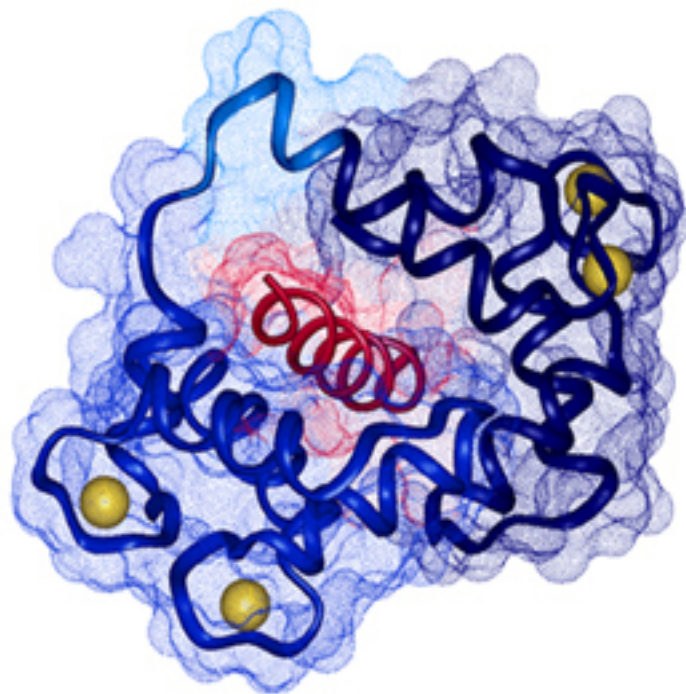


# ***Center for Protease Research-NIH-COBRE***

**Departments of Chemistry and Pharmacy  
North Dakota State University**



[www.ndsu.nodak.edu/cobre](http://www.ndsu.nodak.edu/cobre)

## ***Centers at NDSU***

**Center for Main Group Chemistry-NSF**

**Center for Corrosion-AFOSR**

**Center for Protease Research-NIH**

**Center for Nanoscale Engineering-DoD**



# ***Center for Protease Research-NIH COBRE at NDSU***

## **Long Term Goals**

- **To build the North Dakota Research establishment to the point where it can have an impact on the national and international biomedical research effort**
- **To increase the pool of well-trained personnel with biomedical experience for employment by the private sector**
- **To establish the Center for Protease Research as a productive entity in the development of new pharmaceuticals**



## ***Keys to initiation of a Center***

- **The scientific question**
- **The big picture**
- **The participants**
- **How does it impact the department, college, etc**



# ***Center for Protease Research-NIH COBRE at NDSU***

## **Planning**

- **Converse informally. Hallways, faculty meetings, etc**
- **Identify potential scientific area of inquiry**
- **Call for potential collaborators**
- **Identify a project leader**
- **Meet regularly to initiate a white paper-preproposal**
- **One or two people write the first draft**
- **Refine the proposal with input from all personnel**
- **Arrive at a budget**



# ***Center for Protease Research-NIH COBRE at NDSU***

## **Writing the Big Proposal**

- **Center programs**
  - **Individual science**
  - **Blend the projects and write a good summary in the center project**
  - **Budget allocations for all programs**
- Have all financial arrangements documented and agreed to**



# ***Center for Protease Research-NIH COBRE at NDSU***

## **Activities that impact the department**

- **Faculty recruiting**
- **Graduate student recruiting**
- **Summer REU program**
- **Visiting scholar program**
- **Symposium with oral and poster sessions**
- **Seminar program**



# ***Center for Protease Research-NIH COBRE at NDSU***

## **Activities that impact the University**

- **Increased number of faculty**
- **Grant writing workshop**
- **Proposal review**
- **Seed grant program**
- **Increased funding?**



# **Center for Protease Research-NIH COBRE at NDSU**

## **Science**

**The development of therapeutic inhibitors for matrix metalloproteinases and serine proteases.**

**Synthesis**

**Targeting and delivery**

**Biopharmaceutics**

**Cell biology**

## ***Synthesis Core***

**Synthesize MMP Inhibitors for Center Studies**

**Develop Improved Methodology to Prepare Known**

**Inhibitors- Supply them to other Projects and Collaborators**

**Develop New MMP Inhibitors**

**Develop New Zinc Binding Groups**