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125933**FINAL REPORT 06/30/96****Contract #:** NAG2-1002**Title:** Expression of Contractile Protein Isoforms in Microgravity**Principal Investigator:** Page A. W. Anderson, M.D.**Objectives of Experiment:**

The general objective of this experiment is to determine the effect of space flight parameters, including microgravity, on ontogenesis and embryogenesis of Japanese quail. Nine U.S. and two Russian investigators are cooperating in this study. Specific objectives of the participating scientists include assessing the gross and microscopic morphological and histological development of the embryo, as well as the temporal and spacial development of specific cells, tissues, and organs. Temporally regulated production of specific proteins is also being investigated.

Our objective is to determine the effects of microgravity on developmentally programmed expression of Troponin T and I isoforms known to regulate cardiac and skeletal muscle contraction.

Results:

At the end of the reporting year of the grant 06/30/96, no embryonic tissue had been generated by the fertilized eggs sent to MIR. We had examined control embryonic tissue and had been successful purifying mRNA and obtaining products from RT-PCR.

Discussion:

No microgravity exposed tissue was available for study.

Investigation Results:

The protocols developed will prove useful in studying embryonic tissue that have undergone gestation in microgravity.

Investigation Applications:

Our improved method for harvesting RNA from fixed tissues will enhance the study of archival pathologic specimens.

Bibliography:

Not applicable.



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