John Gilbert, Ph.D.

Associate Professor
Department of Microbiology and Molecular Genetics
College of Arts and Science
Oklahoma State University

Contact Information:
E-mail: gilbert.john10@okstate.edu
Phone: 405-744-7914
Office: Rm 307, Life Science East, Oklahoma State University, Stillwater, OK 74078

Education:
1985: B.S., Microbiology, Colorado State University, CO
1990: Ph.D., Microbiology, Colorado State University, CO
1992-1995: Postdoc, Toxicology, University of Arizona, AZ

Academic Appointments:
1989: Teaching Assistant for Microbiology 200, Colorado State University, CO
1990 -1992: Postdoctoral Fellow with L.W. Mayer, Centers for Disease Control, Division of Molecular Biology, Lyme Disease Section, CO
1992-1992: Summer Postdoctoral Fellowship with R.P. Ellis, Colorado State University, Department of Microbiology, CO
1992-1992: Adjunct Faculty, Microbiology Instructor, Front Range Community College, CO
1992-1995: Assistant Research Scientist with J.R. Halpert, University of Arizona, Department of Pharmacology and Toxicology, AZ
1994- 1995: Associate Adjunct Faculty, Microbiology Instructor, Pima Community College, AZ
1995-2001: Assistant Professor, Department of Microbiology and Molecular Genetics, OK

2001-present: Associate Professor, Department of Microbiology and Molecular Genetics, OK
2002-present: SLOAN Ph.D. Program Director, OSU
2009-present: Director NABS, NSF

Research Support:
Current:

- 2012-2015: Alfred P. Sloan Foundation, "Study of Azoreductase studies and the NABS program.", Role: PI

Past:

- 2008-2013: MCB, "Structure and Function Studies of Azoreductase.", Role: PI
- 2004-2008: NIH/MBRS, " IMSD:Native Americans in Biological Science (NABS) at OSU", Role: Co-PI
- 2004-2006: NIH-COBRE," Identification of azoreductase in dental biofilm", Role: PI for subgrant
- 2004-2005: NIH-BRIN, "Classification of Azoreductase proteins.", Role: PI for subgrant
- 2003-2004: Oklahoma Water Resources Research Institute, "Biosensor development", Role: PI
- 1996-1998: AREA, "Bacterial Cytochrome P450: Isolation and Characterization", Role: PI

Selected Publications:

1. John, G.H., J.A. Hasler, Y. He, and J.R. Halpert. E. coli Expression and Characterization of Cytochromes P450 2B11, 2B1, and 2B5. Arch. Biochem. Biophys. 314:367-375, (1994).
2. Hasler, J.A., G.R. Harlow, G.D. Szklarz, G.H. John, K.M. Kedzie, V.L. Burnett, Y. He, L.S. Kaminsky and J.R. Halpert. Site-directed Mutagenesis of Putative Substrate Recognition Sites in Cytochrome P4502B11. Importance of Amino Acid Residues 114, 290, and 363 for Substrate Specificity. Mol. Pharmacol. 46:338-345, (1994).
3. Born, S.L., G.H. John, G.R. Harlow and J.R. Halpert. Characterization of the Progesterone 21hydroxylase Activity of Cytochrome P450 PBD-2/P450 2B11 Through Reconstitution, Heterologous Expression, and Site-directed Mutagenesis. Drug Metab. Dispos., 23:702-707, (1994).
4. John, G.H., R. Smith, K.J. Abraham, and R.P. Ellis. Identification and grouping of Dichelobacter nodosus, using PCR and sequence analysis. Molec. Cell. Probes, 13:61-65, (1999)
5. Udeh, P., ,Venstra, J, Abraham, K.J., and John, G.H.. Quantitative polymerase chain (QPCR) reaction using the MIMIC approach to estimate Cryptosporidium parvum oocysts, an intestinal pathogen, in municipal water treatment sludge samples. Molecular and Cellular Probes, 14:121-126. (2000). PHS 398/2590 (Rev. 09/04) Page Biographical 11 Sketch Format Page
6. John, G.H., Abraham, K.J., Goodfox-Jones, J., Keith, R., and Walls, S. Identification of cytochrome P450-like protein in the human intestinal microflora, Eubacterium aerofaciens. Microbial Ecology in Health and Disease, (2001), 13:3-8.
7. John, G.H., and Keith, R. Induction of a stress protein in Eubacterium biforme by the surfactant CTAB, Microbial Ecology in Health and Disease, (2001), 13:229-233..
8. Udeh, P., John, G.H. and Veenstra, J., Field Inactivation of Oocysts Exposed to Agricultural Land, Water, Air and Soil Pollution, (2003), 142:211-228.
9. John, G.H., Riveria, M., and Yen, G. The Dual Sensor for detecting xenobiotics and microorganisms. OWRRI Report, (2004).
10. Tucker, K., Jacobs, D., Manjarrez, J., and John, G.H. (2006) The metabolism of phenobarbital, a drug used for epilepsy, by intestinal microflora, Bifidobacterium adolescentis and Bifidobacterium bifidum. Microbial Ecology in Health and Disease, 18:32-37.
11. Abraham, K.J. and John, G.H. (2007) Development of a Classification Scheme Using a Secondary and Tertiary Amino Analysis of Azoreductase Gene. Scientific Journals International, (J. Med. Biolog. Sci.), Vol. 1: Issue 1, 1-5.
12. Punj, S. and John, G.H. (2008) Physiological characterization of Enterococcus faecalis during azoreductase activity, Microbial Ecology in Health and Disease, 20:65-73.
13. Sumit Punj and Gilbert H. John, (2009) Purification and Identification of an FMN-dependent NAD(P)H Azoreductase from Enterococcus faecalis, Curr. Issues Mol. Biol. 11:59-66
14. MacWann, S. Punj, S., Cooper, J., Schwenk, E. and John, G.H. (2009) Identification and Isolation of an Azoreductase from E. faecium. Curr. Issues Mol. Biol. 12:43-48.
15. Morrison, J.M., Wright,C.M., and John, G.H. (2012) Identification, Isolation, and Characterererization of a Novel Azoreductase from Clostridium perfringens. Anaerobe, 2012 18(2), 229-34.
16. Morrison, J., Wright, C., and John, G.H. (2013) The non-enzymatic reduction of azo dyes by flavin and nicotinamide cofactors under varying conditions. Anaerobe, 23:87-96.
17. Morrison, J., Dai, S., Ren, J., Taylor, A., Wilkerson, M., John,G.H. and Xie, A. (2013) Structural Study and Conformational Stability of AzoC, an FAD-Dependent Azoreductase from Clostridium perfringens, Arch. Biochem. Biophys. Submitted.
18. Rice, S., Cougar, B., Cooper, J,, Nichols, D., Holly, S., and John, G.H. (2013) Important substrate binding residues in AzoM reductase in Enterococcus faecium. Anaerobe. In preparation.