Huiping Wu, Ph.D.

Education Summary

- May 1997 - August 2000, Ph.D. Degree in Chemical and Biochemical Engineering, University of Maryland Baltimore County, Baltimore, Maryland Dissertation title: Protein C Separation from Homologous Human Blood Proteins, Cohn Fraction IV-1, Using Immobilized Metal Affinity Chromatography Advisor: Dr. Duane F. Bruley, Professor, Ph.D., P.E.
- Sep. 1993 - May 1997, M.S Degree in Chemical and Biochemical Engineering University of Maryland Baltimore County, Baltimore, Maryland Thesis title: Homologous Protein Purification Using Artificial Antibodies: Application to Protein C Advisor: Dr. Michael R. Sierks, Assistant Professor, Ph.D.
- Sep. 1988 - June 1991, M.S. Degree in Chemical Engineering, Beijing Institute of Chemical Engineering, Beijing, China Thesis title: Solid-state Fermentation Kinetics Study.
- Sep. 1980 - July 1984, Bachelor of Science Degree in Chemical Engineering Zhejiang University, Hungzhou, China

Employment Summary

- August 2005 - Present, Next Breath LLC, Baltimore, MD.
- May 2001 - August 2005, Post Doctoral Student, Department of Pharmaceutical Sciences, University of Maryland School of Pharmacy. Evaluation of spacers and holding chambers using low flow cascade impactors and breath simulators.
- College of Engineering, University of Maryland Baltimore County
    - Sep. 2000 - April 2001, Post Doctoral Student. Studied chelator-metal ion combinations for the separation of protein C from milk components, and from transgenic swine milk.
    - January 1997 - August 2000, Research Assistant (Lab Manager). Separated protein C from homologous human blood proteins and human blood plasma derivatives.
    - September 1993 - January 1997, Research Assistant. Employed molecular biology techniques to make antibodies, which were specific to protein C, and used them in protein C purification.
    - Feb 1994 - September 2000, Teaching Assistant
        - Process Engineering Economics course, including homework, exam and paper grading and teaching students ASPEN-PLUS software for process design.
        - Chemical Engineering Kinetics course homework and exam grading.
        - Advanced Chemical Engineering Analysis course, including grading and teaching students computer applications.
        - Chemical Engineering Kinetics course homework grading.
- Jan. 1992 - Jan. 1993, Management Institute of China, Beijing, China Associate Engineer. Responsible for product development and manufacturing.
- July 1989 - June 1991, Beijing Institute of Chemical Engineering, Beijing, China. Research Assistant. Responsible for Solid--State Fermentation Kinetics study.
- Sep. 1984 - Aug. 1988, Research Institute of Petroleum Processing, Beijing, China, Assistant Engineer. Process design, such as pilot scale design of high purity Al2O3

production process, and computer simulation using ASPEN PLUS and PROCESS program.

Special Skills

Chromatography, FPLC, Filtration, Cell culturing, Biopanning, Fermentation, ELISA, SDS-PAGE, Western blotting, UV-VIS, Protein activity assay. Microsoft office, Spreadsheet, Fortran, Basic, ASPEN-PLUS, SuperPro, Numerical analysis, Matlab.

Publications

- Chelator, Metal Ion and Buffer Studies for Protein C Separation. **Huiping Wu** and Duane F. Bruley. Annual AIChE meeting, Los Angeles, November 2000 (in press).
- Chelator, Metal Ion and Buffer Studies for Protein C Separation. **Huiping Wu** and Duane F. Bruley. Comparative Biochemistry and Physiology, Elsevier (accepted for publication).
- Protein C Separation from Human Blood Plasma Derivatives Using Low Cost Chromatography. **Huiping Wu** and Duane F. Bruley; Advances in Experimental Medicine and Biology (in press).
- Homologous Human Blood Protein Separation Using Immobilized Metal Affinity Chromatography-Protein C Separation from Prothrombin with Application of the Separation of Factor IX and Prothrombin. **Huiping Wu** and Duane F. Bruley; Biotechnol. Prog. 15(5): 928-931, 1999.
- Protein C Separation from Human Blood Plasma Cohn Fraction IV-1 Using Immobilized Metal Affinity Chromatography. **Huiping Wu**, Duane F. Bruley and Kyung A. Kang; Advances in Experimental Medicine and Biology, Hudetz AG and Bruley DF Eds, Plenum Press, Vol. 454, 697-705(1998).
- Artificial Antibodies for Affinity Chromatography of Homologous Proteins: Application to Blood Clotting Proteins. **Huiping Wu**, Gadam N. Goud and Michael R. Sierks; Biotechnol. Prog. 14, 496-499 (1998).
- Protein C Separation from Human Blood Plasma Cohn Fraction IV-1 Using Immobilized Metal Affinity Chromatography. **Huiping Wu**, Duane F. Bruley and Kyung A. Kang; Topical Conference on Separation Science and Technologies - Proceeding of 1997 Annual AIChE meeting, p.1443-1448, 1997.

Presentations

- Chelator, Metal Ion and Buffer Studies for Protein C Separation. **Huiping Wu** and Duane F. Bruley; American Institute of Chemical Engineers (AIChE), Los Angles, November 2000.
- Protein C Separation From Milk Components Using Immobilized Metal Affinity Chromatography. **Huiping Wu** and Duane F. Bruley; IBC, Anticoagulants and Antithrombotics, Boston, October 2000.
- Chelator, Metal Ion and Buffer Studies for Protein C Separation. **Huiping Wu** and Duane F. Bruley; International Society on Oxygen Transport to Tissue (ISOTT), Nijmegen, August 2000.
- Process for Protein C Production from Human Blood Plasma Derivatives. **Huiping Wu** and Duane F. Bruley; Graduate Student Research Day, April 2000.

- Protein C Separation from Transgenic Swine Milk Using Low Cost Chromatography. **Huiping Wu** and Duane F. Bruley; American Institute of Chemical Engineers (AIChE), Atlanta, October 1999.
- Protein C Separation from Human Blood Plasma Derivatives Using Low Cost Chromatography. **Huiping Wu** and Duane F. Bruley; International Society on Oxygen Transport to Tissue (ISOTT), Hanover, August 1999.
- Homologous Human Blood Protein Separation Using Immobilized Metal Affinity Chromatography. **Huiping Wu** and Duane F. Bruley; Graduate Student Research Day, April 1999.
- Protein C Separation from Human Blood Plasma Cohn Fraction IV-1 Using Immobilized Metal Affinity Chromatography. **Huiping Wu**, Duane F. Bruley and Kyung A. Kang; Graduate Student Research Day, April 1998.
- Protein C Separation from Human Blood Plasma Cohn Fraction IV-1 Using Immobilized Metal Affinity Chromatography. **Huiping Wu**, Duane F. Bruley and Kyung A. Kang; Poster presentation; Middle Atlantic Bioengineering Conference (MABEC), Baltimore, April 1998.
- Protein C Separation from Human Blood Plasma Cohn Fraction IV-1 Using Immobilized Metal Affinity Chromatography. **Huiping Wu**, Duane F. Bruley and Kyung A. Kang; American Institute of Chemical Engineers (AIChE), Los Angles, November, 1997.
- Protein C Separation from Human Blood Plasma Cohn Fraction IV-1 Using Immobilized Metal Affinity Chromatography. **Huiping Wu**, Duane F. Bruley and Kyung A. Kang; International Society on Oxygen Transport to Tissue (ISOTT), Milwaukee, August 1997.
- Artificial Antibodies for Affinity Chromatography of Homologous Proteins: Application to Blood Clotting Proteins. **Huiping Wu**, Gadam, Goud and Michael R. Sierks, 213th Natl. Meeting and Exposition, San Francisco, March, 1997.
- Protein C Separation from Human Blood Plasma Cohn Fraction IV-1 Using Immobilized Metal Affinity Chromatography. **Huiping Wu**, Duane F. Bruley and Kyung A. Kang; Graduate Student Research Day, April 1997.

Poster Abstracts

- Investigation of IMAC for the Separation of Protein C from Milk Components. **Huiping Wu** and Duane F. Bruley; Poster presentation, A Look Ahead IV, Futures in Biomedical Research, UMBC, November 2000.
- IMAC Separation of Protein C from Homologous Blood Factors. **Huiping Wu** and Duane F. Bruley; Poster presentation; 4th Annual Green Chemistry and Engineering Conference, Washington DC, June 2000.
- Protein C Separation from Plasma Derivatives Using Low Cost Chromatography. **Huiping Wu** and Duane F. Bruley; Poster presentation, Beyond Heparin, San Diego, May 1999.
- Protein C Separation from Human Blood Plasma Cohn Fraction IV-1 Using Immobilized Metal Affinity Chromatography. **Huiping Wu** and Duane F. Bruley; Poster presentation, America Institute of Chemical Engineers (AIChE), Miami, November 1998.
- Protein C Separation from Human Blood Plasma Cohn Fraction IV-1 Using Immobilized Metal Affinity Chromatography. **Huiping Wu** and Duane F. Bruley; Poster presentation, International Business Community (IBC), Boston, September 1998.
- Protein C Separation from Human Blood Plasma Cohn Fraction IV-1 Using Immobilized Metal Affinity Chromatography. **Huiping Wu** and Duane F. Bruley; Poster presentation, International Society on Oxygen Transport to Tissue (ISOTT), Budapest, August 1998.

- Homologous Protein Separation Using Artificial Antibodies: Application to Protein C. **Huiping Wu**, Gadam, Goud and Michael R. Sierks; Poster presentation; International Business Communications (IBC), Boston, September, 1996.

Honors and Awards

- 1999 Melvin H. Knisely Award (ISOTT), selected by an international committee from the candidates around the world for the achievement of the bioseparation of homologous human blood factors.

Organizations

- Sigma Xi Scientific Research Society, Full Member
- American Institute of Chemical Engineers (AIChE), Associate Member
- American Association of Pharmaceutical Sciences, Member
  International Society on Oxygen Transport to Tissue (ISOTT), Member