Simon Kaja, Ph.D.
8570 N Hickory St. Apt. 412
Kansas City, MO 64155

(Permanent Resident in the United States)
Telephone: +1 (682) 234-4763
Email: simon@simonkaja.com

Summary:
Highly motivated, dedicated and experienced neuroscientist with experience in both pharmaceutical/biotech industry and academia offering his research and leadership expertise to participate in and lead collaborative projects that drive innovation and discovery by translating basic research into novel medical applications and solutions.

Achievements:
- 22 peer-reviewed original research publications, incl. in Neuron and Annals of Neurology;
- 24 invited lectures (national and international);
- <50 conference abstracts at international medical and scientific conferences;
- 4 taught courses at international medical and scientific conferences;
- multiple national and international research grants, awards and fellowships;
- significant experience in pharmaceutical industry and academia.

Current position:
Assistant Professor, Departments of Ophthalmology and Basic Medical Science
Associate Director Preclinical Research; Vision Research Center.
Adjunct Doctoral Faculty, University of Missouri – Kansas City

Research Interest:
- Neuroprotection approaches for neurodegenerative diseases of the eye and brain;
- Cognitive and neuromuscular function during aging and neurodegenerative disease;
- Focus diseases: Alzheimer's disease, ischemic stroke, migraine, cerebellar ataxia

Key methodological expertise:
Molecular biology; cell biology; biochemistry; electrophysiology; laboratory animals and behavioral paradigms; high-resolution quantitative imaging; HTS drug screening platforms.

Education:
- 2002-2006: Doctor of Philosophy (Ph.D.)
  Neuroscience; Faculty of Medicine, University of Leiden, Leiden, The Netherlands
- 1998-2002: B.Sc. (Hons.) (Dunelm) with First Class Honours
  Molecular Biology and Biochemistry with Industrial Placement,
  School of Biological and Biomedical Sciences, University of Durham, Durham, UK

Previous research positions:
- 10/2008 – 12/2008: Research Scientist
  University of North Texas Health Science Center at Fort Worth, Fort Worth, TX
  Department of Pharmacology and Neuroscience
- 07/2008 - 10/2008: Research Scientist II, Neuroscience Consultant
  Neurosearch A/S, Ballerup, Denmark; Department of Behavioral Pharmacology II
- 2006-2008: Senior Research Associate
  Laboratory Professor T.P. Snutch, Michael Smith Laboratories, The University of British Columbia, Vancouver, BC, Canada and Neuromed Pharmaceuticals, Vancouver, BC, Canada
- 2000-2001: Research Assistant
  NovoNordisk A/S, Soeborg, Denmark; Department of Molecular Biology and Virology

Additional research experience:

- Consultant for the pharmaceutical and biotech industry (focus areas: neurological and neurodegenerative disease and biomarker identification)
- Ad-hoc peer reviewer for *Brain Research*, *Neuroscience Letters*, *International Journal of Developmental Neuroscience*, *Eye and Brain*, *Neuroscience*;
- Completed three-week "Mouse Transgenics and Behaviour" course at the University of Zurich (2003)
- Collaborative research visits to Denmark's Technical University (Bacteriophage M13 biology and peptide expression libraries), University of Durham (screening for GABAergic drugs)
- Internship at Bayer AG (Uerdingen, Germany), Dept. of Molecular Biology and Virology (1998, 1999). Development of routine human papilloma virus (HPV) in situ hybridization assays for the early detection of cervical carcinoma.

Supervisory and teaching experience:

- Supervisor and research mentor of research scientists, postdoctoral fellows, graduate students and medical students at UMKC;
- Supervisor of research assistants at NeuroSearch A/S and NovoNordisk A/S;
- Teaching courses: Introductory Neurophysiology; Neuroprotection (part of Biotechnology course); Basic Research in Ophthalmology (Medic al School); Basic Research in Neuroscience (Medical School).

Extramural funding as Principal Investigator (current and previous):

Fight for Sight Grant-in-Aid, 09/01/2010 – 08/30/2011
"Lacrimal gland dysfunction: a first step towards pharmacotherapy of dry-eye disease"

Kansas City Area Life Sciences Institute Patton Trust Grant, 07/01/2011 – 06/30/2012
"A novel canine model for early-onset recessive cerebellar ataxia"

National Headache Foundation Research Grant 2010, 04/01/2009-03/31/2010
"Novel mechanism underlying the visual impairments during migraine headaches."

ST-PDF-140(05-1)BM, 07/01/2006 – 06/30/2008
Michael Smith Foundation for Health Science Research
"Functional characterization of low-voltage activated T-type calcium channels in cerebellar slices of wild-type and P/Q-type calcium channel mutant mice."

Awards, Prizes and Grants:

- Michael Smith Foundation for Health Research postdoctoral trainee award (2006-2008);
- European Molecular Biology Organization postdoctoral fellowship (2006-2008);
- RUBICON grant (Netherlands Organisation for Scientific Research);
- Ph.D. scholar and undergraduate scholar of the German National Merit Foundation (2003-2006);
- British Neuroscience Association Undergraduate Award 2002/2003 for outstanding achievement in the field of Neuroscience;
- Boulter Prize in Molecular Biology 2002, University of Durham.

Specialized computer skills:

- Vector NTI, Clampex, Softmax, MatLab, SPSS, Desktop Publishing

Languages:

English, German (bilingual), French (fluent), Danish (fluent), Dutch (fluent), Spanish (basic knowledge)

Selected peer-reviewed publications (15 out of 22):

1. Burroughs SL, Duncan RS, Rayudu P, Kandula P, Payne AJ, Clark JL, Koulen P, **Kaja S** ¶. Plate reader-based assays for measuring cell viability, neuroprotection and calcium in primary neuronal cultures. J Neurosci Meth. *in press.*
2. **Kaja S** ¶, Hilgenberg JD, Rybalchenko V, Medina-Ortiz WE, Gregg EV, Koulen P. Polycystin-2 expression and function in adult mouse lacrimal acinar cells. Invest Ophthalmol Vis Sci. 2011;52(8):5605-11.
3. Burroughs SL, **Kaja S**, Koulen P. Quantification of deficits in spatial visual function of mouse models for glaucoma. Invest Ophthalmol Vis Sci. 2011;52(6):3654-9. PMCID: 3109046.
4. Garg P, Duncan RS, Kaja S, Zabaneh A, Chapman KD, Koulen P. Lauroylethanolamide and linoleoylethanolamide improve functional outcome in a rodent model for stroke. Neurosci Lett. 2011;492(3):134-8. PMCID: 3057422.
5. **Kaja S** ¶, Duncan RS, Longoria S, Hilgenberg JD, Payne AJ, Desai NM, et al. Novel mechanism of increased Ca(2+) release following oxidative stress in neuronal cells involves type 2 inositol-1,4,5-trisphosphate receptors. Neuroscience. 2011;175:281-91. PMCID: 3038464.
6. Duncan RS, Goad DL, Grillo MA, **Kaja S**, Payne AJ, Koulen P. Neuroprotective Strategies: Control of Intracellular Calcium Signaling as Neuroprotective Strategies. Molecules. 2010;15:1168-95.
7. **Kaja S**, van de Ven RC, Broos LA, Frants RR, Ferrari MD, van den Maagdenberg AM, et al. Severe and progressive neurotransmitter release aberrations in familial hemiplegic migraine type 1 Cacna1a S218L knock-in mice. J Neurophysiol. 2010.
8. van den Maagdenberg AM, Pizzorusso T, **Kaja S** *, Terpolilli N, Shapovalova M, Hoebeek FE, et al. High cortical spreading depression susceptibility and migraine-associated symptoms in Ca(v)2.1 S218L mice. Ann Neurol. 2010;67(1):85-98.
9. Garg P, Duncan RS, **Kaja S**, Koulen P. Intracellular mechanisms of N-acylethanolamine-mediated neuroprotection in a rat model of stroke. Neuroscience. 2010;166(1):252-62. PMCID: 2830814.
10. **Kaja S** ¶, Hann V, Payne HL, Thompson CL. Aberrant cerebellar granule cell-specific GABAA receptor expression in the epileptic and ataxic mouse mutant, Tottering. Neuroscience. 2007;148(1):115-25.
11. **Kaja S**, van de Ven RC, van Dijk JG, Verschuuren JJ, Arahata K, Frants RR, et al. Severely impaired neuromuscular synaptic transmission causes muscle weakness in the Cacna1a-mutant mouse rolling Nagoya. Eur J Neurosci. 2007;25(7):2009-20.
12. **Kaja S**, van de Ven RC, Broos LA, Frants RR, Ferrari MD, van den Maagdenberg AM, et al. Characterization of acetylcholine release and the compensatory contribution of non-Ca(v)2.1 channels at motor nerve terminals of leaner Ca(v)2.1-mutant mice. Neuroscience. 2007;144(4):1278-87.
13. **Kaja S**, Van de Ven RC, Ferrari MD, Frants RR, Van den Maagdenberg AM, Plomp JJ. Compensatory contribution of Cav2.3 channels to acetylcholine release at the neuromuscular junction of tottering mice. J Neurophysiol. 2006;95(4):2698-704.
14. **Kaja S**, van de Ven RC, Broos LA, Veldman H, van Dijk JG, Verschuuren JJ, et al. Gene dosage-dependent transmitter release changes at neuromuscular synapses of CACNA1A R192Q knockin mice are non-progressive and do not lead to morphological changes or muscle weakness. Neuroscience. 2005;135(1):81-95.
15. van den Maagdenberg AM, Pietrobon D, Pizzorusso T, **Kaja S**, Broos LA, Cesetti T, et al. A Cacna1a knockin migraine mouse model with increased susceptibility to cortical spreading depression. Neuron. 2004;41(5):701-10.

Books and book chapters:

S. Kaja, A.J. Payne, S.L. Burroughs, P. Koulen. Homer. Encyclopedia of Signaling Molecules, Choi, Sangdun (Ed.), 1st Edition, 2013. ISBN 978-1-4419-0460-7.

S. Kaja. Synaptic effects of mutations in neuronal $Ca_V2.1$ calcium channels. 2007 Doctoral thesis; ISBN 9-78097819050-7.

S. Kaja. Recent progress in migraine research. BNA Bulletin 2007, 56:20-22.