

ALEXANDER GEORGE RABCHEVSKY, Ph.D.

**DEPARTMENT OF PHYSIOLOGY
SPINAL CORD & BRAIN INJURY RESEARCH CENTER
The University of Kentucky College of Medicine**

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PROFESSIONAL EXPERIENCE

- 2007-:** **Associate Professor** with tenure, Department of Physiology, Spinal Cord & Brain Injury Research Center (SCoBIRC), University of Kentucky College of Medicine, Lexington, KY
- 2004-:** SCoBIRC Endowed Chair #1, College of Medicine, University of Kentucky
- 2002-2006:** **Assistant Professor**, tenure tack, Department of Physiology, Spinal Cord & Brain Injury Research Center (SCoBIRC), University of Kentucky College of Medicine, Lexington, KY
- 1999-2001:** **Research Associate**, Department of Anatomy & Neurobiology, University of Kentucky College of Medicine, Lexington, KY
- 1997-1999:** **Postdoctoral Scholar**, Sanders-Brown Center on Aging, University of Kentucky, Lexington, KY
- 1995-1997:** **Foreign Postdoctoral Fellow**, INSERM Unité 421, University of Paris XII, 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 (USUHS), Bethesda, MD

EDUCATION AND PROFESSIONAL TRAINING

- 1995:** **Ph.D.** (Neuroscience) • University of Florida, Gainesville, FL
- 1988:** **B.S.** (Biology) • Hampden-Sydney College, Hampden-Sydney, VA

RESEARCH INTERESTS

Pathophysiology of spinal cord & brain injury; Behavioral & Physiological assessments following experimental spinal cord injury; Gene therapy to restore locomotor recovery and alleviate autonomic dysfunction; Pharmacological and cellular interventions to enhance spontaneous recovery and/or abrogate aberrant somatic and autonomic motor reflexes; Biochemical characterization of mitochondrial bioenergetics to target therapeutics which prevent their dysfunction and, consequently, promote neuroprotection and functional recovery.

AWARDS/HONORS

- 1987:** Presidential Award for Leadership and Character, Hampden-Sydney College, VA
- 1987:** Biological Fellowship (Molecular Genetics; Department of Biology), Emory University, Atlanta, GA
- 1988:** Presidential Award for Courageousness, Hampden-Sydney College, VA

- 1988:** Graduated with B.S. one semester behind my class (1987) despite missing an entire academic year following an accident rendering me paraplegic in 1985 (Hampden-Sydney)
- 1991-93:** Pre-Doctoral Studentship Award, Rick Hansen Man in Motion Legacy Fund, Canada, Department of Neuroscience, College of Medicine, University of Florida, Gainesville, FL
- 1994:** Graduate Assistant Teaching Award, Medical Neuroscience, College of Medicine, University of Florida, Gainesville, FL
- 1994:** “Poster Excellence” Prize Award, 12th National Neurotrauma Society Symposium, Miami, FL
- 1999:** National Research Service Award, Postdoctoral Fellowship, NIH/NINDS (University of Kentucky) “Mechanisms of bFGF effects after spinal cord injury. \$40,000/year **Declined**”
- 2004:** Provost Retention Award, College of Medicine, University of Kentucky
- 2004-:** SCoBIRC Endowed Chair #1, College of Medicine, University of Kentucky
- 2004-10:** Charles T. Wethington Award for Excellence in Research, 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
- 2008:** James W. Holsinger Award for “Excellence in Teaching,” Department of Physiology and the College of Medicine, University of Kentucky
- 2008:** Invited consultant, Spinal Cord Outcomes Partnership Endeavor (SCOPE) Workshop panel (Nov) “Functional Recovery after Spinal Cord Injury: Implications of Different Spinal Injury Patterns and Distinct Therapeutic Targets on Clinical Trial Outcomes,” Crystal City Hyatt Regency, Arlington, VA
- 2009:** Invited Stakeholder, Spinal Cord Injury Research Program (SCIRP), (Mar) DOD & Congressionally Directed Medical Research Programs (CDMRP), Hyatt Dulles, Herndon, VA
- 2010:** No Barriers USA, Board of Directors member, Mound, MN

SERVICE

Local:

- Institutional Animal Care and Use committee (IACUC) member, University of Kentucky (U.K.), 2002-2005
- Spinal Cord & Brain Injury Research Center (SCoBIRC) Journal Club Organizer, U.K., 2002-2005
- IACUC “Pain Policy” committee member, U.K., 2004-2005
- SCoBIRC-sponsored Seminar Series Coordinator, U.K., 2003-2005
- Lexington bi-annual Kentucky Spinal Cord and Head Injury Research Trust Fund Symposium Organizing committee member, U.K., 2003-present
- Graduate School Faculty member, U.K. College of Medicine (COM), 2004-present
- SCoBIRC Faculty Search Committee member, U.K., 2004-2008
- “Early Mobility Task Force” committee member, U.K. Chandler Hospital, 2005-2008
- Medical and M.D./Ph.D. Student Admissions Interviewer, U.K. COM, 2007-present
- “Society for Promotion of Undergraduate Research” (SPUR), Faculty participant, 2009
- Office of Research Integrity (ORI) Program Review Committee member, Office of the Vice President for Research, U.K. COM, 2009
- Senate Hearing Panel member (Privilege and Tenure), Office of the President, U.K., 2011-2014
- Council of Endowed Professors and Chairs, Steering Committee member, U.K., 2011-2014

Professional Memberships and National Service:

- American Society for Neural Transplantation (1994-present)
- Society for Neuroscience (1995-present)
- National Neurotrauma Society (1996-present)
- Sigma Xi, Scientific Research Society (1997-present)
- Society for Neuroscience, University of Kentucky chapter (1997-present)
- National/International Neurotrauma Society Symposia; Scientific Program Committee, Faculty Poster Judge, Student Abstract Competition (2004, 2005, 2007, 2008, 2010)
- Co-Chair (Dr. Mary Bunge), the 19th Annual National Neurotrauma Society Symposium, San Diego, CA ***Neuroprotective and regenerative therapies for spinal cord injury***, 2001
- Chair, the 10th International Symposium on Neural Regeneration, Pacific Grove, CA ***Visceral function and pain in spinal cord injury***, 2003
- Co-Chair (Dr. Edward Hall), the 1st Translational *Neuroscience Conference*, Lexington, KY ***Spinal cord injury and neural prostheses***, 2005
- Chair, the 4th Congress of the International Society for Autonomic Neuroscience, Marseille, France ***Spinal cord injury, autonomic nervous system and dysfunction***, 2005
- Co-Chair (Dr. Pat Kochanek), the 25th Annual National Neurotrauma Society Symposium, Kansas City, MO ***Tissue Engineering, Neurobionics and Transplantation***, 2007
- National/International Neurotrauma Society, Strategic Planning Committee, 2011-present
- Chair, “No Barriers University” scientific symposia, No Barriers Summit, Winter Park, Colorado, 2011

Outreach:

- Coordinator of SCoBIRC “Day in a Wheelchair” experience, in collaboration with Cardinal Hill Rehabilitation Hospital, 2006-2007
- Spinal Cord Injury Unit “Support Group” member, Cardinal Hill Rehabilitation Hospital, 2007-2009
- “Brain Awareness Day,” Faculty volunteer, Explorium of Lexington, KY Mar 2009
- “Fayette County Science Fair,” Faculty volunteer, Bryan Station High School, Lexington, KY 2009-2011
- Kentucky Appalachian Rural Rehabilitation Network (KARRN), advisory board member. Director, Patrick H. Kitzman, Ph.D., MSPT, U.K., 2009-present
- Volunteer, Big Brothers Big Sisters of the Bluegrass, 2010-present
- Volunteer, “Spinal Cord Injury Peer Mentoring Program,” Cardinal Hill Rehabilitation Hospital, 2010-present

TEACHING at U.K. and other National Institutes

- 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.” (2 hr lecture, summer)
- 2002:** Medical Neuroscience-MD 817, U.K., “Therapeutic interventions following spinal cord injury: Defining targets of experimental treatments.” (1 hr lecture, fall)
- 2002:** Physical Therapy-PT 827, U.K., “A surgically implanted ‘Functional Electrical System’ for standing and walking.” (1 hr lecture, fall)
- 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.” (2 hr lecture, summer)
- 2003-09:** Principles of Human Physiology-PGY 412G, U.K., “Neurophysiology” (8 x 1 hr lectures-spring & fall)
- 2003:** Medical Neuroscience-MD 817, U.K., “Spinal cord injury: Clinical treatment to lab bench to clinical trials.” (1 hr lecture, fall)
- 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,” and “A surgically implanted neuroprosthesis for exercise, standing, and transfers after spinal cord injury.” (4 hrs of lectures; summer)
- 2004:** Medical Neuroscience-MD 817, U.K., “Spinal cord injury: Dysfunctions and therapeutic approaches.” (1 hr lecture, fall)
- 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.” (2 hr lecture; summer)
- 2004:** Advanced Pharmacology-PHA 658, U.K., “Modern viral approaches.” (1.5 hr lecture, fall)
- 2005:** Medical Neuroscience-MD 817, U.K., “Spinal cord injury & functional electrical stimulation.” (1 hr lecture, fall)
- 2005:** Principles of Neurobiology -ANA 605, U.K., “Spinal cord injury models” and “Autonomic dysreflexia after spinal cord injury.” (2 x 1.5 hr lectures, fall)
- 2006-07:** Neurobiology-Bio S315, University of North Carolina, Pembroke, Department of Biology, “Spinal cord injury: dysfunctions, clinical treatments, experimental models & therapeutics.” (1.5 hr lectures - teleconference with Dr. Robert Poage, fall)
- 2006-07:** 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.” (6 hrs of lectures; summer)
- 2006-08:** Dental Human Function-OBI 814, U.K., “Neurophysiology” (6 x 2 hr lectures; fall)
- 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.” (4 hrs of lecture; summer)
- 2007:** CNS Injury and Repair, Special Topics Course-ANA 780 & PGY 630-U.K., “Spinal cord injury

models” and “Autonomic dysreflexia after spinal cord injury” and “Post-traumatic demyelination & remyelination (3 x 1.5 hr lectures, fall)

- 2008:** Physical Therapy-PT 827, U.K., “Plasticity of both visceral sensory fibers and propriospinal neurons is associated with the development of autonomic dysfunction after spinal cord injury.” (2 hr lecture, fall)
- 2009-11:** Spinal Cord Injury Research Training Program, The NIH and The Ohio State University, Center for Brain and Spinal Repair, “Plasticity of visceral afferents and propriospinal neurons is associated with manifestation of autonomic dysreflexia after complete spinal cord injury.” (2 hr lecture; summer)
- 2009:** Neurobiology of CNS Injury and Repair-ANA 605 & PGY 630, U.K., “Intraspinal plasticity is associated with autonomic dysreflexia after spinal cord injury” and “Post-traumatic demyelination & remyelination (2 x 1.5 hr lectures, fall)
- 2009-11:** Physical Therapy-PT 827, U.K., “Pathophysiology of autonomic dysreflexia after spinal cord injury,” and “Spinal cord injury & functional electrical stimulation.” (4 hrs of lectures; fall)
- 2010-11:** Elementary Physiology-PGY 206, U.K., “Endocrinology” (6 x 1 hr lectures-spring & fall)

MENTORSHIP of Rotating Students, Post-Doctoral Fellows & Visiting Scholars at U.K.

Completed:

1. **2002:** Janna Hackett, U.K. 2nd Year Medical Student, summer rotation and Federal Work Study Program
2. **2002-05:** Karah Nazor (Gerontology); PhD Dissertation committee.
3. **2002-05:** Michael Smith (Anatomy & Neurobiology); PhD Dissertation committee.
4. **2003-04:** Igor Voskresensky, U.K. 2nd Year Medical Student, summer-fall rotation and U.K. STEPS Program
5. **2003:** Leslie Schwindel, undergraduate summer rotation and U.K. STEPS Program
6. **2003-07:** Kristine Ziemba (Physiology); PhD Dissertation committee.
7. **2003-04:** Dr. Adrian A. Cameron, now a faculty associate at University of Melbourne, Australia
8. **2003:** George Day; rotating IBS graduate student
9. **2004-08:** Yiqin Xiong (Anatomy & Neurobiology); PhD Dissertation committee.
10. **2005:** Leslie Phillips (Educational & Counsel Psych); External member of PhD Dissertation committee.
11. **2005:** Fujian Zhang (Nutritional Sciences); PhD Dissertation committee; External member.
12. **2005:** Christopher Trimby; rotating IBS graduate student
13. **2005:** Andrew Sauerbeck; rotating IBS graduate student
14. **2005-11:** Christopher Trimby (Physiology); PhD Dissertation committee.
15. **2005-06:** Dr. Sairam Krishnamurthy, now an associate professor at Banaras Hindu University, India
16. **2005-08:** Dr. Shaoping Hou, now a postdoctoral fellow at U.C. San Diego (Dr. Mark Tuzsynski)
17. **2006-09:** Dr. Hanad Duale, now a postdoctoral fellow at Ohio State University (Dr. Chang-Hyuk Kwon)
18. **2006:** Erica Fleishaker; rotating IBS graduate student

19. **2007:** Aaron Harris, undergraduate research, U.K. BIO395 Program
20. **2007:** Racine Gue, undergraduate research, U.K. ABT395 Program
21. **2007:** Sarah Reagin, undergraduate research, KYSS Summer Research Program
22. **2007-08:** Joseph Whelan, Master's thesis advisor, Physiology graduate student now working in MD
23. **2008-09:** Jennifer Evans, undergraduate research, U.K. ANA395 Program
24. **2008:** Eva Bach; rotating IBS graduate student
25. **2008:** Darren Miller; rotating IBS graduate student
26. **2008:** Brent Hackett; rotating IBS graduate student
27. **2008:** JaSan Rumph, undergraduate research, U.K. 'Bucks for Brains' Summer Research Program
28. **2009:** Ernest Aguilar (Neuroscience; Flinders Univ, Aus); PhD Dissertation committee, External member.
29. **2009:** Jenna Gilb, undergraduate research, U.K. BIO395 Program
30. **2009:** Alecia Fields, undergraduate research, U.K. BIO395 Program
31. **2010:** Dr. Yanling Yang, Foreign Visiting Scholar, Yan'an University Medical School, Yan'an, P.R. China
32. **2010-11:** Oksana Zhurbich, undergraduate research, Biology, Federal Work Study Program

Current:

33. **2006-:** Dr. Samirkumar Patel, Scientist II
34. **2008-:** S. Alex Marshall (Pharmaceutical Sciences); PhD Dissertation committee.
35. **2009-:** Patricia Jill Ward (Anatomical Sciences and Neurobiology, University of Louisville);
PhD Dissertation committee, External member.
36. **2009-:** Shaun Carlson (Physiology); PhD Dissertation committee.
37. **2011-:** Dr. Rachel Hill, Post-Doctoral Scholar
38. **2011:** Jenna Vanrooyen; rotating IBS graduate student
39. **2011-:** Oksana Zhurbich, undergraduate research, U.K. BIO395 Program
40. **2011-:** Taylor Smith, undergraduate research, U.K. CHEM395 Program
41. **2011-:** Gregory Corder (Physiology); PhD Dissertation committee.

Trainee Awards/Honors:

Shaoping Hou, PhD – Outstanding Student Abstract – the 25th Annual Neurotrauma Society Symposium, Kansas City, MO (2007)

Hanad Duale, PhD – Awarded PVA Research Foundation Fellowship Grant # 2561 (Rabchevsky, Sponsor) (2008)

Joseph Whelan – Pre-doctoral Scholar Training Program, Therapeutic Strategies for Neurodegeneration Training Grant, National Institutes of Health-NIDA (1T32 DA022738) (2008)

Samir Patel, PhD – Best Poster & Presentation Cash Award –the 25th Annual National Neurotrauma Society Symposium, Kansas City, MO(2007); Travel Award to attend the NINTS Symposium, Santa Barbara, CA (2009); Awarded Neilsen Foundation Fellowship grant (7/1/09-6/30/11) **Declined** (2009)

INVITED LECTURES and SEMINARS– National and International:

1. *Intraspinal transplantation of microglial cells into the injured rat spinal cord* • University of Paris, XII, School of Medicine, Créteil, France, 1995
2. *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, 1998
3. *Basic fibroblast growth factor (bFGF) enhances functional recovery and tissue sparing after spinal cord injury* • Annual KSCHIRT Symposium, University of Louisville, Louisville, KY, 1999
4. *Therapeutic interventions following spinal cord injury: Defining the targets of experimental treatments* • Johns Hopkins University, Depts of Biomedical Engineering & Neurology, Baltimore, MD, 2000
5. *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
6. *Effects of basic fibroblast growth factor (bFGF) therapy on spinal cord injury* • University of Kentucky, Spinal Cord & Brain Injury Research Center, Lexington, KY, 2000
7. *Effects of basic fibroblast growth factor (bFGF) and combination therapy on spinal cord injury* • Annual KSCHIRT Symposium University of Kentucky, Lexington, KY, 2000
8. *Growth factor therapies and transplantation strategies for spinal cord injury* • University of Louisville, Department of Neurological Surgery, Louisville, KY, 2000
9. *Growth factor and steroid therapy for recovery after spinal cord injury* • Frontiers in Spinal Cord Regeneration Symposium, University of Louisville, Louisville, KY, 2001
10. *Growth factor and gene therapy for functional recovery after spinal cord injury* • University of Kentucky, Department of Physiology, Lexington, KY, 2001
11. *Mechanisms of autonomic dysreflexia following spinal cord injury and A surgically implanted neuroprosthesis for exercise, standing, and transfers* • International Spinal Research Trust 5th Research Network Meeting, City University, London, U.K., 2002
12. *Keynote Address* • First National-International Neurotrauma Society Symposium, Tampa, FL, 2002
13. *Combination therapies for recovery after spinal cord injury: steroids and growth factors* • Frontiers in Spinal Cord Regeneration Symposium, University of Louisville, Louisville, KY, 2003
14. *Bowel and sexual dysfunction after spinal cord injury* • Symposium on Autonomic Dysfunction after Spinal Cord Injury: Mechanisms, Prevention and Treatment, Banff, Alberta, Canada, 2003
15. *Clinical and experimental approaches to improve function after spinal cord injury* • Case Western Reserve University, Department of Biomedical Engineering & Cleveland FES Center, Cleveland, OH, 2004
16. *Pathways influencing autonomic reflex dysfunction following spinal cord injury* • the 4th Congress of the International Society for Autonomic Neuroscience, Marseille, France, 2005

17. ***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, 2006
18. ***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
19. ***Experimental potentials and clinical pitfalls of SCI therapeutics: Perspectives from a neuroscientist with SCI*** • Annual KSCHIRT Symposium, University of Louisville, Louisville, KY, 2007
20. ***Perspectives on neuroprosthetics from the view of a neuroscientist and user*** • *No Barriers USA Festival*, Squaw Valley, CA, 2007
21. ***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, 2008
22. ***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
23. ***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, 2009
24. ***Plasticity of visceral sensory fibers and lumbosacral propriospinal neurons is associated with autonomic dysreflexia after spinal cord injury*** • University of Miami, the Project to Cure Paralysis, Miller School of Medicine, Miami, FL, 2009
25. ***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
26. ***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
27. ***Intraspinal plasticity of sensory fibers and propriospinal neurons is associated with autonomic dysreflexia after spinal cord injury*** • Uniformed Services University of the Health Sciences, Neuroscience Program, Bethesda, MD, 2009
28. ***The patient perspective: What should I hope for, what should I know?*** • American Spinal Injury Association (ASIA) Annual Meeting, "For the Clinician: Participating in Translational Research," Nashville, TN, 2010
29. ***Modulating the pathophysiology of autonomic dysreflexia after spinal cord injury*** • University of Kentucky, Department of Physiology, Lexington, KY, 2011
30. ***Modulating the pathophysiology of autonomic dysreflexia after spinal cord injury*** • *Current Advances in Spinal Cord Injury Research*, UMDNJ, New Jersey Medical School, Newark, NJ, 2011
31. ***Modulating the pathophysiology of autonomic dysreflexia after spinal cord injury*** • Indiana University Purdue University (IUPUI) School of Medicine, Stark Neurosciences Research Institute, Indianapolis, IN, 2011

PEER REVIEW ACTIVITIES:**Journal Review Editor:**

- Frontiers in Integrative Physiology (2011-)
- World Journal of Neuroscience (2011-)

Journal Ad hoc Review:

- American Journal of Physiology
- Autonomic Neuroscience: Basic and Clinical
- Brain Research
- Clinical Neurophysiology
- European Journal of Neuroscience
- Experimental Neurology
- Expert Opinion in Pharmacotherapy
- Glia
- Journal of Applied Physiology
- Journal of Comparative Neurology
- Journal of Histochemistry and Cytochemistry
- 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 Spinal Cord Medicine
- Neuroscience
- Neuroscience Letters
- Pain Management
- Public Library of Science (PLOS)
- Spinal Cord
- The Scientific World

Grant Review (ad-hoc memberships)

- American Heart Association (AHA) – (2006, 2007, 2008)
- Canadian Institutes of Health Research (CIHR) – (2007, 2008)
- Christopher Reeve Paralysis Foundation – (2004)
- Craig H. Neilsen Foundation, US – (2010)
- Daniel Heumann Foundation – (2003)
- International Spinal Research Trust (Spinal Cord Foundation, UK) – (2004, 2006, 2010)
- New Jersey Commission on Spinal Cord Research – (2005, 2006, 2009, 2010)
- New York State Spinal Cord Injury Research Program – (2006, 2009)
- NIH: Rare Diseases Clinical Research Consortia (ZRG1 HOP-Y (50) R) – (2009)
- NIH: ARRA RC4 Sustainable Community-Linked Infrastructure Panel 1 (ZRG1 HDM-D (58) – (2010)
- State of South Carolina, Spinal Cord Injury Research Fund – (2003)
- The Ontario Research Fund - Research Excellence program – (2010)
- Veterans Health Administration, RRD0 (RR&D Merit Review Award) – (2010)

PEER-REVIEWED PUBLICATIONS

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. 8 Jan 1991
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. 8 Dec 1992
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. Accepted 1996 Jul 4. **PMID: 8981236**
4. **RABCHEVSKY A.G.**, Weintz 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. The Journal of Neuroscience 18(24): 10541-10552. Accepted 1998 Sept 22. **PMID: 9852591**
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. Accepted 1999 April 6. **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. The Journal of Neuroscience 19(15): 6248-6256. Accepted 1999 May 11. **PMID: 10414954**
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. Accepted 1999 June 6. **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. Accepted 2000 March 14. **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. Accepted 2000 Aug 16. **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. Accepted 2000 May 4. **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. Accepted 2000 Nov 3. **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. Accepted 2001 Dec 27. **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. Accepted 2002 May 4. **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. Accepted 2002 Dec 1. **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. Accepted 2003 Oct 2. **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. The Journal of Comparative Neurology 474(4): 524-534. Accepted 2004 Feb 16. **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. The Journal of Neuroscience 26(11): 2923-2932. Accepted 2006 Jan 25. **PMID: 16540569**
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. Accepted 2006 Aug 23. Epub 2006 Dec 1. **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. Accepted 2007 Feb 28. **PMID: 17390308**
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. Accepted 2007 Feb 6. **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. The Journal of Neuroscience 28(2): 340-348. Accepted 2007 Nov 27. **PMID: 18184776**
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. The Journal of Comparative Neurology 509(4): 382-399. Accepted 2008 April 24. **PMID: 18512692**
23. Patel S.P., Pandya J.D., Sullivan P.G. and **RABCHEVSKY A.G.** (2009) Effects of mitochondrial uncoupling agent, 2,4-dinitrophenol, or nitroxide antioxidant, tempol, on mitochondrial integrity following acute contusion spinal cord injury. Journal of Neuroscience Research 87(1):130-140. Accepted 2008 May 16. **PMID: 18709657**
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. Accepted 2008 Nov 4. **PMID: 18791171**
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**
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. Accepted 2008 Nov 24. **PMID: 19151624**
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**

28. Patel S.P., Sullivan P.G., Lyttle T.S. and **RABCHEVSKY A.G.** (2010) Acetyl-L-carnitine ameliorates mitochondrial dysfunction following contusion spinal cord injury. Journal of Neurochemistry 114(1): 291-301. Epub 2010 Apr 23. **PMID: 20438613**
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**
30. **RABCHEVSKY, A.G.**, Patel S.P., Duale H., Lyttle T.S., O'Dell C.R. and Kitzman P.H. (2011) Gabapentin for spasticity & autonomic dysreflexia after severe spinal cord injury. Spinal Cord 49(1): 99–105. Epub 2010 Jun 1. **PMID: 20514053**

INVITED REVIEW ARTICLES & BOOK CHAPTERS

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. **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.
6. Sullivan P.G., **RABCHEVSKY A.G.**, Waldmeier P.C. and Springer J.E. (2005) Mitochondrial permeability transition in CNS trauma: Cause or effect of neuronal cell death? Journal of Neuroscience Research 79(1-2): 231-239. Accepted 2004 Feb 16. **PMID: 15573402**
7. **RABCHEVSKY A.G.** (2006) Segmental organization of spinal reflexes mediating autonomic dysreflexia after spinal cord injury. Progress in Brain Research 152: Autonomic Dysfunction after Spinal Cord Injury. Weaver L.C. & Polosa C. (eds.), Elsevier B.V. pp. 265-274. Accepted 2005 Nov 15. **PMID: 16198706**
8. Onifer S.M., **RABCHEVSKY A.G.** and Scheff S.W. (2007) Rat models of traumatic spinal cord injury to assess motor recovery. Institute for Laboratory Animal Research Journal 48(4): 385-395. Accepted 2007 April 20. **PMID: 17712224**
9. **RABCHEVSKY A.G.** and Kitzman P.H. (2011) Latest approaches for the treatment of spasticity and autonomic dysreflexia in chronic spinal cord injury. Neurotherapeutics 8(2):274-82. Accepted 2011 January 20. **PMID: 21384222**
10. McEwen M.L., Sullivan P.G., **RABCHEVSKY A.G.** and Springer, J.E. (2011) Targeting mitochondrial function for the treatment of acute spinal cord injury. Neurotherapeutics 8(2): 168-179. Accepted 2011 January 21. **PMID: 21360236**
11. **RABCHEVSKY A.G.**, Patel S.P. and Springer J.E. (2011) Pharmacological interventions for spinal cord injury: Where do we stand? How might we step forward? Pharmacology & Therapeutics 132(1):15-29. Epub 2011 May 14. **PMID: 21605594**

MANUSCRIPTS in PREPARATION, SUBMITTED UNDER REVIEW, in REVISION:

1. Patel S.P., Sullivan P.G., Lyttle T.S., Magnuson D.S.K. and **RABCHEVSKY A.G.** (*in preparation*) Acetyl-L-carnitine treatment following spinal cord injury improves mitochondrial function correlated with remarkable tissue sparing and functional recovery.
2. Hill, R., Lyttle T.S., Scheff S.W. and **RABCHEVSKY A.G.** (*in preparation*) Dose-response and delivery-mediated effects of FGF2 treatment on functional recovery, histopathology and gliogenesis following contusion spinal cord injury in adult rats.
3. **RABCHEVSKY A.G.**, Patel S., Lyttle T.S., Eldahan K.C., O'Dell C.R., Kitzman P.H., Popovich P.G., Zhang Y. and Donohue, K.D. (*in preparation*) Gabapentin alleviates spasticity and both induced and spontaneous autonomic dysreflexia after severe spinal cord injury.

PUBLISHED ABSTRACTS

1. Helke C.J., **RABCHEVSKY A.** and Ichikawa H. (1991) Putative neurotransmitter agents in sensory neurons of the carotid sinus nerve (CSN) of the rat. *Society for Neuroscience Abstracts*, 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 Abstracts*, 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 Abstracts*, 20: 879.
4. Pennell N.A., **RABCHEVSKY A.** and Streit W.J. (1995) Depletion of major histocompatibility complex (MHC)-bearing cells from embryonic rat spinal cord. *Society for Neuroscience Abstracts*, 21: 823.
5. **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.
6. **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.
7. **RABCHEVSKY A.G.**, Weinitz J.M., Couplier M., Fages C., Tinel M. and Junier M.P. (1997) *In vivo* induction of transforming growth factor α synthesis leads to the development of reactive astrocytes throughout the CNS. *Society for Neuroscience Abstracts*, 28: 12.
8. **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 Abstracts*, 24: 545.
9. **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.
10. **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 Abstracts*.
11. **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.

12. **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 Neural Regeneration Symposium*, Pacific Grove, CA.
13. **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 Abstracts*.
14. 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 Abstracts*.
15. 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.
16. 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.
17. 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.
18. **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.
19. 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.
20. 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.
21. **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 Abstracts*.
22. 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 Abstracts*.
23. 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.
24. 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.
25. **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.
26. 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.
27. 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 Abstracts*.
28. **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.

29. 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.
30. 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 Abstracts*.
31. 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.
32. 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.
33. 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.
34. 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 Abstracts*.
35. 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.
36. 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.
37. 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. *Journal of Neurotrauma* 22(10), p. 1172.
38. 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.
39. 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.
40. 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.
41. 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.
42. 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.
43. Hou S., 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. *J. Neurotrauma* 24(7), p. 1231.

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44. Duale H., Hou S., Derbenev A., Smith B.N. and **RABCHEVSKY A.G.** (2007) Intraspinal plasticity and autonomic dysreflexia after spinal cord injury: a transneuronal tracing study using pseudorabies virus. *J. Neurotrauma* 24(7), p. 1260.
45. Hou S., Duale H., Derbenev A.V., Smith B.N. and **RABCHEVSKY A.G.** (2007) Propriospinal plasticity after spinal cord transection is associated with the development of autonomic dysreflexia. *Neurorehab. & Neural Repair* 21(6), p. 611.
46. Duale H., Hou S., Derbenev A.V., Smith B.N. and **RABCHEVSKY A.G.** (2008) Severe spinal cord injury dramatically reduces the efficacy of pseudorabies virus labeling of sympathetic preganglionic neurons. *J. Neurotrauma* 25(7), p. 859.
47. Hou S., Duale H. and **RABCHEVSKY A.G.** (2008) Intraspinal sprouting of unmyelinated pelvic afferents after complete spinal cord injury mediates autonomic dysreflexia induced by visceral pain. *J. Neurotrauma* 25(7), p. 860.
48. Patel S.P., Lyttle T.S., Sullivan P.G. and **RABCHEVSKY A.G.** (2008) Effect of acetyl-L-carnitine on mitochondrial dysfunction following acute contusion spinal cord injury. *J. Neurotrauma* 25(7), p. 893.
49. **RABCHEVSKY A.G.**, Duale H., Lyttle T.S., O'Dell C.R. and Kitzman P.H. (2009) Gabapentin for spasticity and autonomic dysreflexia after severe spinal cord injury. *J. Neurotrauma* 26(8), p. A-65.
50. Duale H., Lyttle T.S., Smith B.N. and **RABCHEVSKY A.G.** (2009) Colorectal distension in spinalized rats reduces the efficacy of pseudorabies virus labeling of kidney-related sympathetic preganglionic neurons. *J. Neurotrauma* 26(8), p. A-42.
51. Patel S.P., Lyttle T.S., Sullivan P.G. and **RABCHEVSKY A.G.** (2009) Mitochondrial targeted interventions following contusion spinal cord injury. *J. Neurotrauma* 26(8), p. A-33.
52. Patel S.P., Lyttle T.S., Sullivan P.G. and **RABCHEVSKY A.G.** (2010) Acetyl-L-carnitine is neuroprotective and improves functional recovery following contusion spinal cord injury. *The 10th International Conference on Neuroprotective Agents*, Pacific Grove, CA.
53. Patel S.P., Sullivan P.G., Lyttle T.S., O'Dell C.R. and **RABCHEVSKY A.G.** (2010) Effects of acetyl-L-carnitine on functional recovery and tissue sparing following contusion spinal cord injury. *J. Neurotrauma* 26, p. A-66.
54. **RABCHEVSKY A.G.**, Patel S., Lyttle T.S., O'Dell C.R. and Kitzman P.H. (2010) Effects of chronic versus acute gabapentin administration on spasticity & autonomic dysreflexia after severe spinal cord injury. *J. Neurotrauma* 26, p. A-73.
55. **RABCHEVSKY A.G.**, Patel S., Lyttle T.S., O'Dell C.R. and Kitzman P.H. (2010) Effects of chronic versus acute gabapentin administration on spasticity & autonomic dysreflexia after severe spinal cord injury. *Society for Neuroscience Abstracts*.
56. Patel S.P., Lyttle T.S., Sullivan P.G. and **RABCHEVSKY A.G.** (2011) Mitochondrial dysfunction: a critical target for treatment of acute spinal cord injury. *The 29th Annual National Neurotrauma Symposium*, Ft. Lauderdale, FL
57. **RABCHEVSKY A.G.**, Patel S.P., Lyttle T.S., O'Dell C.R., Eldahan K.C., Donohue, K.D. and Kitzman P.H. (2011) Gabapentin alleviates spasticity and both induced and spontaneous autonomic dysreflexia after severe spinal cord injury. *The 29th Annual National Neurotrauma Symposium*, Ft. Lauderdale, FL
58. Patel S.P., Lyttle T.S., Sullivan P.G. and **RABCHEVSKY A.G.** (2011) Targeting of mitochondrial dysfunction for treatment of spinal cord injury. *Society for Neuroscience Abstracts*.
59. **RABCHEVSKY A.G.**, Patel S.P., Lyttle T.S., O'Dell C.R., Eldahan K.C., Donohue, K.D. and Kitzman P.H. (2011) Gabapentin mitigates both induced and spontaneous autonomic dysreflexia, as well as reflexive spasticity after severe spinal cord injury. *Society for Neuroscience Abstracts*.

LICENSED TECHNOLOGY/PATENTS

Patent pending (U.S. Patent Application No. 11/343,160; George M. Smith co-Applicant) “Methods of inhibiting pain and autonomic dysreflexia after spinal cord injury with semaphorin 3A.” (Filed January 30, 2006; U.K. case 1261)

CURRENT FUNDING

1. **“Therapeutic Strategies for Neurodegeneration Training Grant”**
 Principal Investigator: Edward .D. Hall (09/26/06 – 06/30/11)
 Agency: National Institutes of Health-NIDA
 Type: 1T32 (DA022738) Total costs: \$1,200,467
Training Faculty: Alexander G. Rabchevsky 2.5%
 Broad-based training in modern research concepts regarding the pathophysiology of neurotrauma.
2. **“Donation for research efforts conducted in laboratory to study spinal cord injury”**
 Principal Investigator: A.G. Rabchevsky (10/14/08 –)
 Agency: The Michael and Helen Schaffer Foundation, Boston, MA
 Type: Discretionary Total costs: \$25,000
3. **“Effects of acetyl-L-carnitine treatment on mitochondrial function, tissue sparing and hind limb locomotor recovery following contusion spinal cord injury”**
 Principal Investigator: A.G. Rabchevsky (1/15/09 – 1/14/12) 10%
 Agency: Kentucky Spinal Cord and Head Injury Research Trust
 Type: KSCHIRT Research Grant #8-13 Total costs: \$298,848
4. **“University of Kentucky Spinal Cord & Brain Injury Research Center Core Grant”**
 Principal Investigator: Edward D. Hall (05/01/10 – 04/30/15)
 Agency: National Institutes of Health-NINDS
 Type: 2P30 NS051220-06 Total costs: \$3,441,126
Core C Assistant Director: Alexander G. Rabchevsky 2.5%
 The Core C is designed to maintain state-of-the-art behavioral analysis apparatus for both SCI and TBI
Core D Assistant Director: Alexander G. Rabchevsky 2.5%
 The Core D is designed to maintain a state-of-the-art microscopy and imaging analysis core
5. **“Pathophysiology of sensory and sympathetic neurons in SCI-induced autonomic dysreflexia”**
 Principle Investigator: Jeffrey C. Petruska (01/15/11 – 01/14/14) 5%
 Co-Principle Investigator: A.G. Rabchevsky 5%
 Agency: Kentucky Spinal Cord and Head Injury Research Trust
 Type: KSCHIRT Research Grant #10-10 Total costs: \$300,000 (\$146,874 as Co-PI with U of Louisville subcontract)
6. **“Mitochondrial targeted interventions following contusion spinal cord injury”**
 Principal Investigator (Dual-PIs): A.G. Rabchevsky (06/15/11 – 04/30/15) 30%
 Principal Investigator (Dual-PIs): P.G. Sullivan 20%
 Agency: National Institutes of Health-NINDS (R01)
 Type: R01 (NS069633) Total costs: \$1,299,376
7. **“Mitochondrial-targeted neuroprotection following spinal cord injury”**
 Principal Investigator: A.G. Rabchevsky (09/01/11 – 08/31/13) 8%
 Agency: Craig H. Neilsen Foundation
 Type: Neilsen Research Grant #190115 Total costs: \$274,964

PAST FUNDING

1. **“Role of intraspinal plasticity in autonomic dysreflexia”**
Principal Investigator: A.G. Rabchevsky (8/2/04 – 4/30/09) Note: Two-year non-cost extension
Agency: NIH-NINDS
Type: R01 (NS049901) Total costs: \$1,703,155
2. **“Intraspinal plasticity contributing to autonomic dysreflexia following SCI”**
Principal Investigator: Hanad Duale (01/01/08 – 12/31/09)
Sponsor: A.G. Rabchevsky
Agency: Paralyzed Veterans of America Research Foundation
Type: Fellowship Grant # 2561 Total costs: \$98,820
3. **“Influence of neurotrophins on intraspinal plasticity modulating autonomic dysreflexia”**
Principal Investigator: A.G. Rabchevsky (01/15/04 – 10/14/07)
Agency: Kentucky Spinal Cord and Head Injury Research Trust
Type: KSCHIRT Research Grant #3-11 Total costs: \$297,000
4. **“Transplantation of glial progenitor cells derived from human embryonic stem cells into the injured rat spinal cord”**
Principal Investigator: A.G. Rabchevsky (01/31/04 – 09/30/05)
Agency: Geron Corporation, Menlo Park, CA
Type: Contract Total costs: \$99,730
5. **“Growth factor-mediated gene therapy for spinal cord injury”**
Principal Investigator: A.G. Rabchevsky (11/01/03 – 10/31/04)
Agency: American Paraplegia Society
Type: Seed Grant (#908) Total costs: \$16,800
6. **“Gene therapy to improve remyelination and function after spinal cord injury”**
Principal Investigator: A.G. Rabchevsky (07/15/03 – 06/30/04)
Agency: University of Kentucky
Type: Medical Center Research Foundation Grant (#1051) Total costs: \$13,500
7. **“Mechanisms of autonomic dysreflexia following spinal cord injury”**
Principal Investigator: A.G. Rabchevsky (07/12/02 – 06/11/05)
Agency: International Spinal Research Trust, UK
Type: ISRT Research Grant #STR063 Total costs: \$213,705
8. **“Combinational therapies for recovery after spinal cord injury: steroids and growth factors”**
Principal Investigator: A.G. Rabchevsky (01/12/00 – 01/13/03)
Agency: Kentucky Spinal Cord and Head Injury Research Trust
Type: KSCHIRT Research Grant #9-17 Total costs: \$299,247