



- 9/30/84- 9/29/87 NHLBI, R01 HL33513 (01-03): "AngiotensinII and Hypertension".  
DIRECT COSTS/yr: \$85,000.00. Duration: 3 yrs.
- 4/1/88- 3/31/91 NHLBI R01 HL33513 (04-06).Angiotensin II and Hypertension. P.I.: K.R.Lynch.  
DIRECT COSTS: \$85,000.00. Duration: 3yrs.
- 4/1/85- 3/31/89 NHLBI, RO1 HL28785 (04-07): "Organization of Central Sympathetic Pathways".  
DIRECT COSTS/yr: \$ 90,000.00. Duration: 4yrs.
- 09/30/87- 07/31/92 NHLBI, R01 HL39841 (01-05): " Neuronal basis for cardiorespiratory integration.  
DIRECT COSTS/yr: \$ 83,000.00. Duration:5yrs.
- 04/1/89- 03/31/94 NHLBI RO1 HL28785 (08-12): "Organization of central Sympathetic Pathways".  
DIRECT COSTS/yr: \$ 150,000.00. Duration: 5yrs.
- 05/1/91- 04/30/94 RO1 DA07216 (01-03): "Alpha-2 adrenergic subtypes in the CNS". P.I. KR Lynch.  
DIRECT COSTS/yr: \$ 130,000.00/yr. Duration: 3yrs.
- 07/01/94- 06/30/95 American Heart Assoc. International Fellowship on behalf of Dr. Yu-Wen Li.  
DIRECT COSTS/yr: \$ 30,000.00. Duration: 2years.
- 04/01/93- 03/31/97 NHLBI R01 HL39841 (06-09): "Neuronal basis for cardiorespiratory integration".  
DIRECT COSTS/yr: \$ 98,000.00. Duration: 4 yrs.
- 04/1/94- 03/31/99 NHLBI, RO1 HL28785 (13-17): "Organization of central Sympathetic Pathways".  
DIRECT COSTS: \$ 170,000.00/yr. Duration: 5years.
- 01/ 01/ 01- 12/31/04 AHA (National). \$75,000.00 / yr. Duration: 4 years PI: AM Schreihofe. Transferred  
to the Medical College of Georgia on 08/01/01.
- 06/01/ 99- 05/30/01. AHA Va chapter. \$ 50,000 / yr. Duration: 2 yrs. PI: Diane Rosin.
- 04/01/99-03/31/04 NHLBI, 1RO1 HL60003: Central mechanisms of decompensated hemorrhage.  
DIRECT COSTS: \$185,000.00 / yr. Duration: 5 years. PI: PG Guyenet.
- 07/01/03-06/31/07 NHLBI, 1RO1 HL074011: Functional neuroanatomy of the pre-Boetzing complex.  
DIRECT COSTS: \$250,000.00 / yr. Duration: 4 years. PI: PG Guyenet
- 07/01/09-06/30/11 NHLBI, RO1 HL28785 (28-29): "Organization of central Sympathetic Pathways".  
DIRECT COSTS: \$ 250,000.00 / yr. ARRA Award. P.I: PG Guyenet.
- 07/01/07-06/30/11 NHLBI, 1RO1 HL074011 (5-8): Retrotrapezoid nucleus and central chemoreception.  
DIRECT COSTS: \$250,000.00 / yr. Duration: 4 years. PI: PG Guyenet

04/01/11-03/3/15 NHLBI, 1RO1 HL074011 (9-12): Retrotrapezoid nucleus and central chemoreception.  
DIRECT COSTS: ~\$280,000.00 / yr. PI: PG Guyenet. Score: 1%.

**Active grants:**

01/01/17-12/31/20 NHLBI, RO1 HL28785 (30-33): "Organization of central Sympathetic Pathways".  
DIRECT COSTS: ~\$ 300,000.00 / yr. P.I: PG Guyenet/ Co-PI: RL Stornetta

1/01/15-02/28/19 NHLBI, 1RO1 HL074011 (13-16): Retrotrapezoid nucleus and central chemoreception.  
DIRECT COSTS: ~\$280,000.00 / yr. PI: PG Guyenet.

09/21/2015 - 07/31/2020 NIH/NIDDK R01 DK105133-01 (PI: Okusa) Ultrasound for Non-Invasive Prevention of Acute Kidney Injury Role: co-investigator

**EDITORIAL BOARDS (current):** American Journal of Physiology, Hypertension, Brain Structure and Function. **(Past):** Journal of Neuroscience, Journal of Comparative Neurology.

**EDITORIAL CONSULTANT:** Brain Research, Neuroscience, J. Autonomic Nervous System, Neuroscience Letters, European Journal of Pharmacology, European Journal of Physiology, Science, Journal of Neurophysiology, Journal of Comparative Neurology, Journal of Neuroscience, Journal of Physiology (London), Journal of Applied Physiology, e-Life, Cell, Hypertension, Circulation Research, Nature Neuroscience, JCI, Neuron and others.

**GRANT REVIEW COMMITTEES:**

NIH Regular Member, Experimental Cardiovascular Sciences study section (1990-1994).  
Adhoc reviewer for PO1s & SCORs from NIHLBI, NSF, AHA & VA grants.  
American Heart Association (National Committee) 1998-1999.  
Chartered Member, NIH CICS study section (2002-2006).  
Current: Adhoc member, RIBT study section (NIH, Heart and Lung Blood Institute)

**U.S. PATENTS:** Three UVa patents on Safety Needle Technology (patents shared with Drs. J. Jagger, PhD and R. Pearson, MD). The development of this technology is unrelated to the NIH-sponsored research carried out in my laboratory. The patents have generated > \$ 1 million in royalties to the University of Virginia.

**UVA COMMITTEES:** Pharmacology Graduate Committee (78-93).

Neuroscience Program Executive Committee (-89)  
Neuroscience Program Graduate Committee (-89).  
Neurology Chair Search Committee (1989).  
UVa Medical School Research Advisory Council  
Chairman Pharmacology Faculty Search Committee (1993).  
Neuroscience Department 5-year review (committee chair)(August 1993).  
Member, Cardiovascular training grant exec com. (Sept 94- 97).  
Member of Faculty Senate (1995-1999).  
Preclinical Committee (1993-1999)  
Med School Promotion Committee (1993-1999).

Department of Microbiology 5-year review (2000).  
Chair Pharmacology Faculty Search Committee (2001)  
Pharmacology Faculty Search Committee (2008 & 2009)  
Pharmacology Faculty Search Committee (2010)  
Promotion & tenure committee (2011-2014)  
Pharmacology Faculty search committee (2016-2017)

## **TEACHING:**

**Course Director**, Medical Pharmacology (Pharm 630): 1994-1999.

### **Lectures (current):**

Pharm 9001/2 (general Pharmacology): autonomic, cardiovascular / CNS lectures (7 topics).  
Physiology 852 (vascular biology): 2 lectures  
Med School new curriculum. Pharm teaching in PULM, CV and RENAL sections (7 topics).

## **AWARDS:**

Research Career Development Award (NIH NHLBI; 1980-1985).  
UVa Medical School Award for Excellence in Teaching (1995).  
Edlich-Henderson Inventor of the Year Award (1996)(with J. Jagger, R. Pearson & J. Brand).  
NIH (HLBI) Merit Award (1999-2009).  
UVa Medical School Student Basic Sciences teaching Award (2000).  
UVa Medical School Student Basic Sciences teaching Award (2001).  
UVa Medical School Student Basic Sciences teaching Award (2002).  
UVa Medical School Student Ten Best Basic Sciences Teacher Award (2003).  
UVa UVa Medical School Award for Excellence in Teaching (2003).  
UVa Medical School Student Basic Sciences teaching Award (2004).  
UVa Medical School Student Basic Sciences teaching Award-lecture (2005).  
Carl Ludwig Distinguished lecture of the American Physiological Society (Neural control and autonomic regulation section) (2008).  
UVa Medical School Student Basic Sciences teaching Award-lecture (2010).  
UVa Medical School Student Basic Sciences teaching Award-lecture (2011)  
UVa Distinguished Scientist Award (2011)

## **MISCELLANEOUS**

Secretary-treasurer, NCAR (neural control / autonomic regulation) steering committee (FASEB scientific interest group): 2001-2004.  
Society for Neuroscience Programming Committee (2008-2010).

## **PUBLICATIONS**

Google Scholar and other statistics

[h-index](#): 82. H-index since 2012: 39. Citations: 19491; Citations since 2012: 5591. i10 Index: 209, since 2010: 124.

## A. PUBLICATIONS LISTED IN MEDLINE (225)

1. **Guyenet P**, Lefresne P, Rossier J, Beaujouan JC, Glowinski J (1973) Effect of sodium, hemicholinium-3 and antiparkinson drugs on (14C)acetylcholine synthesis and (3H)choline uptake in rat striatal synaptosomes. *Brain Res* 62: 523-529.
2. **Guyenet P**, Lefresne P, Rossier J, Beaujouan JC, Glowinski J (1973) Inhibition by hemicholinium-3 of (14C)acetylcholine synthesis and (3H)choline high-affinity uptake in rat striatal synaptosomes. *Mol Pharmacol* 9: 630-639.
3. Jones BE, **Guyenet P**, Cheramy A, Gauchy C, Glowinski J (1973) The in vivo release of acetylcholine from cat caudate nucleus after pharmacological and surgical manipulations of dopaminergic nigrostriatal neurons. *Brain Res* 64: 355-369.
4. Lefresne P, **Guyenet P**, Glowinski J (1973) Acetylcholine synthesis from (2- 14 C) pyruvate in rat striatal slices. *J Neurochem* 20: 1083-1097.
5. **Guyenet P**, Agid Y, Javoy F, Beaujouan JC, Glowinski J (1974) [Selective action of neuroleptics on the cholinergic neurons of the neostriatum in the rat: antagonism to apomorphine]. *C R Acad Sci Hebd Seances Acad Sci D* 278: 2679-2682.
6. Agid Y, **Guyenet P**, Glowinski J, Beaujouan JC, Javoy F (1975) Inhibitory influence of the nigrostriatal dopamine system on the striatal cholinergic neurons in the rat. *Brain Res* 86: 488-492.
7. **Guyenet PG**, Javory AF, Beaujouan JC, Rossier BJ, Glowinski J (1975) Effects of dopaminergic receptor agonists and antagonists on the activity of the neo-striatal cholinergic system. *Brain Res* 84: 227-244.
8. **Guyenet PG**, Beaujouan JC, Glowinski J (1975) Ontogenesis of neostriatal cholinergic neurones in the rat and development of their sensitivity to neuroleptic drugs. *Naunyn Schmiedebergs Arch Pharmacol* 288: 329-334.
9. **Guyenet PG**, Javoy F, Agid Y, Beaujouan JC, Glowinski J (1975) Dopamine receptors and cholinergic neurons in the rat neostriatum. *Adv Neurol* 9: 43-51.
10. Holden JT, Rossier J, Beaujouan JC, **Guyenet P**, Glowinski J (1975) Inhibition of high-affinity choline transport in rat striatal synaptosomes by alkyl bisquaternary ammonium compounds. *Mol Pharmacol* 11: 19-27.
11. Lefresne P, **Guyenet P**, Beaujouan JC, Glowinski J (1975) The subcellular localization of ACh synthesis in rat striatal synaptosomes investigated with the use of triton X-100. *J Neurochem* 25: 415-422.
12. **Guyenet P**, Euvrard C, Javoy F, Herbert A, Glowinski J (1977) Regional differences in the sensitivity of cholinergic neurons to dopaminergic drugs and quipazine in the rat striatum. *Brain Res* 136: 487-500.

13. **Guyenet PG**, Aghajanian GK (1977) Excitation of neurons in the nucleus locus coeruleus by substance P and related peptides. *Brain Res* 136: 178-184.
14. **Guyenet PG**, Javoy F, Euvrard C, Glowinski J (1977) The effect of drugs on the choline and acetylcholine content of the rat striatum following two methods of sacrifice. *Neuropharmacology* 16: 385-390.
15. **Guyenet PG**, Aghajanian GK (1978) Antidromic identification of dopaminergic and other output neurons of the rat substantia nigra. *Brain Res* 150: 69-84.
16. **Guyenet PG**, Mroz EA, Aghajanian GK, Leeman SE (1979) Delayed iontophoretic ejection of substance P from glass micropipettes: correlation with time-course of neuronal excitation in vivo. *Neuropharmacology* 18: 553-558.
17. **Guyenet PG**, Aghajanian GK (1979) ACh, substance P and met-enkephalin in the locus coeruleus: pharmacological evidence for independent sites of action. *Eur J Pharmacol* 53: 319-328.
18. **Guyenet PG** (1980) The coeruleospinal noradrenergic neurons: anatomical and electrophysiological studies in the rat. *Brain Res* 189: 121-133.
19. Raja SN, **Guyenet PG** (1980) Effects of phencyclidine on the spontaneous activity of monoaminergic neurons. *Eur J Pharmacol* 63: 229-233.
20. **Guyenet PG**, Cabot JB (1981) Inhibition of sympathetic preganglionic neurons by catecholamines and clonidine: mediation by an alpha-adrenergic receptor. *J Neurosci* 1: 908-917.
21. **Guyenet PG**, Crane JK (1981) Non-dopaminergic nigrostriatal pathway. *Brain Res* 213: 291-305.
22. **Guyenet PG**, Stornetta RL (1982) Inhibition of sympathetic preganglionic discharges by epinephrine and alpha-methylepinephrine. *Brain Res* 235: 271-283.
23. Raja SN, **Guyenet PG** (1982) Action of phencyclidine on synaptic transmission in the hippocampus. *Brain Res* 236: 289-304.
24. Stringer JL, **Guyenet PG** (1982) Effect of phencyclidines on hippocampal pyramidal cells. *Brain Res* 252: 343-352.
25. Moore SD, **Guyenet PG** (1983) Alpha-receptor mediated inhibition of A2 noradrenergic neurons. *Brain Res* 276: 188-191.
26. Moore SD, **Guyenet PG** (1983) An electrophysiological study of the forebrain projection of nucleus commissuralis: preliminary identification of presumed A2 catecholaminergic neurons. *Brain Res* 263: 211-222.
27. Stringer JL, Greenfield LJ, Hackett JT, **Guyenet PG** (1983) Blockade of long-term potentiation by phencyclidine and sigma opiates in the hippocampus in vivo and in vitro. *Brain Res* 280: 127-138.

28. Brown DL, **Guyenet PG** (1984) Cardiovascular neurons of brain stem with projections to spinal cord. *Am J Physiol* 247: R1009-R1016.
29. Byrum CE, Stornetta R, **Guyenet PG** (1984) Electrophysiological properties of spinally-projecting A5 noradrenergic neurons. *Brain Res* 303: 15-29.
30. **Guyenet PG** (1984) Baroreceptor-mediated inhibition of A5 noradrenergic neurons. *Brain Res* 303: 31-40.
31. Stringer JL, Hackett JT, **Guyenet PG** (1984) Long term potentiation blocked by phencyclidine and cyclazocine in vitro. *Eur J Pharmacol* 98: 381-388.
32. Brown DL, **Guyenet PG** (1985) Electrophysiological study of cardiovascular neurons in the rostral ventrolateral medulla in rats. *Circ Res* 56: 359-369.
33. **Guyenet PG**, Byrum CE (1985) Comparative effects of sciatic nerve stimulation, blood pressure, and morphine on the activity of A5 and A6 pontine noradrenergic neurons. *Brain Res* 327: 191-201.
34. Moore SD, **Guyenet PG** (1985) Effect of blood pressure on A2 noradrenergic neurons. *Brain Res* 338: 169-172.
35. Sun MK, **Guyenet PG** (1985) GABA-mediated baroreceptor inhibition of reticulospinal neurons. *Am J Physiol* 249: R672-R680.
36. **Guyenet PG**, Brown DL (1986) Nucleus paragigantocellularis lateralis and lumbar sympathetic discharge in the rat. *Am J Physiol* 250: R1081-R1094.
37. **Guyenet PG**, Brown DL (1986) Unit activity in nucleus paragigantocellularis lateralis during cerebral ischemia in the rat. *Brain Res* 364: 301-314.
38. Sun MK, **Guyenet PG** (1986) Hypothalamic glutamatergic input to medullary sympathoexcitatory neurons in rats. *Am J Physiol* 251: R798-R810.
39. Sun MK, **Guyenet PG** (1986) Effect of clonidine and gamma-aminobutyric acid on the discharges of medullo-spinal sympathoexcitatory neurons in the rat. *Brain Res* 368: 1-17.
40. Sun MK, **Guyenet PG** (1986) Medullospinal sympathoexcitatory neurons in normotensive and spontaneously hypertensive rats. *Am J Physiol* 250: R910-R917.
41. Byrum CE, **Guyenet PG** (1987) Afferent and efferent connections of the A5 noradrenergic cell group in the rat. *J Comp Neurol* 261: 529-542.
42. **Guyenet PG**, Filtz TM, Donaldson SR (1987) Role of excitatory amino acids in rat vagal and sympathetic baroreflexes. *Brain Res* 407: 272-284.
43. **Guyenet PG**, Young BS (1987) Projections of nucleus paragigantocellularis lateralis to locus coeruleus and other structures in rat. *Brain Res* 406: 171-184.

44. Lynch KR, Hawelu-Johnson CL, **Guyenet PG** (1987) Localization of brain angiotensinogen mRNA by hybridization histochemistry. *Brain Res* 388: 149-158.
45. Stornetta RL, **Guyenet PG**, McCarty RC (1987) Autonomic nervous system control of heart rate during baroreceptor activation in conscious and anesthetized rats. *J Auton Nerv Syst* 20: 121-127.
46. Sun MK, **Guyenet PG** (1987) Arterial baroreceptor and vagal inputs to sympathoexcitatory neurons in rat medulla. *Am J Physiol* 252: R699-R709.
47. Hashemzadeh-Gargari H, Baertschi AJ, **Guyenet PG** (1988) Baroreceptor-independent medullary mechanism for release of vasopressin during hypotension in rats. *J Endocrinol* 118: 101-111.
48. Stornetta RL, Hawelu-Johnson CL, **Guyenet PG**, Lynch KR (1988) Astrocytes synthesize angiotensinogen in brain. *Science* 242: 1444-1446.
49. Sun MK, Young BS, Hackett JT, **Guyenet PG** (1988) Rostral ventrolateral medullary neurons with intrinsic pacemaker properties are not catecholaminergic. *Brain Res* 451: 345-349.
50. Sun MK, Hackett JT, **Guyenet PG** (1988) Sympathoexcitatory neurons of rostral ventrolateral medulla exhibit pacemaker properties in the presence of a glutamate-receptor antagonist. *Brain Res* 438: 23-40.
51. Sun MK, Young BS, Hackett JT, **Guyenet PG** (1988) Reticulospinal pacemaker neurons of the rat rostral ventrolateral medulla with putative sympathoexcitatory function: an intracellular study in vitro. *Brain Res* 442: 229-239.
52. **Guyenet PG**, Haselton JR, Sun MK (1989) Sympathoexcitatory neurons of the rostroventrolateral medulla and the origin of the sympathetic vasomotor tone. *Prog Brain Res* 81: 105-116.
53. Haselton JR, **Guyenet PG** (1989) Central respiratory modulation of medullary sympathoexcitatory neurons in rat. *Am J Physiol* 256: R739-R750.
54. Haselton JR, **Guyenet PG** (1989) Electrophysiological characterization of putative C1 adrenergic neurons in the rat. *Neuroscience* 30: 199-214.
55. Pearce RA, Stornetta RL, **Guyenet PG** (1989) Retrotrapezoid nucleus in the rat. *Neurosci Lett* 101: 138-142.
56. Sun MK, **Guyenet PG** (1989) Effects of vasopressin and other neuropeptides on rostral medullary sympathoexcitatory neurons 'in vitro'. *Brain Res* 492: 261-270.
57. Darnall RA, **Guyenet P** (1990) Respiratory modulation of pre- and postganglionic lumbar vasomotor sympathetic neurons in the rat. *Neurosci Lett* 119: 148-152.
58. **Guyenet PG**, Darnall RA, Riley TA (1990) Rostral ventrolateral medulla and sympathorespiratory integration in rats. *Am J Physiol* 259: R1063-R1074.



59. Haselton JR, **Guyenet PG** (1990) Ascending collaterals of medullary barosensitive neurons and C1 cells in rats. *Am J Physiol* 258: R1051-R1063.
60. Sun MK, **Guyenet PG** (1990) Excitation of rostral medullary pacemaker neurons with putative sympathoexcitatory function by cyclic AMP and beta-adrenoceptor agonists 'in vitro'. *Brain Res* 511: 30-40.
61. **Guyenet PG** (1991) Central noradrenergic neurons: the autonomic connection. *Prog Brain Res* 88: 365-380.
62. Huangfu DH, Koshiya N, **Guyenet PG** (1991) A5 noradrenergic unit activity and sympathetic nerve discharge in rats. *Am J Physiol* 261: R393-R402.
63. Huangfu DH, **Guyenet PG** (1991) Sympatholytic response to stimulation of superior laryngeal nerve in rats. *Am J Physiol* 260: R290-R297.
64. Nosjean A, **Guyenet PG** (1991) Role of ventrolateral medulla in sympatholytic effect of 8-OHDPAT in rats. *Am J Physiol* 260: R600-R609.
65. Sun MK, Stornetta RL, **Guyenet PG** (1991) Morphology of rostral medullary neurons with intrinsic pacemaker activity in the rat. *Brain Res* 556: 61-70.
66. Huangfu D, Hwang LJ, Riley TA, **Guyenet PG** (1992) Splanchnic nerve response to A5 area stimulation in rats. *Am J Physiol* 263: R437-R446.
67. Huangfu D, Verberne AJ, **Guyenet PG** (1992) Rostral ventrolateral medullary neurons projecting to locus coeruleus have cardiorespiratory inputs. *Brain Res* 598: 67-75.
68. Jiao JH, **Guyenet PG**, Baertschi AJ (1992) Lower brain stem controls cardiac ANF secretion. *Am J Physiol* 263: H198-H207.
69. Verberne AJ, **Guyenet PG** (1992) Medullary pathway of the Bezold-Jarisch reflex in the rat. *Am J Physiol* 263: R1195-R1202.
70. Verberne AJ, **Guyenet PG** (1992) Midbrain central gray: influence on medullary sympathoexcitatory neurons and the baroreflex in rats. *Am J Physiol* 263: R24-R33.
71. Allen AM, Adams JM, **Guyenet PG** (1993) Role of the spinal cord in generating the 2- to 6-Hz rhythm in rat sympathetic outflow. *Am J Physiol* 264: R938-R945.
72. Allen AM, **Guyenet PG** (1993) Alpha 2-adrenoceptor-mediated inhibition of bulbospinal barosensitive cells of rat rostral medulla. *Am J Physiol* 265: R1065-R1075.
73. Baraban SC, Stornetta RL, **Guyenet PG** (1993) Respiratory control of sympathetic nerve activity during naloxone-precipitated morphine withdrawal in rats. *J Pharmacol Exp Ther* 265: 89-95.
74. **Guyenet PG**, Koshiya N, Huangfu D, Verberne AJ, Riley TA (1993) Central respiratory control of

- A5 and A6 pontine noradrenergic neurons. *Am J Physiol* 264: R1035-R1044.
75. Huangfu D, Koshiya N, **Guyenet PG** (1993) Central respiratory modulation of facial motoneurons in rats. *Neurosci Lett* 151: 224-228.
  76. Koshiya N, Huangfu D, **Guyenet PG** (1993) Ventrolateral medulla and sympathetic chemoreflex in the rat. *Brain Res* 609: 174-184.
  77. Rosin DL, Zeng D, Stornetta RL, Norton FR, Riley T, Okusa MD, **Guyenet PG**, Lynch KR (1993) Immunohistochemical localization of alpha 2A-adrenergic receptors in catecholaminergic and other brainstem neurons in the rat. *Neuroscience* 56: 139-155.
  78. Stornetta RL, Norton FE, **Guyenet PG** (1993) Autonomic areas of rat brain exhibit increased Fos-like immunoreactivity during opiate withdrawal in rats. *Brain Res* 624: 19-28.
  79. Fisher M, Huangfu D, Shen TY, **Guyenet PG** (1994) Epibatidine, an alkaloid from the poison frog *Epipedobates tricolor*, is a powerful ganglionic depolarizing agent. *J Pharmacol Exp Ther* 270: 702-707.
  80. **Guyenet PG**, Stornetta RL, Riley T, Norton FR, Rosin DL, Lynch KR (1994) Alpha 2A-adrenergic receptors are present in lower brainstem catecholaminergic and serotonergic neurons innervating spinal cord. *Brain Res* 638: 285-294.
  81. Huangfu D, Hwang LJ, Riley TA, **Guyenet PG** (1994) Role of serotonin and catecholamines in sympathetic responses evoked by stimulation of rostral medulla. *Am J Physiol* 266: R338-R352.
  82. Koshiya N, **Guyenet PG** (1994) A5 noradrenergic neurons and the carotid sympathetic chemoreflex. *Am J Physiol* 267: R519-R526.
  83. Koshiya N, **Guyenet PG** (1994) Role of the pons in the carotid sympathetic chemoreflex. *Am J Physiol* 267: R508-R518.
  84. Baraban SC, Lothman EW, Lee A, **Guyenet PG** (1995) Kappa opioid receptor-mediated suppression of voltage-activated potassium current in a catecholaminergic neuronal cell line. *J Pharmacol Exp Ther* 273: 927-933.
  85. Baraban SC, Stornetta RL, **Guyenet PG** (1995) Effects of morphine and morphine withdrawal on adrenergic neurons of the rat rostral ventrolateral medulla. *Brain Res* 676: 245-257.
  86. **Guyenet PG**, Koshiya N (1995) Working model of the sympathetic chemoreflex in rats. *Clin Exp Hypertens* 17: 167-179.
  87. Huangfu D, Goodwin WB, **Guyenet PG** (1995) Sympatholytic effect of tricyclic antidepressants: site and mechanism of action in anesthetized rats. *Am J Physiol* 268: R1429-R1441.
  88. Koshiya N, **Guyenet PG** (1995) Sympatholytic effect of clonidine depends on the respiratory phase in rat splanchnic nerve. *J Auton Nerv Syst* 53: 82-86.

89. Li YW, Bayliss DA, **Guyenet PG** (1995) C1 neurons of neonatal rats: intrinsic beating properties and alpha 2-adrenergic receptors. *Am J Physiol* 269: R1356-R1369.
90. Li YW, **Guyenet PG** (1995) Neuronal excitation by angiotensin II in the rostral ventrolateral medulla of the rat in vitro. *Am J Physiol* 268: R272-R277.
91. Li YW, **Guyenet PG** (1995) Neuronal inhibition by a GABAB receptor agonist in the rostral ventrolateral medulla of the rat. *Am J Physiol* 268: R428-R437.
92. Stornetta RL, Huangfu D, Rosin DL, Lynch KR, **Guyenet PG** (1995) Alpha-2 adrenergic receptors. Immunohistochemical localization and role in mediating inhibition of adrenergic RVLM presympathetic neurons by catecholamines and clonidine. *Ann N Y Acad Sci* 763: 541-551.
93. **Guyenet PG**, Koshiya N, Huangfu D, Baraban SC, Stornetta RL, Li YW (1996) Role of medulla oblongata in generation of sympathetic and vagal outflows. *Prog Brain Res* 107: 127-144.
94. Koshiya N, **Guyenet PG** (1996) NTS neurons with carotid chemoreceptor inputs arborize in the rostral ventrolateral medulla. *Am J Physiol* 270: R1273-R1278.
95. Koshiya N, **Guyenet PG** (1996) Tonic sympathetic chemoreflex after blockade of respiratory rhythmogenesis in the rat. *J Physiol* 491 ( Pt 3): 859-869.
96. Li YW, **Guyenet PG** (1996) Activation of GABAB receptors increases a potassium conductance in rat bulbospinal neurons of the C1 area. *Am J Physiol* 271: R1304-R1310.
97. Li YW, **Guyenet PG** (1996) Angiotensin II decreases a resting K<sup>+</sup> conductance in rat bulbospinal neurons of the C1 area. *Circ Res* 78: 274-282.
98. Rosin DL, Talley EM, Lee A, Stornetta RL, Gaylenn BD, **Guyenet PG**, Lynch KR (1996) Distribution of alpha 2C-adrenergic receptor-like immunoreactivity in the rat central nervous system. *J Comp Neurol* 372: 135-165.
99. Talley EM, Rosin DL, Lee A, **Guyenet PG**, Lynch KR (1996) Distribution of alpha 2A-adrenergic receptor-like immunoreactivity in the rat central nervous system. *J Comp Neurol* 372: 111-134.
100. Varga K, Lake KD, Huangfu D, **Guyenet PG**, Kunos G (1996) Mechanism of the hypotensive action of anandamide in anesthetized rats. *Hypertension* 28: 682-686.
101. **Guyenet PG** (1997) Is the hypotensive effect of clonidine and related drugs due to imidazoline binding sites? *Am J Physiol* 273: R1580-R1584.
102. Huangfu D, **Guyenet PG** (1997) Alpha 2-adrenergic autoreceptors in A5 and A6 neurons of neonate rats. *Am J Physiol* 273: H2290-H2295.
103. Huangfu D, **Guyenet PG** (1997) Autoactivity of A5 neurons: role of subthreshold oscillations and persistent Na<sup>+</sup> current. *Am J Physiol* 273: H2280-H2289.

104. Huangfu D, Schreihofner M, **Guyenet PG** (1997) Effect of cholinergic agonists on bulbospinal C1 neurons in rats. *Am J Physiol* 272: R249-R258.
105. Li YW, **Guyenet PG** (1997) Effect of substance P on C1 and other bulbospinal cells of the RVLM in neonatal rats. *Am J Physiol* 273: R805-R813.
106. Schreihofner AM, **Guyenet PG** (1997) Identification of C1 presympathetic neurons in rat rostral ventrolateral medulla by juxtacellular labeling in vivo. *J Comp Neurol* 387: 524-536.
107. Stornetta RL, Grubb MC, **Guyenet PG** (1997) Atipamezole-precipitated clonidine withdrawal induces c-Fos expression in rat central nervous system. *Brain Res* 764: 81-92.
108. Grubb MC, Stornetta RL, Pence R, Baertschi AJ, **Guyenet PG** (1998) Antagonist precipitated clonidine withdrawal in rat: effects on locus coeruleus neurons, sympathetic nerves and cardiovascular parameters. *J Auton Nerv Syst* 71: 85-95.
109. **Guyenet PG**, Li YW, Huangfu D, Schreihofner AM (1998) Bulbospinal C1-adrenergic neurons: electrophysiological properties in the neonate rat. *Adv Pharmacol* 42: 638-641.
110. Hayar A, **Guyenet PG** (1998) Pre- and postsynaptic inhibitory actions of methionine-enkephalin on identified bulbospinal neurons of the rat RVL. *J Neurophysiol* 80: 2003-2014.
111. Li YW, **Guyenet PG**, Bayliss DA (1998) Voltage-dependent calcium currents in bulbospinal neurons of neonatal rat rostral ventrolateral medulla: modulation by alpha2-adrenergic receptors. *J Neurophysiol* 79: 583-594.
112. Rosin DL, Robeva A, Woodard RL, **Guyenet PG**, Linden J (1998) Immunohistochemical localization of adenosine A2A receptors in the rat central nervous system. *J Comp Neurol* 401: 163-186.
113. Hayar A, **Guyenet PG** (1999) Alpha2-adrenoceptor-mediated presynaptic inhibition in bulbospinal neurons of rostral ventrolateral medulla. *Am J Physiol* 277: H1069-H1080.
114. McCulloch PF, Panneton WM, **Guyenet PG** (1999) The rostral ventrolateral medulla mediates the sympathoactivation produced by chemical stimulation of the rat nasal mucosa. *J Physiol* 516 ( Pt 2): 471-484.
115. Schreihofner AM, Stornetta RL, **Guyenet PG** (1999) Evidence for glycinergic respiratory neurons: Botzinger neurons express mRNA for glycinergic transporter 2. *J Comp Neurol* 407: 583-597.
116. Stornetta RL, Akey PJ, **Guyenet PG** (1999) Location and electrophysiological characterization of rostral medullary adrenergic neurons that contain neuropeptide Y mRNA in rat medulla. *J Comp Neurol* 415: 482-500.
117. Stornetta RL, **Guyenet PG** (1999) Distribution of glutamic acid decarboxylase mRNA-containing neurons in rat medulla projecting to thoracic spinal cord in relation to monoaminergic brainstem neurons. *J Comp Neurol* 407: 367-380.

118. Verberne AJ, Stornetta RL, **Guyenet PG** (1999) Properties of C1 and other ventrolateral medullary neurones with hypothalamic projections in the rat. *J Physiol* 517 ( Pt 2): 477-494.
119. **Guyenet PG** (2000) Neural structures that mediate sympathoexcitation during hypoxia. *Respir Physiol* 121: 147-162.
120. Hayar A, **Guyenet PG** (2000) Prototypical imidazoline-1 receptor ligand moxonidine activates alpha2-adrenoceptors in bulbospinal neurons of the RVL. *J Neurophysiol* 83: 766-776.
121. Schreihof AM, Stornetta RL, **Guyenet PG** (2000) Regulation of sympathetic tone and arterial pressure by rostral ventrolateral medulla after depletion of C1 cells in rat. *J Physiol* 529 Pt 1: 221-236.
122. Schreihof AM, **Guyenet PG** (2000) Role of presympathetic C1 neurons in the sympatholytic and hypotensive effects of clonidine in rats. *Am J Physiol Regul Integr Comp Physiol* 279: R1753-R1762.
123. Schreihof AM, **Guyenet PG** (2000) Sympathetic reflexes after depletion of bulbospinal catecholaminergic neurons with anti-DbetaH-saporin. *Am J Physiol Regul Integr Comp Physiol* 279: R729-R742.
124. Aicher SA, Schreihof AM, Kraus JA, Sharma S, Milner TA, **Guyenet PG** (2001) Mu-opioid receptors are present in functionally identified sympathoexcitatory neurons in the rat rostral ventrolateral medulla. *J Comp Neurol* 433: 34-47.
125. **Guyenet PG**, Schreihof AM, Stornetta RL (2001) Regulation of sympathetic tone and arterial pressure by the rostral ventrolateral medulla after depletion of C1 cells in rats. *Ann N Y Acad Sci* 940: 259-269.
126. **Guyenet PG**, Wang H (2001) Pre-Botzinger neurons with preinspiratory discharges "in vivo" express NK1 receptors in the rat. *J Neurophysiol* 86: 438-446.
127. Llewellyn-Smith IJ, Schreihof AM, **Guyenet PG** (2001) Distribution and amino acid content of enkephalin-immunoreactive inputs onto juxtacellularly labelled bulbospinal barosensitive neurons in rat rostral ventrolateral medulla. *Neuroscience* 108: 307-322.
128. Stornetta RL, Schreihof AM, Pelaez NM, Sevigny CP, **Guyenet PG** (2001) Preproenkephalin mRNA is expressed by C1 and non-C1 barosensitive bulbospinal neurons in the rostral ventrolateral medulla of the rat. *J Comp Neurol* 435: 111-126.
129. Wang H, Stornetta RL, Rosin DL, **Guyenet PG** (2001) Neurokinin-1 receptor-immunoreactive neurons of the ventral respiratory group in the rat. *J Comp Neurol* 434: 128-146.
130. **Guyenet PG**, Sevigny CP, Weston MC, Stornetta RL (2002) Neurokinin-1 receptor-expressing cells of the ventral respiratory group are functionally heterogeneous and predominantly glutamatergic. *J Neurosci* 22: 3806-3816.
131. **Guyenet PG**, Stornetta RL, Schreihof AM, Pelaez NM, Hayar A, Aicher S, Llewellyn-Smith IJ

- (2002) Opioid signalling in the rat rostral ventrolateral medulla. *Clin Exp Pharmacol Physiol* 29: 238-242.
132. Pelaez NM, Schreihof AM, **Guyenet PG** (2002) Decompensated hemorrhage activates serotonergic neurons in the subependymal parapyramidal region of the rat medulla. *Am J Physiol Regul Integr Comp Physiol* 283: R688-R697.
  133. Schreihof AM, **Guyenet PG** (2002) The baroreflex and beyond: control of sympathetic vasomotor tone by GABAergic neurons in the ventrolateral medulla. *Clin Exp Pharmacol Physiol* 29: 514-521.
  134. Stornetta RL, Sevigny CP, Schreihof AM, Rosin DL, **Guyenet PG** (2002) Vesicular glutamate transporter DNPI/VGLUT2 is expressed by both C1 adrenergic and nonaminergic presympathetic vasomotor neurons of the rat medulla. *J Comp Neurol* 444: 207-220.
  135. Stornetta RL, Sevigny CP, **Guyenet PG** (2002) Vesicular glutamate transporter DNPI/VGLUT2 mRNA is present in C1 and several other groups of brainstem catecholaminergic neurons. *J Comp Neurol* 444: 191-206.
  136. Wang H, Germanson TP, **Guyenet PG** (2002) Depressor and tachypneic responses to chemical stimulation of the ventral respiratory group are reduced by ablation of neurokinin-1 receptor-expressing neurons. *J Neurosci* 22: 3755-3764.
  137. Washburn CP, Sirois JE, Talley EM, **Guyenet PG**, Bayliss DA (2002) Serotonergic raphe neurons express TASK channel transcripts and a TASK-like pH- and halothane-sensitive K<sup>+</sup> conductance. *J Neurosci* 22: 1256-1265.
  138. Rosin DL, Weston MC, Sevigny CP, Stornetta RL, **Guyenet PG** (2003) Hypothalamic orexin (hypocretin) neurons express vesicular glutamate transporters VGLUT1 or VGLUT2. *J Comp Neurol* 465: 593-603.
  139. Schreihof AM, **Guyenet PG** (2003) Baro-activated neurons with pulse-modulated activity in the rat caudal ventrolateral medulla express GAD67 mRNA. *J Neurophysiol* 89: 1265-1277.
  140. Stornetta RL, Sevigny CP, **Guyenet PG** (2003) Inspiratory augmenting bulbospinal neurons express both glutamatergic and enkephalinergic phenotypes. *J Comp Neurol* 455: 113-124.
  141. Stornetta RL, Rosin DL, Wang H, Sevigny CP, Weston MC, **Guyenet PG** (2003) A group of glutamatergic interneurons expressing high levels of both neurokinin-1 receptors and somatostatin identifies the region of the pre-Botzinger complex. *J Comp Neurol* 455: 499-512.
  142. Wang H, Weston MC, McQuiston TJ, Stornetta RL, **Guyenet PG** (2003) Neurokinin-1 receptor-expressing cells regulate depressor region of rat ventrolateral medulla. *Am J Physiol Heart Circ Physiol* 285: H2757-H2769.
  143. Washburn CP, Bayliss DA, **Guyenet PG** (2003) Cardiorespiratory neurons of the rat ventrolateral medulla contain TASK-1 and TASK-3 channel mRNA. *Respir Physiol Neurobiol* 138: 19-35.

144. Weston M, Wang H, Stornetta RL, Sevigny CP, **Guyenet PG** (2003) Fos expression by glutamatergic neurons of the solitary tract nucleus after phenylephrine-induced hypertension in rats. *J Comp Neurol* 460: 525-541.
145. Weston MC, Stornetta RL, **Guyenet PG** (2004) Glutamatergic neuronal projections from the marginal glial layer of the rostral ventral medulla to the respiratory centers in rats. *J Comp Neurol* 473: 73-85.
146. Stornetta RL, McQuiston TJ, **Guyenet PG** (2004) GABAergic and Glycinergic Presympathetic Neurons of Rat Medulla Oblongata Identified by Retrograde Transport of Pseudorabies Virus and *in situ* Hybridization. *J Comp Neurol* 479: 257-270.
147. DK Mulkey, RL Stornetta, MC Weston, JR Simmons, A Parker, DA. Bayliss and **PG Guyenet**. (2004) Respiratory control by ventral surface chemoreceptors. *Nature Neuroscience* 7: 1360-1369. *Rated 9.0 by Faculty of 1000* (Exceptional).
- 148 Guyenet, P.G.**; Stornetta, R.L.; Weston, M.C.; McQuiston, T.; Simmons, J.R. (2004) Detection of amino acid and peptide transmitters in physiologically identified brainstem cardiorespiratory neurons *Autonomic Neuroscience* 114:1-10.
- 149 PG Guyenet**, DK Mulkey, RL Stornetta, DA. Bayliss (2005) Regulation of ventral surface chemoreceptors by the central respiratory pattern generator. *J Neurosci* 25: 8938-8947.
- 150 Stornetta, RL, Rosin, DL, Simmons, JR, McQuiston, TJ, Vujovic, N, Weston MC, & **Guyenet, PG** (2005) Coexpression of Vesicular Glutamate Transporter-3 and GABAergic Markers in Rat Rostral Medullary Raphe and Intermediolateral Cell Column. *J Comp Neurol* 492: 477-494.
151. Guyenet PG, Stornetta RL and Schreihofer AM (2005) Cardiovascular deficits after lesions of C1 adrenergic neurons with a saporin-based toxin. In “Molecular Neurosurgery with Targeted Toxins” edited by RG Wiley and DA Lappi. Humana press, Totowa, NJ.
152. Guyenet PG, Stornetta RL, Bayliss DA, Mulkey DK (2005) Retrotrapezoid nucleus: a litmus test for the identification of central chemoreceptors. *Exp Physiol* 90: 247-253.
153. Stocker SD, Simmons, JR, Stornetta, RL, Toney, GM, & Guyenet, PG (2006) Water deprivation activates a glutamatergic projection from the hypothalamic paraventricular nucleus to the rostral ventrolateral medulla. *J Comp Neurol* 494: 673-685. PM:16374796
154. Takakura, AC, Moreira TS, Colombari E, West GH, Stornetta RL, & Guyenet, PG (2006) Peripheral chemoreceptor inputs to retrotrapezoid nucleus (RTN) CO<sub>2</sub>-sensitive neurons in rats. *J Physiol (London)* 572: 503-523. PM:16455687
155. Guyenet, PG (2006) The sympathetic control of blood pressure. *Nat Rev Neurosci* 7: 335-346. PM:16760914
156. Guyenet, PG (2006) Novel two-rhythm generator theory of breathing in mammals. *J Physiol (London)*

570: 207. PM:16308345

157. Rosin DL, Chang D & PG Guyenet (2006) Afferent and efferent connections of the rat retrotrapezoid nucleus. *J Comp Neurol* 499: 64-89. PM:16958085

158. Moreira TS, Takakura AC, Colombari E & Guyenet PG. (2006) Central chemoreceptors and sympathetic vasomotor outflow. *J. Physiol (London)* 577: 369-386. PM:16901945

159. Mulkey DK, Mistry AM, Guyenet PG & Bayliss DA (2006). Purinergic P2 receptors modulate excitability but do not mediate pH sensitivity of RTN respiratory chemoreceptors. *J. Neurosci.* 26: 7230-7233. PM:16822980

160. Stornetta RL, Moreira TS, Takakura AC, Kang BJ, Chang DA, West GH, Brunet JF, Mulkey DK, Bayliss DA & Guyenet PG. (2006). Expression of Phox2b by brainstem neurons involved in chemosensory integration in the adult rat. *J. Neurosci.* 26: 10305-10314. Rated 3.0 by Faculty of 1000 PM:17021186

161. Trotter,R.N.; Stornetta,R.L.; Guyenet,P.G.; Roberts,M.R.(2007) Transneuronal mapping of the CNS network controlling sympathetic outflow to the rat thymus. *Auton Neurosci.* 131: 9-20. PM:16843070

162. Kang BJ, Chang DA, Mackay DD, West GH, Moreira TS, Takakura AC, Gwilt JM, Guyenet PG & Stornetta RL (2007) Central nervous system distribution of the transcription factor Phox2b in the adult rat. *J Comp Neurol.* 503: 627-741. PM:17559094

163. Moreira,T.S.; Takakura,A.C.; Colombari,E.; West,G.H.; Guyenet,P.G. (2007) Inhibitory input from slowly adapting lung stretch receptors to retrotrapezoid nucleus chemoreceptors. *J. Physiol (London)* 580: 285-300. Rated 6.0 by Faculty of 1000 (Must read). PM:17255166

164. Takakura,A.C.; Moreira,T.S.; West,G.H.; Gwilt,J.M.; Colombari,E.; Stornetta,R.L.; Guyenet,P.G. (2007) GABAergic pump cells of solitary tract nucleus innervate retrotrapezoid nucleus chemoreceptors. *J. Neurophysiol.* 98: 374-381. PM:17460107

165. Moreira TS, Takakura AC, Colombari E and Guyenet PG (2007) Activation of 5-hydroxytryptamine type 3 receptor-expressing C-fiber vagal afferents inhibits retrotrapezoid nucleus chemoreceptors in rats. *J. Neurophysiol* 98: 3637-3637. PM:17928558

166. Mulkey DK, Rosin DL, West G, Takakura AC, Moreira TS, Bayliss DA and Guyenet PG (2007) Serotonergic neurons activate chemosensitive RTN neurons by a pH-independent mechanism. *J. Neurosci* 27: 14049-14058. PM:18094252

167. Mulkey DK , Talley EM, StornettaRL, Siegel AR, West GH, Chen Xiangdong, Sen Niel, Mistry AM, Guyenet PG and Bayliss DA (2007) TASK channels determine pH-sensitivity in select respiratory neurons but do not contribute to central respiratory chemosensitivity. *J. Neurosci* 27: 14128-14138. PM:18094244

168. Fortuna MG, West GH, Stornetta RL and Guyenet PG (2008) Bötzing expiratory-augmenting neurons and the parafacial respiratory group. *J Neurosci.* 28: 2506-2515. PM:18322095



169. Guyenet PG, Bayliss DA, Mulkey DK, Stornetta RL, Moreira TS, Takakura AT (2008) The retrotrapezoid nucleus and central chemoreception *Adv Exp Med Biol* 605: 327-332. PM:18085294
170. Guyenet PG. The 2008 Carl Ludwig lecture: retrotrapezoid nucleus, CO<sub>2</sub> homeostasis and breathing automaticity (2008) *J Appl Physiol* 105: 410-416. PM:18535135. PMC2519946
171. Guyenet PG, Stornetta RL, Bayliss DA. (2008) Retrotrapezoid nucleus and central chemoreception. *J Physiol* 586: 2043-2048. PM:18308822. PMC2465196
172. Takakura AC, Moreira TS, Stornetta RL, West GH, Gwilt JM, Guyenet PG (2008) Selective lesion of retrotrapezoid Phox2b-expressing neurons raises the apnoeic threshold in rats. *J Physiol (London)* 586: 2975-2991. PM:18440993. PMC2517201
173. Stornetta RL, Spirovski D, Moreira TS, Takakura AC, West GH, Gwilt JM, Pilowsky PM, Guyenet PG (2009) Galanin is a selective marker of the retrotrapezoid nucleus in rats. *J Comp Neurol* 512: 373-383. PM:19006184. PMC2592500
174. Abbott SB, Stornetta RL, Fortuna MG, Depuy SD, West GH, Harris TE, Guyenet PG (2009) Photostimulation of retrotrapezoid nucleus phox2b-expressing neurons in vivo produces long-lasting activation of breathing in rats. *J. Neurosci.* 29: 5806-5819. PM:19420248 PMC2696034
175. St-John WM, Stornetta RL, Guyenet PG, Paton JF (2009) Location and properties of respiratory neurones with putative intrinsic bursting properties in the rat in situ. *J. Physiol (London)* 587: 3175-3188. PM:19417093. PMC2727030
176. Branco LG, Moreira TS, Guyenet PG, Lalley PM, Kawai A, Putnam RW, Chamberlin NL, Saper CB, Gourine AV, Kanamaru M, Homma I (2009) Commentaries on Viewpoint: Central chemoreception is a complex system function that involves multiple brain stem sites. *J. Appl. Physiol.* 106: 1467-1470. PM:19336680.
177. Patrice G. Guyenet, Douglas A. Bayliss, Ruth L. Stornetta, Michal G. Fortuna, Stephen B.G. Abbott, Seth D. DePuy (2009) [Retrotrapezoid nucleus, respiratory chemosensitivity and breathing automaticity](#). *Respiratory Physiology and Neurobiology* 158: 59-68. PM:19712903. PMC2734912
178. Abbott SB, Stornetta RL, Socolovsky CS, West GH, Guyenet PG. (2009) Photostimulation of channelrhodopsin-2 expressing ventrolateral medullary neurons increases sympathetic nerve activity and blood pressure in rats. *J Physiol (London)* 587: 5613-5681. PM:19822543. PMC2805374
179. Fortuna MG, Stornetta RL, West GH, Guyenet PG. (2009) Activation of the retrotrapezoid nucleus by posterior hypothalamic stimulation. *J Physiol (London)* 587:5121-5138. PM:19752119. PMC2790253

180. Lazarenko RM, Milner TA, Depuy SD, Stornetta RL, West GH, Kievits JA, Bayliss DA, Guyenet PG. (2009) Acid-sensitivity and ultrastructure of the retrotrapezoid nucleus in phox2b-eGFP transgenic mice. *J Comp Neurol* 517: 69-86. PM:19711410. PMC2826801
181. Guyenet, P.G. (2010) Lower brainstem mechanisms of cardiorespiratory integration. In "Sleep Apnea; Implications in Cardiovascular and Cerebrovascular disease" 2nd edition, edited by Douglas Bradley and John S. Floras, Lung Biology in Health and Disease vol. 231. Informa Healthcare, New-York-London: pp. 15-39.
182. Guyenet PG, Stornetta RL, Abbott SBG, Depuy SD, Fortuna MG, Kanbar R. (2010) Central CO<sub>2</sub>-chemoreception and integrated neural mechanisms of cardiovascular and respiratory control. *J Appl Physiol* 108:995-1002. PM:20075262. PMC2853202
183. Guyenet, P.G., Stornetta, R.L. and Bayliss, D.A. (2010) Central respiratory chemoreception [J Comp Neurol](#) 518: 3883-3906. NIHMSID #221311. PM:20737591. PMC2929977
184. Lazarenko,R.M.; Fortuna,M.G.; Shi,Y.; Mulkey,D.K.; Takakura,A.C.; Moreira,T.S.; Guyenet,P.G.; Bayliss,D.A. (2010) Anesthetic activation of central respiratory chemoreceptor neurons involves inhibition of a THIK-1-like background K(+) current. *J. Neurosci.* 30: 9324-9334. PM:20610767. PMC2910363
185. Kanbar R, Stornetta RL, Cash, DR, Lewis SJ and Guyenet PG (2010) Photostimulation of Phox2b medullary neurons activates cardiorespiratory function in conscious rats. *American Journal of Respiratory and Critical Care Medicine.* 182: 1182-1194. PM:20622037.PMC3001261
186. Guyenet PG and Mulkey DK (2010) Retrotrapezoid nucleus and parafacial respiratory group. *Respiratory Physiology and Neurobiology* 173: 244-255. PM:20188865 PMC2891992
187. Lazarenko R, Stornetta RL, Bayliss DA and Guyenet PG (2011) Orexin A activates retrotrapezoid neurons in mice *Respiratory Physiology and Neurobiology* 175: 283-287. PM:21145990 PMC3032025
188. DePuy SD, Kanbar R, Coates M, Stornetta RL and Guyenet PG. (2011) Control of breathing by raphe obscurus serotonergic neurons in mice. *Journal of Neuroscience* 31: 1981-199. PM:21307236. PMC3071248
189. Kanbar,R.; Depuy,S.D.; West,G.H.; Stornetta,R.L.; Guyenet,P.G. (2011) Regulation of visceral sympathetic tone by A5 noradrenergic neurons in rodents. *Journal of Physiology (London)* 589: 903-917 PM:21173073 PMC3060369
190. Abbott,S.B.; Stornetta,R.L.; Coates,M.B.; Guyenet,P.G. (2011) Phox2b-expressing neurons of the parafacial region regulate breathing rate, inspiration, and expiration in conscious rats. *Journal of Neuroscience* 31: 16410-16422. PM:22072691 [PMC3236529](#)
- 191.Bochorishvili,G., Stornetta,R.L., Coates,M.B. and Guyenet P.G. (2011) Pre-Bötzinger complex receives glutamatergic innervation from galaninergic and other retrotrapezoid nucleus neurons. [J Comp](#)

[Neurol](#) 520: 1047-1061. PM:21935944. PMC3925347

192. Derecki N.C., Cronk J.C., Lu Zhenjie, Xu Eric, Abbott S.B.G., Guyenet P.G. and Kipnis J. (2012) Wild type microglia arrests pathology in a mouse model of Rett syndrome. *Nature* 7392: 105-109.

PM:22425995. PMC3321067

193. Guyenet P.G. (2012) Loss of brainstem serotonergic neurons impairs autoresuscitation in neonate rats: is this relevant to the sudden infant death syndrome? *Journal of Physiology (London)* 589: 5343-5344. PM:22086249. PMC3240874

194. Guyenet P.G. (2012) How does CO<sub>2</sub> activate the neurons of the retrotrapezoid nucleus? *Journal of Physiology (London)* 590:2183-2184. PM:22589206. PMC3424740

195. Abbott,S.B.; Kanbar,R.; Bochorishvili,G.; Coates,M.B.; Stornetta,R.L.; Guyenet,P.G. (2012) C1 neurons excite locus coeruleus and A5 noradrenergic neurons along with sympathetic outflow in rats. *Journal of Physiology (London)* 590 2897-2915. PM:22526887. PMC3448155

196. Stornetta,R.L.; Macon,C.J.; Nguyen,T.M.; Coates,M.B.; Guyenet,P.G. (2013) Cholinergic neurons in the mouse rostral ventrolateral medulla target sensory afferent areas. *Brain Structure and Function* 218: 455-475 PM:22460939. PMC3459297

197. Guyenet,P.G.; Stornetta,R.L.; Abbott,S.B.; Depuy,S.D.; Kanbar,R. (2012) The retrotrapezoid nucleus and breathing. *Adv.Exp.Med.Biol.* 758:115-122. PM:23080151

198. Guyenet,P.G. Abbott,S.B. Stornetta,R.L. (2013) The respiratory chemoreception conundrum: Light at the end of the tunnel? *Brain Research* 1511: 126-137. PM:23088963 [F1000Prime](#) » [Article Recommendations](#) PMC3570739

199. Depuy,S.D. Stornetta,R.L. Bochorishvili,G. Deisseroth,K. Witten,I. Coates,M.Guyenet,P.G. (2013) Glutamatergic Neurotransmission between the C1 Neurons and the Parasympathetic Preganglionic Neurons of the Dorsal Motor Nucleus of the Vagus *The Journal of Neuroscience* 33: 1486-1497. PM:23345223. PMC3727439

200. Abbott,S.B.; Depuy,S.D.; Nguyen,T.; Coates,M.B.; Stornetta,R.L.; Guyenet,P.G. (2013) Selective optogenetic activation of rostral ventrolateral medullary catecholaminergic neurons produces cardiorespiratory stimulation in conscious mice. *Journal of Neuroscience* 33: 3164-3177. PM:23407970. PMC3596815

201. Abbott,S.B.; Coates,M.B.; Stornetta,R.L.; Guyenet,P.G. (2013) Optogenetic stimulation of C1 and retrotrapezoid nucleus neurons causes sleep state-dependent cardiorespiratory stimulation and arousal in rats. *Hypertension* 61: 835-841. PM:23438930.<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3666866/>

202. Guyenet,P.G.; Stornetta,R.L.; Bochorishvili,G.; Depuy,S.D.; Burke,P.G.; Abbott,S.B. (2013) Invited Review EB 2012: C1 neurons: the body's EMTs. *Am.J.Physiol.Regul.Integr.Comp. Physiol.* 305:R187-204. PM:23697799 PMC3743001

203. Guyenet, P.G.; Abbott, S.B. (2013) Chemoreception and asphyxia-induced arousal. *Respir. Physiol. Neurobiol.* 188: 333-343. PM:23608705 PMC3749262
204. Holloway BB, Stornetta RL, Bochorishvili G, Erisir A, Viar KE, Guyenet PG. (2013) [Monosynaptic glutamatergic activation of locus coeruleus and other lower brainstem noradrenergic neurons by the C1 cells in mice.](#) *Journal of Neuroscience* 33:18792-805. PMID: 24285886. PMC3841449
205. Wang S, Benamer N, Zanella S, Kumar NN, Shi Y, Bévengut M, Penton D, Guyenet PG, Lesage F, Gestreau C, Barhanin J, Bayliss DA. (2013) [TASK-2 channels contribute to pH sensitivity of retrotrapezoid nucleus chemoreceptor neurons.](#) *Journal of Neuroscience* 33(41):16033-44. PMID: 24107938. PMC3792448
206. Wang S, Shi Y, Shu S, Guyenet PG, Bayliss DA. (2013). Phox2b-expressing retrotrapezoid neurons are intrinsically responsive to H<sup>+</sup> and CO<sub>2</sub>. *Journal of Neuroscience* 33(18):7756-61. PMID: 23637167. PMC3707793
207. Abbott SB, Holloway BB, Viar KE, Guyenet PG. (2014) Vesicular glutamate transporter 2 is required for the respiratory and parasympathetic activation produced by optogenetic stimulation of catecholaminergic neurons in the rostral ventrolateral medulla of mice in vivo. *European Journal of Neuroscience.* 39(1):98-106. PMID: 24236954.
208. Burke PG, Abbott SB, Coates MB, Viar KE, Stornetta RL, **Guyenet PG.** (2014). Optogenetic stimulation of adrenergic C1 neurons causes sleep state-dependent cardiorespiratory stimulation and arousal with sighs in rats. *Am J Respir Crit Care Med.* 190:1301-10.
209. Guyenet PG. Regulation of breathing and autonomic outflows by chemoreceptors (2014) *Compr Physiol.* Oct;4(4):1511-62. doi: 10.1002/cphy.c140004
210. Bochorishvili G, Nguyen T, Coates MB, Viar KE, Stornetta RL, Guyenet PG. (2014). The orexinergic neurons receive synaptic input from C1 cells in rats. *J Comp Neurol.* 522:3834-46.
211. Basting, T.M., Burke, P.G., Kanbar, R., Viar, K.E., Stornetta, D.S., Stornetta, R.L., and Guyenet, P.G. (2015). Hypoxia Silences Retrotrapezoid Nucleus Respiratory Chemoreceptors via Alkalosis. *J Neurosci* 35, 527-543.
212. Bayliss, D.A., Barhanin, J., Gestreau, C., and Guyenet, P.G. (2015). The role of pH-sensitive TASK channels in central respiratory chemoreception. *Pflugers Arch - Eur J Physiol* (2015) 467:917–929.
213. Stornetta RL, Inglis MA, Viar KE, Guyenet PG. [Afferent and efferent connections of C1 cells with spinal cord or hypothalamic projections in mice.](#) *Brain Struct Funct.* 2015 Nov 11. DOI 10.1007/s00429-015-1143-3 PMID: 26560463.

214. Burke, P.G., Kanbar, R., Basting, T.M., Hodges, W.M., Viar, K.E., Stornetta, R.L., and Guyenet, P.G. (2015). State-dependent control of breathing by the retrotrapezoid nucleus. *J Physiol. (London)* 593: 2909-2926.

215. Kumar, N.N., Velic, A., Soliz, J., Shi, Y., Li, K., Wang, S., Weaver, J.L., Sen, J., Abbott, S.B.G., Lazarenko, R.M., Ludwig, Marie-Gabrielle, Perez-Reyes, E., Mohebbi, N., Bettoni, C., Gassmann, M., Suply, T., Seuwen, K., Guyenet, P.G., Wagner, C.A., and Bayliss, D.A.. (2015). Regulation of breathing by CO<sub>2</sub> requires the proton-activated receptor GPR4 in retrotrapezoid nucleus neurons. *Science*, 345: 1255-1260.

216. Holloway B.B., Viar K.E., Stornetta R.L. and Guyenet P. G. (2015). The retrotrapezoid nucleus stimulates breathing by releasing glutamate in adult conscious mice. *European Journal of Neuroscience*, 42: 2271-2282.

217. Burke PG, Kanbar R, Viar KE 2nd, Stornetta RL, Guyenet PG. (2015). Selective optogenetic stimulation of the retrotrapezoid nucleus in sleeping rats activates breathing without changing blood pressure or causing arousal or sighs. *J Appl Physiol.* 2015 118: 1491-1501.

218. Guyenet PG & Bayliss DA (2015). Neural Control of Breathing and CO<sub>2</sub> Homeostasis. *Neuron* 87, 946-961.

219. Guyenet PG, Bayliss DA, Stornetta RL, Ludwig MG, Kumar NN, Shi Y, Burke PG, Kanbar R, Basting TM, Holloway BB, Wenker IC.(2016) [Proton detection and breathing regulation by the retrotrapezoid nucleus.](#) *J Physiol.* 2016 Mar 15;594(6):1529-51. doi: 10.1113/JP271480. Epub 2016 Feb 19.PMID: 26748771

220. Inoue T, Abe C, Sung SJ, Moscalu S, Jankowski J, Huang L, Ye H, Rosin DL, Guyenet PG, Okusa MD. [Vagus nerve stimulation mediates protection from kidney ischemia-reperfusion injury through  \$\alpha\$ 7nAChR+ splenocytes.](#) *J Clin Invest.* 2016 Apr 18. pii: 83658. doi: 10.1172/JCI83658. [Epub ahead of print] PMID:27088805

221. [Putative Mechanism of Salt-Dependent Neurogenic Hypertension: Cell-Autonomous Activation of Organum Vasculosum Laminae Terminalis Neurons by Hypernatremia.](#)

Guyenet PG.

*Hypertension.* 2017 Jan;69(1):20-22. Epub 2016 Nov 28. No abstract available. **IF: 6.3**

222. [Sciatic nerve stimulation activates the retrotrapezoid nucleus in anesthetized rats.](#)

Kanbar R, Stornetta RL, Guyenet PG. *J Neurophysiol.* 2016 Nov 1;116(5):2081-2092. doi: 10.1152/jn.00543.2016. Epub 2016 Aug 10. **IF: 1.9**

223. [Nalcn Is a "Leak" Sodium Channel That Regulates Excitability of Brainstem Chemosensory Neurons and Breathing.](#) Shi Y, Abe C, Holloway BB, Shu S, Kumar NN, Weaver JL, Sen J,

Perez-Reyes E, Stornetta RL, Guyenet PG, Bayliss DA. J Neurosci. 2016 Aug 3;36(31):8174-87. doi: 10.1523/JNEUROSCI.1096-16.2016. **IF: 6.0**

224. [Is plasticity within the retrotrapezoid nucleus responsible for the recovery of the PCO<sub>2</sub> set-point after carotid body denervation in rats?](#) Basting TM, Abe C, Viar KE, Stornetta RL, Guyenet PG. J Physiol. 2016 Jun 15;594(12):3371-90. doi: 10.1113/JP272046. Epub 2016 Mar 4. **IF: 5.0**

225. [Blood pressure regulation by the rostral ventrolateral medulla in conscious rats: effects of hypoxia, hypercapnia, baroreceptor denervation and anesthesia.](#) Wenker IC, Abe C, Viar KE, Stornetta DS, Stornetta RL, Guyenet PG. J Neurosci. 2017 Mar 31. pii: 3922-16. doi: 10.1523/JNEUROSCI.3922-16.2017. [Epub ahead of print] **IF: 6.0**

226. [C1 neurons mediate a stress-induced anti-inflammatory reflex in mice.](#) Abe C, Inoue T, Inglis MA, Viar KE, Huang L, Ye H, Rosin DL, Stornetta RL, Okusa MD, Guyenet PG. Nat Neurosci. 2017 Mar 13. doi: 10.1038/nn.4526. [Epub ahead of print] **IF: 16.7**

#### **B: OTHER PUBLICATIONS (BOOK CHAPTERS)**

1. P. Lefresne and **P.G.Guyenet (1972)**. Metabolisme de l'ACh au niveau du striatum. Colloque INSERM, "la transmission cholinergique de l'excitation" Editions INSERM, Paris, pp 92-99.
2. **P.Guyenet**, P.Lefresne, J.C.Beaujouan and J.Glowinski (1975). The role of newly-taken up choline in the synthesis of ACh in rat striatal synaptosomes. In "Cholinergic Mechanisms", edited by P.G. Waser, Raven Press, New-York, pp43-51.
3. **P.G.Guyenet**, F. Javoy, Y.Agid, J.C.Beaujouan and J.Glowinski (1975). Dopamine receptors and cholinergic neurons in the rat striatum. "Advances in Neurology", edited by D.B.Calne, T.N.Chase and A.Barbeau, Raven Press, New-York, pp43-51.
4. Y.Agid, F.Javoy, **P.Guyenet**, J.C. Beaujouan and J.Glowinski (1974). Effect of surgical and pharmacological manipulations of the dopaminergic nigrostriatal pathway on the activity of the neostriatal system. Neuropsychopharmacology. Proceedings of the LX Congress of the Collegium Internationale Neuropsychopharmacologicum. Excerpta Medica International Congress Series 359:480-486.
5. R.L.Stornetta, **P.G.Guyenet** and R.M. McCarty (1986). Modulation of autonomic outflow by pontine A5 noradrenergic neurons. In "Brain and blood pressure Control" Edited by K.Nakamura. Elsevier Science. pp:23-28.
6. **P.G.Guyenet**, M.-K. Sun and D.L.Brown (1987). Role of GABA and excitatory aminoacids in medullary baroreflex pathways. In "Organisation of the Autonomic Nervous System: central and peripheral Mechanisms". Edited by J. Ciriello and C. Polosa. Alan R.Liss Inc., pp.215-225.
7. **P.G.Guyenet (1990)**. Role of the ventrolateral medulla oblongata in blood pressure regulation.. In A.D.Loewy and K.M.Spyer editors, "Central Regulation of Autonomic Functions", Oxford University Press, New-York, pp.145-167.
8. **P.G. Guyenet** and N. Koshiya (1992). Respiratory-sympathetic integration in the medulla oblongata. In " Central Neural mechanisms of cardiovascular regulation, vol 2," G. Kunos and J.Ciriello (eds.). Birkhauser, Boston, pp 226-247.

9. **P.G. Guyenet**, K.R. Lynch, A.M. Allen, D.L. Rosin, R.L. Stornetta (1995).  $\alpha_2$ -adrenergic receptors rather than "imidazoline" binding sites mediate the sympatholytic effect of clonidine in the rostral ventrolateral medulla. In O. Trouth, R. Willis, H. Kiwull-Schone and M.E. Schlafke eds.: "Ventral Brainstem Mechanisms and Control Functions". Marcel Dekker, inc. New-York. pp 281-304.
10. R.L. Stornetta, D. Huangfu, D.L. Rosin, K.R. Lynch and **P.G. Guyenet** (1995). Alpha-2 Adrenergic receptors: immunohistochemical localization and role in mediating inhibition of adrenergic RVLM presympathetic neurons by catecholamines and clonidine. In "The imidazoline receptor: pharmacology, functions, ligands, and relevance to biology and medicine", D.J. Reis, P. Bousquet and A. Parini eds.; Ann. New-York Acad. Sci. 763: pp.541-551.
11. **P.G. Guyenet**, Yu Wen Li, Donghai Huangfu and Ann M. Schreihofner (1998) Bulbospinal C1-adrenergic neurons: electrophysiological properties in the neonate rat. In D.S Goldstein, G. Eisenhofer and R. McCarty eds: Catecholamines: bridging basic science with clinical medicine. Academic press, New-York, pp. 638-641.
12. **P.G. Guyenet** and R.L. Stornetta. (1998) Central nervous system regulation of the sympathetic and cardiovascular vasomotor outflows under anesthesia. In "J. Biebuyck, C Lynch III, M. Maze, L.J. Saidman, T.L. Yaksch and W.M. Zapol eds."Anesthesia: Biologic Foundations". Lippincott-Raven, New-York: pp.1205-1232.
13. **P. G. Guyenet** (2000) Lower brainstem mechanisms of cardiorespiratory integration. In *Sleep disorders and cardiovascular and cerebrovascular disease*, edited by T. D. Bradley and J.S. Floras. Lung Biology in Health and Disease vol. ---. Exec. Dir: Cl. Lenfant. Marcel Dekker. pp 61-98.
14. **Guyenet PG** and Stornetta RL (2004) The presympathetic cells of the rostral ventrolateral medulla (RVLM): anatomy, physiology and role in the control of circulation. In "Neural Mechanisms of Cardiovascular Regulation" ed. By NJ Dun, BH Machado and PM Pilowsky. Kluwer Academic Publishers, Boston: pp 187-218.
15. **Guyenet, P.G.**; Stornetta, R.L.; Weston, M.C.; McQuiston, T.; Simmons, J.R. (2004) Detection of amino acid and peptide transmitters in physiologically identified brainstem cardiorespiratory neurons *Autonomic Neuroscience* 114:1-10.
16. **Guyenet PG** and Stornetta RL (2004) The presympathetic cells of the rostral ventrolateral medulla (RVLM): anatomy, physiology and role in the control of circulation. In "Neural Mechanisms of Cardiovascular Regulation" ed. By NJ Dun, BH Machado and PM Pilowsky. Kluwer Academic Publishers, Boston: pp 187-218.
17. **Guyenet PG**, Stornetta RL and Schreihofner AM (2005) Cardiovascular deficits after lesions of C1 adrenergic neurons with a saporin-based toxin. In "Molecular Neurosurgery with Targeted Toxins" edited by RG Wiley and DA Lappi. Humana press, Totowa, NJ.
18. **Guyenet PG**, Stornetta RL, Bayliss DA, Mulkey DK (2005) Retrotrapezoid nucleus: a litmus test for the identification of central chemoreceptors. *Exp Physiol* 90: 247-253.
19. Stornetta RL & **Guyenet PG**. (2006). Non-radioactive In situ hybridization in combination with tract tracing. In "Neuroanatomical tract-tracing 3", Zaborsky L, Wouterlood FG & Lanciego JL eds. Springer. Pp. 237-262.
20. In "Central Regulation of Autonomic Functions", Second Edition, Edited by Ida J. Llewellyn-Smith and Anthony J. M. Verberne. Oxford University press 2010.

## TRAINEES:

### PhD students:

- 1) Ruth L. Stornetta, PhD in Neuroscience (1985); postdoctoral training at Cornell University (Dr. D.J. Reis). Currently Research Assistant-Professor at the University of Virginia.
- 2) Scott D. Moore, PhD in Neuroscience (1983), MD at UVa (1985), Postdoc. at the Scripps Clinic (Dr. G.R.Siggins), Currently Associate-Professor of Psychiatry at Duke University.
- 3) Christopher E. Byrum, PhD in Neuroscience (1985), MD University of Virginia (1989), Psychiatrist in private practice.
- 4) Miao-Kun Sun, PhD in Pharmacology (1986). Assistant- Professor, HangChow Univ. (PCR), Visiting Scholar at the University of London (Royal free Hospital) with Dr. K.M. Spyer (1989-1990). Currently Research Scientist at the NIMH.
- 5) Janet L. Stringer, PhD in Pharmacology (1983), MD at UVa (1985), transitionnal internship at Indianapolis, Research-Assistant Professor in the Neurology Dpt at UVA. Currently Professor of Pharmacology and Neuroscience at Baylor University, Texas. Her last pub is in 2009. Janet L. Stringer, MD, PhD, Dean, Science and Technology Articulation Officer Canada College 4200 Farm Hill Blvd Redwood City CA 94061 TEL: 650-306-3322. [stringerj@smccd.edu](mailto:stringerj@smccd.edu)
- 6) Scott Baraban, PhD in Pharmacology (1991-1994). Currently Chaired Professor of Neurosciences at the University of California San Francisco. Address 2015: [Scott.Baraban@ucsf.edu](mailto:Scott.Baraban@ucsf.edu)
- 7) Michele Fisher, PhD in Neuroscience (1994-1997). Post-doc at OHSU. Research Scientist at Albany Medical Center. 2010-2013: Director of research, The Sage Colleges (Russell Sage College and Sage College of Albany, NY). 2014- : business analyst CMA consulting.
- 8) Nicole Pelaez, Masters in Pharmacology (2000-2002). Current employment: Biotech Co. in Melbourne Australia.
- 9) Christopher Washburn, (2001-2003). Pharmacology, PhD. Currently PostDoctoral fellow at Rutgers U. Presently (2011) Senior Medical Editor at Intellisphere, LLC. [Medical Director PVI PeerView Institute for Medical Education](mailto:Medical Director PVI PeerView Institute for Medical Education) June 2012 – Present (3 years) Greater New York City Area. [chris\\_washburn@yahoo.com](mailto:chris_washburn@yahoo.com)
- 10) Thiago dos Santos Moreira (2005-2007). Neuroscience. Dissertation research. Presently Associate-professor of Physiology, tenured. University of San-Paolo, Brazil. Thiago dos Santos Moreira [tmoreira@icb.usp.br](mailto:tmoreira@icb.usp.br)
- 11) Ana Carolina Takakura (2005-2007) Neuroscience. University of Sao Paulo, Brazil. Dissertation research. Presently Assistant-Professor of Physiology. University of San-Paolo, Brazil. Ana Carolina Takakura [takakura@fcr.epm.br](mailto:takakura@fcr.epm.br)
- 12) Michal Fortuna (2007- 2010). Pharmacology. Dissertation research. Currently Postdoctoral fellow. University of Gottingen, Germany. [mf7r@virginia.edu](mailto:mf7r@virginia.edu)
- 13) Stephen B Abbott (2008-2009). PhD candidate from MacQuarie University, Sydney: 1-year training.
- 14) Tyler Basting (2013- ). PhD candidate. UVa Neuroscience program. [tmb4av@virginia.edu](mailto:tmb4av@virginia.edu)

#### Postdoctoral fellows:

- 1) Srinivasa N. Raja, (Post doc: 1979-1981) MD, anesthesiologist (U.Washington, Seattle). Currently tenured Professor of Anesthesiology and Critical Care Medicine at the John Hopkins School of Medicine. 2015: [sraja2@jhmi.edu](mailto:sraja2@jhmi.edu)
- 2) D. Les Brown, PhD in Physiology (UVa 1983). Postdoc with P.Guyenet (1983-1985). Assistant-Professor, Internal Medicine at UNC (1985-1987). Clinical Research Scientist, Burroughs Wellcome Co, Research Triangle Park, N.C. Current whereabouts unknown.
- 3) James, R. Haselton, PhD in Psychology (U. Miami), Postdoc. with P.Guyenet (1986-1989), 2 years sponsored by American Heart Association), Research Associate at UC Davis (Dr Kaufman, 1989-1992). Assistant-Professor, University of Nebraska (1993). 2015: Assistant-Professor University of



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- 4) Miao-Kun Sun, PhD in Pharmacology (U.Va 1986). Associate Research Professor, Cornell University (1990-1998). Currently research scientist at NIMH. Miao-Kun Sun [mksun2000@gmail.com](mailto:mksun2000@gmail.com)
  - 5) Karen L. Cochrane, PhD in Pharmacology, Texas U. at San Antonio (1988). Postdoc with P.Guyenet (1988-1989). Employment: US Patent Office in Washington DC (still current in 2015).
  - 6) Anne Nosjean, PhD in Neuropharmacology, U. Paris (1988-1990). Currently Attachee de Recherche au CNRS, France (position at the Pasteur Institute). 2015- : Centre de Neurosciences Paris Sud, Université Paris Sud 11 and Centre National de la Recherche Scientifique UMR 8195, Bâtiment 446, 15 Bd Clémenceau 91405 Orsay, France. [Anne.nosjean@u-psud.fr](mailto:Anne.nosjean@u-psud.fr) **a confirmer**
  - 7) Naohiro Koshiya, PhD in Physiology, U. of Tsukuba, Japan. Postdoc with P. Guyenet (1991-1995). Research Scientist at the NIH (1996-2000). Associate-Professor, Blanchette Rockefeller Research Institute at the Johns Hopkins University. At the NINCDS Bethesda since 2011. N Koshiya [n@koshiya.net](mailto:n@koshiya.net)
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  - 11) Yu-Wen LI, PhD, Flinders University of South Australia. PostDoc (1993- 1995). Currently: Senior Principal Scientist Bristol-Myers Squibb Pharmaceutical Research Institute, Bristol-Myers Squibb, Wallingford, Connecticut. [yu-wen.li@bms.com](mailto:yu-wen.li@bms.com)
  - 12) Hagiwara, Yukihiko, PhD, Assistant-Professor, Showa College of Pharmaceutical Sciences. Dept Pharmacology. Machida, Tokyo (94-95).
  - 13) Schreihofer Ann, PhD, Univ. Pittsburgh. (1996-2001). Tenured Associate-Professor, Medical College of Georgia. Now Tenured Associate-Professor, UT Dallas-Fortworth. "Schreihof, Ann" [Ann.Schreihof@unthsc.edu](mailto:Ann.Schreihof@unthsc.edu)
  - 14) Hayar, Abdallah, PhD, University of Strasbourg, France (1997-1999). Currently tenured Associate-Professor. Univ Arkansas for Med Sci Neurobiology and Developmental Sciences. Little Rock, Arkansas. Associate Professor University of Arkansas for Medical Sciences Dept. of Neurobiology & Developmental Sciences 4301 W. Markham Street Slot# 847 Little Rock, AR 72205. Tel 501-686-6362 (Work), 901-336-8812 (Cell) Fax 501-526-7928  
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  - 15) Hong WANG, MD, PhD (1999-2002). Currently Research Associate, Diabetes Center UVA.
  - 16) Tirtha Koirala, PhD (2003-2004). Currently Research Scientist, Dpt. medicine, Infectious diseases, UVA.
  - 17) Kang BJ, MD. (2005) Currently Department of Anesthesiology and Pain Medicine, Dankook University College of Medicine, Cheonan, Korea
  - 18) Seth Depuy, PhD (2006-2011). 2013: Research Assistant-Professor, University of Chicago; since 2014: Postdoctoral Scientist, Eli-Lilly, Indianapolis [setherdave@gmail.com](mailto:setherdave@gmail.com). Post-Doctoral Scientist-FDE LRL Neuroscience, Eli Lilly and Company

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- 19) Roy Kanbar, PhD University of Lyon, France (2009-2010). Support: Societe Francaise d'Hypertension arterielle. Currently: Professor of Pharmacy. American University, Beyrouth, Lebanon. 2015 address : Roy Kanbar [roykanbar@gmail.com](mailto:roykanbar@gmail.com)
- 20) Stephen B. Abbott, PhD, Macquarie University, Sydney, Australia (2010-2013). Currently, post-doc Harvard Beth Israel. 2015 addresses: [steve.b.abbott@gmail.com](mailto:steve.b.abbott@gmail.com) OR [sabbott1@bidmc.harvard.edu](mailto:sabbott1@bidmc.harvard.edu)
- 21) Genrieta Bochorishvili, PhD (2010-2014). Surgical Neurophysiologist, Sentient Medical Inc. 11011 McCormick Road, Suite 200 Hunt Valley, MD 21031 [443-835-8755](tel:443-835-8755), [410-666-2588](tel:410-666-2588) ext 158 [888-481-9185](tel:888-481-9185) ext 158. [gbochorishvili@sentientmedical.com](mailto:gbochorishvili@sentientmedical.com) or [teadalexso@yahoo.com](mailto:teadalexso@yahoo.com)
- 22) Peter Burke, PhD, Macquarie University, Sydney, Australia (Nov 2011- March 2015). 03/15-current: Research Officer, Neuroscience Research Australia, Margarete Ainsworth Building Barker Street, Randwick, Sydney, New South Wales, 2031 Australia  
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- 23) Ian Wenker, PhD University of Connecticut (Jan 2014- ). [icw7f@virginia.edu](mailto:icw7f@virginia.edu)

#### **INVITED LECTURES** (seminars and meetings; 1986- current; exclusive of in-house seminars)

##### Year 1986:

- Johns Hopkins University, Dpt. of Biomedical Engineering (Dr. L. Schramm. Lecture and departmental seminar (04/06).
- University of Chicago, Dpt of Pharmacology and Physiological Sciences (Dr. C.Saper). Departmental seminar.
- Georgetown University, Dpt of Pharmacology (Dr R. Gillis). Departmental seminar (04/09).
- XXX International Union of Physiological Sciences Satellite Symposium "Organisation of the Autonomic Nervous System: Central and Peripheral Mechanisms, Montreal, Canada. Invited lecture.

##### Year 1987:

- Emory University, Department of Physiology (Dr J. Manning), Departmental seminar (12/07).
- University of Texas Health Sciences Center at Dallas, Dept of Physiology (Dr J. Mitchell) Departmental Seminar (03/17).
- Society for Neuroscience, special lecture, New-Orleans Convention.
- 6th International Catecholamine Symposium, Jerusalem, Israel (06/14-06/19). Invited lecture.
- University of Paris, INSERM U 288 (Dr Michel Hamon). Departmental seminar (06/21).

##### Year 1988:

- Satellite Symposium to the Meeting of the Society for Neuroscience, U. Western Ontario, London Ontario (11/10- 11/12). Invited lecture and session chairman.
- " Neurobiology of Brainstem Cardiopulmonary control mechanisms". Quail Roost Conference Center 08/12-08/14). NHLBI workshop organised and cochaired by Drs D. Millhorn (UNC) and P.Guyenet.
- Dartmouth School of Medicine, Dpt of Physiology (Dr Eugene Nattie). Departmental Seminar.
- SUNY at Stony Brook, Dpt of Neurobiology (Dr J. Cabot). Departmental Seminar.

- Texas Health Center University at San Antonio, Dpt of Pharmacology, (Dr J.R. Haywood Departmental lecture.

Year 1989:

- Georgetown University, Dpt of Pharmacology (Dr Gillis). Departmental seminar (03/23).
- University of Paris, College de France, INSERM U114 (Dr J. Glowinski), departmental (06/19).
- Gordon Conference on Angiotensin (Dr Ian Phillips). Invitation declined because of schedule conflict.
- Satellite Symposium of XXXI International Congress of IUPS, Helsinki, Finland. Invitation from Dr. H.- P. Koepchen declined because of schedule conflict.

Year 1990:

- "The role of the ventrolateral medulla in arterial pressure". FASEB meeting symposium, April 5, 1990, Washington, D.C.
- " Central noradrenergic neurons: the autonomic connection". Symposium on the Neurobiology of the locus coeruleus organized by Drs Barnes (Washington State University) and Pompeiano (Pisa).

Year 1991:

- "The rostral ventrolateral medulla and the generation of the sympathetic tone". FASEB debate, April 1991, Atlanta, Georgia.

Year 1992:

- Burroughs Wellcome, Research Triangle Park, NC. Seminar and consultation.
- University of Western Ontario, Canada. Seminar entitled: "role of adrenergic and other cells in the generation of the sympathetic tone".

Year 1993:

- FASEB New Orleans. Symposium: Cardiorespiratory interactions during sleep. Invited speaker.
- IUPS (International Union of Physiological Sciences) XXXIInd International Congress of Physiological Sciences. Glasgow UK. Invited Speaker in symposium entitled: "Cardiorespiratory Control".

Year 1994:

- 15th Scientific Meeting of the International Society of Hypertension. March 19-26th. Melbourne Australia. Invited Speaker. Satellite Symposium on: "Neural Mechanisms in Hypertension". Invited speaker.
- International Symposium on "Emotional Motor System" April 1994. Schermonnikoog, The Netherlands. Invited Speaker.
- Second International Symposium on "imidazoline receptors". New-York, July 19 and 20, 1994 (XIIth IUPHAR satellite). Invited speaker.
- October 12: seminar, Howard university.
- December 5: seminar, Medical College of Virginia.

Year 1995:

- March 23: seminar Michigan State University
- April 2-8: seminars at Sao Paulo university (Riberiao-Preto). Seminars and Graduate Course.

- May 20-24; Symposium on "neurochemical control of cardiorespiratory activity" Seattle. Invited Speaker.
- July 9-14: Kyoto IBRO Symposium: Modulation of central cardio-respiratory control. Invited speaker.

Year 1996.

- Soc. for Neuroscience, Washington DC. Invited speaker at debate.
- FASEB Summer Research Conference, Vermont: Neural Mechanisms in Cardiovascular Regulation: Vice-chair.

Year 1997.

- XXXIII IUPS, St-Petersburg, Russia: Invited Symposium speaker (June 30-July 5).
- St- Louis University, Dpt. Anatomy and Neurobiology: seminar.
- International Soc. for Autonomic Neuroscience. Cairns, Australia, Sept 14-20: invited Symposium speaker.

Year 1999.

- FASEB Summer Research Conference, Vermont: Neural Mechanisms in Cardiovascular Regulation: Organizer and Chair.

Year 2000

- Invited speaker. APS Conference entitled ABaroreceptor and cardiopulmonary receptor reflexes. Iowa City, Iowa, August 24-27.
- Invited Speaker. Astra-Zeneca Conference on AStress and Relationship to Functional Visceral Diseases. Amalfi, Italy. March 31-April 3, 2000.
- Invited Speaker. Research Workshop: Effect of acupuncture on cardiovascular diseases: its mechanism and clinical application. UC Irvine: October 14-15, 2000.

Year 2001

- FASEB meeting, Orlando, Fl. Symposium speaker.
- Synthesium organizer and invited speaker, 34th Congress of the IUPS (International Union of Physiological Sciences). August 26-31, 2001, Christchurch, New-Zealand.
- Invited Speaker. Central mechanisms of cardiovascular control - integrative, cellular and molecular aspects. 20-22 August 2001. Sydney, Australia. Satellite meeting of 34th IUPS.

Year 2002

- FASEB summer conference on the Neural Control of Circulation: invited speaker
- European Winter Brain Research Conference. 04/07/10. Sölden, Austria. Central Respiratory and Motor Control: invited speaker.

Year 2003

- EB conference, April San Diego, CA: symposium invited speaker
- OHSU, Portland, OR: invited seminar. April.
- Third Conference of the International Society for Autonomic Neuroscience, Calgary, Ontario, Canada, July 4-8<sup>th</sup>. Plenary lecture.

- Center for Neuroscience 25<sup>th</sup> Anniversary Visiting Fellowship. Flinders University, Adelaide Australia. September 15- October 4. Two plenary lectures.
- Howard Florey Institute, Melbourne, Australia. Two plenary lectures.

Year 2004

- EB meeting, April, Washington DC, Invited speaker.
- Ninth International Sleep & Breathing Meeting, October 13-16, 2004 Newport, Rhode Island: invited speaker.
- George Washington U. Nov 5. Dept Pharmacology & Physiology: invited seminar.
- U Texas San Antonio. Nov 8. Dpt Physiology: invited seminar

Year 2005

- Univ South Florida, March 2-4. Dpt. Physiology seminar invitation
- Dartmouth University, Aug 14-16. Speaker at symposium on sleep apnea.
- U Texas San Antonio. Nov 8. Dpt. Physiology seminar invitation

Year 2006

- April 3, 2006. Exp. Biology meeting, San Francisco. Invited speaker at symposium on chemoreceptors
- British Physiological Society Meeting, July 2006, London. Symposium lecture.
- University of Leeds, UK. Invited seminar, July 2006.
- Oxford Conference, Lake Louise, Alberta, Canada. Invited speaker (two Symposium lectures)

Year 2007

- University of Florida, Gainesville, October 4, 2007: seminar.
- IBRO meeting, Taiwan, July 8, 2007: lecture.
- CCHS meeting, Sestri-Levante, Italy: Nov 9, 2007: Invited lecture.

Year 2008

- March 03, 2008; Harvard University / Beth Israel Hospital: Invited seminar: "CO<sub>2</sub> homeostasis, breathing automaticity and sleep"
- EB08 meeting, April 7, 2008, San Diego. Carl Ludwig Distinguished lecturer of the APS neural control and autonomic regulation section: "Retrotrapezoid nucleus and central chemoreception".
- UC-Irvine, April 10, 2008: Distinguished Lectureship in Integrative Medicine Invited. Title: "The retrotrapezoid nucleus, breathing automaticity and Ondine's curse"
- May 2008: American Thoracic Society, Toronto. Invited symposium lecture: "Central Chemoreceptors".
- Grenoble, France October 10 and 11. Journees respiratoires. Invited lecture.
- December 2008, St Maximin, France. International Symposium on Respiratory Control. December 1-4. Invited presentation.

Year 2010

- American Thoracic Society Meeting May 15, 2010: New-Orleans. Invited lecture.
- Summer FASEB Conference, Saxton River Vermont, July 2010: Invited speaker.

## Year 2011

- Emory University “Frontiers in Neuroscience” seminar series. March 17-18. Invited lecture.
- Experimental Biology Meeting April 11: symposium speaker.
- July 2011, ISAC Conference (International Society for Arterial Chemoreception), Hamilton Ontario; Invited key note speaker.
- October 6-8: University of Nebraska; seminar speaker.

## Year 2012:

- University of Chicago. Feb 10. Seminar.
- University of Iowa. April 12; Seminar.
- EB Meeting San Diego: April 23; symposium
- Spinal cord Symposium, Madison Wisconsin: May 22-25. Lecture.
- Harvard Beth Israel: June 13-14. Consultant on PPG & symposium speaker.
- Serotonin Club. July 10-13; Montpellier, France: invited speaker.
- Sept 25-28: Neuropathophysiology of hypertension, ISH satellite Palm Cover Australia. Key note speaker.
- SFN satellite meeting: 7<sup>th</sup> brain research Conference: Optogenetics and pharmacogenetics in Neuronal function and Dysfunction. October 11 & 12 New-Orleans. Speaker.

## Year 2013

- Rushton Lectures: Optogenetics, University of Florida, Tallahassee, March 23. 1hr lecture.
- Academia Sinica, Taipei, April 1<sup>st</sup>. Invited lecture (cancelled for family reasons).
- FASEB SRC (Science research Conferences) July 14-19, Gleneden Beach Oregon. Neural Mechanisms in Cardiovascular Regulation. Keynote address.
- International Union of Physiological Sciences (IUPS). Birmingham, UK. Invited symposium speaker.

## Year 2014

- 8<sup>th</sup> Annual Salk/Foundation Ibsen/Nature Symposium on “Genes and physiology”. La Jolla. January 29-31. Invited Symposium Speaker.
- SELC Sherbrooke Canada, Feb 5-8. Invited Lecture
- March 14, Seminar U of Arizona
- March 19, Seminar, Tulane U.
- May 24, Feinstein institute, New-York, invited seminar.
- June 12-13. Symposium Institut Pasteur, France. Invited speaker.

## Year 2015

- March 30<sup>th</sup>. Experimental Biology meeting, Boston, MA. Invited Symposium speaker (30min)
- July 8<sup>th</sup>. Harvard, Beth Israel: Seminar.
- September 27<sup>th</sup>. ISAN meeting, Stresa Italy, Keynote speaker (50min).
- October 27<sup>th</sup> Pathology Department, University of Virginia. Seminar.
- December 4<sup>th</sup> Baylor University, Houston TX: Seminar.

## Year 2016

- February 25<sup>th</sup>: Penn State University: seminar
- March 10<sup>th</sup> Academia Sinica Taipei Taiwan: seminar
- April 1<sup>st</sup>: Stanford University: Sleep grand Rounds. Seminar speaker. Invited by E. Mignot.

- June 30<sup>th</sup>: Paris, Ondine symposium: invited speaker.
- July 1: Physiological Society meeting, Dublin Ireland. Invited symposium presentation.
- Nov 8-10: LIX Reunion Annual Sociedad de Biología de Chile, Valparaiso Chile, Keynote speaker
- Dec 1: Emory U. Dpt Physiology. Seminar speaker

Year 2017

- Feb 07: Univ. Pennsylvania. Seminar speaker
- April 25. EB Meeting Chicago. Symposium speaker.
- July 17-19<sup>th</sup>. 15<sup>th</sup> Intrnatnl meeting on Sleep and Breathing; Madison WI. Keynote speaker.
- July 23: ISAC. Keynote speaker
- November. Soc for Neurosci meeting Washington DC: symposium speaker

## MISCELLANEOUS

**Visiting Professor:** Center for Neuroscience 25<sup>th</sup> Anniversary Visiting Fellowship. Flinders University, Adelaide Australia. September 15- October 4, 2004.