

Russell W. Lake
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Education

Doctor of Medicine May 2007
Medical University of South Carolina (MUSC)
Charleston, SC

Bachelor of Science: Biology with Psychology minor May 2001
College of Charleston (CofC)
Charleston, SC

Scholarships and Fellowships

U. S. Army Health Professions Scholarship, MUSC, 2003-2007
Balfour Fellowship, Sigma Chi Fraternity, MUSC, 2003-2004
Presidential Honors Scholarship, CofC, 1997-2001
SC Palmetto Fellows Scholarship, CofC, 1997-2001

Honors and Awards

Balfour Award for Most Outstanding Senior Sigma Chi in SC, CofC, 2001
Greek Man of the Year, CofC, 2001
Order of Omega Greek Honor Society, CofC, 1999
Sigma Chi Horizons Leadership Institute, Snowbird, UT, CofC, 1998
Alpha Epsilon Delta Premedical Honor Society, CofC, 1998

Professional Publications and Presentations

Journal Publications (4)

MS Bowers, K McFarland, **RW Lake**, YK Peterson, CC Lapish, ML Gregory, SM Lanier and PW Kalivas. Activator of G-protein Signaling 3: A gatekeeper of cocaine sensitization and drug seeking. 2004. *Neuron* 42(2): 269-281.

MB Ghasemzadeh, LK Permenter, **RW Lake**, PF Worley and PW Kalivas. Homer1 proteins and AMPA receptors regulate cocaine-induced behavioural plasticity. 2003. *European Journal of Neuroscience* 18(6): 1645-51.

DA Baker, K McFarland, **RW Lake**, H Shen, X-C Tang, S Toda and PW Kalivas. 2003. Neuroadaptations in cystine-glutamate exchange underlie cocaine addiction relapse. *Nature Neuroscience* 6(7):743-749.

Z-X Xi, H Shen, **RW Lake**, S Ramamoorthy, D Samuvel and PW Kalivas. 2003. GABA Transmission in the Nucleus Accumbens Is Altered after Withdrawal from Repeated Cocaine. *Journal of Neuroscience* 23(8):3498 –3505.

Published Abstracts (11)

DA Baker, K McFarland, **RW Lake**, H Shen, S Toda, PW Kalivas. N-Acetyl Cysteine-Induced Blockade of Cocaine-Induced Reinstatement. *Ann. N.Y. Acad. Sci.* 2003 1003(1): p. 349-351.

MS Bowers, **RW Lake**, K McFarland, YK Peterson, SM Lanier, CC Lapish, PW Kalivas. AGS3: A G-Protein Regulator of Addiction-Associated Behaviors. *Ann. N.Y. Acad. Sci.* 2003 1003(1): p. 356-357.

MB Ghasemzadeh, LK Permenter, **RW Lake**, PW Kalivas. Nucleus Accumbens Homer Proteins Regulate Behavioral Sensitization to Cocaine. *Ann. N.Y. Acad. Sci.* 2003 1003(1): p. 395-397.

MS Bowers, **RW Lake**, S Rubinchik, J-Y Dong, PW Kalivas. Elucidation of Homer 1a Function in the Nucleus Accumbens Using Adenovirus Gene Transfer Technology. *Ann. N.Y. Acad. Sci.* 2003 1003(1): p. 419-421.

MS Bowers, K McFarland, **RW Lake**, CC Lapish, SM Lanier, PW Kalivas. Activator of G-Protein Signaling 3: A Cocaine Addiction Gatekeeper. *2003 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2003.* Online.

XC Tang, K McFarland, **RW Lake**, PW Kalivas. Blockade Of Mu-Opioid Receptors in the Ventral Pallidum Prevents Cocaine-Primed Reinstatement. *2003 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2003.* Online.

Z-X Xi, H. Shen, **RW Lake**, PW Kalivas. Chronic cocaine produces enduring alterations in the basal GABA release and the function of GABA_B receptors. Program No. 897.3. *2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2002.* Online.

MS Bowers, CC Lapish, **RW Lake**, K McFarland, SM Lanier, PW Kalivas. AGS3 regulates cocaine seeking and behavioral sensitization following extended withdrawal. Program No. 500.4. *2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2002.* Online.

MB Ghasemzadeh, LK Permenter, KE McChesney, **RW Lake**, PW Kalivas. Nucleus accumbens Homer proteins regulate behavioral sensitization to cocaine through control of Glur1 expression. Program No. 500.1. *2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2002.* Online.

MB Ghasemzadeh, LK Permenter, KM McChesney, **RW Lake**, PF Worley, and PW Kalivas. 2002. Homer proteins and cocaine mediated behavioral plasticity. *Neuropharmacology*, 43 (2): 273 – 318. Presented at the 4th International Meeting on Metabotropic Glutamate Receptors.

MS Bowers, **RW Lake**, CC Lapish, K McFarland, SM Lanier, and PW Kalivas. 2002. Cocaine Regulates Behavioral Sensitization and Drug Seeking via Cortical AGS3 Coupling to Gi α . *Neuropharmacology*, 43 (2): 273 – 318. Presented at the 4th International Meeting on Metabotropic Glutamate Receptors.

Posters (2)

MS Bowers, **RW Lake***, S Rubinchik, J-Y Dong, and PW Kalivas. Elucidation of Homer 1a function in the nucleus accumbens utilizing adenovirus gene transfer technology, New York Academy of Science Glutamate and Disorders of Cognition and Motivation Conference, April 14, 2003. (* presenting author)

RW Lake, K McFarland and PW Kalivas. Neural control of cocaine-induced reinstatement, College of Charleston Student Research Day, April 2001; Bachelor's Essay submitted to Honors Program, April 2001.

Related Work Experience

Instructor & Private Tutor – MCAT, GRE, GMAT

Kaplan Test Prep and Admissions, Oct. 2002 – present

Research Specialist I

Department of Physiology and Neuroscience

Medical University of South Carolina, Charleston, SC, June 2001 – Aug. 2003

- Managed research laboratory
- Assisted principle investigator and post-doctoral fellows with experiments

Lab Assistant

Department of Biology, College of Charleston, Charleston, SC, Jan. – May 2000

- Set up experiments for three weekly molecular biology labs
- Performed pre- and post-lab experiments

Volunteer service

C.A.R.E.S. Clinic, Mount Pleasant, SC, MUSC, 2005 – present

Crisis Ministries, Charleston, SC, MUSC, 2005 - present

Windwood Farm Home for Children, Awendaw, SC, MUSC, 2004

Student National Medical Association Web site design, MUSC, 2003

American Medical Student Association Buddy Program, MUSC, 2003-2005

College of Charleston First Responder Unit, 1200+ hours, CofC, 1998-2001

Activities

Military Medicine Interest Group, MUSC, 2004 – present

Founded and led

American Medical Student Association Sugar-free Fall Festival, MUSC, 2003 – 2004

Anatomical Gift Memorial Service Committee, MUSC, Sept. 2003 – Dec. 2003

Student Council Webmaster, MUSC, Sept. 2003 – present

Sigma Chi Fraternity, Post-baccalaureate and MUSC, May 2001 – May 2005

President of the Charleston, SC, Alumni Chapter, Chapter Advisor at the College of Charleston

College of Charleston Emergency First Responder Unit, CofC, Sept. 1998 – Nov. 2001

- Chief of Training and Staff Development/Interim Chief of Operations
- Also served as Crew Chief, Shift Lieutenant, and Captain
- 1200+ volunteer hours over three academic years

Sigma Chi Fraternity, CofC, Sept. 1997 – May 2001

President, Treasurer, Risk Management Chairman, Philanthropy Co-chairman, Judicial Board member and Webmaster

Other Work Experience

Office Assistant

American Pensions, Inc., Mount Pleasant, SC, Sept. 1998 – May 2001

- Assistant to owner
- Coordinated mailroom and office supplies

Professional Organizations

American Medical Association

American Medical Student Association

American Academy of Family Physicians (Student Member)

Charleston County Medical Society (Webmaster)

Hobbies and Interests

Web design: www.rwlakewebdesigns.com

Mountain and road cycling, running

Braves baseball and USC Gamecock sports

Toyota Territory Off-Roaders Association