Peptides: Biology and Chemistry

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Peptides

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Proceedings of the 1998 Chinese Peptide Symposium
July 14-17, 1998, Lanzhou, China

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Preface

The Fifth Chinese Peptide Symposium, hosted by Lanzhou University, was held at Lanzhou, China July 14-17, 1998, with 156 participants, including 30 scientists from abroad, representing nine countries. The four-day conference was both intense and spiritually rewarding. Our goal for CPS-98 was to provide a forum for the exchange of knowledge, cooperation and friendship between the international and Chinese scientific communities, and we believe this goal was met.

The symposium consisted of 8 sessions with 42 oral and 90 poster presentations, including synthetic methods, molecular diversity and peptide libraries, structure and conformation of peptides and proteins, bioactive peptides, peptide immunology, De Novo design and synthesis of proteins and peptides, ligand-receptor interactions, the chemistry-biology-interface and challenging problems in peptides.

The enthusiastic cooperation and excellent contributions were gratifying and the active response of the invited speakers contributed to the success of the symposium. The presentations were of excellent caliber and represented the most current and significant aspects of peptide science.

Dr. Kit Lam of the University of Arizona and Dr. Yun-Hua Ye of Peking University were the recipients of "The Cathay Award" sponsored by the H. H. Liu Education Foundation, offered for their seminal contribution in peptide science and the Chinese Peptide Symposium. Four outstanding young scientists were selected by the organizing committee to receive awards sponsored by Haikou Nanhai Pharmaceutical Industry Co. Ltd. (Zhong He Group).

It is our pleasure to acknowledge Nobel Laureate Professor Bruce R. Merrifield for his kindness in supporting and serving as the chairman of the Awarding Committee for the "Cathay Award," and all members of the program and organizing committee for their generous contributions to the successful symposium.

Kluwer Academic Publishers kindly agreed to publish the CPS-98 proceedings, and we thank them for their contributions and support of the Symposium. We greatly appreciate the generous financial assistance of the sponsors and donors, in particular the major sponsors from abroad, The American Peptide Society and Eli Lilly and Company. On behalf of the organizing committee, we thank the administrative assistance by Lanzhou University, as well as Vanderbilt University.

Xiao-Yu Hu
Rui Wang
James P. Tam

Chinese Peptide Symposium – 1998

July 14-17, 1998, Lanzhou, China
Lanzhou University

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Abbreviations

α-MSH α-Melanotropin stimulating hormone
Acm acetamidomethyl
AMMC(But)MIVE
ARDS adult respiratory distress syndrome
ATEE acetyl tyrosine ethyl ester
BK brady Kinin
BOC *tert*-butyloxycarbonyl
BOP (benzntriazol-1-yloxy)-tris(dimethylamino) phoshponium hesafluorophosphate
BTC bis(trichloromethyl) carbonate
Bu butyl
CCK-B cholecystokinin-B
CE capillary electrophoresis
CHO Chinese Hamster Ovary
CoMFA comparative molecular field analysis
CRF corticotropin releasing-factor
DAP-aa N-(o,ō-dialkyl) phosphoxylacted amino acids
DBU 1,8-diazabichyclo[5.4.0.]-undec-7-ene
DCM dichloromethane
DEPBT 3-(diethoxyphosphoryloxy) – 1,2,3-benzotriazin-4(3H)-one
DIEA *N,N*-diisopropylethylsulfonic acid
DIPP diisopropyl phosphoryl
DISCO distance-comparisons
DMF dimethylformamide
DMSO dimethyl sulfoxide
DPDPE c[Dpen2, Dpen5]enkephalin
DPP dipropylphosphoryl
DTI Destetrapeptide insulin
ECT Ecl calcitonin
EDT 1,2-ethanedithiol
ELISA enzyme-linked immunoadsorbent assay
Endo-M endo-h-N-acetylglucosaninidase of Mucor hiemalis
ES-MS electric spray mass spectrometry
FAB fast atom bombardment mass spectrometry
FAB-MS
FAB-MS
Fmoc fluoren-9-ylmethoxycarbonyl
FPTase farnesyl protein transferase
FSH follide stimulating hormone
GH growth hormone
GHRP growth hormone releasing peptide
GLCNAC glycopeptide containing the Asn
GMP140 α-granule membrane protein
GPCR G-protein coupled receptor
GPCR G-protein coupled receptor
GST glutathione transferases
hCT human calcitonin
Hep heptyl
Hib-PS Haemophilus influenzae b polysaccharide
HNMR protein nuclear magnetic resonance
Hobt c3-hydroxy-3,4-dihydro-4-oxo-1,2,3-benzotriazine
HOOBt *N*-hydroxyoxodihydrobenzotriazine
HPLC high performance liquid chromatography
HRMS high-resolution negative ion FAB mass spectrum
IPTG isopropyl-D-thiogalactoside
Lys-BK Kallidin
MALCTOF-MS matrix-assisted laser desorption mass spectrometry
MALDI-TOF MALDI time-of-
MAS magic angle spinning

MBHA methylbenzhydrylamine
Mbzl 4-methylbenzyl
MCR melanocotin receptor
MDP N-acetyl muramy –L-alanyl –D-isoglutamine
MMT-1 mouse metallothionein class I
Mpt-MA dimethylphosphinothioic mixed anhydride
MS flight mass spectrometry
MT metallothionein
Mut methanol-utilization slow
MVD mouse vas deferens
NMP N-methylprolidinone
NMR nuclear magnetic resonance
NOS nitric oxide synthase
OGP Osteogenic Growth Peptide
PCR polymerase chain reactions
PEG polyethylene glycol
Pen β,β-dimethylcysteine
Ph Phenol
PhAcOZ p-phenylacetoxybenzyloxycarbonyl
PIP porcine insulin precursor
PLA2 phospholipase A2
PLC phospholipase C
PNA peptide nucleic acid
POEPOP polyoxyethylene-polyoxypropylene
POMC proopiomelanocortin gene
Pq cells transformed by PICQ without PIP gene
QSAR quantitive structrure-activity relationship
RIA radioimmunoassay
RP-HPLC reverse-phase high performance liquid chromatography
SCLC small cell lung carcinoma
sCT salmon calcitonin
sCT salmon calcitonin
SDS-PAGE sodium dodecyl sulfate PAGE
TFA trifluoroacetic acid
TFMSA trifluoromethylsulfonic acid
THF tetrahydrofuran
THP triple-helical peptide
TLC thin layer chromatography
TMT β-methyl-2',6'-dimethyltyrosine
TTT tetrahydrothiazole-2-thione

Contents

Session B: Structure, folding and conformation analysis/ De novo design of peptide & protein

Session C: Neuro/Endocrino/Bioactive peptide