

Jeff Radel, PhD

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Work Address: MSN 4016 (1018 Smith East)
Dept. of Occupational Therapy Education
School of Allied Health
University of Kansas Medical Center
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Curriculum Vitae

Education and Training

Post-doctoral training	1987 - 1992
Dept. of Neurobiology, Anatomy and Cell Science University of Pittsburgh, Pittsburgh, PA	
Doctoral degree	1982 - 1987
Ph.D. (Experimental Psychology/Neuroscience) – Dept. of Psychology, Dalhousie University, Halifax, Nova Scotia, Canada	
Master's degree	1980 - 1982
M.A (Experimental Psychology/Neuroscience) – Dept. of Psychology, Dalhousie University, Halifax, Nova Scotia, Canada	
Baccalaureate degree	1975 - 1979
B.A. (Psychobiology) with honors – Dept. Psychology, Oberlin College, Oberlin, OH	

Positions

Associate Professor (primary appointment)	1999 - present
Dept. Occupational Therapy Education, School of Allied Health, Univ. Kansas Medical Center	
Associate Professor (joint appointment)	1993 - present
Dept. Molecular & Integrative Physiology, School of Medicine, Univ. Kansas Medical Center	
Associate Professor (joint appointment)	2010 - present
Dept. Ophthalmology, School of Medicine, Univ. Kansas Medical Center	
Key Investigator	1994 - present
Kansas Intellectual and Developmental Disabilities Research Center, Univ. Kansas Medical Center	
Assistant Professor	1992 - 1999
Dept. Occupational Therapy Education, School of Allied Health, Univ. Kansas Medical Center	
Affiliate Member	1992 - 1994
R.L. Smith Human Development and Mental Retardation Research Center, Univ. Kansas Medical Center	

Professional Activities

Teaching

Teaching Awards

Joyce Jones Award for Excellence in Teaching (Student nominated award)	2000 & 2001
Dept. Occupational Therapy Education, SAH, KUMC	

Current courses – Occupational Therapy curriculum

<i>Context of Occupations</i> (OCTH 445)	2004 - present
Instructor (graduate entry-level professional program; 3 credits) Occupational Therapy Education, School of Allied Health, KUMC http://www.kumc.edu/SAH/OTEd/OCTH445	
<i>Neuroscience Analysis of Occupational Performance</i> (OCTH 455)	2001 - present
Instructor (graduate entry-level professional program; 3 credits) Occupational Therapy Education, School of Allied Health, KUMC http://www.kumc.edu/SAH/OTEd/OTPT_Neuro	
<i>Professional Writing and Research Practicum</i> (OCTH 790)	2003 - present
Instructor; project coordinator (graduate entry-level professional program; 3 credits) Occupational Therapy Education, School of Allied Health, KUMC http://www.kumc.edu/SAH/OTEd/OCTH790	
<i>Neuroscience</i> (PTRS 850)	2005 - present
Instructor (clinical doctorate program; 4 credits) Dept. Physical Therapy & Rehab. Sciences, School of Allied Health, KUMC http://www.kumc.edu/SAH/OTEd/OTPT_Neuro	
<i>Effective Communication in Scientific and Academic Settings</i> (PHSL 896)	1997 - present
Seminar director (graduate & post-graduate; 1 credit) Interdisciplinary Graduate Program in Biological Sciences, School of Medicine, KUMC http://www.kumc.edu/SAH/OTEd/jradel/PHSL896	

Past courses

<i>The Research Process</i> (OCTH 725)	2003 - 2008
<i>Graduate Proseminar</i> (OTMS 800/TS 800)	2003 - 2007
<i>The Ecology of Human Performance</i> (OCTH 445)	2001 - 2004
<i>Clinical Physical Conditions</i> (OT 400)	1999 - 2000
<i>Activities Analysis</i> (OT 405)	1995 - 1998
<i>Effective Communication in Academic Settings</i> (PHSL 851)	1994 - 1996
<i>Seminar in Research Design and Analysis</i> (OCTH 890)	1994 - 1995
<i>Applied Neuroscience</i> (OTMS 801)	1992 - 2004
<i>Applied Neurology</i> (OT 365)	1992 - 2000
<i>Methods in Experimental Psychology</i> (PSY 2000)	1983 - 1986
<i>Physiological Psychology</i> (PSY 3000)	1980 - 1983

Other Teaching

<i>"The Brain and the Big Screen: Practitioners, Producers, and Neuroscience"</i>	2000 - present
Continuing Education workshop (6 hrs) for health professionals, presenting fundamental concepts of the neurosciences in the context of clinical application. Examples from the entertainment industry are used to illustrate integration of neural systems, drug action in the CNS, substrates of mental health, and functional impairment related to CNS development, vascular compromise, and trauma. Between 3 and 5	

- workshops per year, typically with 100 – 150 participants attending each workshop. (<http://www.pepseminars.com>)
- "Rehabilitation of Central-Nervous System Injuries: Evidence-based Approaches"* 2008
Workshop presented at the 88th Annual AOTA Conference.
- "Turing Your Good Science into an Effective Presentation"* 2003 & 2008
Invited seminar for trainees and staff at the Stower's Institute of Kansas City; a discussion of strategies for formulating talks and presenting information in accessible formats suitable for scientific and other professional settings.
- "Brain development and omega-3 fatty acids"* 2007
Workshop for district educational support professionals on the role of dietary fatty acids in relation to neural function, cognition, and behavior. Teachers, therapists, and staff of Less' Summit School District.
- "Clinical insights, practical neuroscience – Pediatric practice and the brain"* 2007
Workshop for regional health care professionals working with pediatric populations, focusing on brain development and how interventions may influence functional capacity. Kansas City Pediatric Alliance.
- "Neuroanatomy of Stroke"* 2007
Workshop for healthcare professionals sponsored by the Bi-State Stroke Education Consortium, Providence Medical Center, and the American Stroke Association.
- "Scientific Presentations – the Why and the How"* 2004 & 2005
Invited lecture to fellows participating in the Vietnam Education Foundation trainee program. Hosted by the National Academies of Science, this seminar summarized strategies for presenting information in accessible formats suitable for scientific and other professional settings.
- Vision and the Brain – There's more than Meeting the Eyes!* 1999 – 2005
Annual presentations made to elementary school students; internal structure of the eye, optics & corrective lenses, color vision, the brain & vision, perception, and illusions. Typically 60 – 80 5th grade students.
- "Humpty Dumpty Should have Worn a Helmet!"* 1998 - 2005
Brain Awareness Week - Annual presentations made to elementary school students; brain structure, brain function, communication, and preventing head injuries. Indian Woods Elementary, Pembroke Hill Lower School, Prairie Village Elementary, Rushton Elementary; typically 30 – 60 4th & 5th grade students per school.
- "The Plight of the Scarecrow: CNS correlates of functional capacity."* 1996
Workshop on applied neurology at Kansas Occupational Therapy Association annual meeting; video clips from the movie "The Wizard of Oz" were used to illustrate neurological considerations relating to function and dysfunction, and to suggest that an individual with neurological impairment sufficient to produce clinically apparent dysfunction may nonetheless be capable of a living a productive lifestyle with sufficient environmental supports and insightful application of interventions.

Innovations in Teaching

1. *Animal Care & Use on-line training program*

An important aspect of an Institutional Animal Care & Use Committee's responsibilities is to facilitate education and training of investigators and other laboratory personnel in any procedures that involve living animals. I played an integral role in developing on-line training materials and testing modules to improve the effectiveness of individualized training, and to facilitate communication among investigators and Animal Support personnel. Developed in 1997, the training and assessment materials initially were disseminated by the IACUC. Later versions were incorporated into the CHALK training programs as part of compliance training required of all KUMC investigators annually.

2. *Interactive On-line Tutorials for Teaching Clinical Neuroscience*

I have developed and continue to refine a series of tutorials and supplemental materials used to teach Allied Health undergraduate and graduate students the fundamentals of Neuroscience with a strong emphasis on clinical application and strength-based intervention. Anatomy and nomenclature are presented in a manner approachable by novices, and the functional attributes and integrated relations among structures are illustrated through case studies and video examples. The final section of the class (cortical function) uses components of these tutorial materials to construct a top-down conceptual understanding of functional performance in typical individuals and in those with developmental or acquired disability. These materials are available through the ANGEL instructional portal to students enrolled in these courses, and to all users at the KU Medical Center, KU-Edward's, and KU-Lawrence campuses:

http://www.kumc.edu/SAH/OTEd/OTPT_Neuro/

- *Development of the Central Nervous System*
- *The Hypothalamus and Autonomic Nervous System*
- *Spinal cord anatomy and function*
- *Brain stem & cranial nerves*
- *Thalamus & internal capsule*
- *Basal ganglia*
- *Cerebellum*
- *Motor cortex & voluntary movements*

3. *Aids to Facilitate Scientific Communication*

I developed this set of three on-line computer tutorials to introduce graduate students to essential concepts necessary for effective scientific communication, and to provide more experienced users with a readily available reference tool. The tutorials are written in clear language, with integrated graphics to illustrate specific points. Practical hints and suggestions are provided throughout. Since being placed in the public domain in 1994 these materials have been used internationally by students, faculty, professional associations, non-profit organizations, and federal agencies. I frequently am invited to provide instructional workshops on this topic. These tutorials may be accessed at: <http://www.kumc.edu/SAH/OTEd/jradel/effective.html>

- *Formulating an oral presentation.* Provides guidance in producing an informative, streamlined, and focused oral presentation. Specific attention is given to presentation venues common for the novice and student; conferences, seminars, dissertations, and job interviews.
- *Designing effective visuals.* Provides guidance in the preparation of visual aids to be used in a scientific or academic presentation, with an emphasis on slide presentations.

- *Preparing a poster presentation.* Provides novices with guidance in the design, assembly, and presentation of scientific materials using a poster format.

4. *Program Evaluation materials*

A professional training program such as that offered by the Occupational Therapy Education Department is required to undergo periodic accreditation evaluations. A critical aspect of such an accreditation is documentation of the academic and practical skills acquired by the students in our entry-level program. I was responsible for developing a series of surveys in an on-line format. One series is used by students for end-of-term evaluations of courses and faculty, a second series is used by students for self-reflection and evaluation of their performance during each of their 3-month long Level-II Fieldwork experiences, a third series is used by recent graduates and by their employers to evaluate the quality and utility of the academic content provided by our programs, and the fourth series evaluates the student's perspective on their practical experiences. The latter series were developed in concert with three other nationally recognized OT programs, resulting in a database that will inform the OT profession about practice of OT in community-based settings, and the role of evidence-based practice in these settings. The database for all four programs is hosted and managed at KUMC under my guidance.

Research

Funding:

Federal funding:

<i>"Tracking older adult's eye movements while reading"</i>	10/2002 - 09/2006
S. Kemper (P.I.), J. McDowd & J. Radel (Co-invest)	
N.I.H. National Institute on Aging R-01 award (AG 18892)	
<i>"Transplanted retinæ: Functional integration & efficacy"</i>	04/1994 - 03/1999
J. Radel, P.I.	
N.I.H National Eye Institute R-29 (FIRST) award (EY 10603)	
<i>"Retinal transplants: Formation of tectal connections"</i>	02/1987 - 01/1990
J. Radel, P.I. (Sponsor: Raymond D. Lund, Ph.D.)	
N.I.H. National Eye Institute NRSA fellowship (EY 05962)	

Other funding:

<i>"Characterization of pupillary Responses to Assess Diabetic Autonomic neuropathy"</i>	06/2010 - 05/2011
J. Radel (P.I.) Kansas Lion's Sight Foundation	
<i>"Do dietary components influence the severity of oxygen-induced vascular pathology in newborn rat retina"</i>	03/2006 - 09/2008
T. Raghuvver (P.I.) and J. Radel (Co-invest.)	
KUMC School of Medicine (bridging funds)	
<i>"Collection and analysis of evoked potential response neurological assessment data in canines"</i>	12/2005 - 12/2006
J. Radel (P.I.) IAMS Company (Procter & Gamble)	
<i>"Factors contributing to severity of retinal vascular pathogenesis studied in animal models"</i>	04/2004 - 03/2005
J. Radel (P.I.) and T. Raghuvver (Co-invest.) Kansas Lion's Sight Foundation	
<i>"Influence of Altered DHA Level on Mature Brain Function"</i>	03/2003 - 02/2004
J. Radel (P.I.), B. Levant and S. Carlson (Co-invest.) Lied Basic Science grant	
<i>"Examining Visual Scanning in People with Schizophrenia: Implications for Daily Life."</i>	07/2001 - 06/2002
M. Rempfer (P.I.) T. Brown, J. McDowd, J. Radel and D. Filion (participating investigators)	
KUMC School of Allied Health (seed grant)	
<i>"Development of a Video-based System for Tracking Eye Position"</i>	01/2001 - 12/2001

- J. Radel (P.I.), T. Brown, R. Cromwell, D. Filion, E. Hamera, S. Kemper, J. McDowd, E. Penick, M. Rempfer, L. Richards, D. Richman, and W. Stiers (participating investigators)
KUMC Research Office (Shared Biomedical Equipment Grant)
- "Effects of Pigment Epithelium-derived factor (PEDF) on photoreceptor differentiation and viability in retinal transplants" J. Radel (P.I.) KUMC School of Allied Health seed grant 07/1999 - 06/2000
- "Tracking Older Adults' Eye Movements while Reading" 01/1999 - 12/1999
S. Kemper, J. Radel, & D. Filion (Co-investigators) KUMC Center on Aging and the C.D. Pepper Pilot Research Project
- "Quantification of eye movements to assess visual performance following rehabilitation training" 07/1996 - 06/1997
J. Radel (P.I.), Diane Filion, and Yolanda Cate (co-investigators) KUMC School of Allied Health (seed grant)
- "The rodent retina as a model of neurodevelopmental anomalies induced by prenatal exposure to ethanol" J. Radel (P.I.) KUMC School of Allied Health (seed grant) 01/1994 - 12/1994
- "Co-transplantation of retinal pigment epithelial cells with neural retinae: Implications for photoreceptor survival" J. Radel (P.I.) KUMC School of Allied Health (seed grant) 01/1993 - 12/1993
- "Correlates of cochlea transplantation in the avian auditory system: Anatomy & physiology" 01/1993 - 12/1993
M. Chertoff, J. Radel & D. Durham (Co-investigators) KUMC School of Allied Health (seed grant)

Seminars (since joining the KUMC faculty)

- "Effects of Diets that Reduce Brain DHA on Retinal Development" 2005
Clinical Nutrition Seminar "Docosahexaenoic Acid: A nutrient for optimal development of retina and brain." KUMC Dietetics & Nutrition Department.
- "Correlation of Altered Evoked Neural Activity at Maturity and Brain DHA Levels during Early Development: A Reversibility Study" 2003
Maternal and Infant LCPUFA Workshop, annual meeting of American Oil Chemists' Society.
- "Access to Fatty Acids during Early Development Influences Mature Brain Function" 2002
Graduate Neuroscience proseminar, KUMC/KU-Lawrence.
- "Food for Thought: Dietary Fatty Acid Intake During Development and Brain Activity at Maturity" 2002
Dept. Cognitive Psychology proseminar, KU-Lawrence.
- "Food for Thought: Dietary Fatty Acid Intake During Development and Brain Activity at Maturity" 2002
Institute for Child Development, KUMC.
- "Dietary Deficiency of Essential Fatty Acids During Development in Rats Influences Brain Function at Maturity" 2002
Dept. Molecular & Integrative Physiology Research seminar series, KUMC
- "Relation of Structure and Function in the Visual System: Different approaches for gaining insight into neurodevelopment" 2002
Dept. Occupational Therapy Education, graduate Research proseminar (OCTH 800), KUMC
- "Essential Fatty Acids and Early Brain Development" 2002
Dept. Dietetics & Nutrition, graduate Research proseminar (DN817), KUMC
- "Food for Thought: Fatty acid intake during development and brain activity at maturity" 2002
Institute for Child Development Research seminar series, KUMC
- "DHA Deficiency in Rats during Neurodevelopment and Functional Consequences after Maturity" 2002
Workshop for Harmonization Infant Assessment, Kansas City, KS
- "Your Eyes, Your Thoughts, and Your Age – Insights from reading" 2001
School of Allied Health Research Seminar series, KUMC
- "Cognition and Aging – Insights gained through analysis of eye movements" Center on Aging Research Seminar Series, KUMC

- "From Retina to Reading – A systems level approach to visual functions" 1998
Dept. Psychology, KU-Lawrence.
- "Retinal transplants as models of neural development, integration, and function" 1995
Neuroscience Program, Iowa State University, Ames, IA
- "Neural transplants, activity, and host behaviors: Enlightenment through the pupillary reflex" 1993
Somatix Therapy Corp., R & D Division, Alameda, CA.
- "Neural transplantation as a tool for experimental neurobiology" 1993
Department of Physiology, University of Kansas Medical Center.
- "Development and integration of transplanted retinæ with host brains" 1992
Department of Anatomy & Cell Biology and Smith Mental Retardation Research Center,
University of Kansas Medical Center.
- "Efficacy of neural transplantation: Functional interactions of the host visual system and transplanted retinæ" 1992
Department of Neurobiology & Anatomy and Center for Visual Science, University of Rochester
Medical School.

Membership in Professional Societies

- Association for Research in Vision and Ophthalmology (ARVO) 1991 – present
Society for Neuroscience 1982 – present

Publications

Articles: (peer-reviewed; most recent 5 years)

1. Levant, B., J.D. Radel, and S.E. Carlson. (2006) Reduced brain DHA content after a single reproductive cycle in female rats fed a diet deficient in n-3 polyunsaturated fatty acids. *Biol. Psych.*, **60**:987-90.
2. Dancause, N., M.D. Taylor, E.J. Plautz, J.D. Radel, T. Whittaker, R.J. Nudo and A.G. Feldman (2007) A stretch reflex in extraocular muscles of species purportedly lacking muscle spindles. *Exp. Br. Res.*, **180**:15-21. doi:10.1007/s00221-006-0833-8
3. Ahmad, S.O., J-H. Park, J.D. Radel, and B. Levant (2008) Reduced numbers of Dopamine neurons in the substantia nigra pars compacta and ventral tegmental area of rats fed an n-3 polyunsaturated fatty acid-deficient diet: A stereological study. *Neurosci Lett.*, **438**:303:307. doi:10.1016/j.neulet.2008.04.073
4. Döpp, C.M.E., E.M.J. Steultjens, and J. Radel (2009) Evidence-based practice among Dutch Occupational Therapists: Barriers, Perceptions, and Use of Resources. *Wetenschappelijk tijdschrift voor Ergotherapie*, **3**: 7-13.
5. Döpp C.M.E., Steultjens E.M.J., & Radel J. (2010) Evidence-Based Practice: Hoe de kwaliteit van ergotherapie in Nederland vergroot kan worden [*Evidence-Based Practice: How we can increase the quality of occupational therapy in the Netherlands*]. *Wetenschappelijk tijdschrift voor Ergotherapie*, **3**:23-26.
6. Wu, A.J., J. Radel, and B. Hanna-Pladdy (2011) Improved Function after Combined Physical and Mental Practice Following Stroke: A Case of Hemiparesis and Apraxia. *Amer. J. Occupational Therapy*, **65**(1): 161-168.

Submitted:

- O'Bryhim, B.E., H. Niu, J.D. Radel, and R.C. Symons. The genetic control of avascular area in mouse oxygen-induced retinopathy. *Invest. Ophthalmol. Vis. Sci.* (submitted May 2011).

Published abstracts: (most recent 5 years)

1. Radel, J.D., T. Raghuveer, and P. Mahtosh. (2005) Oxygen-induced Vascular Pathology and Dietary n-3 Fatty Acids in Developing Retina. *Invest. Ophthalmol. Vis. Sci.* **46**: E-Abstract 4123.
2. Radel, J.D., P. Mahtosh, and T. Raghuveer (2005) Dietary n-3 Fatty Acids Oxygen-induced Vascular Pathology as a Model for Retinopathy of Prematurity. *Pediatric Academic Societies E-PAS2005*:547.

3. Levant, Beth, Jeffrey D. Radel and Susan E. Carlson (2005) Reduced Brain Docosahexaenoic Acid Content After a Single Reproductive Cycle in Female Rats Maintained on a Diet Deficient in n-3 Polyunsaturated Fatty Acids. *Neuropsychopharmacology* 31(1): 22.
4. Radel, J.D., S.E. Carlson, and B. Levant (2005) Transmitter receptor binding in cortex altered by availability of dietary fatty acids during development. Program No. 956.11. 2005 Abstract Viewer/Itinerary Planner, Washington, DC: Society for Neuroscience, 2005. Online.
5. Taylor, M.D., N. Dancause, A.G. Feldman, J.D. Radel, D.E. Wright, and R.J. Nudo. (2005) Sensory receptors of the extraocular muscles in the squirrel monkey. Program No. 744.17. 2005 Abstract Viewer/Itinerary Planner, Washington, DC: Society for Neuroscience, 2005. Online.
6. Raghuvver, T. and J. Radel (2005) Do dietary omega-3 fatty acids and iron influence severity of oxygen-induced retinopathy in neonatal rat pups. *Society for Free Radical Biology and Medicine*; 12th annual meeting; session 12.
7. Raghuvver, T. and J. Radel (2006) Do dietary omega-3 fatty acids and iron influence severity of oxygen-induced retinopathy in neonatal rat pups? *Pediatric Academic Societies E-PAS2006*:3602.475.
8. Raghuvver, T., J. Radel, G. Blanco, M. Traber, M. Reddy, and J. Roberts (2007) The Impact of DHA and iron on retinal vitamin E, neuroprostanes, and Na⁺-K⁺ ATPase in a rat model of ROP. *Pediatric Academic Societies E-PAS2007*:8440.2.
9. Ahmad, S.O., J. Radel, and B. Levant (2008) Reduced numbers of dopamine neurons in the substantia nigra pars compacta and ventral tegmental area of rats fed an n-3 polyunsaturated fatty acid-deficient diet. Program No. 122.10. 2008 Abstract Viewer/Itinerary Planner, Washington, DC: Society for Neuroscience, 2008. Online.
10. Döpp, C.M.E., E.M.J. Steultjens, and J. Radel. Factors Influencing Evidence-Based Practice: An International Perspective. Program # RWP 466.2009, *American Occupational Therapy Association Annual Conference & Expo*, p. 200.
11. O'Bryhim, B.E., H. Niu, J.D. Radel, and R.C. Symons. The BALB/cByJ tyrosinase allele is linked to resistance to vaso-obliteration in the oxygen-induced retinopathy model. Tracking number: 10-A-2115-ARVO, *Association for Research in Vision and Ophthalmology* annual meeting, Spring 2010.

Student Research

Graduate faculty, School of Allied Health, KUMC	1993 – present
Graduate faculty, School of Medicine, KUMC	1995 – present
Graduate faculty, KU-Lawrence	1998 – present

Master's Thesis committee member:

Completed

1994	Stephanie Dustman, M.S., OTR, Dept. Occup. Therapy Ed., KUMC
1995	Barb Kemmis, M.S., Dept. Occup. Therapy Ed., KUMC
	Mary Kientz, M.S., Dept. Occup. Therapy Ed., KUMC
1996	Teresa Franzen, Dept. Occup. Therapy Ed., KUMC
	Donna Bennett, Dept. Occup. Therapy Ed., KUMC
	Kelly Long, Dept. Occup. Therapy Ed., KUMC
1998	Yolanda Cate, Dept. Occup. Therapy Ed., KUMC
	Christine Wise, Dept. Occup. Therapy Ed., KUMC
	Kelly Humpherys, Dept. Mol. & Integ. Physiology, KUMC
2001	Heather Humphrey, Dept. Exp. Psychology, KU-Lawrence
	Chiung-ju Liu, Dept. Occup. Therapy Ed., KUMC
2007	Becky Bothwell, Dept. Psychology, KU-Lawrence
2008	Natalie Brown, Dept. Occup. Therapy Ed., KUMC
2009	Carola Döpp* (<i>MS in OT with Honors</i>), Dept. Occup. Therapy Ed., KUMC
2010	Ala'a Jaber, Dept. Occup. Therapy Ed., KUMC

Noor Ismael, Dept. Occup. Therapy Ed., KUMC
 Areum Han, Dept. Occup. Therapy Ed., KUMC

In Progress:

Dissertation committee member:

Completed

1998 Brian McKiernan, Dept. Mol. & Integ. Physiology, KUMC
 2000 Elena Zoubina, Dept. Mol. & Integ. Physiology, KUMC
 2001 Jena Steinle, Dept. Mol. & Integ. Physiology, KUMC
 Adam Buhman-Wiggs, Dept. Clinical Psychology, KU-Lawrence
 Tracy Mitzner, Dept. Exp. Psychology, KU-Lawrence
 2002 Michael Park, Dept. Mol. & Integ. Physiology, KUMC
 Kathleen Friel, Dept. Mol. & Integ. Physiology, KUMC
 2003 Don Warn, Dept. Mol. & Integ. Physiology, KUMC
 2005 Numa Dancause, Dept. Mol. & Integ. Physiology, KUMC
 2005 Seok Hun Kim, Dept. Physical Therapy and Rehab. Sciences, KUMC
 2006 Emmanuel John, Dept. Physical Therapy and Rehab. Sciences, KUMC
 Kevin McIntire, Dept. Physical Therapy and Rehab. Sciences, KUMC
 Mukul Mukherjee, Dept. Physical Therapy and Rehab. Sciences, KUMC
 2008 Jeannine Goetz*, Dept. Occup. Therapy, KUMC
 Catherine Siengsukon, Dept. Physical Therapy and Rehab. Sciences, KUMC
 Eric Vidoni, Dept. Physical Therapy and Rehab. Sciences, KUMC
 2009 Ben Tseng, Dept. Physical Therapy and Rehab. Sciences, KUMC
 Kendra Gagnon, Dept. Physical Therapy and Rehab. Sciences, KUMC
 2010 Ji-Hyuk Park, Dept. Occup. Therapy, KUMC
 Nancy Spangler*, Dept. Occup. Therapy, KUMC

In progress:

Bliss O'Bryhim, Dept. Mol. & Integ. Physiology, KUMC
 Andy Wu*, Dept. Occup. Therapy, KUMC
 Jason Rucker, Dept. Physical Therapy and Rehab. Sciences, KUMC
 Rupali Rupali, Dept. Physical Therapy and Rehab. Sciences, KUMC
 David Guggenmos, Dept. Mol. & Integ. Physiology, KUMC

Comprehensive Exam committee member:

2010 Bliss O'Bryhim, Dept. Mol. & Integ. Physiology, KUMC
 Bryan Bond, Dept. Physical Therapy and Rehab. Sciences, KUMC
 2009 Andy Wu*, Dept. Occup. Therapy, KUMC
 David Guggenmos, Dept. Mol. & Integ. Physiology, KUMC
 2008 Nancy Spangler*, Dept. Occup. Therapy Education, KUMC
 2007 Ji-Hyuk Park, Dept. Occup. Therapy Education, KUMC
 Jeannine Goetz, Dept. Occup. Therapy Education, KUMC
 2006 Ben Tseng, Dept. Physical Therapy and Rehab. Sciences, KUMC
 Kendra Gagnon, Dept. Physical Therapy and Rehab. Sciences, KUMC

2005	Kevin McIntire, Dept. Physical Therapy & Rehab. Sciences, KUMC
	Mukul Mukherjee, Dept. Physical Therapy & Rehab. Sciences, KUMC
	Catherine Siengsukon, Dept. Physical Therapy & Rehab. Sciences, KUMC
2002	Numa Dancause, Dept. Mol. & Integ. Physiology, KUMC
1999	Jenna Steinle, Dept. Mol. & Integ. Physiology, KUMC
	Elena Zoubina, Dept. Mol. & Integ. Physiology, KUMC
1997	Katherine Friel, Dept. Mol. & Integ. Physiology, KUMC
	Leigh Raymond, Dept. Mol. & Integ. Physiology, KUMC
1995	Don Warn, Dept. Mol. & Integ. Physiology, KUMC
1994	Kelly Humpherys, Dept. Physiology, KUMC
1994	Lynette Sheffield, Dept. Anatomy, KUMC

* J. Radel, advisor

Service

Service on committees:

University

2010 – present	Institutional Animal Care and Use Committee (alternate member)
2009 – 2012	Faculty Assembly – Faculty Concerns (Chair 2009 & 2010)
2009	Faculty Grievance Review committee on Academic Freedom
2008 – 2009	KUMC Budgetary Advisory Committee
2003 – present	Graduate Council
2003 – 2010	Laboratory Animal Resources Advisory Committee
2002 – 2010	Institutional Animal Care and Use Committee
2003 – 2005	Faculty Assembly Steering Committee (Chair; elected member)
2003 – 2005	Faculty Assembly representative to Kansas Board of Regents
2003 – 2004	KU-Research Institute Research Committee (Chair)
1998 – 2004	KU Research Institute Board member
1998 – 2002	KUMC Research Compliance Committee, Basic Science Ombudsman
1996 – 1998	Institutional Animal Care and Use Committee (Chair)
1994 – 1996	Institutional Animal Care and Use Committee
1993 – present	Graduate Faculty of KU/KUMC

School of Allied Health

2006 – 2009	Appointment, Promotions & Tenure committee (Chair)
2002 – 2006	Appointment, Promotions & Tenure committee
2002	School of Allied Health Dean's Performance Review committee
2000 – 2003	Steering committee (elected member; Chair 2001-2003)
2000 – present	Interdisciplinary Collaboration committee
1997 – 1998	Academic Affairs committee (Chair)
1997 – 1998	Steering committee
1996 – 1997	Academic Affairs committee
1995 – present	Committee on Computer Information
1993	Task Force on Teaching Titles

Department of Occupational Therapy Education

2010	Student Reinstatement Review Committee
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2007 – present	Program manager for admissions, Therapeutic Science program
2003 – present	Director of Graduate Studies
2000 – 2003	Curriculum Committee
1999 – present	Program Evaluation Committee (Chair)
1994 – 1999	Curriculum Committee

Other

2006 – 2008	Center of Excellence expert review panel, Rehabilitation Research and Development Service, Department of Veterans Affairs (reviewer)
2010	Textbook Review “The Ultimate Guide to Presenting Science” (Elsevier)

Perspectives on Teaching: A student’s job is to learn, but a teacher’s profession is that of being an educator. As part of my graduate course on making effective presentations, I once calculated how many hours a graduate student has spent in a classroom by the time that student has reached graduate school. Despite the number (>17000 hours!), my students often hesitate and then have to think carefully about what qualities are shared by good instructors. So do many of my faculty colleagues when asked the same question, even though faculty have the added benefit of more years in the classroom on both sides of the podium. There is no one right answer, but I believe useful and effective strategies include making the content interesting to students, making it challenging enough for students to experience success after expending some effort, involving students in the process of learning, and allowing students to explore areas of personal interest.

I also value two additional strategies that require insight and experience to apply appropriately. One is to allow students to make errors, but then to provide directed feedback and then give these students opportunities to re-address their mistakes successfully. A second under-utilized strategy is to begin preparing for teaching by determining the essential information, the useful information, and the information that may be interesting but not directly relevant to the students’ learning. Students must understand the essential information and be aware of useful information to learn fundamentals, and these categories of information must be conveyed by the course. A good educator recognizes that understanding and mastering more esoteric information may take place at a later stage in the learning process, with student success enhanced through prior proficiency with essential knowledge, greater motivation to learn the topic, and confidence bolstered by past success. A faculty member’s teaching responsibilities should be viewed as a privilege rather than an obligation and should be approached with enthusiasm and insight. The outcome, in turn, should be gauged by the degree of student insight and success.

Perspectives on Research: My primary research efforts address neural plasticity and function by investigating how anatomic relations and functional capacities of the visual system are altered after perturbations during development or through disease. Determining how neural information from multiple sources is integrated, how functional behaviors are influenced by patterns of integration, and how neural processing may be enhanced are factors fundamental to understanding neural development, and for developing useful therapeutic interventions. Rather than focusing on a single component of visual function, I have explored vision as a neural system, with studies ranging from photoreceptor biology in the retina, to formation of visual synapses centrally, to output motor control of eye movements, to cognitive processing of visual information. Current studies include exploring the role of fatty acids in retinal and cortical function in rats, and neural control of the iris as an index of autonomic cardiac neuropathy in diabetic humans.

As an extension of my expertise in teaching clinical neuroscience course work, I have initiated development of a regional database for head injuries in high school athletes. Although the latter project presently is unfunded, it has emerged as an integral part of the 2011 Football Ambassadors for Sports and Training (F.A.S.T.) education initiative of the Missouri Football Coaches Association. This project has attracted active collaborations with a number of KU Medical Center faculty having interests in trauma medicine, concussion, and sports-related

injuries, and promises to be a fertile resource for future investigations. This project also will be a topical means of introducing applied research to graduate students and other trainees who have a clinical emphasis.

Perspectives on Service: Throughout graduate school and as a faculty member, I consistently have worked to maintain a balance between my achievements related to research, those related to educating students, and those in which I play an active role in the academic community. Committee activities seldom are glamorous, can be arduous, and occasionally are inconvenient – but these activities also are integral components in maintaining a dynamic and forward-looking academic environment. My preferred approaches are to be efficient in conducting committee business, and to encourage a focus on the tasks required of each committee. I also have found that inviting and then listening to views offered by committee members is an effective strategy, as is a light dose of levity when discussions become contentious or prolonged. I firmly believe that faculty and administration must be mutually respectful while also offering thoughtful and constructive critiques of issues at hand.
