**ORAL ANTI INFLAMMATORY PEPTIDE F REDUCES SYSTEMIC INFLAMMATION AND IMPROVES HDL FUNCTION**

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Objective: Our hypothesis was that anti inflammatory peptide F that has a high affinity for oxidized fatty acids and oxidized phospholipids might reduce systemic inflammation and improve HDL function in a mouse model of atherosclerosis.

Methods: ApoE deficient mice, 4 to 5 month of age were maintained on a laboratory chow diet. A group (n=10) was given chow alone, another group (n=10) was provided for two weeks, with the anti inflammatory peptide F in the diet at a level of 500 ug per day per mouse. Serum amyloid A was determined using a commercial kit. Plasma HDL containing fractions were isolated using fast performance liquid chromatography. Endothelial cells were grown to confluence in culture plates. HDL was pre labeled with DiI and was incubated with endothelial cells at 50 ug per ml and the cells were incubated for 60 minutes at a 37 degree incubator on a mixer with 60 rotations per minute. The cells were then washed and fluorescence associated with the cells was determined using a fluorescence plate reader.

Results: treatment of the mice with the anti inflammatory peptide F resulted in a significant reduction of serum amyloid A (p= 0.014 compared with the control group). In the experiment determining the binding of HDL to endothelial cells, HDL from mice that received peptide F resulted in a 35 % increase in the fluorescence associated with the cells (p=0.023) as compared with the control HDL.

Conclusion: the present data indicates that the anti inflammatory peptide F is capable of reducing serum amyloid A and increasing the binding of HDL to vascular endothelail cells.