

Virginie King, Ph.D.

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HIGHLIGHTS:

- Over 10 years of NMR administration, training, and structure elucidation
- Extensive use of HPLC in biocatalytic assays
- Considerable experience with hazardous materials
- Meaningful experience working in multinational/multicultural environments
- Proven ability to work under pressure and with multiple deadlines
- Grant management experience (personnel and budget)
- Extensive experience in chemistry and biochemistry
- Teaching experience both in classroom and workplace environment
- Wide multi-platform experience in computers, LAN network, and HTML/CSS

EDUCATION:

- 1999-2002** **University of Oxford, United Kingdom**
PhD in Organic Chemistry
- 1998-1999** **Louis Pasteur University, Strasbourg I, France**
Diplôme d'Etudes Approfondies en Chimie Organique Moléculaire et Supramoléculaire
(Equivalent to MS in chemistry, specialization: bio-organic and bio-inorganic chemistry)
- 1994-1997** **Louis Pasteur University, Strasbourg I, France**
Licence de Chimie (Equivalent to BS in chemistry)

PROFESSIONAL EXPERIENCE:

Teaching/Faculty

- 2024-present** **Adjunct Instructor, Trinity College, Hartford, CT, USA**
- General Chemistry Labs
- 2022-present** **Senior Lecturer, University of New Haven, New Haven, CT, USA**
- General Chemistry I and II with Labs; Organic Chemistry I and II with Labs
 - Coordinator for Organic I and II Labs
 - Advisor for MS students in chemistry
 - Chair of the Teaching Fellowship Committee
- 2015-2022** **Chemistry Instructor, Gaston College, Dallas, NC, USA**
- General Chemistry I and II with Labs; Introduction to Chemistry with Lab; General, Organic, and Biochemistry with Lab, Organic Chemistry I and II with Labs
 - PI and co-PI on two grants
 - Supervised several undergraduate research projects
 - Mentor (faculty and students) and success coach
 - NC Guided Pathway to Success (NC-GPS) and Achieving The Dream (ATD) committee member
 - Hiring committee member
- 2003-2008** **Assistant Scientist, Florida State University, USA**
- Directly supervised and guided the research direction of three graduate students
- 2001-2002** **Non-stipendiary Fellow, Merton College, University of Oxford, UK**
- Taught Organic Chemistry to 1st and 2nd year undergraduate chemists and biochemists

- 2000-2002 Junior Demonstrator, The Dyson Perrins Laboratory, University of Oxford, UK**
- Directly supervised and guided the research direction of several 4th year undergraduate and summer students
 - 1st, 2nd and 3rd year Organic Chemistry practical laboratory, instruction and marking

Analytical Chemistry/Technology

- 2015-2022 Gaston College, Dallas, NC, USA. Principal Investigator**
- Management and maintenance of PicoSpin 45 NMR spectrometer and training with Mnova.
 - Hardware and software administration of a network of 24 iPads
 - Provided group and individualized training to assist faculty with technology integration in lab and classroom environments
 - Hardware and software support of Shimadzu HPLC used in grant-funded multi-project research.
- 2003 to 2015 Florida State University, USA. Assistant then Associate in research and finally Assistant Scientist**
- Administration and maintenance of a Varian 400 MHz NMR spectrometer and Sun computer (Solaris 9)
 - Included hardware and software support as well as training to a group of 20-25 chemists
 - Developed Unix macros to simplify the use of the machine by the various users
 - Administration and maintenance of FT-IR spectrometer (Paragon 1000; Spectrum 5.3)
 - Hardware and software support for a network of 12 Macs, 10 PCs and 5 printers. Installation and servicing of the Local Area Network
 - Training and support for theoretical calculations with Gaussian 03 (empirical and DFT calculations)
- 1999 to 2002 Oxford University, UK. Graduate Research Assistant**
- Administration, training and troubleshooting of Waters HPLC (Millennium)
 - Focus on analytical and semi-preparative, chiral and reverse phase HPLC, extensive use for kinetic analysis
 - Expertise in HPLC-MS, GC and GC-MS analysis
- 1998 to 1999 Louis Pasteur University, France. Graduate Research Assistant**
- Use of Waters and Shimadzu HPLC
 - Focus on analytical, semi-preparative and preparative HPLC using reverse phase column

Organic Chemistry

- 2003 to 2015 Florida State University, USA. Assistant then Associate in Research and finally Assistant Scientist**
Title: "New methodologies towards the preparation of Taxol and its analogs"
Multistep synthesis of natural and unnatural biologically active compounds. The work includes larger scale (5 to 100 g) synthesis of key intermediates and smaller scale (<100 mg) investigative chemistry for novel approaches towards Taxol analogs.
Supervisor: Prof. R. A. Holton Sponsor: MDS Fellowship
- 1999 to 2002 Oxford University, UK. Graduate Research Assistant**
Title: "Direct Biocatalytic Asymmetric Aldol Reaction"
Design and synthesis of racemic and chiral small organic molecules. Use of air sensitive reagents and Schlenk technique. Biocatalytic assays and Michaelis-Menten kinetics performed on HPLC.
Supervisor: Prof. V. Gouverneur
- 1998 to 1999 Louis Pasteur University, France. Graduate Research Assistant**
Title: "Synthesis of a fragment of myelin PLP, regioselective formation of disulfide bonds"
Solid phase peptide synthesis, HPLC analysis and purification, MALDI-TOF.
Supervisor: Dr. E. Trifilieff
- 1998 Louis Pasteur University, France. 3 Month internship**
Title: "Synthesis of water-soluble polymers, study of their bacterial biodegradation with pseudomonas oleovorans"
Synthesis of water-soluble polymers, culture of bacteria and decomposition analysis.
Supervisor: Dr E. Franta in collaboration with Prof. M. Rohmer

AWARDS:

- 2021 **Nomination for Faculty of the Year Award**
- 2020 **Faculty of the Year Award for the Arts and Sciences Division**
- 2019 **Nomination for Faculty of the Year Award**
Altrusa Award
- 2018 **Gamma Beta Phi Instructor of the Year Award**

GRANTS:

- 2019-2022 **PI: Women Impact Fund Grant**
Entitled: "Mapping of Microbial Populations and Antibiotic Resistance Across Surface Water in Mecklenburg and Surrounding Counties," \$86,000
- 2019-2024 **Co-Pi: NSF S-STEM Award**
Entitled "SPARC3: Alleviating Transfer Shock in Community College STEM Students" (Award # 1833783), \$972,598
- 2020 **NSF S-STEM Track 2 Reviewer**

PUBLICATIONS:

1. V. Maggiotti, M. Resmini, V. Gouverneur, "Unprecedented Regiocontrol Using An Aldolase I Antibody," *Angew. Chem. Int. Ed.* **2002**, *41*, 1012.
2. V. Maggiotti, M. Resmini, V. Gouverneur, "Unprecedented Regiocontrol Using An Aldolase I Antibody," *Angew. Chem.* **2002**, *41*, 1054.
3. V. Maggiotti, V. Gouverneur, M. Resmini, "Unprecedented regiocontrol using an aldolase I antibody," *Abstr. Pap. Am. Chem. S.* 268: 15-ORGN APR **2002**.
4. V. Maggiotti, S. Bahmanyar, K.N. Houk, V. Gouverneur, M. Resmini, "Theoretical studies on the antibody-catalyzed aldol reaction involving unsymmetrical enamine intermediates," *Abstr. Pap. Am. Chem. S.* 100: 15-ORGN APR **2002**.
5. V. Maggiotti, J.-B. Wong, R. Razet, A. R. Cowley, V. Gouverneur, "Asymmetric Synthesis of Aldol Products derived from Unsymmetrical Ketones. Assignment of the Absolute Configurations of Antibody Aldol Products," *Tetrahedron: Asymmetry* **2002**, *13*, 1789.
6. C.A.G. Baker-Glenn, V. Maggiotti, Rachael Ancliff, V. Gouverneur, "Aldolase class I antibody route to hetero Diels-Alder adducts of carbonyl compounds," *Abstr. Pap. Am. Chem. S.* 477: 15-ORGN MAR **2003**.
7. C.A.G. Baker-Glenn, V. Maggiotti, Rachael Ancliff, V. Gouverneur, "Novel biocatalytic route to β,γ -epoxy alcohols," *Abstr. Pap. Am. Chem. S.* 441: 15-ORGN MAR **2003**.
8. V. Maggiotti, S. Bahmanyar, M. Reiter, M. Resmini, K.N. Houk, V. Gouverneur, "Unusual Reversal of Regioselectivity in Antibody-Mediated Aldol Additions with Unsymmetrical Methyl Ketones," *Tetrahedron* **2004**, *60*, 619.

ORAL COMMUNICATIONS AND POSTERS:

1. V. Maggiotti, V. Gouverneur, "Synthesis of New Haptens Designed for Abzymatic Dynamic Resolution of Oxazolidinone," Royal Society of Chemistry (Perkin Division-BioOrganic Group); One-Day Postgraduate Symposium, Oxford, United Kingdom, **1999**. (*poster*)

2. V. Maggiotti, V. Gouverneur, "Dynamic Kinetic Resolution" and "Studies with the Aldolase Antibodies 38C2 and 84G3", COST meeting, Bern, Switzerland, **2000**. (*invited lecture*)
3. V. Maggiotti, V. Gouverneur, "New Regioselectivity with Aldolase I Antibody 84G3," COSSAC meeting, Nottingham, United Kingdom, **2001**. (*oral*)
4. V. Maggiotti, M. Resmini, V. Gouverneur, "Direct Catalytic Asymmetric Aldol Reaction: Unprecedented Regiocontrol using an Aldolase Type I Antibody," Royal Society of Chemistry (Perkin Division-BioOrganic Group); One-Day Postgraduate Symposium, Norwich, United Kingdom, **2001**. (*oral*)
5. V. Maggiotti, S. Bahmanyar, K.N. Houk, V. Gouverneur, M. Resmini, "Theoretical studies on the antibody-catalyzed aldol reaction involving unsymmetrical enamine intermediates," ORGN #100, 223rd ACS National Meeting--Orlando, Florida, USA, **2002**. (*poster*)
6. V. Maggiotti, V. Gouverneur, M. Resmini, "Unprecedented regiocontrol using an aldolase I antibody," ORGN #268, 223rd ACS National Meeting--Orlando, Florida, USA, **2002**. (*oral*)
7. V. Maggiotti, S. Bahmanyar, K.N. Houk, M. Resmini, V. Gouverneur, "Antibody 84G3: an Unusual Reactivity," Royal Society of Chemistry (Organic Reaction Mechanisms Group); One-Day Postgraduate Symposium, Loughborough, United Kingdom, **2002**. (*oral*)
8. V. Maggiotti, "Aldolase Antibodies: From Catalysis to Cancer Therapy," Organic and Bioorganic Colloquium, Florida State University, Florida, USA, **2004**. (*invited lecture*).
9. A. Hines, B. Lear, M. Staves, V. Maggiotti*, "The Potential Use of Juglone as a Herbicide," Gaston College Colloquium, Dallas, North Carolina, USA, **2016**. (*poster*)
10. C. King, E. Adedokun, V. Maggiotti*, "Antimicrobial properties of terpene hydrocarbons found in *humulus lupulus*," Gaston College Colloquium, Dallas, North Carolina, USA, **2016**. (*poster*)
11. E. Spurrier, E. Reynoso, V. Maggiotti*, "Insect Repellent from Linalool Derivative," Gaston College Colloquium, Dallas, North Carolina, USA, **2016**. (*poster*)
12. R. Booth, C.A. Leiva, G.E. Allen, V. Maggiotti*, "Overview of Biodiesel Production," Gaston College Colloquium, Dallas, North Carolina, USA, **2017**. (*poster*)
13. M. Vázquez, A. Williams, C. Grimsley, V. Maggiotti*, "Terpenes' antibacterial activity against *S. aureus* and *E. coli*," CCURI Colloquium, Glendale, Arizona, USA, **2018**. (*poster*)
14. M. Vázquez, A. Williams, C. Grimsley, V. Maggiotti*, "Terpenes' antibacterial activity against *S. aureus* and *E. coli*," SNCURCS Colloquium, Raleigh, North Carolina, USA, **2018**. (*poster*)
15. S. Kunzig, V. Maggiotti, "Water quality of Long Creek*," Gaston College Colloquium, Dallas, North Carolina, USA, **2019**. (*poster*)
16. L. Abee, K. Rhyne, V. Maggiotti*, "HPLC Tests for Nicotine Concentration in Juul Pods," Gaston College Colloquium, Dallas, North Carolina, USA, **2019**. (*poster*)
17. T. Sprouse, J. Vina Moreno, M. Ross, H. Minier, N. Murray, C. Hall, V. Maggiotti*, P. Williams*, "Mapping of Microbial Populations and Antibiotic Resistance Across Surface Water along the Catawba River Basin," SNCURCS Colloquium, Durham, North Carolina, USA, **2019**. (*poster*)
18. A. Dellinger, V. Maggiotti*, "Tracking Antimicrobial Resistance and Water Quality in Surface Water Microbiomes along the Catawba River Basin," SNCURCS Colloquium, Greenville (virtual), North Carolina, USA, **2020**. (*oral*)
19. M. de Andrea Pereira, A. Dellinger, M. Ross, R. Sheliakyn, V. Maggiotti*, "Do Heavy Metal Pollutants Contribute to the Development of Antibiotic Resistance in the Catawba River Basin?" SNCURCS Colloquium, Greenville (virtual), North Carolina, USA, **2020**. (*poster*)