

Joseph P.G. Mack, Ph.D.

Publications

Mack J.P.G.. Retroviral Integrase: Conserved Sequence Information as a Guide to Understanding Structure and Function of the Retroviral and Bacterial IS3 DD(35)E Transposases. in *Journal of Molecular Structure (THEOCHEM)*, **423**, 1, 41-57(17) (1998).

Teo, B., R.D., Kidd, **J. Mack**, A. Tiwari, D. Hernandez, A.T. Phillips, and G.K. Farber. Crystallization and preliminary x-ray studies of *Pseudomonas putida* histidine ammonia-lyase. *Acta Cryst.* **D54**:681-683. 1998.

Delahunty M.D. and **Mack J.P.G.** A Generalised Method of Curve Fitting and Error Estimation using a Spreadsheet: The binding of ligands at the Primer binding site of Reverse Transcriptase (1993). *Computer Applications in the Biological Sciences (CABIOS)*, **9**, 127-31.

Katz R.A., **Mack J.P.G.**, Merkel G., Kulkosky J., Ge Z., Leis J. and Skalka A.M. (1992). Processing and joining activities of retroviral integrase require a conserved serine residue. *Proc. Natl. Acad. Sci.*, **89**, 6741-5.

Kulkosky J., Jones K. S., Katz R.A., **Mack J.P.G.**, and Skalka A.M. (1992). Residues Critical for Retroviral Integrative Recombination in a Region that is Highly Conserved Among Retroviral/Retrotransposon Integrases and Bacterial IS Transposases. *M.C.B.*, **12**, 2331-8.

Katzman M., **Mack J.P.G.**, Skalka A.M. and Leis J. (1991). A covalent complex between retroviral integrase and nicked substrate DNA. *Proc. Natl. Acad. Sci. USA*, **88**, 4695-9.

Khan E., **Mack J.P.G.**, Katz R.A., Kulkosky J. and Skalka A.M. (1991). Retroviral integrase domains. *Nucl. Acids Res.*, **19**, 851-860.

M. Miller, "X-ray Analysis of HIV-1 Protease and its Complexes with Inhibitors" in *Retroviral Proteases, Maturation and Morphogenesis*, Pearl L.H. Ed., MacMillan Press, 1990. Use of program NEWSHADEMOL, for generation of publication quality molecular structures - Figure, p103, (C α Tracing of HIV protease - Inhibitor Complex).

Mack J.P.G. (1990). Structure and function of retroviral IN protein from conserved sequence information. In: *The 4th Structure of AIDS Proteins Meeting, NIH* (M. Cassman Ed).

Pollack R.M., Zeng B., **Mack J.P.G.** and Eldin S. (1989). Determination of the microscopic rate constants for the base-catalysed conjugation of 5-androstene-3,17-dione. *J. Am. Chem. Soc.*, **111**, 6419-6423.

Mack J.P.G., Mulvaney D. and Slaytor M.B. (1988). N,N-dimethyltryptamine production in *Phalaris aquatica* seedlings: A mathematical model for its synthesis. *Plant Physiology*, **88**, 315-320.

Pollack R.M., **Mack J.P.G.** and Blotny G. (1987). Ketonization of 1,3-cyclohexadienol, a conjugated enol. *J. Am. Chem. Soc.*, **109**, 3138-3139.

Pollack R. M., **Mack J.P.G.** and Eldin S. (1987). Direct observation of a dienolate intermediate in the base catalysed isomerisation of 5-androstene-3,17-dione to 4-androstene-3,17-dione. *J. Am. Chem. Soc.*, **109**, 5048-5050.

Mack J.P.G. and Slaytor M.B. (1979). Indolethylamine N-methyltransferases of *Phalaris tuberosa*: Purification and Properties. *Phytochemistry*, **18**, 1921-5.

Mack J.P.G. and Slaytor M.B. (1978). Affinity Chromatography of an S-adenosylmethionine dependent methyltransferase using immobilised S-adenosylhomocysteine: Purification of the Indolethylamine N-methyltransferases *Phalaris tuberosa*. *J. Chromatog.*, **157**, 153-9.

Brand. G., **Mack J.P.G.** *et al.* and Ritchie E. (1972). Constituents of *Alphitonia sp.* III, *Aust. J. Chem.*, **25**, 2209-16.

Gordon Conference

Speaker at Gordon Conference on Animal Viruses, Tilton, NH, 1991.

Grant Reviewer

Have reviewed papers on sequence alignment and enzyme kinetics. Have reviewed grants on retroviral integrase and laser photocrosslinking of proteins.