

Gibbs

*Shea*

**The Fourth Gibbs Conference on Biological Systems  
September 15-18, 1990**

**Touch of Nature  
Carbondale, Illinois**

Organizers: Mike Johnson, Marty Straume

## SATURDAY NIGHT

No food available at Touch of Nature on Saturday

4:00 - ?

Registration

5:00 - ?

Informal Cash Bar (Beer and Wine available on site)

## SUNDAY A.M.

8:00 - 9:00

Breakfast

9:15 - 9:20

Welcome

9:20 - 9:40

1. Kinlin Chao  
DNA-induced Dimerization of *Escherichia coli* Rep Helicase

9:40 - 9:45

Discussion

9:45 - 10:05

2. David P. Mascotti  
Thermodynamics of Oligopeptide-Nucleic Acid Interactions

10:05 - 10:10

Discussion

10:10 - 10:30

3. Peter E. Schlack, Jr.  
The Effects of Sequence and Length on *E. coli* Promoter Spacer Regions

10:30 - 10:35

Discussion

10:35 - 10:50

Break

10:50 - 11:10

4. S.M. Law *Scott*  
Calculation of DNA Physical Properties *in vivo* Using the DNA Looping Process

11:10 - 11:15

Discussion

11:15 - 11:35

5. Veronica Brushaber *hi*  
Investigating Divalent Cation Interactions with DNA using  $^{23}\text{Na}$  NMR

11:35 - 11:40

Discussion

## SUNDAY A.M. (Continued)

11:40 - 12:05

*Tom Record Maurice Effink*  
Discussion *"Darwin's Middle Road"*  
*Stephen Jay Gould*

12:05 - 12:10

12:30 - 1:30

Lunch

## SUNDAY P.M.

Poster "Put-Up" after Lunch. Will remain up for rest of meeting.

6:30 - 7:30

Dinner

8:00 - 8:20

6. Y. Huang  
Protein Structure Stabilization Effects in Acylenzyme Intermediates

8:20 - 8:25

Discussion

8:25 - 8:45

7. G. Signor  
Cold Unfolding in T4 Lysozyme: Study of Variants with Engineered Disulfide Bridges

8:45 - 8:50

Discussion

8:50 - 9:10

8. Jeff R. Livingstone  
A General Expression for the Contribution of Nonpolar Surface Area Burial to the Overall Free Energy Change of Protein Folding

9:10 - 9:15

Discussion

9:15 - 9:40

9. Richard W. Pastor  
Dynamic Simulations of Lipid Bilayers

9:40 - 9:45

Discussion

MONDAY A.M.

- 8:00 - 9:00            Breakfast
- 9:15 - 9:35            10.    H. Oberoi  
                              Electrostatic Effects in *E. coli* Aspartate Transcarbamylase:  
                              Preliminary Results of Finite Difference Poisson-Boltzmann  
                              Calculations
- 9:35 - 9:40            Discussion
- 9:40 - 10:00           11.    D. Mallikarachchi  
                              Energetics of Dissociation and Unfolding of the Catalytic Subunit  
                              of *E. coli* Aspartate Transcarbamylase
- 10:00 - 10:05           Discussion
- 10:05 - 10:25           12.    Glen Ramsay  
                              Development of Thermal Gradient Gel Electrophoresis as an  
                              Analytical Technique
- 10:25 - 10:30           Discussion
- 10:30 - 10:45           Break
- 10:45 - 11:05           13.    Qiang Ye  
                              Phase Transition Kinetics of Binary Lipid Mixture Membranes
- 11:05 - 11:10           Discussion
- 11:10 - 11:30           14.    S. Barghouthi  
                              Models Describing Dibucaine Binding to Phospholipids: Langmuir  
                              Isotherm versus Equilibrium Partitioning Model
- 11:30 - 11:35           Discussion
- 11:35 - 12:00           ~~Maurice E. King~~    Rod Bittonen
- 12:00 - 12:05           Discussion
- 12:30 - 1:30           Lunch


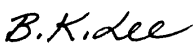
## MONDAY P.M.

- 4:00 - 6:00 POSTER SESSION  
6:00 - 8:30 BUFFALO TRO  
8:30 - ? Business Meeting

## TUESDAY A.M.

- 8:00 - 9:00 Breakfast  
*Maurice's talk.*
- 9:15 - 9:35 15. Vince J. LiCata  
Molecular Properties of the Intermediate Allosteric Structure of Human Hemoglobin: Using Single Site Modifications as Thermodynamic Reporter Groups
- 9:35 - 9:40 Discussion
- 9:40 - 10:00 16. George J. Turner  
Effects of Temperature on the Cooperative Mechanism of Oxygenation in Human Hemoglobin with Single Amino Acid Alterations
- 10:00 - 10:05 Discussion
- 10:05 - 10:25 17. Michael L. Doyle  
Cooperative Oxygenation and Subunit Assembly of Cobaltous Human Hemoglobin
- 10:25 - 10:30 Discussion
- 10:30 - 10:45 Break
- 10:45 - 11:05 18. Margaret A. Daugherty  
Effects of Protons on the Energetics of Cooperativity for the Intermediate Allosteric Species of Human Hemoglobin
- 11:05 - 11:10 Discussion

## TUESDAY A.M. (Continued)

- 11:10 - 11:30 19. David W. Ownby  
Nonlinear Optical Effects in Ligand Binding Reactions of  
Hemoglobin A<sub>0</sub>
- 11:30 - 11:35 Discussion
- 11:35 - 12:00  Rod Biltonen  B.K. Lee
- 12:00 - 12:05 Discussion
- 12:30 - 1:30 Lunch
- 2:00 - 2:00 Bus Leaves for St. Louis Airport
- 2:01 You Missed the Bus!!!