Trevor M. Penning

Current Position: Professor of Pharmacology, Biochemistry and Biophysics, and Obstetrics/Gynecology and Director of the Center of Excellence in Environmental Toxicology (CEET) at the University of Pennsylvania School of Medicine.

Education: Ph.D. in Biochemistry (1976) from Southampton University in the UK where he studied mechanisms of cholesterol biosynthesis and estrogen action with M. Ahktar, F.R.S.

Non-scientific Interests: the performing arts, World War II history, travel, jogging, and family.

At the time I was in graduate school, a standard approach to elucidating the biosynthetic pathway of cholesterol was to conduct metabolism experiments in rat liver extracts using radiolabeled precursors and trapping chemistry. Dissatisfied with this approach, I sought a postdoctoral appointment with Paul Talalay at the Johns Hopkins University School of Medicine. The Talalay laboratory was conducting detailed enzymology on (Δ^4-3-ketosteroid isomerase from Pseudomonas testosterone, which was available in crystalline form, but at that time it was not possible to conduct similar work on any mammalian steroid hormone transforming enzyme. I never lost sight of this important goal. My group reported the structure of a mammalian hydroxysteroid dehydrogenase. In this issue, in collaboration with David Christianson, I report the structure of a human steroid double bond reductase. The paper is also dedicated to my lifelong mentor Paul Talalay.

Read Dr. Penning's article entitled: Crystal Structure of Human Liver Δ^4-3-Ketosteroid 5β-Reductase (AKR1D1) and Implications for Substrate Binding and Catalysis

http://www.jbc.org/cgi/content/full/283/24/16830