



Seminar organized by Northern New York Local Section of  
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# The transferrin story . . . Why we do not rust !

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Thursday, February 26, 2009, SUNY Potsdam, Chemistry Department  
5:15 – 6:15 pm, Stowell 211

**Abstract.** In the first part of the presentation, I will talk about the importance of iron and its critical role in the human body. Interesting facts about iron, the control of its entry into the body and some well known diseases which result from too much or too little iron will be discussed.

**Fact:** To date only two organisms in the universe have been identified which do not require iron for life! What are they? (Additionally, the Popeye spinach myth will be debunked)!

In the second part of the talk I will try to convince the audience that their tax dollars are being well spent! I will talk about the structure and function of the important family of proteins called transferrins.

The transferrins (TF) are proteins with two nearly identical halves each of which tightly binds iron in a deep cleft. How do we know this? How is iron binding accomplished?

Despite binding iron in similar manner in each half there is much evidence that the binding is not equivalent. How can this be?

I will briefly describe how my lab has developed the tools to study human serum transferrin. My hope is to provide some insight into the technology currently available to study long standing problems related to human health.

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