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EDUCATION:

Ph.D., Biochemistry September, 1997
Virginia Polytechnic Institute & State University (VPI&SU)
Thesis: Characterization of IphP from *Nostoc commune* UTEX 584 a Dual-Specificity Protein Phosphatase from *Anabaena* PCC 7120
Advisor: Dr. Peter J. Kennelly

B.S., Biology (minor in Chemistry) May, 1992
Old Dominion University

EXPERIENCE:

1992-present Graduate Research Assistant, Dr. Peter J. Kennelly, Dept. of Biochemistry, VPI&SU. Performed extensive characterization of a novel dual-specificity phosphatase, IphP, from *Nostoc commune* UTEX 584. Assisted the detection of tyrosine-phosphorylated proteins in *Anabaena* sp. and *Nostoc* sp. by western blot and phosphoamino acid analysis following *in vitro* labelling with ³²P. Discovered and purified a periplasmic dual-specificity protein phosphatase from *Anabaena* PCC 7120.

1994 Teaching Assistant, VPI&SU, Dr. C. W. Claus, Dept. of Biology, VPI&SU. Taught an undergraduate microbiology laboratory course.

1990-92 Undergraduate Research Assistant, Old Dominion University, Dr. A. S. Gordon, Dept. of Biology, Old Dominion University. Analyzed the effects of toxic metals, especially copper, on bacterial growth. Partially characterized extracellular detoxifying proteins expressed by copper stress in some microorganisms.

CURRICULAR-RELATED ACTIVITIES:

Member, Graduate Honor Council Judiciary Committee, VPI&SU, 1993-95

HONORS AND AWARDS:

William Eheart Graduate Travel Scholarship, 1995

Member (Full), Sigma Xi Research Society, 1997

Travel Award from EMBO-FMI Conference organizing committee

PUBLICATIONS:

Gordon, A. S., **L. D. Howell**, and V. Harwood (1994). Responses of diverse heterotrophic bacteria to elevated copper concentrations. *Can. J. Microbiol.* **40**: 408-11.

Howell, L.D., C. Griffiths, L. Slade, M. Potts, and P.J. Kennelly (1996). Substrate specificity of IphP, a cyanobacterial dual-specificity protein phosphatase with MAP kinase phosphatase activity. *Biochem.* **35**: 7566-72.

McCartney, B., **L.D. Howell**, M. Potts, and P.J. Kennelly. (1997). Protein tyrosine phosphorylation in the cyanobacterium *Anabaena* PCC 7120. *J. Bacteriol.* **179**: 2314-18.

L.D. Howell, M. Potts, and P.J. Kennelly. Characterization of a dual-specificity protein phosphatase activity in the cyanobacterium *Anabaena* PCC 7120. *in prep.*

ABSTRACTS:

Harwood, V.J., C.A. Keelan, **L.D. Howell**, and A.S. Gordon (1992). Occurrence and characterization of copper-tolerant variants of *vibrio alginolyticus* *vibrio parahaemolyticus*. *ASM Abstracts*.

Howell, L.D., S. Sayyar, V. Harwood, and A.S. Gordon (1992). Responses to elevated copper concentrations by diverse heterotrophic bacteria. *ASM Abstracts*.