

# Paresthesia free spinal cord stimulation in experimental chronic neuropathic pain

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## **Paresthesia free spinal cord stimulation in experimental chronic neuropathic pain**

door Lonne Heijmans

1. Spinal cord stimulation (SCS) parameter titration and correct parameter selection is crucial for optimizing pain relief. – *this thesis (chapters 4 & 5)*
2. New SCS paradigms and the underlying mechanisms should be studied with use of both active and (pseudo-)passive charge balance in order to characterize potential differences in SCS effectiveness on pain relief. – *this thesis (chapters 4 & 5)*
3. Identifying 5-HT receptor subtypes and changes in expression and function is needed to select drugs for optimal treatment of chronic neuropathic pain. – *this thesis (chapter 2)*
4. The development of pain-biomarkers will improve the prediction, diagnosis and treatment of neuropathic pain and will allow for a better and more objective analysis of SCS treatment efficacy on pain relief. – *this thesis (chapters 7 & 8)*
5. Operant behavioral testing needs to be an integral part of preclinical research on SCS and pain and will improve translation of findings to the clinic. – *this thesis (chapter 8)*
6. Pain-paresthesia overlap is a major complication in preclinical research on SCS and pain relief. – *this thesis (chapter 8)*
7. The use of mean charge per second as a treatment dose provides a new angle on the approach of optimizing SCS-induced pain relief. – *this thesis (impact)*
8. The capability of the spinal cord stimulation device to deliver different waveforms provides greater clinical improvement than using a single waveform, whatever the waveform. – *Philippe Rigoard et al. 2023. <https://doi.org/10.1016/j.jpain.2023.07.015>*
9. To kill an error is as good a service as, and sometimes even better than, the establishing of a new truth or fact. – *Charles Darwin (UK, 1809-1882)*
10. 100% of the time, pain is a construct of the brain. – *Lorimer Moseley (Australia, 1970)*
11. The method of science, as stodgy and grumpy as it may seem, is far more important than the findings of science. – *Carl Sagan (USA, 1934-1996)*