

**The Fifth Gibbs Conference on Biological Thermodynamics  
September 28-October 1, 1991**

**SATURDAY**

No food available at Touch of Nature on Saturday

4:00 p.m. - Registration in Little Grassy Lodge

6:00 p.m. - Posters can be set up in Indian Lodge and remain up for the entire meeting

8:00 p.m. **Ernesto Freire**  
Department of Biology  
The Johns Hopkins University  
The Molecular Basis of Cooperativity in Protein Folding

9:00-11:00 p.m.- Informal Mixer

**SUNDAY a.m.**

8:00 - 9:00 a.m. Breakfast

Session Moderator: **K. Murphy**

9:20 - 9:40 **Nick Pace**  
Contribution of Hydrogen Bonding and the Hydrophobic Effect to the Conformational  
Stability of Ribonuclease T1

9:45 - 10:05 **Isaac Wong**  
Mechanism of DNA-Unwinding by *E. coli* Rep Helicase

10:10 - 10:30 **Wolfgang Schaller**  
Calcium-Linked Conformational Changes in Calmodulin

10:35 - 10:50 Coffee Break

10:50 - 11:10 **Diana Montgomery**  
The Thermal Stability of Two Heat Shock Proteins: DnaK and Human HSP70

11:15 - 11:35 **Michael Doyle**  
Regulation of Oxygen Affinity by Quaternary Enhancement in Hemoglobin  
Ypsilanti: A Mutant Which Crystallizes in a New Quaternary Structure

11:40 - 12:05 **Diane Frank**  
Context Dependence of Interactions in the *lac* Repressor/Operator Complex

12:30 - 1:30 p.m. Lunch

## SUNDAY p.m.

4:00 - 6:00 p.m. - POSTER SESSION

6:30 -7:30 p.m. Dinner

Session Moderator: **D. Beckett**

8:00 - 8:20 **Enrico De Cera**  
Critical Phenomena in a Heterogeneous Lattice

8:25 - 8:45 **Veronica Brushaber**  
Thermodynamic Study of Cation-Oligonucleotide Interactions by UV Absorption Spectroscopy

8:50 - 9:10 **Yingwen Huang**  
Thermodynamic Description of Covalent and Noncovalent Changes in an Enzyme Catalyzed Reaction

9: 15 - 9:40 p.m. **Donald Haynie**  
Direct Measurement of the Intrinsic Enthalpies of the Molten Globule and Denatured States of Alpha-Lactalbumin

## MONDAY a.m.

8:00 - 9:00 a.m. Breakfast

Session Moderator: **H. Oberoi**

9:15 - 9:35 **Jannette Carey**  
Thermodynamics of Ligand Binding to *trp* Repressor

9:40 - 10:00 **Ken Koblan**  
Energetics of Site-Specific Protein-DNA Interactions in Phage A

10:05 .: 10:25 **Thomasz Heyduk**  
DNA Bending and Salt-Induced Change in Conformation of CRP-lac DNA Complex

10:30 - 10:45 Coffee Break

10:45 - 11 :05 **George Makhatadze**  
Protein Interactions with Urea and Guanidinium Chloride. A Calorimetric Study

11:10 ~ 11:30 **Jeff Livingstone**  
The Role of the Hydrophobic Effect in Protein Folding and Protein-Protein Association

11:35 ~ 12:00 **Bertrand Garcia-Moreno E.**  
Electrostatic Basis of the Linkage Between pH, Salt and the Functional Thermodynamics of Hemoglobin

12:30 - 1:30 p.m. Lunch

## MONDAY p.m.

4:00 - 6:00 p.m. POSTER SESSION  
6:00 - 18:30 p.m. BUFFALO TRO  
8:30 - ? Business Meeting

## TUESDAY a.m.

8:00 - 9:00 a.m. Breakfast

Session Moderator: **S. Bailey**

9:15 - 9:35 **Herb Halvorson**  
The Effect of Pressure on Calmodulin Interactions

9:40 - 10:00 **Dave Bain**  
Development of a Thermodynamically Valid Cryogenic Gel Mobility Shift Assay

10:05 - 10:25 **Marcel Santoro**  
The Functional Dependence of Thioredoxin Unfolding Free Energy Changes Over an Extended Concentration Range of Guanidine:HCl

10:30-10:45 Coffee Break

10:45 - 11:05 **Mark Levandoski**  
Improvements in the Chemical Definition of the *lac* Repressor-Operator System

11:10 ~ 11:30 **Charlene Yuan**  
Probing the Role of Electrostatic Effects in the Function and Regulation of *E. coli* Aspartate Transcarbamylase with Single Site Mutants

11:35 ~ 12:00 **Isabel M. Plaza del Pino**  
Thermodynamic Detection of Folding Intermediates in Ribonuclease T1

12:30 ~ 1:30 p.m. Lunch

1:30- 2:00 - check out at Little Grassy Lodge