

# Tar<sup>He</sup>lium



North Carolina Section  
AMERICAN CHEMICAL SOCIETY

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"IDENTIFICATION OF ESSENTIAL AMINO  
ACIDS IN THE ACTIVE CENTER OF MALATE  
DEHYDROGENASE"

Speaker:        Dr. John Harrison  
                  University of North Carolina  
                  Chapel Hill

Date:            Thursday, February 26, 1976

Place:           Duke University  
                  Durham, North Carolina

Time:            5:30 Happy Hour  
                  President's Room  
                  Student Union

6:30 Dinner  
                  Oak Room, Student Union

8:00 Lecture  
                  Room 103, Gross Chem. Lab.

John H. Harrison IV was born in Pittsburgh, Pa., in 1936. He received his B.S. degree in chemistry from the University of Texas in 1958, and following several years of service in the USMC, his Ph.D. from the same institution in 1964. Dr. Harrison was a Jane Coffin Childs post doctoral fellow at Harvard Medical School in the laboratory of Dr. Bert Vallee from 1964-1967. In 1967 he joined the faculty of the Department of Chemistry, The University of North Carolina where he has remained until the present time. His area of research interest includes the structure-function relationship in the pyridine nucleotide dependent dehydrogenase enzymes, development of techniques of selective chemical modification for the determination of active center residues of proteins and the study of metallo-enzyme.

"IDENTIFICATION OF ESSENTIAL AMINO ACIDS IN THE ACTIVE CENTER OF MALATE DEHYDROGENASE"

The technique of selective modification has been utilized in an attempt to identify those amino acid residues which appear to be essential for either substrate binding and or catalysts in the enzymes of the dehydrogenase class. The hypothesis by which this research has been developed is that spatial arrangement of structural features within the enzymes allowing expression of enzymic function may also account for enhanced chemical reactivity of certain active center residues. Several amino acid residues including cysteine, histidine, arginine and lysine have been shown to be essentially located within the enzymatic active center of the malate dehydrogenate enzyme systems. The means by which identification of these amino acid residues not only as to type but as to position within the primary sequence will be the topic of discussion.

Application to Present a Paper at the Meeting-  
in-Miniature on Thursday April 22, 1976 at  
North Carolina State University.

Author(s): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Position(s): \_\_\_\_\_

Institution: \_\_\_\_\_

Title of Paper: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Underline most appropriate section: analytical,  
biochemical, chemical education, inorganic,  
organic, physical, polymer.

To be presented by\*: \_\_\_\_\_

Time needed (15 minute maximum) \_\_\_\_\_

Type of projector needed (if any) \_\_\_\_\_

Note: Application must be received by March 15,  
1976.

\*If one of the authors is a student, it is urged  
that the student be allowed to present the paper.

Mail to: Dr. Suzanne T. Purrington  
Route 8  
Box 205  
Raleigh, N. C. 27612

## \* \* \* A N N O U N C E M E N T \* \* \*

The North Carolina Section of the  
American Chemical Society  
Announces its

## CENTENNIAL SCHOLARSHIP AWARD

for the Summer of 1976

Stipend: \$750 (tax free)

## Eligibility Requirements:

- (1) Membership or Associate Membership in the American Chemical Society
- (2) Attendance at a Graduate or Professional School within the geographic boundaries of the North Carolina Section of the ACS and successful completion of at least one year of graduate or professional study toward an advanced degree at such an institution by the end of the academic year
- (3) Must have no other obligations for which income is earned during the tenure of the scholarship.

DEADLINE FOR RECEIPT OF APPLICATION: March 15, 1976

## Send Application to:

Dr. Robert G. Lewis, Chairman  
Scholarship Committee  
Health Effects Research Laboratory (MD69)  
U. S. Environmental Protection Agency  
Research Triangle Park, N.C. 27711

Along with: (a) One copy each of undergraduate and graduate (or professional school) transcripts (these need not be official-listing of courses and grades will be acceptable)

(b) Two letters of recommendation-  
One from research director (thesis advisor)  
and one from another graduate professor

(c) A brief written summary of the Applicant's overall research project, which must be in a chemically related area, and an outline of the portion of work planned for the period of the Award (Summer '76)

Note: The Scholarship will be awarded on the basis of excellence of academic record, superior performance as a teaching assistant (where applicable), and promise in research. It will be given primarily on the basis of past performance rather than the quality of the research proposal. The award is not subject to renewal.

### MARCH MEETING TO BE AT NCSU

The March meeting of the North Carolina Section will take place at NCSU with Mr. Albert Plant, Editor of C&EN as the scheduled speaker. His topic is "Feeding the World." The date is March 17.

### JANUARY MEETING A SUCCESS

The January meeting of the local section at UNC was well attended. Dr. Marcus Hobbs traced the history of the development of Chemistry in the Triangle area.

### REMINDER-BIOCHEMISTRY SHORT COURSE

There is still a little time to sign up for the short course sponsored by the North Carolina Section titled "Biochemistry for Organic Chemists". The course will meet on Wednesdays from February 18 to April 14. Contact Dr. Howard G. Clark at Duke.

### MEETING-IN-MINIATURE AT NCSU APRIL 22

This year the meeting-in-miniature will be joint with Central North Carolina Section of ACS (Greensboro, Winston-Salem area). Page 3 is the application to present a paper. The Plenary lecture will be given by Dr. Ted Benfey of Guilford College and Editor of Chemistry. Let's have even more papers than last year!

### SERIES OF SHORT COURSES AT UNC

UNC at Chapel Hill will have a series of chemistry short courses on Friday and Saturday March 19 and 20. The topics are recent advances in organic synthesis, chemical applications of lasers and x-ray crystallography. Dr. Kinsinger of NSF will speak at the banquet on Friday evening. For info contact Dr. Maurice Bursey at UNC.

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TARHELIUM is published by the North Carolina Section of the American Chemical Society. The views expressed herein are not necessarily those of the Section. Direct all correspondence to Dr. Eric Wiechert, Editor, c/o Chemistry Department, Meredith College, Raleigh, N.C. 27611

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