Faculty Name: John Kane, M.D. Ph.D.
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Project Name(s): Discovery of the Molecular Speciation of Human High Density Lipoproteins

General Topic (Keywords): Protein chemistry, mass spectrometry, human lipoproteins, heart disease, ovarian cancer

Project Description(s): All the effort in this project involves original discovery. We are finding that the high density lipoproteins of human plasma exist in up to twenty species. We have discovered species that kill Trypanosomes that cause African sleeping sickness, others that protect against septic shock, and others that defend against leukemogenic viruses. We are now exploring a connection with risk of ovarian cancer, and protective actions against heart disease. The laboratory effort is to isolate and characterize the individual species. Some opportunity to learn medical implications exists.

Desired Skills or Experience: Some experience with electrophoresis, chromatography is desirable

Time Commitment: Full time summer, can continue part-time, time available, in the Fall/Winter, if desired

Preferred Starting Date: June