

Biomimetics-III
An International Workshop on
Nature of the Protein/Inorganic Interfaces

August 28-30, 2002

Friday Harbor Marine Laboratory (University of Washington),
San Juan Island, Washington

The **Purpose** of the workshop is to explore ways to understand the nature of protein binding onto inorganic surfaces, including experimental and theoretical approaches, by bringing together a multifaceted group of experts in biochemistry, genetics, biotechnology, biophysics, chemistry, physics, and materials sciences.

Background: One of the building blocks of all living systems, proteins play an enormous variety of roles: some carry out transport and storage of small molecules, others make up large part of the structural framework of cells and tissues, and some others carry out enzymatic reactions that channel metabolism into essential pathways. Recently, proteins, big and small, are playing significant roles in non-traditional sciences and technologies, including nano-biotechnology, drug-delivery, tissue engineering, and molecular biomimetics. Here, designer proteins, off-the-shelf molecules, proteins selected via combinatorial mutagenesis, those extracted from hard or soft tissues, and modified/functionalized ones are all used for tissue regeneration and bone and dental biomineralization, as linkers for nanoparticles and polymers, and as structural and functional molecules integrated into nanostructures.

The **Theme** of the workshop includes questions such as:

- How do proteins recognize an inorganic surface,
- How do they conform onto surfaces,
- Enzymatic affects of proteins,
- Spectroscopic understanding of protein/inorganic interfaces,
- Scanning-probe microscopy and spectroscopy of proteins and other molecules,
- Modeling of protein conformation and binding onto surfaces,
- Stability and durability of assembled proteins on surfaces under various conditions.

The **Format** of the workshop will follow that of Gordon Research Conferences, i.e., morning sessions, free afternoons, late afternoon poster sessions, and evening talks. The talks will all comprise invited presentations, and posters will all comprise student presentations.

The **registration** is via the web-site: <http://depts.washington.edu/bionano>;

Students bringing a poster will have free, and post-docs, will have reduced registration to the workshop. The registration includes room-and-board, and all the other amenities at the FHL.

The **Friday Harbor Marine** lab is located at the beautiful San Juan Island, at the NW Coast of Washington State, near Canada. Plenty of outdoor activities include kayaking, diving, boating, photographing, bicycling, bird-watching, fishing, crabbing, oyster picking, whale and tortoise watching, and may more. <http://depts.washington.edu/fhl/>