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Professor, Department of Biochemistry and Biophysics, School of Medicine, University of North Carolina at Chapel Hill.

Founder and Chief Scientific Officer, *Exigent Pharmaceuticals, Inc.*, Novel therapeutics for infectious disease.

Founder, *Identizyme Defense Technologies, Inc.*, Novel biologicals and technology for chemical detection.

Senior Fellow, Biochemistry and Structural Biology, University of Washington School of Medicine, 1995-1999.

Ph.D., Biochemistry, Department of Chemistry and Biochemistry, University of California, Los Angeles; July, 1995.

B.S., Biochemistry, Minor in English Literature, University of California, Davis; June, 1990.

Awards: Phillip and Ruth Hettleman Prize for Artistic and Scholarly Achievement, 2004; Burroughs Wellcome Fund Career Award in the Biomedical Sciences, 1999; Outstanding Dissertation Award, University of California, Los Angeles, 1995.

Select Publications (of 66 total)

Orans, J., Johnson, M.D.L., Coggan, K.A., Sperlazza, J.R., Heiniger, R.W., Wolfgang, M.C., and **Redinbo, M.R.** (2009). Crystal structure analysis reveals *Pseudomonas* PilY1 as an essential calcium-dependent regulator of bacterial surface motility. *Proceedings of the National Academy of Sciences USA*, **107**, 1065-1070.

Ortlund, E.A., Bridgham, J.T., **Redinbo, M.R.**, and Thornton, J.W. (2007). Crystal structure of an ancient protein: evolution by conformational epistasis. *Science*, **317**, 1544-1548.

Lujan, S.A., Guogas, L.M., Ragonese, H., Matson, S.W., and **Redinbo, M.R.** (2007). Disrupting antibiotic resistance propagation by inhibiting the conjugative DNA relaxase. *Proceedings of the National Academy of Sciences USA*, **104**, 12282-12287.

Ortlund, E.A., Lee, Y., Solomon, I.H., Hager, J.M., Safi, R., Choi, Y., Guan, Z., Tripathy, A., Raetz, C.R.H., McDonnell, D.P., Moore, D.D., and **Redinbo, M.R.** (2005). Modulation of human nuclear receptor LRH-1 activity by phospholipids and SHP. *Nature Structural and Molecular Biology*, **12**, 357-363.

Bencharit, S., Morton, C.L., Xue, Y., Potter, P.M. and **Redinbo, M.R.** (2003). Structural basis of heroin and cocaine metabolism by a promiscuous human drug-processing enzyme. *Nature Structural Biology*, **10**, 349-356.

Leshner, D.-T.T., Pommier, Y., Stewart, L., and **Redinbo, M.R.** (2002). 8-oxoguanine rearranges the active site of human topoisomerase I. *Proceedings of the National Academy of Sciences USA*, **99**, 12102-12107.

Bencharit, S., Morton, C.L., Howard-Williams, E.L., Danks, M.K., Potter, P.M., and **Redinbo, M.R.** (2002). Structural insights into CPT-11 activation by mammalian carboxylesterases. *Nature Structural Biology*, **9**, 337-342.

Watkins, R.E., Wisely, G.B., Moore, L.B., Collins, J.L., Lambert, M.H., Williams, S.P., Willson, T.M., Klierer, S.A., and **Redinbo, M.R.** (2001). The human nuclear xenobiotic receptor PXR: structural determinants of directed promiscuity. *Science*, **292**, 2329-2333.

Stewart, L., **Redinbo, M.R.**, Qiu, X., Hol, W.G.J., and Champoux, J.J. (1998). A model for the mechanism of human topoisomerase I. *Science*, **279**, 1534-1541.

Redinbo, M.R., Stewart, L., Kuhn, P., Champoux, J.J., and Hol, W.G.J. (1998). Crystal structures of human topoisomerase I in covalent and non-covalent complexes with DNA. *Science*, **279**, 1504-1513.

Select Current Funding

"Novel Protein-Based Therapeutic for Nerve Agent Detoxification"; 2006-2011; NIH U01 NS58089

"Structure and Inhibition of the Conjugative DNA Relaxase-Helicase"; 2008-2013; NIH R01 AI78924

"Improving CPT-11 Efficacy Using Structural Biology"; 2003-20014; NIH R01 CA98468

Teaching

Chemistry 131, "Nucleic Acid Chemistry." Chemistry 232, "Seminars in Biological Chemistry." Chemistry 233, "Current Literature in Biological Chemistry." Chemistry 236, "Macromolecular Crystallography Methods." Chemistry 431, "Macromolecular Structure and Metabolism." Chemistry 138, "Macromolecular Structure and Human Disease." Chemistry 430, "Introduction to Biological Chemistry."