

**TWELFTH
MONA SYMPOSIUM, NATURAL
PRODUCTS & MEDICINAL CHEMISTRY**

Mona, Jamaica

January 4th – 8th

1988



**SCIENTIFIC PROGRAMME
AND
ABSTRACTS OF SHORT PAPERS**

Department of Chemistry

UNIVERSITY OF THE WEST INDIES

X11th MONA SYMPOSIUM - 4th to 8th JANUARY. 1988

CONFERENCE CHAIRPERSON - PROF. W.R. CHAN

ORGANIZING COMMITTEE:

Y.A. Jackson
H.A. Jacobs
K.E. Magnus (Dean)
K.O. Pascoe (Organizing Secretary)
P. B. Reese
E. V. Roberts (Head of Department)
S. E. Thomas (Overseas Coordinator)

ACKNOWLEDGEMENTS :

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Berger Paints Jamaica Limited
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Scientific Research Council

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SCIENTIFIC PROGRAMME

PLENARY LECTURES

MONDAY, 4th JANUARY

Morning

9:40 - 10:40

S. Ley
Department of Chemistry
Imperial College of Science & Technology
South Kensington, London SW7 2AI
ENGLAND

TITLE: Recent Developments in Natural Product Synthesis

11:10 - 12:10

T. H. Chan
Department of Chemistry
Otto Moos Chemistry Building
McGill University
801 Sherbrooke St. W.
Montreal, PQ H3A 2K6
CANADA

TITLE: Recent Development in the Use of Organosilicon Compounds for Organic Synthesis.

Afternoon

2:00 - 3:00

T. J. Mabry
Department of Botany
University of Texas at Austin
Austin, TX 78713 - 7640
U.S.A.

TITLE: Chemistry and Biology of Terpenoids From the Sunflower Genus Helianthus.

TUESDAY, 5th JANUARY

Morning

9:00 - 10:00

S. Henessier
Department of Chemistry
University of Montreal
Montreal, Quebec H3C 3J7
CANADA

TITLE: Combining Innovation with Predictive Power in Organic Synthesis

10:45 - 11:45

T. I. Simpson
Department of Chemistry
University of Edinburgh
Edinburgh EH8 9YL
SCOTLAND

TITLE: Biosynthesis of Fungal Polyketide Metabolites

Afternoon

2:00 - 3:00

S. Kobayashi
Faculty of Pharmaceutical Sciences
University of Tokyo
Hurokyo-ku, Tokyo
JAPAN

TITLE: Chemicoenzymatic Approach to Biologically Interesting Compounds

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THURSDAY, 7th JANUARY

Morning

9:00 - 10:00

C.A. Townsend
Department of Chemistry
The Johns Hopkins University
Baltimore, Maryland 21218
U.S.A.

TITLE: Biosynthetic and Biometabolic Studies of Monocyclic Lactams

10:45 - 11:45

K.A. Parker
Department of Chemistry
Brown University
Providence R.I. 02912
U.S.A.

TITLE: To be announced.

Afternoon

2:00 - 3:00

S.J. Gould
Department of Chemistry
Oregon State University
Corvallis, Oregon 97331 - 4003
U.S.A.

TITLE: Advanced Intermediates in the Biosynthesis of Quinolone Antibiotics

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FRIDAY, 8th JANUARY

Morning

9:00 - 10:00

D.M. Brooks
Abbott Laboratories
Abbott Park, North Chicago
Illinois 60064
U.S.A.

TITLE: Strategic Methodology for Enantioselective Synthesis using Enzyme Catalysed Reactions

11:10 - 12:10

M. Herz
Department of Chemistry
Florida State University
Tallahassee, FL. 32306 - 3006
U.S.A.

TITLE: Chemistry of Mikania Species

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DAILY SCHEDULE

MONDAY, 4th JANUARY

Morning:

8:15 - 9:00 Completion of Registration

9:00 - 9:30 Opening Address
Pro Vice Chancellor
Prof. Gerald C. Lalor

9:30 - 9:40 Announcements
Chairperson - W.F. Chan

9:40 - 10:40 Plenary Lecture
S. Ley - Recent Developments in
Natural Product Synthesis

10:40 - 10:50 Question and Discussion Period

10:50 - 11:10 C o f f e e B r e a k

11:10 - 12:10 Plenary Lecture
T.H. Chan - Recent Development in
the use of Organocellulose Compounds
for Organic Synthesis

12:10 - 12:20 Question and Discussion Period

Afternoon:

2:00 - 3:00 Plenary Lecture
T.J. Mabry - Chemistry and Biology
of Terpenoids From the Sunflower
Genus Helianthus.

3:00 - 3:10 Question and Discussion Period

SHORT PAPERS

3:10 - 3:30 Paper #1
M. Krugs, M. Boveij, A. Bruhn,
R. Cramer, W. Orliminger, H. Gutzeit,
R. Hardreier, E. Keli, A. Klank,
H. Pohnl, B. Vogler and Y. Zhou -
Stoichiologically active constituents of
Melissae.

3:30 - 3:45 C o f f e e B r e a k

3:45 - 4:05 Paper #2
Z. Lidetz - Natural Plant Protection
Agents at Rohm and Haas.

4:05 - 4:25 Paper #3
C. Hasbun and O. Castro C. -
Natural Occurrence of Coumarins and
Nrides in Amyris Species of Costa Rica.

4:25 - 4:45 Paper #4
K.S. Brown, Jr. and R. Francini -
Patterns of Chemical Defense in
Aposematic Butterflies Whose Larvae
Feed on Toxic Plants: Limnarin
Synthesized by American Aecinae.

4:45 - 5:00 Question and Discussion Period

TUESDAY, 5th JANUARY

Morning:

Chairperson - F.O. Vedernar

9:00 - 10:00

Plenary Lecture

S. Hanessian - Combining Innovation with Predictive Power in Organic Synthesis.

10:00 - 11:10

Question and Discussion Period

SHORT PAPER

10:10 - 10:30

Paper #5

P. DeShone - New Method for Stereoselective Synthesis of C-Glycosyl Compounds.

10:30 - 10:45

C o f f e e B r e a k

10:45 - 11:45

Plenary Lecture

M. Simpson - Biosynthesis of Fungal Polyketide Metabolites.

11:45 - 11:55

Question and Discussion Period

SHORT PAPERS

11:55 - 12:15

Paper #6

Y.O. Mittie and S.J. Gould - The Correct Structure of Antibiotic LL-010037_A and Related Metabolites.

12:15 - 12:35

Paper #7

C.J. Pearce, T.W. Doyle, S. Porzana, R. Lam and D. Schroeder - Biosynthetic Origins of Hebeceamycin.

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Afternoon:

Chairperson - J. Cook

2:00 - 3:00

Plenary Lecture

S. Kobayashi - Chemoenzymatic Approach to Biologically Interesting Compounds

3:00 - 3:10

Question and Discussion Period

SHORT PAPERS

3:10 - 3:30

Paper #8

A. Brossi and P. Alonso - Homologous Total Synthesis and Antiviral Property

3:30 - 3:45

C o f f e e B r e a k

3:45 - 4:05

Paper #9

C.J. Breckson, D. Breckson, E. Pasquet and F.C. Silve - Cycloheptanoid Precursors for Guttane Sesquiterpene Synthesis.

4:05 - 4:25

Paper #10

J.M. Huffman and W. H. Balle - Enolization of 2-Decalones.

4:25 - 4:45

Paper #11

C.M. Thompson - "Heroin" Diantone In Natural Product Synthesis.

4:45 - 5:05

Paper #12

J.M. Cook, T. Hagen and W. Trudell - Fictit-Spengler Reactions in Apoptotic Media. Synthesis of the Indole Alkaloids 1-Methoxy Canthine-6-one and Esveoline.

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THURSDAY, 7th JANUARY

Morning:

Chairperson - D. Horton

9:00 - 10:00

Plenary Lecture

C.A. Townsend - Biosynthetic and
Bionimetic Studies of Monocyclic
β-Lactams

10:00 - 10:10

Question and Discussion Period

SHORT PAPER

10:10 - 10:30

Paper #13

F.S. Manohand, K.C. Iuk,
S.C. Choudhury, C.C. Wei, P.S. Bejwa,
C.G. Enny and N. Soukup - Synthesis of
Carumonam, A Penobactam Antidiabetic.

10:30 - 10:45

C o f f e e B r e a k

10:45 - 11:45

Plenary Lecture

K.A. Parker - Title to be announced.

11:45 - 11:55

Question and Discussion Period

SHORT PAPERS

11:55 - 12:15

Paper #14

R.A. Filla and M.M. Murta -
An Efficient and Stereoselective Total
Synthesis of (+)-Gerritcomine.

12:15 - 12:35

Paper # 15

P.V. Schmitz - Saponins from Sponges.

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Afternoon:

Chairperson - S.E. Thomas

2:00 - 3:00

Plenary Lecture

S.J. Gould - Advanced Intermediates
in the Biosynthesis of Quinolid
Antibiotics.

3:00 - 3:10

Question and Discussion Period

SHORT PAPERS

3:10 - 3:30

Paper #16

G. Castro C. - The Chemistry of
Costa Rican Laureaceae: Constituents
of Phoebe Species.

3:30 - 3:45

C o f f e e B r e a k

3:45 - 4:05

Paper #17

T. Hudlicky, G.S. Zindge, G. Seoane,
A. Fleming, L. Radesca, M. Natchus
and F.E. Anderson, III - New (2+3)
Annulation Methodology in Natural
Product Synthesis.

4:05 - 4:25

Paper #18

F.A. Jacobi and S. Buddhu - A
Synthetic Approach to the Linear
Tetrahydroresorcinols.

4:25 - 4:45

Paper #19

A. Ajo - Extractives from Nigerian
Bryophytes: Hiebulia lambarensis

4:45 - 5:05

Paper #20

P. Moyna - Uruguayan Folk Medicine.

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FRIDAY, 8th JANUARY

Morning:

Chairperson - F.J. Brookes

9:00 - 10:00

Plenary Lecture

D.W. Brookes - Strategic Methodology
for Enantioselective Synthesis
Using Enzyme Catalysed Reactions.

10:00 - 10:10

Question and Discussion Period

SHORT TALKS

10:10 - 10:30

Paper #21

R.N. Young - Synthesis of Novel
Analogues of Leukotrienes.

10:30 - 10:50

C o f f e e B r e a k

10:50 - 11:10

Paper #22

M. Kahr - The Design and Synthesis
of Nonpeptide Mimetics of Bioactive
Peptides and Proteins.

11:10 - 11:30

Paper #23

C.H. Hassall - In Vivo Inhibitors
of Human Granulocyte Elastase.

11:30 - 12:30

Plenary Lecture

M. Herz - Chemistry of Mikania
Species.

12:30 - 12:40

Question and Discussion Period

12:40 - 12:55

Closing Ceremony

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REGISTERED VISITING PARTICIPANTS

ALO, B
BOX, V.G.
BROCKSON, T.J.
BROOKS, D.W.
BROSSI, A.
BROWN, D.G.
BROWN, K.S.
CASTRO, C.D.
CHAN, T.H.
CHAN, W.R.
COOK, J.M.
DESHONG, P.
GOULD, S.J.
HANNESSIAN, S.
HASBUN, C.
HASSALL, C.H.
HERZ, W.
HORTON, D.
HUDLICKY, T.
HUFFMAN, J.W.
JACOMI, P.A.
KAHN, M.
KOBAYASHI, S.
KRAUS, W.

LAINE, R.A.
LEY, S.
LIDERT, Z.
MABRY, T.J.
MANCHAND, P.S.
MAXWELL, A.
MOYNA, P.
PARKER, K.A.
PEARCE, C.
PILLI, R.
SCHMITZ, F.
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THOMPSON, C.M.
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YOUNG, R.