

1. Curriculum Vitae

Beat Lutz, Ph.D., W3 Professor for Physiological Chemistry

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Personal information:

Birth Date/Place: March 26, 1961 in Romanshorn (Kanton Thurgau), Switzerland
Marital Status: married, 2 children
Citizenship: Swiss
Home Address: Humboldtstraße 9, 55270 Zornheim
Phone (home): 06136 85 04 35

Education:

School 1967-1975 Elementary School in Romanshorn, Switzerland
1975-1980 Gymnasium in Romanshorn
9/1980 Gymnasium Diploma (**Abitur**) in Romanshorn

Studies 1980-1985 **Studies in Biochemistry (Biochemie)** at the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland

5/1985 Diploma in Natural Sciences (Naturwissenschaften) (Biochemistry, Organic Chemistry, Microbiology, Cell Biology, and Molecular Biology)

Thesis 1985-1989 Doctorate work at the Institute for Cell Biology, ETH Zurich

3/1989 Doctor of Natural Sciences (Naturwissenschaften) (Dr. sc. nat.)

Further Education 10/1990 Diploma as Gymnasium Teacher in Chemistry at the ETH Zurich

Postdoctoral Education (4/1989-3/1997)

4/1989-9/1990 Postdoctoral position at the Institute of Cell Biology, ETH-Zürich

10/1990-3/1995 Postdoctoral position with Prof. Dr. G. Eichele at Harvard Medical School, Dept. of Cellular & Mol. Physiol., Boston, USA (1990), and from January 1991 at Baylor College of Medicine, Dept. of Biochemistry, Houston, USA

- Sponsored by the Swiss National Science Foundation 1990-1994
- 3-Week Cold Spring Harbor Practical Course in "Molecular Embryology of the Mouse" (June 1994)

4/1995-3/1997 Scientist with Prof. Dr. G. Schütz at the German Cancer Research Center (DKFZ) in Heidelberg.

4/1997-9/2004 **Independent Group Leader** of the Max-Planck-Society at the Max-Planck-Institute of Psychiatry, Munich.

1/02 and 3/02 **Habilitation and Certificate for Teaching ("Lehrbefugnis")** in Zoology at the Ludwig-Maximilians-University Munich.

9/03-9/04 **Scholarship from the Hertie-Foundation**

Since 10/2004 **W3 Professor for Physiological Chemistry**, Johannes Gutenberg University Mainz

Since 4/2011 **Director of the Institute of Physiological Chemistry**, University Medical Center of the Johannes Gutenberg University Mainz

2. List of Publications

A) Original publications

1. Amrein K, Lutz B, Hertner T, Lezzi M, Dorsch-Häsler K (1986) Complete DNA sequence of the ecdysterone-controlled gene I-18C of *Chironomus tentans*. Nucleic Acids Res, 17:7807-7808 [IF: 6.3]
2. Turberg A, Spindler-Barth M, Lutz B, Lezzi M, and Spindler K-D (1988) Presence of an ecdysteroid-specific binding protein ("receptor") in epithelial tissue culture cells of *Chironomus tentans*. J Insect Physiol, 34:797-803 [IF: 2.0]
3. Amrein K, Dorsch-Häsler K, Lutz B, Lezzi M (1988) Two transcripts of the same ecdysterone-controlled gene are differentially associated with ribosomes. Gene, 65:277-283 [IF: 2.7]
4. Dorsch-Häsler K, Lutz B, Lezzi M (1990) Structural and developmental analysis of a gene cloned from the early ecdysterone inducible puff site I-18C in *Chironomus tentans*. Gene, 96:233-239 [IF: 2.7]
5. Rugarli EI, Lutz B, Kuratani SC, Wawersik S, Borsani G, Ballabio A, Eichele G (1993) Expression pattern of the Kallmann syndrome gene in the olfactory system suggests a role in neuronal targeting. Nature Genet, 4:19-26 [IF: 24.1]
6. Lutz B, Kuratani SC, Cooney AJ, Wawersik S, Tsai SY, Eichele G, Tsai M-J (1994) Developmental regulation of the orphan receptor COUP-TF II gene in spinal motor neurons. Development, 120:25-36 [IF: 7.8]
7. Lutz B, Kuratani S, Rugarli EI, Wawersik S, Wong C, Bieber FR, Ballabio A, Eichele G (1994) Expression of the Kallmann syndrome gene in human fetal brain and in the manipulated chick embryo. Hum Mol Genet, 3:1717-1723 [IF: 8.1]
8. Lutz* B, Lu* H-C, Eichele G, Miller D, Kaufman TC (1996) Rescue of *Drosophila labial* null mutant by the chicken ortholog *HoxB-1* demonstrates that the function of *Hox* genes is phylogenetically conserved. Genes Dev, 10:176-184 (*equal contributions) [IF: 15.0]
9. Marsicano G, Lutz B (1999) Expression of the cannabinoid receptor CB1 in distinct neuronal subpopulations in the adult mouse forebrain. Eur J Neurosci 11:4213-4225. [IF: 3.7]
10. Lutz B, Schmid W, Niehrs C, Schütz G (1999) Essential role of CREB family proteins during *Xenopus* embryogenesis. Mech Dev 88:55-66. [IF: 3.8]
11. Rammes G, Steckler T, Kresse A, Schütz G, Zieglgänsberger W, Lutz B (2000) Synaptic plasticity and fear conditioning in mice expressing dominant-negative cAMP response element-binding protein (CREB) in forebrain. Eur J Neurosci 12:2534-2546. [IF: 3.7]
12. Ong WY, Lim HM, Lim TM, Lutz B (2000) Kainate-induced neuronal injury leads to persistent phosphorylation of cAMP response element-binding protein in glial and endothelial cells in the hippocampus. Exp Brain Res 131:178-186. [IF: 1.9]
13. Klostermann A, Lutz B, Gertler F, Behl C (2000) The orthologous human and murine semaphorin 6A-1 proteins (SEMA6A-1/Sema6A-1) bind to the enabled/vasodilator-stimulated phosphoprotein-like protein (EVL) via a novel carboxyl-terminal zyxin-like domain. J Biol Chem 275:39647-53. [IF: 5.8]

14. Pagotto U, Marsicano G, Fezza F, Theodoropoulou M, Grübler Y, Stalla J, Arzberger T, Milone A, Losa M, Di Marzo V, Stalla G, Lutz B (2001) Normal human pituitary gland and pituitary adenomas express cannabinoid receptor type 1 and synthesize endogenous cannabinoids. First evidence for a direct role of cannabinoids on hormone modulation at human pituitary level. *J Clin Endocrinol Metab* 86:2687-2696. [IF: 5.8]
15. Azad SC, Marsicano G, Eberlein I, Putzke J, Zieglgänsberger W, Spanagel R, Lutz B (2001) Differential role of the nitric oxide pathway on Δ^9 -THC-induced central nervous system effects in the mouse. *Eur J Neurosci* 13:561-568. [IF: 3.7]
16. Hermann H, Marsicano G, Lutz B (2002) Coexpression of the cannabinoid receptor type 1 with dopamine and serotonin receptors in distinct neuronal subpopulations of the adult mouse forebrain. *Neuroscience* 109:451-460. [IF: 3.4]
17. Marsicano G, Moosmann B, Hermann H, Behl⁺C, Lutz⁺B (2002) Neuroprotective properties of cannabinoids against oxidative stress: role of the cannabinoid receptor CB1. *J Neurochem* 80:448-456. (+equal contributions) [IF: 4.3]
18. Zhang Z, Lutz B (2002) Cre recombinase-mediated inversion using lox66 and lox71: Method to introduce conditional point mutations into the CREB-binding protein (CBP). *Nucleic Acids Res* 30:E90-0. [IF: 6.3]
19. Marsicano G, Wotjak CW, Azad SC, Bisogno T, Rammes G, Song T, Hofmann C, Zieglgänsberger W, Di Marzo V, Lutz B (2002) The endogenous cannabinoid system controls extinction of aversive memories. *Nature* 418:530-535. [IF: 26.6]
20. Azad SC, Eder M, Marsicano G, Lutz B, Zieglgänsberger W, Rammes G (2003) Activation of the cannabinoid receptor type 1 decreases glutamatergic and GABAergic synaptic transmission in the lateral amygdala of the mouse. *Learn Mem* 10:116-128. [IF: 5.1]
21. Hermann H, De Petrocellis L, Bisogno T, Moriello TA, Lutz B, Di Marzo V (2003) Dual action of a cannabinoid receptor agonist on capsaicin-induced increase of intracellular Ca^{2+} in cells co-expressing cannabinoid CB₁ and vanilloid VR1 receptors. *Cell Mol Life Sci* 60:607-616. [IF: 4.7]
22. Cota D, Marsicano G, Tschöp M, Grübler Y, Flachskamm C, Schubert M, Auer D, Thöne-Reinecke C, Ortmann S, Cervino C, Linthorst A, Pasquali R, Lutz B, Stalla GK, Pagotto U (2003) Decreased fat mass in mice deficient for cannabinoid receptor 1 is due to decreased orexigenic drive and impaired adipocyte differentiation. *J Clin Invest* 112:423-431. [IF: 15.8]
23. Izzo AA, Capasso F, Costagliola A, Bisogno T, Marsicano G, Ligresti A, Matias I, Capasso R, Pinto L, Borrelli F, Cecio A, Lutz B, Mascolo N, Di Marzo V (2003) An endogenous cannabinoid tone attenuates cholera toxin-induced fluid accumulation in mice. *Gastroenterology* 125:765-774. [IF: 12.5]
24. Marsicano G, Goodenough S, Monory K, Hermann H, Eder M, Cannich A, Azad SC, Grazia Cascio M, Ortega Gutiérrez S, van der Stelt M, Luz López-Rodríguez M, Casanova E, Schütz G, Zieglgänsberger W, Di Marzo V, Behl C, Lutz B (2003) CB1 cannabinoid receptors mediate on-demand defense against excitotoxicity. *Science* 302:84-88. [IF: 30.0]
25. Storr M, Sibae A, Marsicano G, Lutz B, Schusdziarra V, Timmermans JP, Allescher HD. (2004) Cannabinoid receptor type 1 modulates excitatory and inhibitory neurotransmission in mouse colon. *Am J Physiol Gastrointest Liver Physiol* 286:G110-G117. [IF: 3.6]

26. Khaspekov LG, Brenz Verca MS, Frumkina LE, Hermann H, Marsicano G, Lutz B (2004) Involvement of brain-derived neurotrophic factor in cannabinoid receptor-dependent protection against excitotoxicity. *Eur J Neurosci* 19:1691-1698. [IF: 3.7]
27. Sitz JH, Tigges M, Baumgärtel K, Khaspekov LG, Lutz B (2004) Dyrk1A potentiates steroid hormone-induced transcription via the chromatin remodeling factor Arip4. *Mol Cell Biol* 24:5821-5834. [IF: 6.8]
28. Massa F, Marsicano G, Hermann H, Cannich A, Monory K, Cravatt BF, Ferri G-L, Sibaev A, Storr M, Lutz B (2004) The endogenous cannabinoid system protects against colonic inflammation. *J Clin Invest* 113:1202-1209. [IF: 15.8]
29. Cannich A, Wotjak C, Kamprath C, Lutz B, Marsicano G (2004). CB1 cannabinoid receptors modulate kinase and phosphatase activity during extinction of conditioned fear in mice. *Learning & Memory* 11:625-632. [IF: 5.1]
30. Zhang Z, Hofmann C, Casanova E, Schütz G, Lutz B (2004) Generation of a conditional allele of the *CBP* gene in mouse. *Genesis* 40:82-89. [IF: 2.6]
31. Sanchis-Segura C, Cline BH, Marsicano G, Lutz B, Spanagel R (2004) Reduce sensitivity to reward in CB1 knockout mice. *Psychopharmacology* 176:223-232. [IF: 3.6]
32. Azad SC, Monory K, Marsicano G, Cravatt BF, Lutz B, Zieglgänsberger W and Rammes G (2004) Circuitry for associative plasticity in the amygdala involves endocannabinoid signaling. *J Neurosci* 24:9953-9961. [IF: 7.5]
33. Melis M, Perra S, Muntoni AL, Pillolla G, Lutz B, Marsicano G, Di Marzo V, Gessa GL, Pistis M (2004) Prefrontal cortex stimulation induces 2-arachidonoyl-glycerol-mediated suppression of excitation in dopamine neurons. *J Neurosci* 24:107070-10715. [IF: 7.5]
34. Bayatti N, Hermann H, Lutz B, Behl C (2005) CRH-mediated induction of BDNF expression is inhibited by the activation of the cannabinoid system. *Endocrinology* 146:1205-1213. [IF: 5.2]
35. Hermann H, Lutz B (2005) Coexpression of the cannabinoid receptor type 1 with the corticotropin-releasing hormone receptor type 1 in distinct regions of the adult mouse forebrain. *Neurosci Lett* 375:13-18. [IF: 2.1]
36. Hölter SM, Kallnik M, Wurst W, Marsicano G, Lutz B, Wotjak CT (2005) Cannabinoid CB1 receptor is dispensable for memory extinction in an appetitively-motivated learning task. *Eur J Pharmacol* 510:69-74. [IF: 2.5]
37. Capasso R, Matias I, Lutz B, Borrelli F, Capasso F, Marsicano G, Mascolo N, Petrosino S, Monory K, Valenti M, Di Marzo V, Izzo AA (2005) Fatty acid amide hydrolase controls mouse intestinal motility in vivo. *Gastroenterology* 129:941-51. [IF: 12.5]
38. Aguado T, Monory K, Palazuelos J, Stella N, Cravatt B, Lutz B, Marsicano G, Kokaia Z, Guzman M, Galve-Roperh I (2005) The endocannabinoid system drives neural progenitor proliferation. *FASEB J* 19:1704-6. [IF: 6.7]
39. Obradovic D, Gronemeyer H, Lutz B, Rein T (2006) Antagonizing actions of vitamin D₃ on glucocorticoid functions in hippocampal cells. *J Neurochem* 96:500-509. [IF: 4.3]
40. Aguado T, Palazuelos J, Monory K, Stella N, Cravatt B, Lutz B, Marsicano G, Kokaia Z, Guzman M, Galve-Roperh I (2006) The endocannabinoid system promotes astroglial differentiation b acting on neural progenitor cells. *J Neurosci* 26:1551-1561. [IF: 7.5]

41. Massa F, Sibaeve A, Marsicano G, Blauzun, Storr M, Lutz B (2006) Vanilloid receptor (TRPV1)-deficient mice show increased susceptibility to dinitrobenzene sulfonic acid-induced colitis. *J Mol Med* 84:142-6. [IF: 5.2]
42. Sibaeve A, Massa F, Yuce B, Marsicano G, Lehr HA, Lutz B, Goke B, Allescher HD, Storr M (2006) CB1 and TRPV1 receptors mediate protective effects on colonic electrophysiological properties in mice. *J Mol Med* 84:513-520. [IF: 5.2]
43. Kamprath C, Marsicano G, Tang J, Monory K, Bisogno T, Di Marzo V, Lutz B, Wotjak CT (2006) Cannabinoid CB1 receptor mediates fear extinction via habituation-like processes. *J Neurosci* 26:6677-86. [IF: 7.5]
44. Domenici MR, Azad SC, Schierloh A, Wotjak CT, Dodt HU, Marsicano G, Zieglgänsberger W, Lutz B, Rammes G (2006) Evidence for the control of excitatory synaptic transmission by activation of cannabinoid receptor type 1 (CB1) located on presynaptic terminals of principal neurons in the cortex. *J Neurosci* 26:5794-9. [IF: 7.5]
45. Monory K, Massa F, Egertova M, Eder M, Blaudzun H, Westenbroek R, Kelsch W, Jacob W, Marsch R, Ekker M, Long J, Rubenstein JL, Goebbels S, Nave KA, During M, Klugmann M, Wolfel B, Dodt HU, Zieglgänsberger W, Wotjak CT, Mackie K, Elphick MR, Marsicano G, Lutz B. (2006) The endocannabinoid system controls key epileptogenic circuits in the hippocampus. *Neuron* 51:455-66. [IF: 13.9]
46. Melis M, Pillolla G, Bisogno T, Minassi A, Petrosino S, Perra S, Muntoni AL, Lutz B, Gessa GL, Marsicano G, Di Marzo V, Pistis M (2006) Protective activation of the endocannabinoid system during Ischemia in dopamine neurons, *Neurobiol Dis* 24:15-27. [IF: 4.1]
47. Brenz Verca MS, Weber P, Mayer C, Graf C, Refojo D, Kühn R, Grummt I, Lutz B (2007) Development of a species-specific RNA polymerase I-based shRNA expression vector. *Nucl Acids Res* 35:e10. [IF: 6.3]
48. Marsch R, Foeller E, Rammes G, Bunck M, Kössl M, Holsboer F, Zieglgänsberger W, Landgraf R, Lutz B, Wotjak CT (2007) Reduced anxiety, conditioned fear, and hippocampal long-term potentiation in transient receptor potential vanilloid type 1 receptor-deficient mice. *J Neurosci* 27:832-9. [IF: 7.5]
49. Deshmukh S, Onozuka K, Bender KJ, Bender VA, Lutz B, Mackie K, Feldman DE (2007) Postnatal development of cannabinoid receptor type 1 expression in rodent somatosensory cortex. *Neuroscience* 2007 145:279-87. [IF: 3.4]
50. Häring M, Marsicano G, Lutz B, Monory K. (2007) Identification of the cannabinoid receptor type 1 in serotonergic cells of raphe nuclei in mice. *Neuroscience*. 2007 Mar 22; 146:1212-9. [IF: 3.4]
51. Cota D, Steiner MA, Marsicano G, Cervino C, Herman JP, Grubler Y, Stalla J, Pasquali R, Lutz B, Stalla GK, Pagotto U (2007) Requirement of cannabinoid receptor type 1 for the basal modulation of hypothalamic-pituitary-adrenal axis formation. *Endocrinology* 148:1574-81. [IF: 5.2]
52. Maresz K, Pryce G, Ponomarev ED, Marsicano G, Croxford JL, Shriver LP, Ledent C, Cheng X, Carrier EJ, Mann MK, Giovannoni G, Pertwee RG, Yamamura T, Buckley NE, Hillard CJ, Lutz B, Baker D, Dittel BN. (2007) Direct suppression of CNS autoimmune inflammation via the cannabinoid receptor CB1 on neurons and CB2 on autoreactive T cells. *Nat Med* 13(4):492-7. [IF: 28.6]

53. Berghuis P, Rajnicek AM, Morozov YM, Ross RA, Mulder J, Gabriella M, Urbán GM, Monory K, Marsicano G, Matteoli M, Canty A, Irving AJ, Katona I, Yanagawa Y, Rakic P, Lutz B, Mackie K, Harkany T (2007) Hardwiring the brain: endocannabinoids control axon guidance. *Science* 316:1212-16. [IF: 30.0]
54. Agarwal N, Pacher P, Tegeder I, Amaya F, Constantin C, Brenner GJ, Rubino T, Michalski CW, Marsicano G, Monory K, Mackie K, Marian C, Batkai B, Parolaro D, Fischer MJ, Reeh P, Kunos G, Kress M, Lutz B, Woolf CJ, Kuner R (2007) Nociceptor-specific conditional gene deletion reveals that cannabinoids mediate analgesia largely via peripheral type 1 cannabinoid receptors. *Nat Neurosci* 10:870-9. [IF: 14.8]
55. Corbillé AG, Valjent E, Marsicano G, Ledent L, Lutz B, Hervé D, Girault JA (2007) Role of CB1 receptors in locomotor activity and striatal signaling in response to psychostimulants. *J Neurosci* 27:6937–6947. [IF: 7.5]
56. Aguado T, Romero E, Monory K, Palazuelos J, Sendtner M, Marsicano G, Lutz B, Guzman M, Galve-Roperh I (2007) The CB1 cannabinoid receptor mediates excitotoxicity-induced neural progenitor proliferation and neurogenesis. *J Biol Chem* 282:23892-8. [IF: 5.8]
57. Steiner MA, Wanisch K, Monory K, Marsicano G, Borroni E, Bächli H, Holsboer F, Lutz B, Wotjak CT (2007) Impaired cannabinoid receptor type 1 signaling interferes with stress coping behavior in mice. *The Pharmacogenomics J* 8:196-208. [IF: 3.9]
58. Yucece B, Sibaevev A, Broedl U, Marsicano G, Goeke B, Lutz B, Allescher HD, Storr M (2007) Cannabinoid type 1 receptor modulates intestinal propulsion by an attenuation of intestinal motor responses within the peristaltic reflex. *Neurogastroenterol Motil* 19:744-753. [IF: 3.3]
59. Monory M, Blaudzun H, Massa F, Kaiser N, Lemberger T, Schütz G, Wotjak CT, Marsicano G*, Lutz B*, (2007) Genetic dissection of behavioural and autonomic effects of Δ^9 -tetrahydrocannabinol in mice, *PLoS Biol* 5:e269. (*, equal contributions) [IF: 14.1]
60. Moreira FA, Kaiser N, Monory K, Lutz B (2008) Reduced anxiety-like behaviour induced by genetic and pharmacological inhibition of the endocannabinoid-degrading enzyme fatty acid amide hydrolase (FAAH) is mediated by CB1 receptors. *Neuropharmacology* 54:141-50. [IF: 3.9]
61. Izzo AA, Avello G, Petrosino S, Orlando P, Marsicano G, Lutz B, Borrelli F, Papasso R, Nigam S, Papasso F, Di Marzo V (2007) Increased endocannabinoid levels reduce the development of precancerous lesions in the mouse colon. *J Mol Med* 86:89-98. [IF: 5.2]
62. Steiner MA, Marsicano G, Nestler EJ, Holsboer F, Lutz B, Wotjak C (2008) Antidepressant-like behavioural effects of impaired cannabinoid type 1 signalling coincide with exaggerated corticosterone secretion in mice. *Psychoneuroendocrinol* 33:54-67. [IF: 4.8]
63. Hansen HH, Krutz B, Siffringer M, Stefovská V, Bittigau P, Pragst F, Marsicano G, Lutz B, Ikonomidou C (2008) Cannabinoids enhance susceptibility of immature brain to ethanol neurotoxicity. *Ann Neurol* 64:52-62. [IF: 8.3]
64. Jeong WI, Osei-Hyiaman D, Park O, Liu J, Bátkai S, Mukhopadhyay P, Horiguchi N, Harvey-White J, Marsicano G, Lutz B, Gao B and Kunos G (2008) Paracrine activation of hepatic CB1 receptors by stellate cell-derived endocannabinoids mediates alcoholic fatty liver. *Cell Metabol* 7:227-35. [IF: 16.7]
65. Azad SC, Kurz J, Marsicano G, Lutz B, Zieglgänsberger W, Rammes G (2008) Cannabinoid receptor type 1 (CB1) receptor on GABAergic interneurons inhibits LTD in lateral amygdala. *Learn Mem* 15:143-52. [IF: 5.1]

66. Tedesco L, Valerio A, Cervino C, Cardile A, Pagano C, Vettor R, Pasquali R, Carruba MO, Marsicano G, Lutz B, Pagotto U, Nisoli E (2008) Cannabinoid type 1 receptor blockade promotes mitochondrial biogenesis through eNOS expression in white adipocytes. *Diabetes* 57:2028-36. [IF: 7.8]
67. Mulder J, Aguado T, Keimpema E, Barabás K, Ballester Rosado CJ, Nguyen L, Monory K, Marsicano G, Di Marzo V, Hurd YL, Guillemot F, Mackie K, Lutz B, Guzmán M, Lu HC, Galve-Roperh I, Harkany T. (2008) Endocannabinoid signaling controls pyramidal cell specification and long-range axon patterning. *Proc Natl Acad Sci U S A* 105:8760-5. [IF: 10.2]
68. Storr MA, Keenan CM, Emmerdinger D, Zhang H, Yüce B, Sibaev A, Massa F, Buckley NE, Lutz B, Göke B, Brand S, Patel KD, Sharkey KA. (2008) Targeting endocannabinoid degradation protects against experimental colitis in mice: involvement of CB1 and CB2 receptors. *J Mol Med* 86:925-936 [IF: 5.2]
69. Osei-Hyiaman D, Liu J, Zhou L, Godlewski G, Harvey-White J, Jeong Wi, Bátkai S, Marsicano G, Lutz B, Buettner C, Kunos G (2008) Hepatic CB₁ receptor involvement in diet-induced steatosis, altered lipid profile, and insulin and leptin resistance. *J Clin Invest* 118:3160-3169. [IF: 15.8]
70. Steiner M, Marsicano G, Wotjak CT, Lutz B (2008) Conditional cannabinoid receptor type 1 mutants reveal neuron subpopulation-specific effects on behavioral and neuroendocrine stress responses. *Psychoneuroendocrinology* 33:1165-1170 [IF: 4.9]
71. Sitz JH, Baumgärtel K, Hämmerle B, Papadopoulos C, Hekerman P, Tejedor F, Becker W, Lutz B. (2008) The Down syndrome candidate kinase DYRK1A phosphorylates the neurodegeneration-related septin SEPT4. *Neuroscience* 157:596-605. [IF: 3.4]
72. Chung SC, Hammarsten P, Josefsson A, Stattin P, Granfors T, Egevad L, Mancini G, Lutz B, Bergh A, Fowler CJ. (2009) A high cannabinoid CB1 receptor immunoreactivity is associated with disease severity and outcome in prostate cancer. *Eur J Cancer*, 45:174-82 [IF: 4.5]
73. Kamprath K, Plendl W, Marsicano G, Deussing JM, Wurst W, Lutz B, Wotjak CT (2009) Endocannabinoids mediate acute fear adaptation via glutamatergic neurons independently of CRH signaling. *Genes Brain Behav* 8:203-211 [IF: 3.5]
74. Cluny NL, Keenan CM, Lutz B, Piomelli D, Sharkey KA (2009) The identification of peroxisome proliferator-activated receptor alpha independent effects of oleoylethanolamide on intestinal transit in mice. *Neurogastroenterology and Motility* 21:420-429 [IF: 3.4]
75. Price DA, Seillier A, Koek W, Acosta Y, Fernandez E, Strong JR, Lutz B, Marsicano G, Roberts JL, Guiffrida A (2009) WIN55,212-2, a cannabinoid receptor agonist, protects against nigrostriatal cell loss in the MPTP mouse model of Parkinson's Disease. *Eur J Neurosci* 29:2177-2186. [IF: 3.7]
76. Puighermanal E, Marsicano G, Busquets A, Lutz B, Maldonado R, Ozaita A (2009) Cannabinoid modulation of hippocampal long-term memory is mediated by mTOR signalling through CB1 receptors located in GABAergic neurons. *Nat Neurosci* 12:1152-8 [IF: 15.6]
77. Pernía-Andrade AJ, Kato A, Witschi R, Nyilas R, Katona I, Freund TF, Watanabe M, Filitz J, Koppert W, Schüttler J, Ji G, Neugebauer V, Marsicano G, Lutz B, Vanegas H, Zeilhofer HU (2009) Spinal endocannabinoids and CB1 receptors mediate C-fiber-induced heterosynaptic pain plasticity. *Science* 325:760-4 [IF: 30.0]

78. Kodirov SA, Jasiewicz J, Amirmahani P, Psyraakis D, Bonni K, Wehrmeister M, Lutz B (2009) Endogenous cannabinoids trigger the depolarization-induced suppression of excitation in the lateral amygdala. *Learn Mem* 17:43-9 [IF: 4.0]
79. Quarta C, Bellocchio L, Mancini G, Mazza R, Cervino C, Braulke LJ, Fekete C, Latorre R, Nanni C, Bucci M, Clemens LE, Heldmaier G, Watanabe M, Leste-Lassere T, Maitre M, Tedesco L, Fanelli F, Reuss S, Klaus S, Srivastava RK, Monory K, Valerio A, Grandis A, De Giorgio R, Pasquali R, Nisoli E, Cota D, Lutz B, Marsicano G, Pagotto U (2010) CB1 signaling in forebrain and sympathetic neurons is a key determinant of endocannabinoid actions on energy balance. *Cell Metab* 11:273-85 [IF: 17.3]
80. Storr MA, Bashashati M, Hirota C, Vemuri VK, Keenan CM, Duncan M, Lutz B, Mackie K, Makriyannis A, Macnaughton WK, Sharkey KA (2010) Differential effects of CB1 neutral antagonists and inverse agonists on gastrointestinal motility in mice. *Neurogastroenterol Motil* 22:787-96 [IF: 3.5]
81. Cluny NL, Keenan CM, Duncan M, Fox A, Lutz B, Sharkey KA (2010) Naphthalen-1-yl-(4-pentyloxynaphthalen-1-yl)methanone (SAB378), a peripherally restricted cannabinoid CB1/CB2 receptor agonist, inhibits gastrointestinal motility but has no effect on experimental colitis in mice. *J Pharmacol Exp Ther* 334:973-80 [IF: 4.0]
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