



# Biology @ Acadia

## ANTIAPOPTIC EFFECTS OF RELAXIN IN ORGANOTYPIC BRAIN SLICE CULTURES

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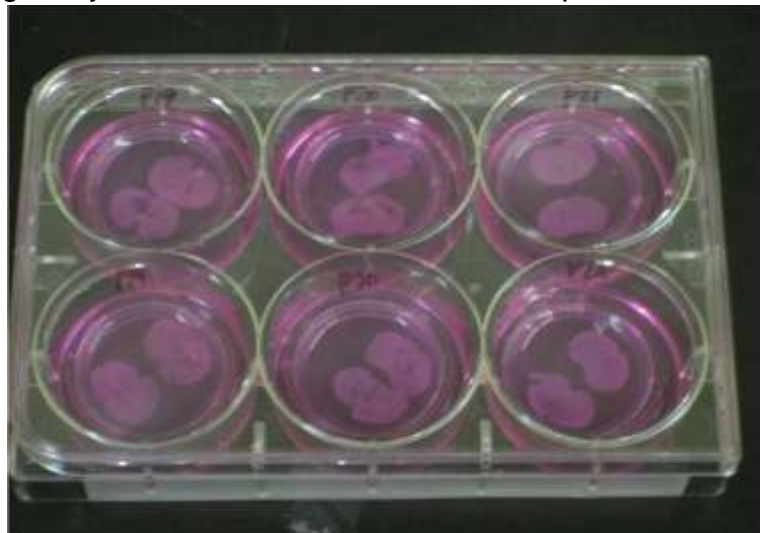
Relaxin is a peptide hormone, which belongs to the insulin superfamily. However, relaxin does not share any functional similarities with insulin. The first studied function of relaxin was its active role during pregnancy, which caused relaxation of the pelvic ligaments. In more recent

research, relaxin has been shown to play a protective role during ischemic stress within the heart, pancreas, spleen and brain.

Injecting relaxin into the brain prior to the induction of cerebral ischemia resulted in a smaller infarct size. Relaxin may have caused this due to a cellular mechanism regulating apoptosis.

This study aimed to quantify the difference of apoptosis occurring with and without the relaxin treatment in brain slices under

ischemic conditions. Organotypic cultures of neonatal rat brains were given one of three different treatments, normoxic, hypoxic or hypoxic with relaxin. Following incubation the tissue was flash frozen prior to protein isolation. A sandwich ELISA was used to quantify the amount of apoptosis occurring for each treatment by measuring the concentration of histone of each sample. The data from this protocol did not show any significant difference between the hypoxic and hypoxic with relaxin treatments, however there was a pattern that showed a decrease in apoptosis occurring in the relaxin treatment group.



**Matthew Mackin** graduated from Saint John High School in Saint John NB in 2006. Matthew is currently completing his honours thesis as part of his double major in Biology and Psychology. Aside from Matthew's academic's, he has been extremely involved in Acadia University life as the current ARD of Chase Court. Matthew has also been a representative for the university as a student ambassador since his first year at Acadia. Matthew has always believed in giving back to the community and has done so by being a Scout leader as well as participating in the best buds program. Upon arrival at Acadia Matthew received the Acadia Advantage Award as well as the Acadia Residence Award. Matthew was also the first recipient of the Wanda Langley Award from the department of biology. Next year Matthew will be completing a paramedic course at Holland College in pursuits of a Medical degree in the future.

