

CURRICULUM VITAE

EDUCATION/TRAINING

University of Illinois, Urbana IL, BS, 1955 Microbiology, Chemistry
Cornell University, Ithaca NY, Ph.D, 1960 Microbiology, Biochemistry

POSITIONS

1960-1961 Postdoctoral University of Illinois
1961-1963 Research Associate University of Chicago (Affiliated Institute)
1964-1966 Research Associate and Instructor Dartmouth Medical School
1967-1972 Assistant Professor DMS
1973-1983 Associate Professor DMS
1983-1999 Professor, DMS Adjunct Professor, Dartmouth College
1977-1995 Associate Director, Clinical Microbiology Lab, Dartmouth Hitchcock
Medical Center
1999- date Professor Emeritus, Geisel School of Medicine at Dartmouth
Adjunct Professor Emeritus, Dartmouth College

RESEARCH AWARDS

PI of NIH (Allergy and Infectious Diseases) Awards: Virulence and metabolism of
Staphylococcus (1962 to 1971)
PI of NSF Awards: Heme synthesis in bacteria and plants (1974 to 1983)
PI of USDA Award: Biochemistry and toxicity of porphyrin synthesis(1985 to 1988)
Co Investigator on NIH funded projects on Women's Health (C.Wira as PI)
Co Investigator on NIH project on Mycobacterial infections in AIDS (von Reyn, PI)
Co Investigator on EPA project evaluating methods for coliform analysis of water

SELECTED PEER-REVIEWED PUBLICATIONS (of more than 70)

1. Morales DK, Grahl N, Okegbe C, Dietrich LE, Jacobs NJ, Hogan DA. Control of *Candida albicans* metabolism and biofilm formation by *Pseudomonas aeruginosa* phenazines. *MBio*. (2013) Jan 29; 4(1):e 00526-12.
2. Morales, Diana K., Nicholas J. Jacobs, Sathish Rajamani, Malathy Krishnamurthy, Juan R. Cubillos-Ruiz, Deborah A. Hogan (2010). Antifungal mechanisms by which a novel *Pseudomonas aeruginosa* phenazine toxin kills *Candida albicans* in biofilms *Molecular Microbiology* (Article first published online: 18 Oct 2010)

3. von Reyn CF, Jacobs NJ, Arbeit RD, Maslow JN, Niemczyk S.(1995). Polyclonal *Mycobacterium avium* infections in patients with AIDS: variations in antimicrobial susceptibilities of different strains of *M. avium* isolated from the same patient. *J Clin Microbiol.* Apr;33(4):1008-10..
4. Jacobs NJ, Fordham Von Reyn C, Gine N, Dawson D. Similar serovar and drug susceptibility profiles among AIDS-related *Mycobacterium avium* isolates from diverse geographic locations.(1997). *Am J Med Sci.* Jun;313(6):352-4.
5. Gorman N, Zaharia A, Trask HS, Szakacs JG, Jacobs NJ, Jacobs JM, Balestra D, Sinclair JF, Sinclair PR. (2007). Effect of iron and ascorbate on uroporphyrin in ascorbate-requiring mice as a model for porphyria cutanea tarda. *Hepatology.* Jan; 45(1):187-94.
6. Jacobs JM, Jacobs NJ. (2001) Measurement of protoporphyrinogen oxidase activity. *Curr Protoc Toxicol.* May;Chapter 8:Unit 8.5.
7. Jacobs NJ, Kruszyna HG, Hier JS, Dayan FE, Duke SO, Pont F, Montforts FP. (1999) Glutathione-dependent oxidative modification of protoporphyrin and other dicarboxylic porphyrins by mammalian and plant peroxidases. *Biochem Biophys Res Commun.* May 27;259 (1):195-200.
8. Trask HW, Gorman N, Dwyer BE, Jacobs NJ, Jacobs JM, Sinclair JF, Balestra D, Sinclair PR. (2005) Effect of insulin and glucagon on accumulation of uroporphyrin and coproporphyrin from 5-aminolevulinic acid in hepatocyte cultures. *Arch Biochem Biophys.* Jul 1; 439(1): 1-11.
9. Jacobs JM, Jacobs NJ. (1995) Terminal enzymes of heme biosynthesis in the plant plasma membrane. *Arch Biochem Biophys.* Nov 10; 323(2):274-8.
10. von Reyn CF, Hennigan S, Niemczyk S, Jacobs NJ. (1991) Effect of delays in processing on the survival of *Mycobacterium avium*-M. intracellulare in the isolator blood culture system. *J Clin Microbiol.* Jun; 29(6):1211-4.
11. Root JL, McIntyre OR, Jacobs NJ, Daghlian CP. (1988) Inhibitory effect of disodium EDTA upon the growth of *Staphylococcus epidermidis* in vitro: relation to infection prophylaxis of Hickman catheters. *Antimicrob Agents Chemother.* Nov;32 (11):1627-31.
12. Jacobs JM, Jacobs NJ. (1984) Protoporphyrinogen oxidation, an enzymatic step in heme and chlorophyll synthesis: partial characterization of the reaction in plant organelles and comparison with mammalian and bacterial systems. *Arch Biochem Biophys.* Feb 15;229(1):312-9.
13. Jacobs NJ, Borotz SE, Guerinot ML. (1989) Protoporphyrinogen oxidation, a step in heme synthesis in soybean root nodules and free-living rhizobia. *J Bacteriol.* Jan;

171(1): 573-6.

14. Merritt K, Jacobs NJ. (1978) Characterization and incidence of pigment production by human clinical group B streptococci. *J Clin Microbiol.* Jul;8(1): 105-7.

15. Jacobs NJ, Conti SF. (1965) Effect of hemin on the formation of the cytochrome system of anaerobically grown *Staphylococcus epidermidis*. *J Bacteriol.* 1965 Mar; 89:675-9.

16. Jacobs NJ, Vandenmark PJ. (1960) Comparison of the mechanism of glycerol oxidation in aerobically and anaerobically grown *Streptococcus faecalis*. *J Bacteriol.* Apr; 79:532-8.