

### **Research Interests**

---

- Mechanisms & Healing Potentials of **Placebo & Nocebo Effects**,
- Mediators and Mechanisms of **Human Change Processes**,
- **Neuromodulation**,
- **Applied System Theory**,
- Belief Systems, **Exceptional Experiences**, Salience & Dopaminergic Neurotransmission,
- **Hypnosis & Suggestibility**,
- **Top-down Pain Modulations**

### **Awards**

---

03.2017: «**1. Nachwuchs-Förderpreis für Hypnose & Hypnotherapie 2017**» M.E.G. - Milton Erickson Gesellschaft für Klinische Hypnose e.V. (M.E.G.; Milton Erickson Society for Clinical Hypnosis).

10.2010: «**Förderpreis für Schmerzforschung 2010**» der Deutschen Gesellschaft zum Studium des Schmerzes (DGSS; German Society for the Study of Pain).

### **Journal Articles**

---

Ho, J. T., **Krummenacher, P.**, Lesur, M.R., Lenggenhager, B. (2020). Real Bodies Not Required? Placebo Analgesia and Pain Perception in Immersive Virtual and Augmented Reality. bioRxiv 2020.12.18.423276; doi: <https://doi.org/10.1101/2020.12.18.423276>

**Krummenacher, P.** (2018). Placeboanalgesie und Nocebohyperalgesie – Mechanismen und gesundheitsförderndes Potenzial. Schweizer Zeitschrift für Psychiatrie & Neurologie

**Krummenacher, P.** (2017). Placeboanalgesie und Nocebohyperalgesie – Mechanismen und klinische Nutzung [Placebo analgesia and nocebo hyperalgesia – Mechanisms and clinical use]. Therapeutische Umschau, 74(5):232-240.

Birkhäuser, J., Gaab, J., Kossowsky, J., Hasler, S., **Krummenacher, P.**, Werner, C. & Gerger, H. (2017). *Trust in the health care professional and health outcome: A meta-analysis*. Plos One, <http://dx.doi.org/10.1371/journal.pone.0170988>

Gaab, J., Jiménez, J., Voneschen, L., Oschwald, D., Meyer, A. H., Nater, U. & **Krummenacher, P.** (2016). *Psychosocial stress-induced analgesia - an examination of effects on heat pain threshold and tolerance and of neuroendocrine mediation*. Neuropsychobiology, 74(2): 87-95. doi: 10.1159/000454986. Epub 2017 Feb 11.

Prätzlich, M., Kossowsky, J., Gaab, J. & **Krummenacher, P.** (2016). Impact of short-term meditation and expectation on executive brain functions. Behavioural Brain Research, 297: 268-276.

Wittwer, A., **Krummenacher, P.**, La Marca, R., Ehlert, U. & Folkers, G. (2016). *Salivary alpha-amylase correlates with subjective heat pain perception*. Pain Medicine (13.1.2016 epub).

Locher, C., Kossowsky, J., Gaab, J., Kirsch, I., Bain & **Krummenacher, P.** (2015). *Moderation of antidepressant and placebo outcomes by baseline severity in late-life depression: A systematic review and meta-analysis*. Journal of Affective Disorders, 181, 50-60.

**Krummenacher, P.**, Kossowsky, J., Schwarz, C., Brugger, P., Kelley, J. M., Meyer, A. H., & Gaab, J. (2014). *Expectancy-Induced Placebo Analgesia in Children and the Role of Magical Thinking*. Journal of Pain, 15(12):1282-1293.

Simmons, K., Ortiz, R., Kossowsky, J., **Krummenacher, P.**, Grillon, C., Pine, D., Colloca, L. (2014). *Pain and placebo in pediatrics: A comprehensive review of laboratory and clinical findings*. Pain, 155(11):2229-2235.

Landolt, K., Wittwer, A., Wyss, T., Unterassner, L., Fach, W., **Krummenacher, P.**, Brugger, P., Haker, H., Kawohl, W., Schubiger, P. A., Folkers, G., Rössler, W. (2014). Help-seeking in people with exceptional experiences: results from a general population sample. *Front Public Health*. 21;2:51.

**Krummenacher, P.**, Kut, E., Folkers, G., & Brugger, P. (2013). *Naloxone modulates visual judgments of similarity but not dissimilarity*. *Cognitive, Affective, & Behavioral Neuroscience*. doi: 10.3758/s13415-013-0155-9.

McKay, R., Tamagni, C., Palla, A., **Krummenacher, P.**, Hegemann, S. C., Straumann, D., & Brugger, P. (2013). *Vestibular stimulation attenuates unrealistic optimism*. *Cortex*. <http://dx.doi.org/10.1016/j.cortex.2013.04.005>.

Aoyama, A., **Krummenacher, P.**, Palla, A., Hilti, L. M. and Brugger, P. (2012). *Impaired spatial-temporal Integration of touch in body integrity identity disorder (BIID)*. *Spatial Cognition and Computation: An Interdisciplinary Journal*, 12, 96-110.

**Krummenacher, P.** (2011). *Präfrontale Kontrolle von Erwartungen bei der Placebo-Analgesie [Prefrontal cortex mediated control of expectations in placebo analgesia]*. *Der Schmerz*, 25, 440–443.

Stern, J., Candia, V., Porchet, R. I., **Krummenacher, P.**, Folkers, G., Schedlowski, M., Ettlin, D. A. and Schönbächler G. (2011; Epub 25.1.2011). *Placebo-mediated, Naloxone-sensitive suggestibility of short-term memory performance*. *Neurobiology of Learning and Memory*, 95(3), 326-34

**Krummenacher, P.**, Candia, V., Folkers, G., Schedlowski, M. and Schönbächler, G. (2010; Epub, 28.10.2009). *Prefrontal cortex modulates placebo analgesia*. *Pain*, 148(3), 368-374.

**Krummenacher, P.**, Mohr, C., Haker, H. and Brugger, P. (2010; Epub, 30.7.2009). *Dopamine, Paranormal Belief, and the Detection of Meaningful Stimuli*. *Journal of Cognitive Neuroscience*, 22(8), 1670-1681.

Palmer, J., Mohr, C., **Krummenacher, P.** and Brugger, P. (2007). *Implicit learning of sequential bias in a guessing task: Failure to demonstrate effects of dopamine administration and paranormal belief*. *Consciousness and Cognition*, 16, 498-506.

Mohr, C., **Krummenacher, P.**, Landis, T., Sandor, P.S., Fathi, M. and Brugger, P. (2005). *Psychometric schizotypy modulates levodopa effects on lateralized lexical decision performance*. *Journal of Psychiatric Research*, 39, 241-250.

### **Articles & Internet Publications**

---

**Krummenacher, P** (2015). *Heilen mit Hirn*. Senso, 4; 11.

**Krummenacher, P.** (2015). *Plazeboanalgesie und Magical Thinking bei Kindern*. *Journal Club Schmerzmedizin*, 4; 112-114.

**Krummenacher, P.** & Hofer, F. (2014). Burnout: *Sinnkrise oder Symptom unseres Systems*. In: *Burnout & Depression*. Media Planet/Tagesanzeiger (27.12.2014).

**Krummenacher, P.**, & Gaab, J. (2013). *Klinische Nutzung der Placeboreaktion*. *PSYCH up2date*, 7, 199-201.

Tamagni, C., Palla, A., **Krummenacher, P.**, Vitacco, D., Huberle, E., D. Straumann, D., S. C. A. Hegemann, S. C. A., McKay, R., and Brugger, P. (2010). *Vestibular stimulation reduces unrealistic optimism*. *Nature Precedings*, <http://hdl.handle.net/10101/npre.2010.4519>.

### **Books and Book contributions**

---

Krummenacher, P. (2012). Das soziale Gehirn. In: W.I.R.E. (Web for Interdisciplinary Research & Expertise) (Hrsg.). Die grosse Gemeinschaft. NZZ Verlag. Zürich.

Krummenacher, P. (2010). *Expectation, Belief and Framing: Neuroscientific Aspects of Belief and Judgment Systems*. ETH Dissertation Nr. 18875, Zürich.

### **Commentaries about our work**

---

Benedetti F. (2010; Epub, 3.11.2009). [\*No prefrontal control, no placebo response\*](#). *Pain*, 148(3), 357-358.

Philips H. (2002). *Paranormal beliefs linked to brain chemistry*. NewScientist, 2353, 17.

***Reviewer***

PAIN®, Molecular Psychiatry, Cerebral Cortex, Psychology of Consciousness