

Summer Student Research Program
Project Description

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PROJECT TITLE (200 Characters max):
How does silver ion accelerate blood clotting?

HYPOTHESIS:

We have previously found that silver ion reduces the clotting time of human blood in a dose-related manner. In addition, when combined with collagen, a known initiator of platelet aggregation, a potentiation of clotting is observed. Whether this combination of collagen (in the form of a bandage, etc) and silver can be effectively employed as an effective hemostatic device will be evaluated.

PROJECT DESCRIPTION (Include design, methodology, data collection, techniques, data analysis to be employed and evaluation and interpretation methodology)

One-day old citrated whole blood (CWB) from the clinical labs will be divided into aliquots containing combinations of saline (control), silver nitrate, collagen and other agents. The samples will be incubated (10 min) and the clotting times and erythrocyte sedimentation rate (ESR) determined. The difference in clotting time and ESR between samples will be statistically evaluated (ANOVA) to determine what agents (anticoagulants, fibrinolytic, etc) alter these parameters and if a mechanism of action can be established

SPONSOR'S MOST RECENT PUBLICATIONS RELEVANT TO THIS RESEARCH:
Spillert CR: Silver ion potentiates the hemostatic properties of collagen. Shock 17:70, 2002

IS THIS PROJECT SUPPORTED BY EXTRAMURAL FUNDS?

Yes or No

(IF YES, PLEASE SUPPLY THE GRANTING AGENCY'S NAME)

THIS PROJECT IS: Clinical Laboratory Behavioral Other

THIS PROJECT INVOLVES THE USE OF HUMAN SUBJECTS

PENDING APPROVED IRB PROTOCOL # M-071-1997

THIS PROJECT IS SUITABLE FOR:

UNDERGRADUATE STUDENTS ENTERING FRESHMAN
SOPHOMORES ALL STUDENTS

**THIS PROJECT WILL BE POSTED DURING ACADEMIC YEAR
FOR INTERESTED VOLUNTEERS?:** Yes or No

WHAT WILL THE STUDENT LEARN FROM THIS EXPERIENCE?

Improve laboratory skills, ability to plan and perform additional experiments, appreciate the need of good laboratory data for effective clinical decision making (students will make clinical rounds).