Abstract – English
Master thesis, programme of medicine
A new, clinically more relevant model for nerve root injury in the rat.
Oscar Finskas, 2012
Sahlgrenska Academy, University of Gothenburg
Structured abstract:
Study design: Exposure to nucleus pulposus and displacement of intra spinal nervous structures with assessment of spontaneous behavior changes in rats.
Objectives: To develop a controlled, experimental model for nerve root injury.
Summary of background data: There are a number of experimental models presented for studies on radiculopathies. One often utilized model is based on exposure to nucleus pulposus and displacement of the dorsal root ganglion (DRG). However, it is clinically more common that the nerve roots are displaced/compressed than the DRG. In the present study, we developed a model for displacement of the nerve root by modifying the DRG model.
Methods: After removing the left L3-4 facet joint the underlying disc was punctured and the L4 nerve root was displaced laterally by an injection needle (n=10). In sham experiments the same procedure was performed without disc puncture and displacement (n=10). In ten rats, the left L4-5 facet joint was removed. The underlying disc was punctured and the L4 DRG was displaced medially by an injection needle. Assessment of spontaneous behavior changes were performed at days 1, 3, 7, 14 and 21 post surgery.