the severity of autonomic dysreflexia as measured by increased blood pressure following colon distention.

Role: PI, 3.0 calendar months

Title: Combinational therapies for recovery after spinal cord injury: steroids and growth factors
PI: Rabchevsky A.G. (01/12/2000 - 01/13/2003)

Agency: Kentucky Spinal Cord and Head Injury Research Trust (Grant #9-17)
Total: \$299,247

These studies tested the hypothesis that the combination of i.v. methylprednisolone treatment with intrathecal bFGF infusion after contusion SCI will act synergistically to further enhance recovery.

Role: PI, 5.0 calendar months

TEACHING EXPERIENCE at UNIVERSITY OF KENTUCKY

Course Lecturer

- 2022 Neuroscience Seminar-BIO 426, Spinal cord injury: Pathophysiology and therapeutics.
- 2018 Neuroscience Seminar-BIO 426, Spinal cord injury: Pathophysiology and therapeutics.
- 2015 Graduate Gerontology Program-GRN 650, Research methods and design.
- 2015 Undergraduate Honors Program-HON 301, Where are all the women?
- 2010 - 2018 Elementary Physiology-PGY 206, Endocrinology.
- 2009 - 2023 Physical Therapy-PT 827, Pathophysiology of spasticity and autonomic dysreflexia after spinal cord injury and Spinal cord injury & functional electrical stimulation.
- 2009 - 2023 Neurobiology of CNS Injury & Repair-ANA 605 & PGY 605, Spinal cord injury models and Intraspinial plasticity associated with autonomic dysreflexia after SCI and Post-traumatic demyelination & remyelination.
- 2008 Physical Therapy-PT 827, Plasticity of both visceral sensory fibers and propriospinal neurons is associated with the development of autonomic dysfunction after spinal cord injury.
- 2007 CNS Injury and Repair, Special Topics Course-ANA 780 & PGY 630, Spinal cord injury models and Autonomic dysreflexia after spinal cord injury and Post-traumatic demyelination & remyelination.
- 2006 - 2008 Dental Human Function-OBI 814, Neurophysiology.
- 2005 Principles of Neurobiology-ANA 605, Spinal cord injury models and Autonomic dysreflexia after spinal cord injury.
- 2005 Medical Neuroscience-MD 817, Spinal cord injury & functional electrical stimulation.
- 2004 Advanced Pharmacology-PHA 658, Modern viral approaches.
- 2004 Medical Neuroscience-MD 817, Spinal cord injury: Dysfunctions & therapeutic approaches.
- 2003 Medical Neuroscience-MD 817, Spinal cord injury: Clinical treatment from lab bench to clinical trials.
- 2003 - 2009 Principles of Human Physiology-PGY 412G, Neurophysiology.

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- 2002 Medical Neuroscience-MD 817, Therapeutic interventions following spinal cord injury: Defining targets of experimental treatments.
- 2002 Physical Therapy-PT 827, A surgically implanted Functional Electrical System for standing and walking.

TEACHING EXPERIENCE at OTHER NATIONAL INSTITUTES

Invited Lecturer

- 2016 Miami Project to Cure Paralysis, University of Miami, Miller School of Medicine, Miami, FL, *Autonomic dysreflexia following spinal cord injury*. (teleconference with Dr. Vance Lemmon)
- 2009 - 2013 Spinal Cord Injury Research Training Program, The NIH and The Ohio State University, Center for Brain and Spinal Repair, *Modulating the pathophysiology of autonomic dysreflexia after spinal cord injury*.
- 2007 Spinal Cord Injury Research Training Program, The NIH and The Ohio State University, Center for Brain and Spinal Repair, *Plasticity of both sensory axons and propriospinal neurons influences the severity of autonomic dysreflexia after complete spinal cord injury, and Spinal cord injury & functional electrical stimulation*.
- 2006 - 2007 Neurobiology-Bio S315, University of North Carolina, Pembroke, Department of Biology, *Spinal cord injury: dysfunctions, clinical treatments, experimental models & therapeutics*. (Teleconference with Dr. Robert Poage)
- 2006 - 2007 The Reeve-Irvine Research Center, Spinal Cord Injury Techniques Course, University of California at Irvine, Department of Anatomy & Neurobiology, *Plasticity of both sensory axons and propriospinal neurons influences the severity of autonomic dysreflexia after complete spinal cord injury, and Basic fibroblast growth factor (FGF-2) therapy for recovery of motor function*.
- 2004 The Reeve-Irvine Research Center, Spinal Cord Injury Techniques Course, University of California at Irvine, Department of Anatomy & Neurobiology, *Dysfunction after spinal cord injury: Clinical and experimental therapeutics*.
- 2003 The Reeve-Irvine Research Center, Spinal Cord Injury Techniques Course, University of California at Irvine, Department of Anatomy & Neurobiology, *Gene therapy for spinal cord dysfunction; A surgically implanted neuroprosthesis for exercise, standing and transfers after spinal cord injury*.
- 2002 The Reeve-Irvine Research Center, Spinal Cord Injury Techniques Course, University of California at Irvine, Department of Anatomy & Neurobiology, *Therapeutic interventions following spinal cord injury: clinical treatment to lab bench to clinical trials*.
- 2001 The Reeve-Irvine Research Center, Spinal Cord Injury Techniques Course, University of California at Irvine, Department of Anatomy & Neurobiology, *Growth factor therapy for recovery after spinal cord injury*.

MENTORING at UNIVERSITY OF KENTUCKY, NATIONAL and INTERNATIONAL

Doctoral Thesis Advisor

- 2014 - 2019 Khalid Eldahan (Physiology), PhD Dissertation mentor/chair; Scientist at Lonza Bioscience, Houston, TX
- 2012 - 2017 Jenna VanRooyen-Gollihue (Physiology), PhD Dissertation mentor/chair; postdoctoral researcher in Chris Norris' lab, UK Sanders-Brown Center on Aging
- 2007 - 2008 Joseph Whelan (Physiology), Master's thesis mentor; Biomedical Life Scientist at Leidos, MD

Postdoctoral Fellows: current positions

2019 - 2022	Dr. Felicia Mary Michael, Assistant Professor, City College London, United Kingdom
2011 - 2012	Dr. Rachel Hill, Bibliography Manager, University of Cincinnati, OH
2006 - 2014	Dr. Samirkumar Patel, Assistant Professor, Department of Physiology, Kentucky
2006 - 2009	Dr. Hanad Duale, CEO at Kare Intellex, Inc. Columbus, OH
2005 - 2008	Dr. Shaoping Hou, Associate Professor, University of Missouri, Interdisciplinary Neuroscience Faculty Columbia, MO
2005 - 2006	Dr. Sairam Krishnamurthy, Professor of Pharmaceutics, Banaras Hindu University, India
2003 - 2004	Dr. Adrian A. Cameron, Nambour General Hospital, Australia

Graduate Students

2021	Kelsey Campbell, rotating IBS graduate student
2011	Jenna VanRooyen (Gollihue), rotating IBS graduate student
2011	Hyein Jang, rotating IBS graduate student
2008	Darren Miller, rotating IBS graduate student
2008	Brent Hackett, rotating IBS graduate student
2008	Eva Bach, rotating IBS graduate student
2006	Erica Fleishaker, rotating IBS graduate student
2005	Andrew Sauerbeck, rotating IBS graduate student
2005	Christopher Trimby, rotating IBS graduate student
2003	George Day, rotating IBS graduate student

Medical Students

2015	Justin Huber, 4 th Year Med Student, PGY850 Clinical Resident Program
2014 - 2015	Catherine Wang, 3 rd Year Med Student, Professional Student Mentored Research Fellowship
2013	Chad Willis, 2 nd Year Med Student, Medical Student Research Program (Fed Work-Study)
2013	Catherine Wang, 2 nd Year Med Student, Med Student Research Program (Fed Work-Study)
2003 - 2005	Igor Voskresensky, 2 nd Year Medical Student (STEPS Program)
2002	Janna Hackett, 2 nd Year Medical Student (Federal Work Study Program)

Undergraduate Researchers

2022	Jasey Williams, PGY394 Program
2022	Cannon La Font, PGY394 Program
2022	Emmylou Tidwell, PGY394 Program
2021 - 2022	Olivia Whitfield, PGY394 Program
2021 - 2022	Blayne Starkey, PGY394 Program
2021	Sophia Carpico, PGY394 Program
2021	Jay Patel, PGY394 Program
2020	Ashley Pitts, PGY394 Program
2019	Stephen Spezzano, PGY394 Program
2019	Bailee Taylor, BIO395/ABT396 Programs
2018 - 2019	Lydia Boyd, PGY394 Program
2018	Sean Dunn, BIO395 Program
2017	Christian Baker, KHP395 Program
2018	Alexandra Bruce, BIO395 Program
2019	Janki Naidugari, BIO395 Program
2016	Kaylin Foreman, KHP395 Program
2016	Meraj Kotwal, BIO395 Program

2016	Carlee Schreiber, KHP395 Program
2015	Rebecca Joel, BIO395 Program
2015	Ashley Pittman, HHS445 Program
2015	Aileexandria Sandlin, ABT301 Program
2015	Hannah Hollenbach, BIO395 Program
2015	Alex Carter, BIO395 Program
2014 - 2016	Jonathan Gardner, CHEM395 Program
2014 - 2017	Jensen Goh, BIO395 & KHP395 Programs
2013 - 2015	Ana Bahrami, BIO395 Program
2013 - 2014	Alicia Kasetta, Physiology Scholars Program
2013 - 2014	Jensen Goh, Physiology Scholars Program
2013 - 2014	Katherine Spezzano, BIO395 Program
2012	Nathalie Astudillo, BIO395 Program
2012	Nicholas Streck, BIO395 Program
2012 - 2013	Christian Baker, BIO395 Program
2011 - 2013	Taylor Smith, CHEM395 Program
2011	Seth Leeds, BIO395 Program
2011	Anthony Gutierrez, Gatton Academy Research Fellowship
2010 - 2011	Oksana Zhurbich, BIO395 & Federal Work Study Program
2009	Alecia Fields, BIO395 Program
2009	Jenna Gilb, BIO395 Program
2008 - 2009	Jennifer Evans, ANA395 Program
2008	JaSan Rumph, Bucks for Brains Summer Research Program
2007	Racine Gue, ABT395 Program
2007	Sarah Reagin, KYSS Summer Research Program
2007	Aaron Harris, BIO395 Program
2003	Leslie Schwindel, STEPS Program

Ph.D. Dissertation Committees

2022 - present	Ammar Jamie Ahmed (U.K. Chemical & Materials Engineering)
2015 - 2019	Nour Baddar (U.K. Biology)
2011 - 2013	Gregory Corder (U.K. Physiology)
2009 - 2013	Shaun Carlson (U.K. Physiology)
2008 - 2013	S. Alex Marshall (U.K. Pharmaceutical Sciences)
2005 - 2011	Christopher Trimby (U.K. Physiology)
2004 - 2008	Yiqin Xiong (U.K. Anatomy & Neurobiology)
2003 - 2007	Kristine Ziemba (U.K. Physiology)
2002 - 2005	Michael Smith (U.K. Anatomy & Neurobiology)
2002 - 2005	Karah Nazor (U.K. Gerontology)

Outside Reviewer/External Examiner for Ph.D. Dissertation Committees

2024	Jan Elaine Cuevas Soriano (UNIL/EPFL, University of Lausanne, Switzerland)
2022 - 2023	Rémi Hudelle (UNIL/EPFL, University of Lausanne, Switzerland)
2022 - 2023	Marissa Cusimano (Neurobiology & Anatomy, Drexel University)
2019 - 2022	Cameron Trueblood (Neurobiology & Anatomy, Drexel University)
2014	Sang Hee Lee (U.K., Nutritional Sciences)
2013	Sarah Figley (Medicine, University of Toronto, CAN; site visit)
2009 - 2012	Patricia J. Ward (Anatomy & Neurobiology, University of Louisville, KY)
2009	Ernest Aguilar (Neuroscience; Flinders University, Australia)

2005 Fujian Zhang (U.K., Nutritional Sciences)

Training of Visiting Scientists

2022 Sajeev Kaur, Foreign Postdoctoral Scholar from India

2010 Dr. Yanling Yang, Visiting Scholar, Yan'an University Medical School, Yan'an, P.R. China

Awards/Honors of Trainees

2020 - 2022 Felicia Michael, PhD – *Principle Investigator*, Craig H. Neilsen Foundation Postdoctoral Fellowship #651019 (Rabchevsky, Sponsor) Chemogenetic silencing of interneurons to modulate autonomic dysreflexia

2021 Felicia Michael, PhD – *Poster Cash Award and the Dean's Lecture Series presentation*, The Annual College of Medicine Trainee Poster Competition, University of Kentucky

2016 Jenna VanRooyen-Gollihue – Michael Goldberger Award, Top (1) ranked poster presentation. The 34th Annual National Neurotrauma Society Symposium, Lexington, KY

2016 Jenna VanRooyen-Gollihue - *Thomas V. Getchell, PhD, Memorial Award*, for excellence in grant writing, Department of Physiology, University of Kentucky

2016 Jenna VanRooyen-Gollihue – Poster Award, *The 4th Annual Meeting of the Kentucky Chapter of the American Physiological Society*, BioPharmacy Building, University of Kentucky, Lexington, KY

2016 - 2018 Khalid Eldahan – *Pre-doctoral Scholar Training Program grant*, Neurobiology of CNS Injury and Repair, National Institutes of Health-NIDA (5T32 NS077889) (Rabchevsky, Sponsor)

2016 - 2018 Jenna VanRooyen-Gollihue – NIH/NINDS F31 Grant Award (*Principle Investigator*), *Mitochondria transplantation for functional recovery after spinal cord injury* (Rabchevsky, Sponsor)

2015 Jenna VanRooyen-Gollihue – Poster Cash Award, *Bluegrass Society Neuroscience Day*, Civic Center, Lexington, KY

2015 Jenna VanRooyen – Travel Award Recipient, *The 22nd Annual American Society for Neural Therapy and Repair Conference*, Clearwater, FL

2015 Jenna VanRooyen – Poster Selection for Oral Presentation, *The 22nd Annual American Society for Neural Therapy and Repair Conference*, Clearwater, FL

2014 - 2016 Jenna VanRooyen – Pre-doctoral Scholar Training Program grant, *Neurobiology of CNS Injury and Repair*, NIH-NIDA (5T32 NS077889) (Rabchevsky, Sponsor)

2013 - 2014 Catherine Wang, 3rd Year Med Student, Professional Student Mentored Research Fellowship

2013 Samir Patel, PhD – Oral Presentation, *The 19th Annual Kentucky Spinal Cord & Head Injury Research Trust Symposium*, Louisville, KY

2013 Samir Patel, PhD – Poster Selection for Oral Presentation, *The 31st Annual National Neurotrauma Society Symposium*, Nashville, TN

2012 Samir Patel, PhD – Poster Selection for Oral Presentation, *The 30th Annual National Neurotrauma Society Symposium*, Phoenix, AZ

2009 Samir Patel, PhD – *Awarded Neilsen Foundation Fellowship grant (Declined)*

2009 Samir Patel, PhD – Travel Award recipient, *The 2nd Joint Symposium of the International and National Neurotrauma Societies*, Santa Barbara, CA

2008 - 2010 Hanad Duale, PhD – Principal Investigator (*Paralyzed Veterans Administration Research*)

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Foundation Fellowship #2561 (Rabchevsky, Sponsor)

- 2008 - 2009 Joseph Whelan – Pre-doctoral Scholar Training grant, *Therapeutic Strategies for Neurodegeneration Training Grant*, NIH-NIDA (1T32 DA022738) (Rabchevsky, Sponsor)
- 2007 Samir Patel, PhD – Best Poster, Oral Presentation & Cash Award, *The 25th Annual National Neurotrauma Society Symposium*, Kansas City, MO
- 2007 Shaoping Hou, PhD – Outstanding Student Abstract, *The 25th Annual Neurotrauma Society Symposium*, Kansas City, MO

ADMINISTRATIVE DUTIES AND SERVICE at UNIVERSITY OF KENTUCKY

Departmental

- 2019 - 2021 Organizing Committee for the 2021 Kentucky Spinal Cord and Head Injury Research Trust Fund Symposium
- 2018 - 2023 Department of Physiology Research committee
- 2012 SCoBIRC Faculty Retreat Planning committee
- 2007 - 2008 Chair, Organizing Committee for the 2008 14th Annual Kentucky Spinal Cord and Head Injury Research Trust Fund Symposium
- 2004 - 2008 SCoBIRC Faculty Search Committee
- 2003 - 2013 Lexington Biannual Kentucky Spinal Cord and Head Injury Research Trust Symposium Organizing committee
- 2003 - 2005 SCoBIRC-sponsored Seminar Series Coordinator
- 2002 - 2005 SCoBIRC Journal Club Organizer

College of Medicine

- 2018 - 2022 Biomedical Education Committee
- 2016 - 2019 Curriculum Subcommittee (Basic Science)
- 2007 - 2016 Interviewer, MD-PhD Program
- 2005 - 2008 Early Mobility Task Force Committee, U.K. Chandler Hospital
- 2004 - present Graduate School Faculty member
- 2002 - 2018 Interviewer, IBS Graduate Student Program

University

- 2015 Neuroscience Faculty Search Committee, Department of Biology
- 2013 New Financial Budget Model Research Work Team, Office of VP for Research
- 2011 - 2014 Council of Endowed Professors and Chairs, Steering Committee
- 2011 - 2014 Senate Hearing Panel member (Privilege and Tenure), Office of the President
- 2009 Office of Research Integrity (ORI) Program Review Committee, Office of the VPR
- 2009 Society for Promotion of Undergraduate Research (SPUR)
- 2004 - 2005 IACUC Pain Policy committee member
- 2002 - 2005 Institutional Animal Care and Use committee (IACUC) member

Outreach

- 2023 - 2024 Unite 2 Fight Paralysis, President, Board of Directors, Minneapolis, MN
- 2021 Ninth Annual Kentucky Congress on Spinal Cord Injury, Vice President and co-organizer, Virtual Symposium to over 95 registrants, Lexington, KY
- 2020 Eighth Annual *Kentucky Congress on Spinal Cord Injury*, Vice President and co-organizer, Virtual Symposium to over 150 registrants-Covid-19, Lexington, KY
- 2019 Seventh Annual *Kentucky Congress on Spinal Cord Injury*, Vice President and co-organizer, Northeast Christian Church in Hamburg, Lexington, KY
- 2018 - 2022 Unite 2 Fight Paralysis, Board of Directors member, Minneapolis, MN
- 2018 - present Delegate to North American Spinal Cord Injury Consortium (NASCIIC)
- 2018 Sixth Annual *Kentucky Congress on Spinal Cord Injury*, Vice President and co-organizer, Northeast Christian Church in Hamburg, Lexington, KY
- 2021 - 2023 Independence Place KY, Inc., President, Board of Directors, Lexington, KY
- 2017 Inaugural North American Spinal Cord Injury Consortium (NASCIIC), Representative of *Kentucky Congress on Spinal Cord Injury*, Airport Hilton, Miami, FL
- 2017 Fifth Annual *Kentucky Congress on Spinal Cord Injury*, Vice President and co-organizer, Cardinal Hill Rehabilitation Hospital, Lexington, KY
- 2017 Disability Awareness Day, Life in a Wheelchair, Seton Catholic Elementary School
- 2017 Panel Discussion Member, *Communication and self-advocacy; Real world situations and solutions*. The 8th Annual Kentucky Appalachian Rural Rehabilitation Network Conference (Sept), Engagement, Communication & Access, Perkins Conference Center, Eastern Kentucky University, Richmond, KY
- 2017 Independence Place KY, Inc., Board of Directors, Lexington, KY
- 2016 Fourth Annual *Kentucky Congress on Spinal Cord Injury*, Vice President and co-organizer, Cardinal Hill Rehabilitation Hospital, Lexington, KY
- 2015 Third Annual *Kentucky Congress on Spinal Cord Injury*, Vice President and co-organizer, Marriot Griffin Gate Hotel, Lexington, KY
- 2015 Invited by Governor Steve Beshear to the Capitol in Frankfort, KY where he signed a proclamation recognizing the *Kentucky Congress on Spinal Cord Injury* on the 25th anniversary of the Americans with Disabilities Act (ADA)
- 2015 Moderator of Panel Discussion, *Impact of the ACA from the patient and caregiver point of view*. The 7th Annual Kentucky Appalachian Rural Rehabilitation Network Conference, Healthcare Accessibility for Individuals with Disabilities, Perkins Conference Center, Eastern Kentucky University, Richmond, KY
- 2015 Chair, *No Barriers University Scientific Symposia*, No Barriers USA Summit, Park City, UT
- 2014 Second Annual *Kentucky Congress on Spinal Cord Injury*, co-organizer and moderator, Clarion Hotel, Lexington, KY
- 2014 Moderator of Panel Discussion, *Issues relating to SCI and TBI and caregivers*. The 6th Annual

Kentucky Appalachian Rural Rehabilitation Network Conference, Issues Related to Spinal Cord Injury, Stroke and Brain Injury, The Perkins Conference Center, Eastern Kentucky University, Richmond, KY

- 2013 - present Kentucky Congress on Spinal Cord Injury (KCSCI), vice president, Lexington, KY
- 2013 Inaugural Kentucky *Congress on Spinal Cord Injury*, co-organizer, moderator and keynote speaker, Civic Center, Lexington, KY
- 2013 Moderator of Panel Discussion, *Health and wellness living with spinal cord injury*. The 5th Annual Kentucky Appalachian Rural Rehabilitation Network Conference, Issues Related to Spinal Cord Injury, Stroke and Brain Injury, The Perkins Conference Center, Eastern Kentucky University, Richmond, KY
- 2013 Chair, *No Barriers University Scientific Symposia*, No Barriers USA Summit, Telluride, CO
- 2012 Moderator of Panel Discussion, *Aging with spinal cord injury from the clients point of view*. The 4th Annual Kentucky Appalachian Rural Rehabilitation Network Health Summit, Issues Related to Spinal Cord Injury and Stroke Across the Life Span, Eastern Kentucky University, Richmond, KY
- 2011 - 2018 Elkhorn Park Neighborhood Association, VP, Board of Directors, Lexington, KY
- 2011 Chair, *No Barriers University Scientific Symposia*. No Barriers Summit, Winter Park, CO
- 2011 Moderator of Panel Discussion, *Spinal cord injury and issues unique to this condition*. The 3rd Annual Kentucky Appalachian Rural Rehabilitation Network Health Summit, Issues Related to Spinal Cord Injury and Stroke, The Center for Rural Development, Somerset, KY
- 2010 - 2019 No Barriers USA, Board of Directors member, Fort Collins, CO
- 2010 - 2019 Spinal Cord Injury Peer Alliance Program, KARRN & Cardinal Hill Rehab Hospital
- 2010 - 2015 Volunteer, Big Brothers Big Sisters of the Bluegrass, Lexington, KY
- 2009 - present Kentucky Appalachian Rural Rehabilitation Network (KARRN), advisory board
- 2009 - 2013 Fayette County Science Fair, Faculty volunteer, Bryan Station High School, Lexington, KY
- 2009 Brain Awareness Day, Faculty volunteer, Explorium of Lexington, KY
- 2007 - 2009 Spinal Cord Injury Unit Support Group member, Cardinal Hill Rehabilitation Hospital
- 2006 - 2007 Coordinator of SCoBIRC 'Day in a Wheelchair experience', in collaboration with Cardinal Hill Rehabilitation Hospital

PROFESSIONAL SERVICE

Professional Affiliations

American Society for Neurochemistry (2022-2023)

Sigma Xi, Scientific Research Society (1997-present)

American Society for Neural Transplantation; Neural Therapy and Repair (1994-2023)

Society for Neuroscience (1993-present)

National Neurotrauma Society (1993-present)

Consulting Activities

- 2024 - present Advisor for PVA research grant, MIT Biomechatronics Group; Dr. Hugh Herr, Director (PI)
- 2024 - present Board of Scientific Advisors, Dignify Therapeutics, Raleigh, NC; Dr. Karl Thor, President
- 2023 - present Data & Safety Monitoring Board, University Miami, FL; Drs. B. Noga & J. Guest (MPI)
- 2022 - 2024 Guideline development of Collaborative RECOSPA (REporting COrd Stimulation PArameters) for minimum reporting of standard parameters in future studies. ICORD, UBC; Dr. Andrei Krassioukov (PI)
- 2022 - 2023 The International Advisory Council (IAC): evaluating the progress of the Mend the Gap (MTG) project: A Transformative Biomaterials Platform for Spinal Cord Repair, Project Steering Committee. ICORD, UBC, CAN; Dr. Wolfram Tetzlaff (PI)
- 2021 - present Advisory Board, The Northeast Ohio Regional Spinal Cord Injury System (NORSCIS) 90SIMS0007 - Feasibility of gabapentin as an intervention to improve neurologic recovery; Dr. Kim Anderson (PI)
- 2021 - present Scientific Advisor/Consultant, Cellvie, Inc. Houston, TX; Dr. Alexander Schueller, President
- 2014 - present Data & Safety Monitoring Board, The Keck Institute, NJ, W81XWH-14-2-0190; Dr. Gail Forrest (PI)
- 2009 - present Advisory Board, Kentucky Appalachian Rural Rehabilitation Network (KARRN), University of Kentucky, Department of Physical Therapy; Dr. Patrick Kitzman, Founder

NIH Study Sections

- 2023 NIH/NINDS: 2024/01 ZNS1 SRB-Q (09) Translational (BPN) - Special Emphasis Panel
- 2023 NIH/NINDS: 2023/10 ZNS1 SRB-G (62) Clinical Trials, G62 - Special Emphasis Panel
- 2021 NIH/NINDS: 2021/10 ZRG1 BDCN-E (02) M, Special Emphasis Panel Reviewer; Neurological Dysfunction and Degenerative Disorders
- 2016 - 2017 NIH/NINDS: Clinical Neuroplasticity and Neurotransmitters-CNNT
- 2011 - 2013 NIH/NINDS: NST-1 Subcommittee member (K Awards in Neuroscience/Neurology)
- 2010 NIH: ARRA RC4 Sustainable Community-Linked Infrastructure Panel ZRG1 HDM-D (58)
- 2009 NIH: Rare Diseases Clinical Research Consortia (ZRG1 HOP-Y (50) R)

Grant Reviewer (non-Federal)

- 2022 - present The Swiss National Science Foundation (FNSNF)
- 2022 - present The Praxis Spinal Cord Institute, Vancouver, BC Canada
- 2021 - present International Spinal Research Trust (ISRT-Spinal Cord Foundation, UK) and Christopher & Dana Reeve Foundation (CDRF)
- 2013 - 2022 Craig H. Neilsen Foundation (SRB, *standing member*)
- 2010 - 2012 Craig H. Neilsen Foundation (SRB, *ad hoc*)
- 2010 - 2011 Ontario Research Fund - Research Excellence program
- 2010 - 2013 Congressional Directed Medical Research Program (Spinal Cord Injury Res Program)
- 2010 - 2011 Veterans' Health Administration, RRD0 (RR&D Merit Review Award)

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- 2007 - 2022 Canadian Institutes of Health Research (CIHR)
- 2006 - 2009 New York State Spinal Cord Injury Research Program
- 2006 - 2008 American Heart Association (AHA)
- 2005 - 2011 New Jersey Commission on Spinal Cord Research
- 2004 - 2010 Christopher and Dana Reeve Paralysis Foundation
- 2004 - 2011 International Spinal Research Trust (ISRT-Spinal Cord Foundation, UK)
- 2003 - 2004 Daniel Heumann Foundation
- 2003 State of South Carolina, Spinal Cord Injury Research Fund

Journal Reviewer >20/year, since 2000

American Journal of Physiology, Autonomic Neuroscience: Basic and Clinical, Biology, Biomedicines Biomolecules, BMC Veterinary Research, Brain Research, Burns and Trauma, Cell Biochemistry & Function, Cell Reports, Cells, Clinical Neurophysiology, Communications Medicine, European Journal of Neuroscience, Experimental Neurology, Experimental Physiology, Expert Opinion in Pharmacotherapy, Free Radical Biology and Medicine, Frontiers in Molecular Neuroscience, Frontiers in Neuroscience, Frontiers in Physiology, Glia, Journal of Applied Physiology, Journal of Clinical Medicine, Journal of Comparative Neurology, Journal of Histochemistry and Cytochemistry, Journal of Inborn Errors of Metabolism and Screening, Journal of Integrative Neuroscience, Journal of Neurochemistry, Journal of Neuroimmunology, Journal of Neuropathology & Experimental Neurology, Journal of Neuroscience, Journal of Neuroscience Methods, Journal of Neuroscience Research, Journal of Neurotrauma, Journal of Physiology, Journal of Spinal Cord Medicine, Journal of Translational Engineering in Health and Medicine, Journal of Visualized Experiments, Mayo Clinic Proceedings, Molecular Neurobiology, Molecular Therapy, Nature Communications, Nature Protocols, Neural Regeneration Research, Neurobiology of Disease, Neurochemical Research, Neuropharmacology, Neuroscience, Neuroscience Letters, The Neuroscientist, Neurotherapeutics, OBM Neurobiology, Pain Management, Physiological Reports, Public Library of Science (PLOS) ONE, Reviews in the Neurosciences, Scientific Reports, Spinal Cord, Stem Cells, Translational Medicine, The Scientific World, Trends in Neurosciences, World Journal of Orthopedics

OTHER SERVICE (NATIONAL/INTERNATIONAL): Chair/Moderator/Committee

- 2023 Moderator of panel discussion, *What is the optimism that regeneration strategies (clinical) can be designed and implemented to restore lost functions after spinal cord injury?* The 18th Annual (Working2Walk) Symposium on Science & Advocacy, Unite 2 Fight Paralysis organization, Minneapolis, MN
- 2022 - present International Symposium for Neural Regeneration, scientific advisory board member
- 2022 Moderator of panel discussion, the 17th Annual Science & Advocacy Symposium (Working2Walk), Unite 2 Fight Paralysis organization, Salt Lake City, UT
- 2021 Moderator of panel discussion, *Beyond the Hype: Brain Computer Interfaces, From Concept to Real World; Regeneration Strategies*, the 16th Annual Science & Advocacy *virtual* Symposium (Working2Walk), Unite 2 Fight Paralysis organization
- 2021 Invited panelist, *Advocacy Pathways for Spinal Cord Injury*. Neurotrauma Advocacy: Building a Pathway for the Future (Co-Chairs Drs. Grace Griesbach and Amy Wagner). The 38th Annual National Neurotrauma Society *virtual* symposium

- 2020 Moderator of panel discussion, *Pre-Clinical Research done in laboratory experiments and animal models*. The 15th Annual (Working2Walk) *virtual* symposium, Unite 2 Fight Paralysis organization
- 2019 - 2022 National Neurotrauma Society, Advocacy Committee member
- 2019 Co-Chair (with Dr. Dianne Langford), *Targeting mitochondrial medicine to improve functional outcome after CNS injury*. The 37th Annual National Neurotrauma Society Symposium, Pittsburgh, PA
- 2019 Co-Chair (with Drs. Grace Griesbach and Amy Wagner), *What Does Function Mean to Me? Function After SCI & TBI & Advocacy-Roundtable Lunches*. The 37th Annual National Neurotrauma Society Symposium, Pittsburgh, PA
- 2016 Co-Chair (with Dr. Lumy Sawaki), *Engineering approaches for functional restoration after spinal cord injury*. The 34th Annual National Neurotrauma Society Symposium, Lexington, KY
- 2016 Chair, *Management of acute autonomic dysfunction after spinal cord injury*. The 34th Annual National Neurotrauma Society Symposium, Lexington, KY
- 2016 - 2019 National Neurotrauma Society Council member
- 2015 - 2016 National Neurotrauma Society, *Planning Committee member for the 34th Annual Meeting*
- 2013 Debate Team Captain-Pro, *The barrier to axonal regeneration is intrinsic to the neuron*. The 15th International Symposium on Neural Regeneration, Asilomar Conference, Pacific Grove, CA
- 2011 - 2012 National Neurotrauma Society, Strategic Planning Committee member
- 2007 Co-Chair (with Dr. Pat Kochanek), *Tissue engineering, neurobionics and transplantation*. The 25th Annual National Neurotrauma Society Symposium, Kansas City, MO
- 2005 Chair, *Spinal cord injury, autonomic nervous system and dysfunction*. The 4th Congress of the International Society for Autonomic Neuroscience, Marseille, France
- 2005 Co-Chair (with Dr. Edward Hall), *Spinal cord injury and neural prostheses*. The 1st Translational Neuroscience Conference, Lexington, KY
- 2004 - 2011 National/International Neurotrauma Society Symposia; *Scientific Program Committee, Faculty Poster Judge, Student Abstract Competition*
- 2003 Chair, *Visceral function and pain in spinal cord injury*. The 10th International Symposium on Neural Regeneration, Asilomar Conference, Pacific Grove, CA
- 2001 Co-Chair (with Dr. Mary Bunge), *Neuroprotective and regenerative therapies for spinal cord injury*. The 19th Annual National Neurotrauma Society Symposium, San Diego, CA

INVITED PRESENTATIONS/SEMINARS

Local

- 2017 Changing serotonin receptor 2C splice variants to combat spasticity after spinal cord injury. University of Kentucky, Department of Molecular & Cellular Biochemistry, Lexington, KY
- 2013 Keynote Address. Inaugural Kentucky Congress on Spinal Cord Injury, Civic Center, Lexington, KY
- 2012 Novel targets for spinal cord injury therapeutics: Bioenergetic and autonomic dysfunctions. University of Kentucky, Department of Physiology, Lexington, KY
- 2012 Experimental design: Applying scientific method, power and avoiding bias. University of Kentucky, Spinal Cord and Brain Injury Research Center, Lexington, KY

- 2012 Autonomic dysreflexia, electrical implants, no barriers: Perspectives from a paraplegic neuroscientist. Appalachian Health Summit, Quality of Life Following Neurotrauma, Civic Center, Lexington, KY
- 2011 Modulating the pathophysiology of autonomic dysreflexia after spinal cord injury. University of Kentucky, Department of Physiology, Lexington, KY
- 2001 Growth factor and gene therapy for functional recovery after spinal cord injury. University of Kentucky, Department of Physiology, Lexington, KY
- 2000 Effects of basic fibroblast growth factor (bFGF) and combination therapy on spinal cord injury. Annual KSCHIRT Symposium University of Kentucky, Lexington, KY
- 2000 Effects of basic fibroblast growth factor (bFGF) therapy on spinal cord injury. University of Kentucky, Spinal Cord & Brain Injury Research Center, Lexington, KY
- 1998 Basic fibroblast growth factor (bFGF) reduces tissue damage and enhances recovery following spinal cord injury to the rat. Annual KSCHIRT Symposium, University of Kentucky, Lexington, KY

State

- 2015 Mitochondrial targeted therapeutics for treatment of spinal cord injury. Kentucky Spinal Cord Injury Research Center, University of Louisville, Louisville, KY
- 2007 Experimental potentials and clinical pitfalls of SCI therapeutics: Perspectives from a neuroscientist with SCI. Annual KSCHIRT Symposium, University of Louisville, Louisville, KY
- 2003 Combination therapies for recovery after spinal cord injury: steroids and growth factors. Annual KSCHIRT Symposium, Frontiers in Spinal Cord Regeneration, Louisville, KY
- 2001 Growth factor and steroid therapy for recovery after spinal cord injury. Annual KSCHIRT Symposium, Frontiers in Spinal Cord Regeneration, Louisville, KY
- 2000 Growth factor therapies and transplantation strategies for spinal cord injury. University of Louisville, Department of Neurological Surgery, Louisville, KY
- 1999 Basic fibroblast growth factor (bFGF) enhances functional recovery and tissue sparing after spinal cord injury. Annual KSCHIRT Symposium, Louisville, KY

National/International

- 2023 What is the optimism that regeneration strategies (clinical) can be designed and implemented to restore lost functions after spinal cord injury? The 18th Annual Unite 2 Fight Paralysis Symposium on Science & Advocacy. Minneapolis, MN
- 2023 Compendium of an American graduate student supported by Rick Hansen 'Man in Motion' Legacy Fund. Plenary Lecture, 20th annual International Collaboration on Repair Discoveries (ICORD) Research Meeting, University of British Columbia, Vancouver, Canada
- 2021 Mitochondrial transplantation strategies for the injured spinal cord. United Mitochondrial Disease Foundation: Bench-to-Bedside webinar series, Center for Metabolic and Mitochondrial Medicine, University of Pittsburgh
- 2021 Mitochondrial transplantation strategies for the injured spinal cord. Advances of mitochondria as a therapeutic agent. Virtual conference via Universidad San Francisco de Quito School of Medicine, Ecuador
- 2020 Mitochondrial transplantation for spinal cord injury. The International Online SCI Research Seminar series (IOSCIRS), virtual webinar.
- 2018 Mitochondrial-targeted pharmacotherapeutics and biopharmaceuticals for spinal cord injury. The 3rd

- National-International Neurotrauma Society Symposium, Perspectives on SCI and TBI Research Going from INTS 2018 to the Future, Toronto, Ontario, Canada
- 2018 Transplantation of mitochondria into the injured spinal cord. The Cleveland Clinic, Department of Neurosciences, Lerner Research Institute, Cleveland, OH
- 2017 Swapping the powerhouse of the cell following SCI: Intraspinal mitochondrial transplantation. The 34th Annual Meeting of the National Neurotrauma Society. Snowbird, UT
- 2017 Mitochondrial bioenergetics and functional recovery after spinal cord injury. Inaugural Spinal Cord Injury Summit, Ohio State University Neurological Institute, Columbus, OH
- 2015 Pharmacological manipulation of maladaptive plasticity to mitigate autonomic dysreflexia after spinal cord injury. Emory University School of Medicine, Department of Physiology, Atlanta, GA
- 2015 Targeting bioenergetic and autonomic dysfunctions after spinal cord injury. Penn State University College of Medicine, Department of Physical Medicine and Rehabilitation Hershey, PA
- 2014 Perspectives of a neuroscientist with a surgically implanted neuroprosthesis for exercise, standing, and transfers following spinal cord injury. The Mayo Clinic, Department of Physiology and Biomedical Engineering, Rochester, MN
- 2014 Novel targets for spinal cord injury therapeutics: Bioenergetic and autonomic dysfunctions. The Mayo Clinic, Department of Neuroscience, Rochester, MN
- 2014 Pharmacological management of autonomic dysreflexia: Effects on intraspinal plasticity and inflammation after complete spinal cord injury. The 16th International Spinal Research Trust Network Meeting, London, UK
- 2014 Perspectives of a neuroscientist with a surgically implanted neuroprosthesis for exercise, standing, and transfers following spinal cord injury. The 41st Neural Interfaces Conference, Dallas, TX
- 2014 N-acetylcysteine amide (NACA) promotes mitochondrial bioenergetics and functional recovery following spinal trauma. The 14th Conference of the International Society of Antioxidants in Nutrition & Health, Paris, France
- 2014 Management of autonomic dysreflexia with gabapentin. The 40th Annual Meeting of the American Spinal Injury Association (ASIA), San Antonio, TX
- 2013 Keynote Address. University of Toronto Spine Program, Department of Surgery, Toronto, Canada
- 2013 Novel targets for spinal cord injury therapeutics: Bioenergetic and autonomic dysfunctions. Drexel University, Department of Neurobiology and Anatomy, Philadelphia, PA
- 2012 Modulation of intraspinal plasticity associated with autonomic dysreflexia after complete spinal cord injury. The 2012 J. Allyn Taylor International Prize in Medicine, Symposium on spinal cord injury research, London, Ontario, Canada
- 2012 Modulating intraspinal plasticity associated with pathophysiology of autonomic dysreflexia after spinal cord injury. The 30th Annual Meeting of the National Neurotrauma Society. Phoenix, AZ
- 2012 Autonomic dysreflexia, electrical implants, no barriers: Perspectives from a paraplegic neuroscientist. University of North Carolina at Pembroke, Department of Biology, Pembroke, NC
- 2012 Autonomic dysreflexia after spinal cord injury is associated with anomalous intraspinal plasticity. University of Western Sydney Campbelltown Campus, Sydney, Australia
- 2012 Spinal cord injury and functional electrical stimulation (FES); Perspectives from the view of a neuroscientist and user. Neuroscience Research Australia (NeuRA), Sydney, Australia

- 2012 Spinal cord injury and functional electrical stimulation (FES); Perspectives from the view of a neuroscientist and user. Royal Talbot Rehabilitation Centre, Melbourne, Australia
- 2012 Intraspinal plasticity associated with pathophysiology of autonomic dysreflexia after spinal cord injury. University of Melbourne Brain Centre, Melbourne, Australia
- 2012 Modulating the pathophysiology of autonomic dysreflexia after spinal cord injury. The 32nd Annual Meeting of the Australian Neuroscience Society, Autonomic and sensory changes in spinal cord injury: Impact and prospects for treatment, Gold Coast, Australia
- 2011 Modulating the pathophysiology of autonomic dysreflexia after spinal cord injury. Indiana University Purdue University (IUPUI) School Medicine, Stark Neuroscience Research Institute, Indianapolis, IN
- 2011 Modulating the pathophysiology of autonomic dysreflexia after spinal cord injury. Current advances in spinal cord injury research, UMDNJ, New Jersey Medical School, Newark, NJ
- 2010 The patient perspective: What should I hope for, what should I know? The 36th Annual Meeting of the American Spinal Injury Association (ASIA), For the Clinician: Participating in Translational Research, Nashville, TN
- 2009 Intraspinal plasticity is associated with autonomic dysreflexia after spinal cord injury. Uniformed Services University of the Health Sciences, Neuroscience Program, Bethesda, MD
- 2009 Intraspinal plasticity of sensory fibers and propriospinal neurons is associated with autonomic dysreflexia after spinal cord injury. University of Florida, McKnight Brain Institute, Gainesville, FL
- 2009 Plasticity of both visceral afferents and propriospinal neurons is associated with manifestation of autonomic dysreflexia after complete spinal cord injury. Cellular & Network Functions in the Spinal Cord Symposium, University of Wisconsin-Madison
- 2009 Plasticity of visceral sensory fibers and lumbosacral propriospinal neurons is associated with autonomic dysreflexia after spinal cord injury. University Miami, Project to Cure Paralysis. Miami, FL
- 2009 Stance on functional neuroprosthetics: from bench side to bedside and back and Plasticity of visceral sensory fibers and lumbosacral propriospinal neurons is associated with autonomic dysfunction after spinal cord injury. University of Alberta, Department of Cell Biology, Edmonton, Alberta Canada
- 2008 Plasticity of both visceral sensory fibers and propriospinal neurons is associated with the development of autonomic dysfunction after spinal cord injury. Touro University, School of Osteopathic Medicine, Henderson, NV
- 2008 Plasticity of lumbosacral propriospinal neurons is associated with the development of autonomic dysreflexia after thoracic spinal cord transection. Second annual Reeve-Irvine Medal Symposium (honoring William C. de Groat), University of California, Irvine, CA
- 2007 Perspectives on neuroprosthetics from the view of a neuroscientist and user. No Barriers USA Festival, Squaw Valley, CA
- 2006 Perspectives on neuroprosthetics from the view of a neuroscientist and user. The National Academies Keck's Future Initiative, Smart prosthetics: Exploring assistive devices for the body and mind. Beckman Center. Irvine, CA
- 2006 Plasticity of both sensory axons and propriospinal neurons influences the severity of autonomic dysreflexia after complete spinal cord injury. Drexel University, College of Medicine, Department of Neurobiology and Anatomy. Philadelphia, PA
- 2005 Influence of propriospinal pathway plasticity following spinal cord injury in the development of autonomic dysreflexia. *The 4th Congress of the International Society for Autonomic Neuroscience*, Marseille,

France

- 2004 Clinical and experimental approaches to improve function after spinal cord injury. Case Western Reserve University, Department of Biomedical Engineering & Cleveland FES Center, Cleveland, OH
- 2003 Bowel and sexual dysfunction after spinal cord injury. *Symposium on Autonomic Dysfunction after Spinal Cord Injury: Mechanisms, Prevention and Treatment*, Banff, Alberta, Canada
- 2002 Keynote Address. The 1st National-International Neurotrauma Society Symposium, Tampa, FL
- 2002 Mechanisms of autonomic dysreflexia following spinal cord injury and A surgically implanted neuroprosthesis for exercise, standing, and transfers. The 5th International Spinal Research Trust Network Meeting, City University, London, U.K.
- 2000 Effects of basic fibroblast growth factor (bFGF) therapy on spinal cord injury. University of British Columbia, Department of Zoology and International Collaboration on Repair Discoveries (iCORD), Vancouver, B.C., Canada
- 2000 Therapeutic interventions following spinal cord injury: Defining the targets of experimental treatments. Johns Hopkins University, Biomedical Engineering & Neurology, Baltimore, MD
- 1995 Intraspinal transplantation of microglial cells into the injured rat spinal cord. University of Paris, XII, School of Medicine, Créteil, France

PROFESSIONAL SYMPOSIA AND WORKSHOPS ATTENDED

- 2023 The 18th annual Science & Advocacy Symposium (Working2Walk), Unite 2 Fight Paralysis organization, Minneapolis, MN
- 2023 Inaugural progress meeting of the Mend the Gap (MTG) project, “A Transformative Biomaterials Platform for Spinal Cord Repair”, ICORD, UBC, Vancouver, Canada
- 2023 The 20th International Symposium on Neural Regeneration, Stevenson, WA; SAB member
- 2022 The 17th annual Science & Advocacy Symposium (Working2Walk), Unite 2 Fight Paralysis organization, Salt Lake City, UT
- 2022 The 51st annual Society for Neuroscience Meeting, San Diego, CA
- 2022 The 38th annual Neurotrauma Society Symposium, Atlanta, GA
- 2021 The 26th annual Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY
- 2021 The 16th annual Science & Advocacy Symposium (Working2Walk), Unite 2 Fight Paralysis organization, *virtual*
- 2021 The 38th Annual National Neurotrauma Society *virtual* symposium. Invited panelist, *Advocacy Pathways for Spinal Cord Injury*. Neurotrauma Advocacy: Building a Pathway for the Future (Co-Chairs Drs. Grace Griesbach and Amy Wagner).
- 2020 The 15th annual Science & Advocacy Symposium (Working2Walk), Unite 2 Fight Paralysis organization, *virtual*
- 2019 The 14th annual Science & Advocacy Symposium (Working2Walk), Unite 2 Fight Paralysis organization, Cleveland, OH
- 2019 SCI 2020: *Launching a Decade for Disruption in Spinal Cord Injury Research*: Session 1: Fire and Smoke - Opportunities in the acute post-injury phase [NINDS, OD-ODP]; Session 3: With Us, Not for Us: Community activity and priorities [NINDS/NCMRR/NINR], Bethesda, MD

- 2019 The 37th annual Neurotrauma Society Symposium, Pittsburgh, PA
- 2019 The 25th annual Kentucky Spinal Cord and Head Injury Research Symposium, Louisville, KY
- 2019 The 22nd annual American Society for Neural Therapy and Repair Conference, Clearwater, FL
- 2018 - 2020 NASCIC Advisory Team to the Bladder/Bowel Working group; Craig H. Neilsen Foundation
- 2018 The 13th annual Science & Advocacy Symposium (Working2Walk), Unite 2 Fight Paralysis organization
- 2018 The 3rd Joint National/International Neurotrauma Society Symposium, Toronto, Canada
- 2018 The 24th annual Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY
- 2018 The 47th annual Society for Neuroscience Meeting, San Diego, CA
- 2017 The 23rd annual Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY
- 2017 The 35th annual National Neurotrauma Society Symposium, Snowbird, UT
- 2017 The 17th International Symposium on Neural Regeneration, *Exercise as a therapy for spinal cord injury: How to move physical training from animal models to clinical implementation*. Asilomar Conference, Pacific Grove, CA
- 2017 Inaugural meeting of the North American Spinal Cord Injury Consortium, Miami, FL
- 2017 The 12th annual Science & Advocacy Symposium (Working2Walk), Unite 2 Fight Paralysis organization, Miami, FL
- 2017 The annual International Spinal Research Trust Symposium, London, UK
- 2017 The 46th annual Society for Neuroscience Meeting, Washington, DC
- 2016 The 22nd annual Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY
- 2016 The NIH/NINDS, *Spinal Cord Injury Preclinical Data Workshop: Developing a FAIR Share Community* North Bethesda, MD
- 2016 The 34th National Neurotrauma Society Symposium, Lexington, KY
- 2016 The 42nd Annual Meeting of the American Spinal Injury Association (ASIA), Philadelphia, PA
Panel Discussion member, *How to move from animal models of spinal cord injury to clinical implementation*. Pre-course #2-Progress in Translational Research.
- 2015 The 21st annual Kentucky Spinal Cord and Head Injury Research Symposium, Louisville, KY
- 2015 The 33rd annual National Neurotrauma Society Symposium, Santa Fe, NM
- 2014 The 20th annual Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY
- 2014 The 44th annual Society for Neuroscience Meeting, Washington, DC
- 2013 The 19th annual Kentucky Spinal Cord and Head Injury Research Symposium, Louisville, KY
- 2013 The 31st annual National Neurotrauma Society Symposium, Nashville, TN
- 2012 The 42nd annual Society for Neuroscience Meeting, New Orleans, LA
- 2012 The NIH/NINDS, *Optimizing the Predictive Value of Preclinical Research Workshop*, Washington, DC
- 2012 The 30th annual National Neurotrauma Society Symposium, Phoenix, AZ
- 2012 The 18th annual Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY
- 2010 The 17th annual Kentucky Spinal Cord and Head Injury Research Symposium, Louisville, KY
- 2011 The 41st annual Society for Neuroscience Meeting, Washington, DC
- 2010 The 16th annual Kentucky Spinal Cord and Head Injury Research Symposium, University of Kentucky, Lexington, KY
- 2010 The 28th annual National Neurotrauma Society Symposium, Las Vegas, NV

- 2010 The 40th annual Society for Neuroscience Meeting, San Diego, CA
- 2009 The 2nd Joint National/International Neurotrauma Society Symposium, Santa Barbara, CA
- 2009 Spinal Cord Injury Research Program (SCIRP), DoD & Congressionally Directed Medical Research Programs (CDMRP), Invited Stakeholder, Herndon, VA
- 2008 The 15th annual Kentucky Spinal Cord and Head Injury Research Symposium, Louisville, KY
- 2008 Spinal Cord Outcomes Partnership Endeavor (SCOPE) Workshop. *Functional Recovery after Spinal Cord Injury: Implications of Different Spinal Injury Patterns and Distinct Therapeutic Targets on Clinical Trial Outcomes*. Arlington, VA
- 2008 The 14th annual Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY
- 2008 The NIH/NINDS, *Combination Therapies, Mechanisms and Targets for Neuroprotection for TBI Workshop*, Rockville, MD
- 2010 The 25th annual National Neurotrauma Society Symposium, Kansas City, MO
- 2007 The 13th annual Kentucky Spinal Cord and Head Injury Research Symposium, Louisville, KY
- 2006 The 12th annual Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY
- 2006 The 24th annual National Neurotrauma Society Symposium, St. Louis, MO
- 2005 The 4th Congress of the International Society for Autonomic Neuroscience, Marseille, France
- 2005 The 23rd annual National Neurotrauma Society Symposium, Washington, DC
- 2005 The 11th annual Kentucky Spinal Cord and Head Injury Research Symposium, Louisville, KY
- 2004 The 10th annual Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY
- 2004 The 34th annual Society of Neuroscience Meeting, San Diego, CA
- 2004 The 22nd annual National Neurotrauma Society Symposium, San Diego, CA
- 2004 The annual International Spinal Research Trust Symposium, London, UK
- 2003 The 1st Symposium on Autonomic Dysfunction after Spinal Cord Injury: *Mechanisms, Prevention and Treatment*. Banff, Alberta, Canada
- 2003 The 9th annual Kentucky Spinal Cord and Head Injury Research Symposium, Louisville, KY
- 2003 The 21st annual National Neurotrauma Society Symposium, Biloxi, MS
- 2002 The 8th annual Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY
- 2002 The 1st Joint National/International Neurotrauma Society Symposium, Tampa, FL
- 2001 The annual International Spinal Research Trust Symposium, London, UK
- 2001 The 31st annual Society of Neuroscience Meeting, San Diego, CA
- 2001 The 7th annual Kentucky Spinal Cord and Head Injury Research Symposium, Louisville, KY
- 2001 The 20st annual National Neurotrauma Society Symposium, San Diego, CA
- 2000 The 6th annual Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY
- 2000 The 30th annual Society of Neuroscience Meeting, New Orleans, LA
- 2000 The 19th annual National Neurotrauma Society Symposium, New Orleans, LA
- 1999 The 5th annual Kentucky Spinal Cord and Head Injury Research Symposium, Louisville, KY
- 1999 The 18th annual National Neurotrauma Society Symposium, Miami, FL
- 1998 The 17th annual National Neurotrauma Society Symposium, Los Angeles, CA
- 1998 The 4th annual Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY
- 1997 The Annual European Society for Neuroscience Meeting, Bordeaux, France
- 1997 The 27th annual Society of Neuroscience Meeting, New Orleans, LA
- 1997 The 16th annual National Neurotrauma Society Symposium, New Orleans, LA
- 1996 The 15th annual National Neurotrauma Society Symposium, Washington, DC

- 1994 The 13th annual National Neurotrauma Society Symposium, Miami, FL
1994 The 24th annual Society of Neuroscience Meeting, Miami, FL
1994 The 1st annual American Society for Neural Therapy and Repair Conference, Clearwater, FL
1993 The 23rd annual Society of Neuroscience Meeting, Washington, DC

PUBLISHED ABSTRACTS: NATIONAL/INTERNATIONAL MEETINGS

1. Helke C.J., **Rabchevsky A.G.** and Ichikawa H. (1991) Putative neurotransmitter agents in sensory neurons of the carotid sinus nerve (CSN) of the rat. *Society for Neuroscience Annual Meeting*, 17: 287.
2. **Rabchevsky A.G.**, Streit W.J. and Reier P.J. (1993) Transplantation of fluorescently labeled microglia into the adult rat spinal cord. *Society for Neuroscience Annual Meeting*, 19: 57.
3. **Rabchevsky A.G.**, Streit W.J. and Reier P.J. (1994) Intraspinal transplantation of enriched microglia seeded within biodegradable polymeric tubes: Evidence for neuritic ingrowth. *Society for Neuroscience Annual Meeting*, 20: 879.
4. **Rabchevsky A.G.**, W.J. Streit and P.J. Reier. (1994) Transplantation of brain macrophages (BrM) embedded in gelfoam into the injured rat spinal cord: evidence for neuritic ingrowth and the presence of extracellular matrix. *J. Neurotrauma* 11(2), p. 93. ***Top Poster Award Winner***
5. Pennell N.A., **Rabchevsky A.G.** and Streit W.J. (1995) Depletion of major histocompatibility complex (MHC)-bearing cells from embryonic rat spinal cord. *Society for Neuroscience Annual Meeting*, 21: 823.
6. **Rabchevsky A.G.**, Streit W.J. and Reier P.J. (1995) Transplantation of brain macrophages (BrM) embedded in Gelfoam into the injured rat spinal cord: Evidence for neuritic ingrowth and the presence of extracellular matrix. *J. Neurotrauma* 12(10), p. 136.
7. **Rabchevsky A.G.** and Dreyfus P.A. (1996) Characterization of murine microglia and astrocytes in relation to IgG leakage into neural parenchyma after systemic adjuvant injection. *J. Neurotrauma* 13(10), p. 630.
8. **Rabchevsky A.G.**, Weinitz J.M., Couplier M., Fages C., Tinel M., Junier M.P. (1997) La stimulation de la synthèse du Transforming Growth Factor alpha conduit, in vivo, à une réactivité astrocytaire dans le SNC. *European Society of Neuroscience symposium*, Bordeaux, France INSERM U421, Créteil
9. **Rabchevsky A.G.**, Weinitz J.M., Couplier M., Fages C., Tinel M. and Junier M.P. (1997) *In vivo* induction of transforming growth factor alpha synthesis leads to the development of reactive astrocytes throughout the CNS. *Society for Neuroscience Annual Meeting*, 28: 12.
10. **Rabchevsky A.G.**, Turner A.F., Blades D.A., and Scheff S.W. (1998) Basic fibroblast growth factor (bFGF) reduces tissue damage and enhances functional recovery following spinal cord injury in the rat. *The annual Kentucky Spinal Cord and Head Injury Research Symposium*, University of Kentucky, Lexington, KY
11. **Rabchevsky A.G.**, Turner A.F. and Scheff S.W. (1998) Intrathecal infusion of basic fibroblast growth factor (bFGF) following contusion injury to the adult rat spinal cord reduces tissue damage and enhances functional recovery. *Society for Neuroscience Annual Meeting*, 24: 545.
12. **Rabchevsky A.G.**, Turner A.F. and Scheff S.W. (1998) Effects of intrathecal infusion of basic fibroblast growth factor (bFGF) on functional recovery and tissue sparing following spinal cord injury in the adult rat. *J. Neurotrauma* 15(10), p. 892.

13. **Rabchevsky A.G.**, Fugaccia I., Turner A.F., Blades D.A. and Scheff S.W. (1999) Basic fibroblast growth factor (bFGF) significantly enhances hindlimb recovery following moderate and severe spinal cord injury in the rat. *The 8th International Symposium on Neural Regeneration*, Asilomar Conference, Pacific Grove, CA.
14. **Rabchevsky A.G.**, Fugaccia I., Sullivan P.G. and Scheff S.W. (1999) Cyclosporin A (CsA) does not reduce tissue damage after spinal cord injury in the rat. *Society for Neuroscience Annual Meeting*.
15. **Rabchevsky A.G.**, Fugaccia I., Sullivan P.G. and Scheff S.W. (1999) Cyclosporin A (CsA) does not reduce tissue damage after spinal cord injury in the rat. *J. Neurotrauma* 16(10), p. 981.
16. **Rabchevsky A.G.**, Fugaccia I., Turner A.F., Blades D.A. and Scheff S.W. (1999) Basic fibroblast growth factor (bFGF) significantly enhances hindlimb recovery following moderate and severe spinal cord injury in the rat. *The 8th International Symposium on Neural Regeneration*, Asilomar Conference, Pacific Grove, CA.
17. **Rabchevsky A.G.**, Fugaccia, I., Turner A.F., Blades D.A., Mattson. M.P. and Scheff S.W. (2000) Basic fibroblast growth factor (bFGF) therapy following spinal cord injury in the rat. *The annual Kentucky Spinal Cord and Head Injury Research Symposium*, University of Kentucky, Lexington, KY
18. **Rabchevsky A.G.**, Fugaccia I. and Scheff S.W. (2000) Stereological assessment of lesion development after spinal cord injury in rats: effect of methylprednisolone. *Society for Neuroscience Annual Meeting*.
19. Sullivan P.G., **Rabchevsky A.G.**, Keller J.N., Lovell M.A. and Scheff. S.W. (2000) Intrinsic differences between brain and spinal cord mitochondria. *Society for Neuroscience Annual Meeting*.
20. Scheff S.W., **Rabchevsky A.G.**, Fugaccia I., Zhang P., Lump J.E. and Main J.A. (2000) A contusion model of spinal cord injury for use in both rats and mice. *J. Neurotrauma* 17(10), p. 945.
21. Sullivan P.G., Keller J.N., **Rabchevsky A.G.**, Lovell M.A. and Scheff. S.W. (2000) Intrinsic differences in isolated brain and spinal cord mitochondria. *J. Neurotrauma* 17(10), p. 950.
22. Price D., Sullivan P.G., **Rabchevsky A.G.** and Scheff. S.W. (2000) Dose response curve and optimal dosing of cyclosporin A after traumatic brain injury. *J. Neurotrauma* 17(10), p. 961.
23. **Rabchevsky A.G.**, Fugaccia I. and Scheff S.W. (2000) Stereological assessment of lesion volume after spinal cord injury in rats: effect of methylprednisolone. *J. Neurotrauma* 17(10), p. 961.
24. Zhang P., **Rabchevsky A.G.**, Fugaccia I. and Scheff S.W. (2000) Intrathecal GDNF infusion fails to protect the injured rat spinal cord. *J. Neurotrauma* 17(10), p. 965.
25. Fugaccia I., **Rabchevsky A.G.**, Sullivan P.G. and Scheff S.W. (2000) Stereological assessment of spared tissue following spinal cord injury in the rat. *J. Neurotrauma* 17(10), p. 979.
26. **Rabchevsky A.G.**, Fugaccia I., Sullivan P.G. and Scheff S.W. (2001) Creatine diet supplement does not improve recovery or tissue sparing after spinal cord injury. *Society for Neuroscience Annual Meeting*.
27. Zhang P., **Rabchevsky A.G.**, Fugaccia I and Scheff S.W. (2001) Loss and reacquisition of oligodendrocytes following spinal cord injury in the rat. *Society for Neuroscience Annual Meeting*.
28. Fugaccia I., **Rabchevsky A.G.**, Zhang P., Main J.A. and Scheff S.W. (2001) Characterization of a force-based computer controlled spinal cord injury device. *J. Neurotrauma* 18(10), p. 1125.
29. Hynds D.L., Dassel M., **Rabchevsky A.G.** and Snow D.M. (2001) Rho GTPase expression and activation in response to chondroitin sulfate proteoglycans. *J. Neurotrauma* 18(10), p. 1144.
30. **Rabchevsky A.G.**, Fugaccia I., Sullivan P.G. and Scheff S.W. (2001) Creatine diet supplement does not improve recovery or tissue sparing after spinal cord injury. *J. Neurotrauma* 18(10), p. 1167.

31. Zhang P., **Rabchevsky A.G.**, Fugaccia I. and Scheff S.W. (2001) Dynamic changes in oligodendrocytes following spinal cord injury in the rat. *J. Neurotrauma*, 18(10), p. 1145.
32. Cai J., **Rabchevsky A.G.**, Nelson K.D. and Smith G.M. (2002) Improved peripheral nerve regeneration across long lesion gaps using aligned microfilaments within porous biodegradable guidance channels. *Society for Neuroscience Annual Meeting*.
33. **Rabchevsky A.G.**, Fugaccia I., Khalili M.A., Herman R.K. and Scheff S.W. (2002) Increasing dosages of fibroblast growth factor-2 (FGF-2) delivered near the site of spinal cord injury impair functional recovery and tissue sparing in rats. *J. Neurotrauma* 19(10), p. 1297.
34. Cameron A.A., Smith G.M., Randall D.C., Brown D.R. and **Rabchevsky A.G.** (2003) Effects of over-expressing nerve growth factor at different levels below thoracic spinal cord injury on autonomic dysreflexia. *Autonomic Dysfunction after Spinal Cord Injury Symposium*, Banff, Alberta, Canada.
35. Cameron A.A., Smith G.M., Randall D.C., Brown D.R. and **Rabchevsky A.G.** (2003) Effects of NGF over-expression on autonomic dysreflexia after spinal cord injury. *Society for Neuroscience Annual Meeting*.
36. Cameron A.A., Smith G.M., Randall D.C., Brown D.R. and **Rabchevsky A.G.** (2003) Effects of NGF over-expression on autonomic dysreflexia after spinal cord injury. *J. Neurotrauma* 20(10), p. 1086.
37. Dragicevic N.B., **Rabchevsky A.G.** and Sullivan P.G. (2003) Characterization of mitochondria from different regions of the rat spinal cord. *J. Neurotrauma* 20(10), p. 1055.
38. Cameron A.A., Smith G.M., Randall D.C., Brown D.R. and **Rabchevsky A.G.** (2003) Differential effects of over-expressing nerve growth factor at various levels below thoracic spinal cord injury on autonomic dysreflexia. *Journal of Rehabilitation Research & Development* 40(6), p. 61.
39. Cameron A.A., Smith G.M., Randall D.C., Brown D.R. and **Rabchevsky A.G.** (2004) Genetic manipulation of afferent fiber sprouting following spinal cord injury modulates the severity of autonomic dysreflexia. *Society for Neuroscience Annual Meeting*, San Diego, CA
40. Cameron A.A., Smith G.M., Randall D.C., Brown D.R. and **Rabchevsky A.G.** (2004) Genetic manipulation of afferent fiber sprouting following spinal cord injury modulates the severity of autonomic dysreflexia. *J. Neurotrauma* 21(9), p. 1271.
41. **Rabchevsky A.G.** and Smith G.M. (2004) Gene therapy following spinal cord injury alters sensory fiber sprouting and intraspinal plasticity to modulate the severity of autonomic dysreflexia. *The annual International Spinal Research Trust Symposium*.
42. **Rabchevsky, A.G.** (2005) Influence of propriospinal pathway plasticity following spinal cord injury in the development of autonomic dysreflexia. *The 4th Congress of the International Society for Autonomic Neuroscience*, Marseille, France
43. Krishnamurthy S., Pandya, J.D., Sullivan P.G. and **Rabchevsky A.G.** (2005) Temporal study of mitochondrial bioenergetics following mid-thoracic spinal cord contusion injury in rats. *J. Neurotrauma* 22(10), p. 1239.
44. Krishnamurthy S., Cameron A.A., Lyttle T.S., Schwindel L.E., Carrico K.M. and **Rabchevsky A.G.** (2005) Injury-induced neural plasticity influences the onset of autonomic dysreflexia in rats after complete high thoracic spinal cord transection. *J. Neurotrauma* 22(10), p. 1172.
45. Lyttle T.S., Voskresensky I.V., Schwindel L.E., Carrico K.M. and **Rabchevsky A.G.** (2005) Dose-dependent recovery of hind limb function with fibroblast growth factor-2 (FGF-2) over-expression at the site of thoracic spinal cord contusion injury. *J. Neurotrauma* 22(10), p. 1222.

46. Xiong Y., **Rabchevsky A.G.**, Lyttle T.S., Thompson B.M. and Hall E.D. (2005) Time course of oxidative damage and cytoskeletal degradation after spinal cord contusion injury in rats. *J. Neurotrauma* 22(10), p. 1173.
47. Hou S., Duale H., Lyttle T.S. and **Rabchevsky A.G.** (2006) Contribution of propriospinal plasticity to the development of autonomic dysreflexia after complete spinal cord injury. *The annual Kentucky Spinal Cord and Head Injury Research Symposium*, Lexington, KY
48. Lyttle T.S., Wallace S.M., Carrico K.M. and **Rabchevsky A.G.** (2006) Improved hind limb locomotor recovery after spinal cord injury with fibroblast growth factor-2 (FGF-2) over-expression is correlated with oligodendrocyte repopulation throughout ventrolateral white matter. *J. Neurotrauma* 23(6), p. 995. *The 24th Annual National Neurotrauma Society Symposium*
49. Hou S., Krishnamurthy, S., Cameron A.A., Lyttle T.S. and **Rabchevsky A.G.** (2006) Plasticity of propriospinal neurons correlates with autonomic dysreflexia after complete thoracic spinal cord transection in rat. *J. Neurotrauma* 23(6), p. 1026. *The 24th Annual National Neurotrauma Society Symposium*
50. Patel S.P., Pandya J.D., Sullivan P.G. and **Rabchevsky A.G.** (2007) Effects of mitochondrial uncoupling agent, 2,4-dinitrophenol, or nitroxide antioxidant, Tempol, on mitochondrial integrity following acute contusion spinal cord injury. *J. Neurotrauma* 24(7), p. 1231. *25th Annual National Neurotrauma Society Symposium*, Kansas City, MO
51. Hou S.P., Duale H., Cameron A.A., Abshire S.M. and **Rabchevsky A.G.** (2007) Plasticity of lumbosacral propriospinal neurons is associated with the development of autonomic dysreflexia after thoracic spinal cord transection. *The annual Kentucky Spinal Cord and Head Injury Research Symposium*, Lexington, KY
52. Duale H., Hou S.P., Derbenev A.V., Smith B.N. and **Rabchevsky A.G.** (2007) Intraspinal plasticity and autonomic dysreflexia after spinal cord injury: a transneuronal tracing study using pseudorabies virus. *The annual Kentucky Spinal Cord and Head Injury Research Symposium*, Lexington, KY
53. **Rabchevsky A.G.** (2007) Experimental potentials and clinical pitfalls of SCI therapeutics: Perspectives from a neuroscientist with SCI. *The annual Kentucky Spinal Cord and Head Injury Research Symposium*, University of Kentucky, Lexington, KY
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115. Jagielo-Miller, J. E., Patel, S. P., Bailey, C. S., Count, C. T., **Rabchevsky, A. G.**, and Prendergast, M. A. (2021) Ethanol exaggerates cell death at high but not low impact force in an organotypic hippocampal slice culture mechanical distension model of traumatic brain injury. Virtual poster, *The 50th Annual Society for Neuroscience*.
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138. **Rabchevsky, A.G.** (2023) What is the optimism that regeneration strategies (clinical) can be designed and implemented to restore lost functions after spinal cord injury? *The 18th annual Science & Advocacy Symposium (Working2Walk), Unite 2 Fight Paralysis organization, Minneapolis, MN*
139. Jessica L. Nielson, David W. McMillan, Evan C. Lewis, Dominik Zbogor, Ricardo Battaglino, **Alexander Rabchevsky**, Robert Wudlick, Tegan M. Carr (In Preparation) Muscle spasms and pain reduction in people with spinal cord injury who use psilocybin – results from an anonymous online survey study.
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141. Jonathan R. Brestoff*, Keshav K. Singh*, Katia Aquilano, Lance B. Becker, Michael V. Berridge, Eric Boilard, Andrés Caicedo, Clair Crewe, José Antonio Enríquez, Jianqing Gao, Åsa Gustafsson, Kazuhide Hayakawa, Maroun Khoury, Yun-Sil Lee, Daniele Lettieri-Barbato, Patricia Luz-Crawford, Heidi M. McBride, James D. McCully, Ritsuko Nakai, Jiri Neuzil, Martin Picard, Alexander G. Rabchevsky, Anne-Marie Rodriguez, Siladitya Sengupta, Alex J. Sercel, Toshio Suda, Michael A. Teitell, Alain R. Thierry, Rong Tian, Melanie Walker, Minghao Zheng. Recommendations for mitochondria transfer and transplantation nomenclature and characterization. *Nature Metabolism*