

Publications

Pamela Banta Lavenex, PhD

Extraordinary Professor in Psychology
UniDistance Suisse
pamela.banta@unidistance.ch

Articles and book contributions

- Villard, J., Chareyron, L.J., **Banta Lavenex, P.**, Amaral, D.G., Lavenex, P. (2024). Stereological Analysis of the Rhesus Monkey Perirhinal and Parahippocampal Cortices, *Journal of Comparative Neurology*, 532:e25684. <https://doi.org/10.1002/cne.25684>
- Bochud-Fragnière, E., Bittolo, P., Ehrensperger, G., Antonicelli, N., Costanzo, F., Menghini, F., Vicari, S., **Banta Lavenex, P.** & Lavenex, P. (2024): Conditional learning abilities in Down syndrome and Williams syndrome, *Journal of Cognitive Psychology*, <https://doi.org/10.1080/20445911.2024.2390538>
- **Banta Lavenex, P.**, Blandin, M. L., Gaborieau, C., & Lavenex, P. (2024). Well-designed manufacturing work improves some cognitive abilities in individuals with cognitive impairments. *Frontiers in Rehabilitation Sciences*, 5, 1377133. <http://doi.org/10.3389/fresc.2024.1377133>
- Baillifard, A., Gabella, M., **Banta Lavenex, P.**, Martarelli, C.S. (2024). Effective learning with a personal AI tutor: A case study. *Education and Information Technologies*, 1-16. <https://link.springer.com/article/10.1007/s10639-024-12888-5>
- Bochud-Fragnière, E., Lavenex, P., & **Banta Lavenex, P.** (2024). Development of conditional learning abilities in children from 3 to 12 years of age. *Journal of Cognitive Psychology*, 1-22. <https://doi.org/10.1080/20445911.2024.2314973>
- Bochud-Fragnière, E., Lonchampt, G., Bittolo, P., Ehrensperger, G., Circelli, A. R., Antonicelli, N., Costanzo, F., Menghini, D., Vicari, S., **Banta Lavenex, P.** & Lavenex, P. (2024). Why do individuals with Williams syndrome or Down syndrome fail the Weather Prediction Task?. *Developmental Psychobiology*, 66(5), e22503. <https://onlinelibrary.wiley.com/doi/full/10.1002/dev.22503>
- Meziane, H. B., Jabès, A., Klencklen, G., **Banta Lavenex, P.**, & Lavenex, P. (2024). EEG markers of successful allocentric spatial working memory maintenance in humans. *European Journal of Neuroscience*, 60(4), 4421-4436 <https://doi.org/10.1111/ejn.16446>
- Lavenex, P., Amaral, D.G., **Banta Lavenex, P.**, Guillemot, F., Insausti, R., and Urban, N. Development of the hippocampal formation. In, *The Hippocampus Book*. Eds. Andersen, P., Morris, R.G.M., Amaral, D.G., Bliss, T., O'Keefe, J., Oxford University Press, 2024. ISBN: 9780190065324
- Sideropoulos, V., Van Herwegen, J., Meuleman, B., Alessandri, M., Alnemary, F. M., Amani Rad, J., **Banta Lavenex, P.** et al. (2023). Anxiety, concerns and COVID-19: Cross-country perspectives from families and individuals with neurodevelopmental conditions. *Journal of Global Health* doi: 10.7189/jogh.13.04081.
- Bochud-Fragnière, E., Lavenex, P. and **Banta Lavenex P.** (2023). When and how do children solve the Weather Prediction Task? *Developmental Psychobiology* doi : 10.1002/dev.22407.
- Villard, J., Chareyron, L.J., Piguet, O., Lambercy, P., Lonchampt, G., **Banta Lavenex, P.**, Amaral, D.G. and Lavenex, P. (2023). Structural plasticity in the entorhinal and perirhinal cortices following hippocampal lesion in rhesus monkeys. *Hippocampus* doi: 10.1002/hipo.23567.
- Di Poi, G., Dukes, D. Meuleman, B. **Banta Lavenex, P.**, Lavenex, P., Papon, A., Tran, M., Stallmann, L., Treichel, N., Samson, A.C. (2023). Anxiety in families of individuals with

neurodevelopmental conditions in the early months of the COVID-19 pandemic in Switzerland. *Frontiers in Education* doi: 10.3389/feduc.2023.951970.

- Bochud-Fraghière, E., **Banta Lavenex P.**, Lavenex, P. (2022). What is the Weather Prediction Task good for? A new analysis of learning strategies reveals how young adults solve the task. *Frontiers in Psychology* doi: 10.3389/fpsyg.2022.886339.
- Jabès, A., Klencklen, G., Ruggeri, P., Antonietti, J.-P., **Banta Lavenex, P.**, Lavenex, P. (2021). Age-related differences in resting-state EEG and allocentric spatial working memory performance. *Frontiers in Aging Neuroscience* doi: 10.3389/fnagi.2021.704362.
- Chareyron, L., **Banta Lavenex, P.**, Amaral, D.G. and Lavenex, P. (2021). Life and death of immature neurons in the juvenile and adult primate amygdala. *International Journal of Molecular Sciences*, 22(13): 6691-6710. doi: 10.3390/ijms22136691
- **Banta Lavenex, P.** and Lavenex, P. (2021). *A critical review of spatial abilities in Down and Williams syndromes: not all space is created equal*. *Frontiers in Psychiatry* doi: 10.3389/fpsyg.2021.669320.
- Jabès, A., Klencklen, G., Ruggeri, P., Michel, C.M., **Banta Lavenex, P.** and Lavenex, P. (2021) *Resting-state EEG microstates parallel age-related differences in allocentric spatial working memory performance*. *Brain Topography*, 1-19, doi: 10.1007/s10548-021-00835-3.
- Banta Lavenex, P., Ribordy Lambert, F., Bostelmann, M. and Lavenex, P. (2021). *Le développement de la mémoire spatiale chez l'enfant entre 2 et 9 ans*. *Enfance* 1:19-35.
- Bostelmann, M., Ruggeri, P., Rita Circelli, A., Costanza, F., Menghini, D., Vicari, S., Lavenex, P., **Banta Lavenex, P.** (2020). *Path integration and cognitive mapping capacities in Down and Williams syndromes*. *Frontiers in Psychology*, 11:571394. doi: 10.3389/fpsyg.2020.571394.
- Bostelmann, M., Lavenex, P., **Banta Lavenex, P.** (2020). *Children five-to-nine years old can use path integration to build a cognitive map without vision*. *Cognitive Psychology*, 121 doi.org/10.1016/j.cogpsych.2020.101307.
- Piguet, O., Chareyron, L., **Banta Lavenex, P.**, Amaral, D., Lavenex, P. (2020). *Postnatal development of the entorhinal cortex: A stereological study in macaque monkeys*. *Journal of Comparative Neurology*, 528:2308-2332. doi: 10.1002/cne.24897.
- Bostelmann, M., Bochud-Fraghière, E., Lavenex, P., **Banta Lavenex, P.** (2019). *Les systèmes de mémoire spatiale et le syndrome de Williams*. *Approche Neuropsychologique des Apprentissages chez l'Enfant*, 160:358-368.
- Bostelmann, M., Costanza, F., Martorana, L., Menghini, D., Vicari, S., **Banta Lavenex, P.**, Lavenex, P. (2018). *Low-resolution place and response learning capacities in Down syndrome*. *Frontiers in Psychology*, 9:1-17. doi: 10.3389/fpsyg.2018.02049.
- Piguet, O., Chareyron, L.J., **Banta Lavenex, P.**, Amaral, D., Lavenex, P. (2018). *Stereological analysis of the rhesus monkey entorhinal cortex*. *Journal of Comparative Neurology*, 526:2115-2132.
- Thevenot, C., Dewi, J., **Banta Lavenex, P.**, Bagnoud, J. (2018). *Spatial-numerical associations enhance the short-term memorization of digit locations*. *Frontiers in Psychology*, 9:1-6. doi:10.3389/fpsyg.2018.00636.
- Klencklen, G., **Banta Lavenex, P.**, Brandner, C., Lavenex, P. (2017). *Working memory decline in normal aging: Memory load and representational demands affect performance*. *Learning and Motivation*, 60:10-22.
- Bostelmann, M., Fragnière, E., Costanzo, F., Di Vara, S., Menghini, D., Vicari, S., Lavenex, P., **Banta Lavenex, P.** (2017). *Dissociation of spatial memory systems in Williams syndrome*. *Hippocampus*, 27(11):1192-1203; doi.org/10.1002/hipo.22764.

- Chareyron, L., **Banta Lavenex, P.**, Amaral, D.G., Lavenex, P. (2017). *Functional organization of the medial temporal lobe memory system following neonatal hippocampal lesion in rhesus monkeys*. Brain Structure and Function, doi:10.1007/s00429-017-1441-z.
- Klencklen, G. **Banta Lavenex, P.**, Brandner, C., Lavenex, P. (2017). *Working memory decline in normal aging: Is it really worse in space than in color?* Learning and Motivation, 57: 48-60.
- Ribordy F., Lavenex, P., **Banta Lavenex, P.** (2016). *The 'when' and the 'where' of single-trial allocentric spatial memory performance in young children: insights into the development of episodic memory*. Developmental Psychobiology, 59(2): 185-196.
- Lavenex, P., **Banta Lavenex, P.**, Cachat, F., Gehri, M., Juvet, T. (2016). *No association between ApoE polymorphism and febrile seizures*. Neurological Sciences, 37:21-36. doi:10.1007/s10072-015-2351-6.
- **Banta Lavenex, P.**, Bostelmann, M., Brandner, C., Costanzo, F., Fragnière, E., Klencklen, G., Lavenex, P., Menghini, D., Vicari, S. (2015). *Allocentric spatial learning and memory deficits in Down Syndrome*. Frontiers in Psychology, 6:1-17. doi: 10.3389/fpsyg.2015.00062.
- **Banta Lavenex, P.**, Boujon, V., Ndarugendamwo, A., Lavenex, P. (2015). *Human short-term spatial memory: Precision predicts capacity*. Cognitive Psychology, 77:1-19.
- Ribordy Lambert, F., Lavenex, P., **Banta Lavenex, P.** (2015). *Improvement of allocentric spatial memory resolution in children from 2 to 4 years of age*. International Journal of Behavioral Development, 39(4): 318-331, 2015. doi: 10.1177/0165025415584808.
- **Banta Lavenex, P.**, Lavenex, P. (2015). *The ontogeny of human memory: Where are we going?* International Journal of Behavioral Development, 39(4): 308-309, 2015. doi: 10.1177/0165025415573645.
- **Banta Lavenex, P.**, Colombo, F., Ribordy Lambert, F., Lavenex, P. (2014). *The human hippocampus beyond the cognitive map: evidence from a densely amnesic patient*. Frontiers in Human Neuroscience, 8:1-18, doi: 10.3389/fnhum.2014.00711.
- Lavenex, P., **Banta Lavenex, P.**, Favre, G. (2014). *What animals can teach clinicians about the hippocampus*. Frontiers of Neurology and Neuroscience, 34:36-50. doi: 10.1159/000356418.
- Lavenex, P., **Banta Lavenex, P.** (2013). *Building hippocampal circuits to learn and remember: Insights into the development of human memory*. Behavioural Brain Research, 254:8-21.
- Ribordy, F., Jabès, A., **Banta Lavenex, P.**, Lavenex, P. (2013). *Developmental of allocentric spatial memory abilities in children from 18 months to 5 years of age*. Cognitive Psychology, 66(1):1-29.
- Favre, G., **Banta Lavenex, P.** and Lavenex, P. (2012). *miRNA regulation of gene expression: A predictive bioinformatics analysis in the postnatally developing monkey hippocampus*. PLoS One, 7(8):e43435.
- Favre, G., **Banta Lavenex, P.**, Lavenex, P. (2012). *Developmental regulation of expression of schizophrenia susceptibility genes in the primate hippocampal formation*. Translational Psychiatry, 2:e173.
- Chareyron, L., **Banta Lavenex, P.**, Lavenex, P. (2012). *Postnatal development of the amygdala: A stereological study in rats*. Journal of Comparative Neurology, 520(16):3745-63.
- Chareyron, L., **Banta Lavenex, P.**, Amaral, D.G., Lavenex, P. (2011). *Postnatal development of the amygdala: A stereological study in macaque monkeys*. Journal of Comparative Neurology, 520(9):1965-84.
- Chareyron, L., **Banta Lavenex, P.**, Amaral, D.G., Lavenex, P. (2011). *Stereological analysis of the rat and monkey amygdala*. Journal of Comparative Neurology, 519(16):3218-3239.
- **Banta Lavenex, P.**, Lecci, S., Prêtre, V., Brandner, C., Mazza, C., Pasquier, J., Lavenex, P. (2011). *As the world turns: Short-term human spatial memory in egocentric and allocentric coordinates*. Behavioural Brain Research, 219: 132-141.

- Jabès, A., **Banta Lavenex, P.**, Amaral, D.G., Lavenex, P. (2011). *Postnatal development of the hippocampal formation: a stereological study in macaque monkeys*. Journal of Comparative Neurology, 519: 1051-1070.
- Lavenex, P., Sugden, S.G., Davis, R.R., Gregg, J.P., **Banta Lavenex, P.** (2010). *Developmental regulation of gene expression and astrocytic processes may explain selective hippocampal vulnerability*. Hippocampus, 21: 142-149.
- **Banta Lavenex, P.**, Lavenex, P. (2010). *Spatial relational learning and memory abilities do not differ between men and women in a real-world, open-field environment*. Behavioural Brain Research, 207: 125-137.
- Jabès, A., **Banta Lavenex, P.**, Amaral, D.G., Lavenex, P. (2010). *Quantitative analysis of postnatal neurogenesis and neuron number in the macaque monkey dentate gyrus*. European Journal of Neuroscience, 31: 273-285.
- **Banta Lavenex, P.**, Lavenex, P. (2009). *Spatial memory and the monkey hippocampus: Not all space is created equal*. Hippocampus, 19: 8-19.
- Lavenex, P., **Banta Lavenex, P.**, Bennett, J.L., Amaral, D.G. (2009). *Postmortem changes in the neuroanatomical characteristics of the primate brain: hippocampal formation*. Journal of Comparative Neurology, 512: 27-51.
- Lavenex, P., **Banta Lavenex, P.**, Amaral, D.G. (2007). *Spatial relational learning persists following neonatal hippocampal lesions in macaque monkeys*. Nature Neuroscience, 10(2): 234-239.
- Lavenex, P., **Banta Lavenex, P.**, Amaral, D.G. (2007). *Postnatal development of the primate hippocampal formation*. Developmental Neuroscience, 29: 179-192.
- **Banta Lavenex, P.**, Amaral, D.G., Lavenex, P. (2006). *Hippocampal lesion prevents spatial relational learning in adult macaque monkeys*. Journal of Neuroscience, 26: 4546-4558.
- Lavenex, P., **Banta Lavenex, P.** (2006). *Spatial relational memory in 9-month-old macaque monkeys*. Learning and memory, 13(1): 84-96.
- Lavenex, P., **Banta Lavenex, P.**, Amaral D.G. (2004). *Nonphosphorylated high-molecular-weight neurofilament expression suggests early maturation of the monkey subiculum*. Hippocampus, 14: 797-801.
- **Banta Lavenex, P.**, P. Lavenex, N.S. Clayton (2001). *Comparative studies of postnatal neurogenesis and learning: A critical review*. Avian and Poultry Biology Reviews, 12(3): 103-125.
- **Banta Lavenex, P.** (2000). *Lesions in the budgerigar vocal control nucleus NLC affect production, but not memory, of English words and natural vocalizations*. Journal of Comparative Neurology, 421: 437-460.
- **Banta Lavenex, P.** (1999). *Vocal production mechanisms in the budgerigar (Melopsittacus undulatus): The presence and implications of amplitude modulation*. Journal of the Acoustical Society of America, 106: 491-505.
- Pepperberg, I.M., Naughton, J.R., **Banta, P.A.** (1998). *Allospecific vocal learning by Grey parrots (Psittacus erithacus): A failure of some videotaped instruction*. Behavioural Processes, 42: 139-158.
- Pepperberg, I.M., Howell, K.S., **Banta, P.A.**, Patterson, D.K., Meister, M. (1998). *Measurement of Grey parrot (Psittacus erithacus) trachea via magnetic resonance imaging, dissection and electron beam computed tomography*. Journal of Morphology, 238: 81-91.
- **Banta, P.A.**, Welsford, I.G., Prior, D.J. (1989). *Water-orientation behavior in the terrestrial gastropod Limax maximus: The effects of dehydration and arginine vasotocin*. Physiological Zoology, 63(4): 683-696.

- Welsford, I.G., **Banta, P.A.**, Prior, D.J. (1989). *Size-dependent responses to dehydration in the terrestrial slug, Limax maximus L.: Locomotor activity and huddling behavior.* Journal of Experimental Zoology, 253: 229-234.
- Prior D.J., Welsford, I.G., **Banta, P.A.** (1989). *Ingestion of substrate fluid by Helix aspersa Muller: a feeding response induced by low molecular weight chemical stimuli.* Comparative Biochemistry and Physiology, 94(1): 73-74.
- Shagene, K.A., Welsford, I.G., Prior, D.J., **Banta, P.A.** (1989). *Injection of small cardioactive peptide (SCPB) can initiate the appetitive phase of feeding in the slug, Limax maximus.* Journal of Experimental Biology, 143: 553-557.