Maria Ngu-Schwemlein, Ph.D.

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Winston-Salem State University
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EDUCATION

Ph.D., Medicinal/Organic Chemistry, The Australian National University, Australia, 1989
B.Sc., (Honors), Chemistry, LaTrobe University, Australia, 1985

PROFESSIONAL EXPERIENCE

2010-Present	Professor of Chemistry at Winston-Salem State University
2006 – 2010	Associate Professor of Chemistry at Winston-Salem State University
2002 - 2006	Associate Professor of Chemistry at University of South Alabama
Summer 2000	Faculty research participation in the Biology and Biotechnology Research Program at the Lawrence Livermore National Laboratory, Livermore, CA
1999 - 2002	Associate Professor of Chemistry at Southern University
Summer 1998	Visiting Fellowship at the John Curtin School of Medical Research at The Australian National University, Canberra, Australia
1994 – 1999	Assistant Professor of Chemistry at Southern University
1991&1993	Postdoctoral Fellow at Louisiana State University
1990	Postdoctoral Fellow at Ciba Geigy AG, Plant Protection, Basel, Switzerland
1989	Postdoctoral Fellow at the ETH Zürich, Switzerland

AWARDS

Wilveria B. Atkinson Distinguished Research Award, Winston Salem State University, 2012
Teacher of the Year, College of Basic Sciences, Southern University, 2000
FASEB Travel Award for Faculty and Students, 1999
Australian National University Merit Ph.D. Scholarship (1986-1988)

PROFESSIONAL MEMBERSHIPS

American Chemical Society (ACS), continuing member, Organic Chemistry, Medicinal Chemistry, and Chemical Education Divisions of ACS	1991-present
Member, American Peptide Society	1997-present
Member, Council on Undergraduate Research	2007-present
Member, American Association for the Advancement of Science (AAAS)	2007-present

PROFESSIONAL EXPERIENCE

Research Experience:

- Synthetic methodologies, laboratory techniques and safety in synthetic organic chemistry, including heterocyclic and microwave- assisted solid phase peptide chemistry
- Experience in microscale techniques, inert atmosphere reactions, solid and solution phase peptide synthesis
- Purification techniques including crystallization, distillation, solid phase extraction, chromatographic techniques including flash chromatography and preparative TLC, semi-preparative HPLC
- Transformation of bacterial cells, protein expression, analysis and purification, Western Blot analysis, and protein structure analysis by Circular Dichroism
- Polymerase Chain Reaction, Gel Electrophoresis
- Protein crystallization by vapor diffusion methods
- Methods for Antimicrobial Susceptibility Tests
- Molecular Modeling on Spartan (Unix and PC versions) and HyperChem Programs
- Assessment of metal ion binding to cyclopeptides by isothermal titration calorimetry (ITC).
- Fluorescence measurements of fluorophore tagged cyclopeptides in the presence of metal ions.
- Bioconjugation of amino acids to carbon nanodots

Instrumentation Experience:
Liquid state NMR Spectrometer
Matrix Assisted Laser Desorption and Ionization – Time of Flight Mass Spectrometer
UV/VIS Spectrometer
FTIR Spectrometer
Circular Dichroism Spectropolarimeter, Jasco 810 and Aviv 62DS
High Performance Liquid Chromatography System
BioLogic DuoFlow Liquid Chromatography
MicroCal VP-ITC MicroCalorimeter
Spectrofluorometers, SLM Aminco 8100TM, Cary Eclipse
Milestones Ethos Plus Microwave System and CEM Discovery Peptide Synthesis Microwave.
Also familiar with GCMS, FABMS

Teaching Experience:
Freshman General Chemistry (including computer-assisted instructions)
Survey of Inorganic and Organic Chemistry for Nurses
Sophomore Organic Chemistry
Intermediate Organic Chemistry
Special Topics in Organic Chemistry - Peptide Chemistry
Biochemistry for Food Nutrition, Animal Science and Agro majors
Biochemistry for Chemistry and Biology majors (2-semesters Biochemistry)
Biochemistry Laboratory for Chemistry majors (biochemical and biotechnology experiments)
Macroscale and microscale techniques in General and Organic Chemistry Laboratory Classes

Master's Student Thesis Supervised:
Chiamaka O. Agbasi, "Synthesis of Some Small Cyclic Peptides As Potential Antimicrobial Agents", May 1999.
Stephanie S. Chin, "Quantification of Paclobutrazol in Plant Stem Extracts by Reversed Phase HPLC", July 2001.

Undergraduate Honors Thesis supervised:
Kellie Green, "A Literary Analysis of the Breast Cancer 1 Gene (BRCA1) and the Breast Cancer Carboxyl-terminus (BRCT) domain", May 2001
Toni Bowie, "Structural Studies of Small Cyclic Peptides by Circular Dichroism", May 2002.
Bobby Kakati, "Amphipathic Cyclopeptides and their Interactions with Metal Ions", May 2005.

Additional professional services:

Co-host of an AAAS Webinar, "Mentoring Women in International Research Collaborations in STEM", 2015
NIH Panel Reviewer 2013
NSF Chemistry Panel Reviewer 2011, 2013
Tenure and Promotions Reviewer for University of Sharjah, 2013
NSF Proposal Reviewer, 2006-present.
Journal Referee: European Journal of Medicinal Chemistry, 2009; Journal of Peptide Research, 2000-6
Proposal Reviewer: ACS Petroleum Research Fund, 1999, U.S. Civilian Research & Development Foundation (CRDF), NSF Division of Chemistry Research proposal, 2004, 2007, 2010, 2011
Textbook Chapters Review: Carey, F.A., Organic Chemistry, 4th Edition, McGraw Hill, 2000
Book Review: Basic Chemistry Review by Brian A. Lewis, Tichenor Publishing, 2002
Contribution to Reference Book: Getting Scientific Grants: Effective Strategies for Funding Success by Thomas A. Blackburn, Wiley Canada, 2003

RESEARCH GRANT RECORD

"Design and Synthesis of Amphipathic Cyclic Peptides and their Potential to Induce Leakage in Liposomes," Research Planning Grant (NSF), Grant # CHE-9409873, Principal Investigator, 1994 – 1996.

"The Design, Synthesis and Characterization of Polymeric Cyclic Peptides," ACS Petroleum Research Fund (ACS-PRF-B # 29709), Principal Investigator, 1995 – 1998.

"Antimicrobial Polymeric Cyclic Peptides," National Institute of Health (MBRS Program) Grant # GM08025, Principal Investigator, 1996 – 1999.

"Peptide Derived Macrocycles as Chemosensors for Metal Ions**",** NSF (RUI Program) Grant # CHE-0071632, #0301973, Principal Investigator, 2000-2005.

"Enhancing the Analytical Instrumentation in the Chemistry Department for Research and Teaching"
PI: Maria Ngu-Schwemlein, Co-PI: Wesley Gray
Louisiana Board of Regents (Traditional Enhancement), $ 88,633, June 2002 to June 2004; Funded, Grant # 026CHE (This award was transferred to Dr. Wesley Gray due to relocation of PI, but original PI acts as a Consultant)

"REU Site on Structure and Function of Proteins," National Science Foundation Grant # BDI-0353562, Sub-project funded (PI: Dr. Julio Turrens), 2004 – 2007.

"RUI: Rational Design of Fluorogenic Cyclopeptides as Sensors for Metal Ions" National Science Foundation Grant # CHE-0613675, Principal Investigator, 2006-2009 (Subawarded to WSSU)

"Targeted Infusion Grant: Enhancing the Undergraduate Biochemistry Experience by Implementing a Concentration in Biochemistry within the Chemistry Program" National Science Foundation grant HRD 0714900, PI and Coordinator (PI: Chair of Department, Dr. A. Mohammed), 2007-2009.

"Instrumentation to Enhance Education and Research at Winston-Salem State University", DoD, Army Research Office, Co-PI (PI: Dr. M. Yakubu), 2007-2009.

"Enhancing In Vitro Antimicrobial Activity of Common Antibiotics with Cyclopeptides", NIH NIGMS SC3, Grant # 1SC3GM088134-0, PI, 8/01/2009-7/31/2015.

"RUI: Rational Design of Cysteinyl Peptide Ligands as Chelators of Mercury(II)", NSF Grant # CHE1011859, PI (Maria Ngu-Schwemlein), Co-PIs (John Merle, Sayo Fakayode: 7/15/2010-6/30/2015.

"AAAS WIRC-MI: International collaboration in cysteinyl-peptide functionalized carbon nanodots as chelators and sensors for mercury ion", PI (Maria Ngu-Schwemlein): 11/1/2012-12/31/2013

"Fulbright STEM Scholar-in-Residence (SIR) at Winston-Salem State University" PI and Faculty Associate (Maria Ngu-Schwemlein), Co-PIs (Joti Sekhon, and Mamudu Yakubu) 7/15/2014 to 5/15/2015.

"Targeted Infusion Project: Enhancing Undergraduate Research Experience in the Chemistry Curriculum at WSSU" NSF Grant # HRD 1438865; PI (Maria Ngu-Schwemlein), Co-PIs (Brown, Merle, Kiren, Yakubu) 9/1/2014 to 8/31/2017.

PUBLICATIONS (undergraduates co-authors*)

1. Heterocyclic Amplifiers of Phleomycin. X. Derivatives of Diazine Mono- and Di-thiols. G.B. Barlin, D.J. Brown, B.J. Cronin, and M. Ngu, Aust. J. Chem., 1986., 39: 69-75
2. An Improved Synthesis of Porphyrin C. P.A. Scourides, G. Morstyn, and M. Ngu, J. Chem. Soc., Chem Commun., 1986, 1917
3. Imidazo[1,2-*b*]pyridazines. III. Syntheses and Central Nervous System Activities of Some 6-Chloro-3-methoxy(and ethoxy)-2-aryl(and heteroaryl)-imidazo[1,2-*b*]pyridazines. G.B. Barlin, L.P. Davies, and M. Ngu, Aust. J. Chem., 1988, 41, 1149-1156
4. Imidazo[1,2-*b*]pyridazines. IV. Syntheses and Central Nervous System Activities of Some 3-Methoxy-6-phenoxyimidazo[1,2-*b*]pyridazines. G.B. Barlin, L.P. Davies, and M. Ngu, Aust. J. Chem., 1988, 41, 1735
5. Imidazo[1,2-*b*]pyridazines. V. Syntheses and Central Nervous System Activities of Some 3-Alkoxy-6-benzylthio(substituted benzylthio and other phenylalkylthio)-2-(and substituted phenyl)imidazo[1,2-*b*]pyridazines. G.B. Barlin, L.P. Davies, and M. Ngu, Aust. J. Chem., 1989, 42, 1133

6. Imidazo[1,2-*b*]pyridazines. VI. Syntheses and Central Nervous System Activities of Some 3-(Alkoxy- and methylthio-phenoxy and methoxybenzylthio)-3-methoxy-2-phenyl(substituted phenyl and pyridyl)imidazo[1,2-*b*]pyridazines. G.B. Barlin, L.P. Davies, S.J. Ireland and M. Ngu, Aust. J. Chem., 1989, 42, 1735
7. Imidazo[1,2-*b*]pyridazines. VII. Syntheses and Central Nervous System Activities of Some 3-Alkoxy-6-benzyloxy(methoxybenzyloxy)-2-phenyl (substituted phenyl or pyridyl)imidazo[1,2-*b*]pyridazines. G.B. Barlin, L.P. Davies, and M. Ngu, Aust. J. Chem., 1989, 42, 1749
8. Imidazo[1,2-*b*]pyridazines. VIII. Syntheses and Central Nervous System Activities of Some 6-Benzylamino(and methoxybenzylamino)-3-methoxy-2-phenyl (substituted phenyl or pyridyl)imidazo[1,2-*b*]pyridazines. G.B. Barlin, L.P. Davies, and M. Ngu, Aust. J. Chem., 1989, 42, 1759
9. Imidazo[1,2-*b*]pyridazines. X. Syntheses and Central Nervous System Activities of Some 3-(Acetamido, benzamido, substituted benzamido or dimethylamino)methyl-2-(phenyl or substituted phenyl)-6-halogeno, alkylthio, alkoxy, phenylthio, phenoxy, benzylthio or benzyloxy)imidazo[1,2-*b*]pyridazines. G.B. Barlin, L.P. Davies, S.J. Ireland, M. M. L. Ngu and J. Zhang, Aust. J. Chem., 1992, 45, 731
10. Substituted imidazo[1,2-*b*]pyridazines. New Compounds with activity at Central and Peripheral Benzodiazepine Receptors. L.P. Davies, G.B. Barlin, S.J. Ireland, M.M.L. Ngu, Biochem. Pharm., 1992, 44, 1555
11. A Practical Method for Preparing Peroxynitrite Solutions of low Ionic Strength, free of Hydrogen Peroxide. W.A. Pryor, R. Cueto, X. Jin, W.H. Koppenol, M. Ngu-Schwemlein, G.L. Squadrito, R.M.Uppu, Free Radical Biol. Med., 18:75-83 (1995).
12. Synthesis of *gama*-Benzyl-*alpha*, L-glutamate Oligomers and their Star Derivatives. X. Wang, W. Daly, M. Ngu-Schwemlein, Polymer Preprints, 37(1): 622-623, 1996.
13. Imidazo[1,2-*b*]pyridazines. XXII. Syntheses of Some 2-Aryl-3-methoxy-6-(pyridinylmethylthio and pyridinylmethylamino)imidazo[1,2-b]pyridazines and their Interaction with Central and Mitochondrial Benzodiazepine Receptors. G.B. Barlin, L.P. Davies, S.J. Ireland, M. Ngu-Schwemlein, Aust. J. Chem., 1997, 50, 91-95
14. Polymeric Cyclic Peptides as Self-Assembling Biopolymers. M. Appeanin*, C. Agbasi*, M. Ngu-Schwemlein, Proceedings of the 26th Annual NOBBChE Conference, 1999, 26, 109-116.
15. Conformational Studies of Cyclotetrapeptides $[Xaa\text{-}D\text{-}Ala]_2$ by NMR, CD and Molecular Modeling. M. Ngu-Schwemlein, T. Bowie*, R. Eden*, F. Zhou, In Proceedings of the Seventeenth American Peptide Symposium (Houghten, R.A. and Lebl, M., Eds), 2001, 287-8.
16. CD Evidence of Conformational Transitions in rMOG[1-125] in the Presence of Membrane Mimicking Detergents. M. Ngu-Schwemlein, M. Corzette, R. Balhorn, M. Cosman, In Proceedings of the Seventeenth American Peptide Society Symposium (Houghten, R.A. and Lebl, M., Eds), 2001, 334-5.
17. Synthesis of Paucidisperse Poly(gamma-benzyl-alpha, L-glutamate) Oligomers and Star Polymers with Rigid Arms. X. Wang, W. Daly, P. Russo, M. Ngu-Schwemlein, Biomacromol., 2001, 2(4), 1214-1219.
18. Cyclotetrapeptides with alternating D-Ala residues: synthesis and spectroscopic studies. M. Ngu-Schwemlein, F. Zhou, T. Bowie*, R. Eden*, J. Mol. Str., 2003, 655 (1), 59-68.
19. Synthesis and Calcium Interactions of Model Amphiphatic Cyclic Peptides in Detergents. Day Gates*, Jack Rostas*, Victor Bailey*, Maria Ngu-Schwemlein, In Proceedings of the Eighteenth American Peptide Society Symposium (Chorev, M. and Sawyer, T.K., Eds), 2003, 424-425.
20. Extracellular Domain of Myelin Oligodendrocyte Glycoprotein (MOG) Exhibits Solvent-Dependent Conformational Transitions. Maria Ngu-Schwemlein, Michele Corzett, Kevin H. Thornton, Rod Balhorn, Monique Cosman, Protein and Peptide Lett., 2003, 10 (5), 483-490.

21. Amphipathic Cyclooctapeptides: Interactions with Detergent Micelles and Metal Ions. William Day Gates*, Jack Rostas*, Bobby Kakati*, and Maria Ngu-Schwemlein, J. Mol. Str., 2005, 733(1), 5-11.
22. Interactions of an Acidic Cyclooctapeptide with Metal Ions: Microcalorimetric and Fluorescence Analyses, Maria Ngu-Schwemlein, Peter Butko, Brian Cook*, Tiffany Whigham*, J. Peptide Research, 2005, 66 (Supplement s1), 72-81.
23. Recombinant Expression of the β subunit of HLA-DR10 for the Selection of Novel Lymphoma Targeting Molecules, Huguette Albrecht, Monique Cosman, Maria Ngu-Schwemlein, Michele Corzett, Kena W. Curran, Cheryl Dolan, Xiangming Fang, Sally J. DeNardo, Gerald L. DeNardo and Rod Balhorn, Cancer Biother Radiopharm. 2007 22(4):531-42.
24. Thermodynamics and Fluorescence Studies of the Interactions of Cyclopeptides with Hg^{2+}, Pb^{2+} and Cd^{2+}, Maria Ngu-Schwemlein, Willie Gilbert*, Kshawna Askew*, Stefanie Schwemlein*, Bioorganic and Medicinal Chemistry, 2008, 16 (10), 5778-5787.
25. Fluorogenic Cyclooctapeptides and Metal Ion Sensing. M. Ngu-Schwemlein, L. Garcia, A. Kshawna*, In Proceedings of the Twentieth American Peptide Symposium Series: Advances in Experimental Medicine and Biology, Vol. 611, Peptides for Youth, (E. Escher, W. D. Lubell, S. D. Valle, Eds), 2009, pg. 87-8.
26. Thermodynamics of the complexation of Hg(II) by cysteinyl peptide ligands using isothermal titration calorimetry, M. Ngu-Schwemlein, J. Merle, Patrick Healy*, S. Schwemlein*, Sade Rhodes*, Thermochimica Acta, 2009, 496, 129-135.
27. 1,2-Dihydro-9H-carbazole-4(3H)-thione, W.A. Phelan, M. Ngu-Schwemlein, F.R. Fronczek, M.L. McLaughlin, S.F. Watkins, Acta Crystallographica, 2011, E67, o757.
28. Evaluation of the association of mercury(II) with some dicysteinyl tripeptides, X. Lin, J. Brooks*, M. Bronson*, M. Ngu-Schwemlein, Bioorganic Chemistry, 2012, 44, 8-18. http://dx.doi.org/10.1016/j.bioorg.2012.06.001
29. Secondary Structural Preferences of Some Antibacterial Cyclooctapeptides in the Presence of Calcium(II), Tarshona Stevens, Nykia McNeil, Xiuli Lin, and Maria Ngu-Schwemlein, International Journal of Medicinal Chemistry, 2012, Article ID 730239, doi:10.1155/2012/730239
30. Synthesis and ESI mass spectrometric analysis of the association of mercury(II) with multi-cysteinyl peptides, Maria Ngu-Schwemlein, Xiuli Lin, Brent Rudd, Matthew Bronson*, Journal of Inorganic Biochemistry, 2014, 133, 8-23.
31. In vitro synergy between some cationic amphipathic cyclooctapeptides and antibiotics, Maria Ngu-Schwemlein, Jenna Dumond, Lisa Rudd, Jean-Herbert Rigaud*, Australian Journal of Chemistry 2015, 68, 218-223.
32. A Study of the Complexation of Mercury(II) with Dicysteinyl Tetrapeptides by Electrospray Ionization Mass Spectrometry, Johanna Mazlo, Maria Ngu-Schwemlein, Journal of Visualized Experiments, 2015, accepted July 1, 2015, In Press.

PATENTS

Aryloxy- and aralkythio-substituted imidazo [1,2-*b*] pyridazines with benzodiazepine receptor binding activity, their preparation, pharmaceutical compositions, and use
G.B. Barlin, L.P. Davies, S.J. Ireland, M.M.L. Ngu, PCT Int. Appl. (1989), 44 pp. Patent No. WO 8901478.

Preparation of imidazo[1,2-b]pyridazines as nervous system agents. G.B. Barlin, L.P. Davies, S.J. Ireland, M.M.L. Ngu, PCT Int. Appl. (1989), 66 pp. Patent No. WO 8901333.

PRESENTATIONS (representative)

Fourth Australian Molecular Modeling Conference, Sydney, Australia, July 1998
Poster Title: Conformational Studies of Cyclotetrapeptide [Leu-D-Ala-Leu-D-Ala]
M. Ngu-Schwemlein, C. Agbasi, X. Wu

52nd SE/56th SW ACS Regional Meeting, New Orleans, Louisiana, December 2000
Investigation of the Secondary Structural Changes in rMOG[1-125] by Circular Dichroism
M. Ngu-Schwemlein, M. Corzette, R. Balhorn, and M. Cosman

2nd International Peptide /17th American Peptide Symposium, San Diego, California, June 2001
Conformational Studies of Cyclotetrapeptides $[Xaa\text{-}D\text{-}Ala]_2$ by NMR, CD and Molecular Modeling. M. Ngu-Schwemlein, T. Bowie, F. Zhou

2nd International Peptide /17th American Peptide Symposium, San Diego, California, June 2001
CD Evidence of Conformational Transitions in rMOG[1-125] in the Presence of Membrane Mimicking Detergents. M. Ngu-Schwemlein, M. Corzette, R. Balhorn, M. Cosman

The University of South Alabama's 10th Annual Research Forum., Mobile, AL, April 2003
Ngu-Schwemlein, M., Bailey, V., Zhou, F.. Conformational studies of cyclotetrapeptides [Xaa-D-Ala] by NMR, CD and molecular modeling.

The University of South Alabama's 10th Annual Research Forum., Mobile, AL, April 2003
Ngu-Schwemlein, M., Cosman, M.. Extracellular domain of myelin oligodendrocyte glycoprotein exhibits conformational transitions.

18th American Peptide Symposium, Boston, Massachusetts, July 2003
Synthesis and Calcium Interactions of Model Amphiphatic Cyclic Peptides in Detergents. Day Gates, Jack Rostas, Victor Bailey, Maria Ngu-Schwemlein

20th American Peptide Symposium, Montreal, Canada, June 25-30, 2007: Fluorogenic Cyclooctapeptides and Metal Ion Sensing. M. Ngu-Schwemlein, L. Garcia, A. Kshawna.

NSF Joint Annual Meeting, Washington DC, June 16-19, 2008: Implementation of a Biochemistry Concentration to Enhance the Undergraduate Biochemistry Experience, M. Ngu-Schwemlein, J. Harp, A. Mohammed

POGIL Southeast Regional Annual Meeting, Statesboro, GA, July 27-29, 2009: Improving Student Achievement in Sophomore Organic Chemistry by Enhancing Active Learning with Technology. M. Ngu-Schwemlein

238th National American Chemical Society Meeting, Washington DC, August 16-20, 2009:
Guided Inquiry Learning in the Chemistry Laboratory Experience, Abdul Mohammed, Sayo Fakayode, Mamudu Yakubu, Maria Ngu-Schwemlein.

POGIL Southeast Regional Annual Meeting, Williamsburg, VA, June 30-July 2, 2010: Guided Inquiry Learning in the Chemistry Laboratory Experience, Mamudu Yakubu, Maria Ngu-Schwemlein, Sayo Fakayode, Abdul Mohammed, Angela King.

240th National American Chemical Society Meeting, Boston, MA, Division of Medicinal Chemistry August 22-26, 2010: Synthesis and structural studies of the antimicrobial action of some amphipathic cyclopeptides, Maria Ngu-Schwemlein, Nykia McNeil, C-F Zhu, Melissa Bovell.

242th National American Chemical Society Meeting, Denver, CO, Division of Medicinal Chemistry August, 2011: Enhancing In-vitro Antimicrobial Activity of Common Antibiotics with Cyclopeptide
Maria Ngu-Schwemlein, Lisa Rudd, Tarshona Stevens

SERMACS 2011 ACS Southeastern Regional Meeting, Richmond, VA, October 26-29, 2011: A Study of the complexation of Hg(II) with some cysteinyl peptides by electrospray ionization mass spectrometry, Xiuli Lin, Maria Ngu-Schwemlein, Christa Colyer

SERMACS 2012 ACS Southeastern Regional Meeting, Raleigh, NC, November 14-17, 2012: Evaluation of synergism from combination of some cyclopeptides and antibiotics, Jenna Dumond, Lisa Rudd, Jean-Herbert Rigaud, Destiny Walter, Maria Ngu-Schwemlein

246th National American Chemical Society Meeting, Indianapolis, IN, September 8-12, 2013: Elucidation of the association of mercury(II) with cysteinyl peptides for chelation therapy, Maria Ngu-Schwemlein, Xiuli Lin, Matthew Bronson, Brent Rudd

STUDENT PRESENTATIONS at Professional Organizations (representative)

ACS National Meeting at New Orleans March 23, 1996
Poster Title: Synthesis of γ-Benzyl-α,L-Glutamate Oligomers and their Star Derivatives
XiaolanWang, William H. Daly and Maria Ngu-Schwemlein

National Minority Research Symposium, Miami, Florida, November 1996
Poster Title: Synthesis of an Octapeptide with Alternating L- and D- Residues
D. Jones, M. Ngu-Schwemlein

Beta Kappa Chi 54th National Meeting, Baton Rouge, April 1997
Title: Synthesis of *N*-tert. Butoxycarbonyl-γ-Benzyl-D-Glutamic Acid α-Phenacyl Ester : a Triprotected Amino Acid
P. Perera, M. Ngu-Schwemlein

National Minority Research Symposium, New Orleans, Louisiana, October, 1997
Poster Title: Synthesis and Antimicrobial Activities of Some Small Peptides with Alternating L- and D- Residues
C. Agbasi, M. Ngu-Schwemlein

Poster Title: Optimized Preparation of Cyclic Tetrapeptides Cyclo[D-Ala-Xxx-D-Ala-Glu] by Solid Phase Peptide Synthesis
Valerie Jones, Kinesha Harris, M. Ngu-Schwemlein

National Minority Research Symposium, New York, Louisiana, November 21-24, 1998
Poster Title: Synthesis of a Cyclic Peptide Monomer for Polymerization and Membrane Interaction
C. Agbasi, M. Appeaning, M. Ngu-Schwemlein

26th Annual National Organization for the Professional Advancement of Black Chemists and Chemical Engineers, San Diego, April 5-10, 1999
Poster Title: Polymeric Cyclic Peptides as Self-Assembling Biopolymers
M. Appeaning, C. Agbasi, M. Ngu-Schwemlein, Health Research Center, Southern University

National Minority Research Symposium, Phoenix, Arizona, November 10-13, 1999
Hydrophobic Cyclic Peptide Copolymers as Novel Self-Assembling Biopolymers
J. Johnson, M. Etienne, M. Ngu-Schwemlein, Health Research Center, Southern University

National American Chemical Society Meeting, San Francisco, California, March 26-31, 2000
Conformational Studies of Cyclotetrapeptides [D-Ala-Leu-D-Ala-Xxx]
R. Eden, F. Zhou, M. Ngu-Schwemlein

2nd International Peptide /17th American Peptide Symposium, San Diego, California, June 2001
Conformational Studies of Cyclotetrapeptides $[Xaa\text{-}D\text{-}Ala]_2$ by NMR, CD and Molecular Modeling. M. Ngu-Schwemlein, T. Bowie, F. Zhou

226th National American Chemical Society Meeting, New York, September 7-11, 2003
Morphological Responses and Retention of Paclobutrazol in Treated *Salvinia minima* and *Hydrilla verticillata*
Sweet, H., Sullivan, L., Sherman, T., and Ngu-Schwemlein, M.

226th National American Chemical Society Meeting, New York, September 7-11, 2003
Circular Dichroism and Fluorescence of Cation Binding Amphipathic Cyclooctapeptides
Jivaranjan, S., Gates, D., and Ngu-Schwemlein, M.

68th Annual Meeting of the Mississippi Academy of Sciences at Biloxi, MS, February 19-20, 2004:
Interaction Of A Cyclic Amphipathic Peptide With Lipid Membranes
Kelley B. Counts*1, Oluyemisi Adeyemi1, Maria Ngu-Schwemlein[2], and
Peter Butko[1]. [1]University of Southern Mississippi, Hattiesburg, MS 39406; [2]University of South Alabama, Mobile, AL 36688.

228th National American Chemical Society Meeting, Philadelphia, August 22-26, 2004: Amphipathic Cyclooctapeptides, Detergent Co-Micelles and Interactions with Metal Ions, Kakati, B., Butko, P. and Ngu-Schwemlein, M.

229th National American Chemical Society Meeting, San Diego, March 13-17, 2005: Analysis of the major salivary gland proteins from Black fly, Arai, Y., Brockhouse, C. and Ngu-Schwemlein, M.

229th National American Chemical Society Meeting, San Diego, March 13-17, 2005: Fluorescence and thermodynamic analysis of metal ion binding to a cyclooctapeptide, Whigham, T., Cook, B., Butko, P. and Ngu-Schwemlein, M.

229th National American Chemical Society Meeting, San Diego, March 13-17, 2005: Investigation of cyclo[(Glu-D-Glu)$_2$-(Leu-D-Leu)$_2$] and its metal ion binding properties, Henninger, E., and Ngu-Schwemlein, M.

231st National American Chemical Society Meeting, Atlanta, March 26-30, 2006: Extracellular domain of MOG(residues 1-200): Expression and thermal stability studies, Early, B., Fletcher, B., Cosman, M. and Ngu-Schwemlein, M.

HBCU-UP Research Conference, Washington, DC, Oct 4-7, 2007: Cyclopeptides: Metal Ion Binding and Sensing, Willie Gilbert, Stephanie Jackson, Maria Ngu-Schwemlein.
Student Presenter, Willie Gilbert, received the first place award for this research presentation at this conference.

235th National American Chemical Society Meeting, New Orleans, April 6-10, 2008: Thermodynamic studies of the chelation of mercuric ions by amino acids and derivatives, Patrick Healy, Willie Gilbert, Maria Ngu-Schwemlein

235th National American Chemical Society Meeting, New Orleans, April 6-10, 2008:
Interactions of cyclopeptides containing Cys_2His_2 or Met_2His_2 residues and Hg^{2+}, Pb^{2+} and Cd^{2+}, Kshawna Askew and Maria Ngu-Schwemlein

HBCU-UP Research Conference, Washington, DC, Oct 23-26, 2008: Interactions of cyclopeptides containing Cys_2/His_2 or Met_2/His_2 residues with some common heavy metal ions g, Kshawna Askew, Maria Ngu-Schwemlein.

237th National American Chemical Society Meeting, Salt Lake City, UT, March 22-26, 2009:
Chelation of mercury (II) by peptide ligands containing cysteinyl and histidyl residues, Sade Rhodes, Aisha Hilliard, John Merle, Maria Ngu-Schwemlein

238th National American Chemical Society Meeting, Washington DC, August 16-20, 2009:
Computational studies of chelation of mercury (II) by peptide ligands containing cysteinyl residues
John Merle, Maria Ngu-Schwemlein, Jamar Thomas, Alicia McClain.

HBCU-UP Research Conference, Washington, DC, Oct 22-25, 2009: Complexation of Mercury (II) by Peptide Ligands containing Cysteinyl and Histidyl residues, Sade Rhodes, Maria Ngu-Schwemlein

10th Annual Biomedical Research Conference for Minority Students (ABRCMS), Charlotte, NC, November 10-13, 2010: Synthesis and Structure-Antimicrobial Activity Correlation Study of Some Amphipathic Cyclopeptides, Tarshona Stevens, Nykia McNeil, Melissa Bovel, Maria Ngu-Schwemlein.

242th National American Chemical Society Meeting, Denver, CO, Division of Analytical Chemistry August, 2011: Rational design of cysteinyl peptide ligands as chelators of mercury(II), Jeremy Brooks, Brent Rudd, Maria Ngu-Schwemlein

2011 Sigma Xi Annual Meeting & International Research Conference, Raleigh Convention Center, NC, November 10-13, 2011: Rational design of cysteinyl peptides as chelators of mercury(II), Matthew Bronson and Jeremy Brooks, Adviser: M. Ngu-Schwemlein

Winston-Salem State University Scholarship Day, April 10, 2011: Cysteinyl Peptides as Potential Chelators for Mercury(II) in Therapy and Remediation, Jeremy Brooks

The 12th Annual Poster and Vendor Night, April 3, 2012, Sponsored by Syngenta and the Central North Carolina Section of ACS: Rational design of cysteinyl peptides as chelators of mercury(II), Matthew Bronson, M. Ngu-Schwemlein
(*Student Presenter, Matthew Bronson, received the second place award for this research presentation at this meeting.*

Winston-Salem State University Scholarship Day, April 9, 2013: Evaluation of synergism from combination of some cyclopeptides and antibiotics, Jean-Herbert Rigaud, Jenna Dumond, Lisa Rudd, Maria Ngu-Schwemlein

2013 Annual Biomedical Research Conference for Minority Students (ABRCMS), November 15, 2013, Evaluation of synergism from combination of some cyclopeptides and antibiotics, Jean-Herbert Rigaud, Jenna Dumond, Lisa Rudd, Maria Ngu-Schwemlein
(Jean-Herbert Rigaud is a recipient of an ABRCMS Travel Award)

Emerging Researchers National Conference in STEM, February 19-21, 2015, in Washington, D.C., Carbon Nanodots as Antimicrobials Against Multi-Drug Resistant Gram-Negative Bacteria, April Hargrove, Ryan Hileman, Chris Drozdowski, Chin Suk Fun and Maria Ngu-Schwemlein
(April Hargrove is a recipient of an ERN Student Travel Award)