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Academic Background:

1987-1991: Doctor of Philosophy (Ph.D.) "Structural characterization of carbohydrates and glycoproteins by mass spectrometry." Imperial College of Science, Technology and Medicine, UK. Advisers: Profs. A. Dell and H.R. Morris.

1984-1987: B.Sc. (Hons.) in Chemistry, University of North London, UK

Professional Experience

2007-present Associate Research Scientist, Complex Carbohydrate Research Center, University of Georgia, Athens, GA

2001-present Technical Director of Analytical Services, Complex Carbohydrate Research Center, University of Georgia, Athens, GA

1999-2007: Assistant Research Scientist, Complex Carbohydrate Research Center, University of Georgia, Athens, GA

1996-2001: Associate Technical Director of Plant and Microbial Analytical Services, Complex Carbohydrate Research Center, Athens, GA

1994-1999: Postdoctoral Research Associate, Complex Carbohydrate Research Center, University of Georgia, Athens, GA.

1990-1994: Study Director/Senior Scientist, M-SCAN LTD (Analytical Mass Spectrometry Consultancy), Sunnighill, Ascot, UK.

Research and Service

As the Technical Director, Dr. Azadi oversees and manages the analytical services conducted at the CCRC which are supported by three federal resource centers of excellence that CCRC has been awarded: The Department of Energy-funded Center for Plant and Microbial Complex Carbohydrates, the National Institutes of Health Resources Center for Integrated Glycotechnology, and the National Institutes of Health for Biomedical Glycomics. The analytical service program offers two main areas of service: standard analyses and contract analyses. The standard analytical service includes glycosyl-residue composition analysis, glycosyl-linkage (methylation) analysis, and molecular weight determination by MALDI-TOF and electrospray. The samples submitted for these types of analyses come from academic, government, non-profit organizations and private companies, throughout the United States and internationally.

The contract service projects involve some method development and are more long term, using a combination of techniques, which may involve all of the above techniques. These projects can also include isolation and purification of the glycopeptides or the oligosaccharides in addition to determining the site of *N*- and or *O*-glycosylation prior to analysis. Structural characterization of biologically active molecules such as polysaccharides, lipopolysaccharides, glycolipids and glycoproteins are analyzed by mass spectrometry, HPAEC, and NMR.

Training

Since 2000, Dr. Azadi has organized and been responsible for two annual training courses offered by the CCRC in carbohydrate analysis. These two, one-week laboratory courses are offered annually and are supported through the NIH Resource Center for Biomedical Carbohydrates (now Research Resource for Integrated Glycotechnology) and the DOE-funded Center for Plant and Microbial Carbohydrates. The two courses are entitled *Analytical Techniques for Carbohydrates Structure Determination*, and *Separation and Characterization of Glycoconjugate Oligosaccharides*.

Publications:

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- Liab K, **P. Azadi**, R. Collins, J. Tolan, J.S. Kim, K.L. Eriksson. 2000. Relationships between activities of xylanases and xylan structures. *Enzyme Microb Technol.* **27**: 89-94.
- Sangadala, S., **P. Azadi**, R.W. Carlson, and M. Adang. 2001. Neutral lipid non covalently attached to *Manduca sexta* aminopeptidase N enhance *Bacillus thuringiensis* Cry1Ac-induced pore formation. *Insect Biochem. Mol. Biol.* **32**: 97-107.
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- Marsh, M.E., A.L. Ridall, **P. Azadi**, and P.J. Duke. 2002. Galacturonomannan and Golgi-derived membrane linked to growth and shaping of biogenic calcite. *J. Struct. Biol.* **139**: 39-45.
- Lawrence, M.L., M.M. Banes, and **P. Azadi**. 2003. The *Edwardsiella ictaluri* O polysaccharide biosynthesis gene cluster: Correlation between predicted enzyme functions and O polysaccharide composition. *Microbiol.* **149**: 1409-1421.
- Wozniak, D.J., T.J.O. Wyckoff, M. Starkey, R. Keyser, **P. Azadi**, G.A. O'Toole, and M.R. Parsek. 2003. Alginate is not a significant component of the extracellular polysaccharide matrix of PA14 and PAO1 *Pseudomonas aeruginosa* biofilms. *PNAS.* **100**: 7907-7912.
- Williams M.L., **P. Azadi**, M.L. Lawrence. 2003. Comparison of cellular and extracellular products expressed by virulent and attenuated strains of *Edwardsiella ictalur.*, *J. Aquatic Animal Health* **5**: 264-273.
- Laus MC, T.J. Logman, A.A. Van Brussel, R.W. Carlson, **P. Azadi**, M.Y. Gao, J.W. Kijne. 2004. Involvement of *exo5* in production of surface polysaccharides in *Rhizobium leguminosarum* and its role in nodulation of *Vicia sativa subsp.nigra*. *J Bacteriol.* **186**: 6617-6625.
- Jahfar, M. and **P. Azadi**. 2004. Glycosyl composition and linkages of polysaccharide from *Tinospora cordifolia*. II. *Acta Pharma.* **54**: 73-78.
- Snyder, D.S., C. Heiss, D. Gibson, W. Kay, **P. Azadi**. 2006. Structure of a capsular polysaccharide isolated from *Salmonella Enteritidis*. *Carbohydr. Res.* **341**: 2388-2397.
- Gibson DL, White AP, Snyder DS, Martin S, Heiss C, **Azadi P**, Surette M, Kay WW (2006) Salmonella produces an O-antigen capsule regulated by AgfD and important for environmental persistence. *J. Bacteriol.* **188**: 7722-7730.
- Brett PJ, Burtneck MN, Snyder DS, Shannon JG, **Azadi P**, Gheradini FC (2007) *Burkholderia mallei* expresses a unique lipopolysaccharide mixture that is a potent activator of human Toll-like receptor 4 complexes. *Mol. Microbiol.* **63**: 379-390.