Biographical Sketch **ROY A. JENSEN** (rjensen@ufl.edu) 352-475-3019

EDUCATIONAL BACKGROUND

Undergraduate

B.A. [Majors: Psychology and Biology] Ripon College; Ripon, WI ***Phi Beta Kappa** **1954-1958**

Graduate

Ph.D. [Biochemistry and Genetics] M. D. Anderson Hospital & Tumor Inst.; Houston, TX/jointly with the University of Texas; Austin, TX ***Predoctoral Fellowship: NIH** **1959-1963**

ACADEMIC EMPLOYMENT

University of Washington School of Medicine; Dept. of Microbiology; Seattle, WA
***NIH Postdoctoral Fellow and Research Instructor** with Eugene W. Nester **1964-1966**

State University of New York at Buffalo; Dept. of Biology; Buffalo, NY
Assistant Professor **1966-1968**

Baylor College of Medicine; Dept. of Microbiology; Houston, TX
Associate Professor ***NIH Career Development Award** **1968-1973**

M. D. Anderson Hospital & Tumor Institute; Dept. of Biology; Houston, TX **1974-1976**
Associate Professor

State University of New York at Binghamton; Dept. of Biology; Binghamton, NY
Professor **1976-1986**

University of Florida; Dept. of Microbiology & Cell Science; Gainesville, FL
Professor **1986-2000**

University of Florida; Dept. of Microbiology & Cell Science; Gainesville, FL
Emeritus Professor **2000-present**

University of Chicago; Dept. of Computer Science; Chicago, IL
Professor (part time) **2007-present**

ADMINISTRATIVE POSITIONS

U. S. Atomic Energy Commission/Energy Development Administration/Dept. of Energy; Germantown, MD
Geneticist/Molecular Biologist for Biomedical Programs **1973-1976**

Center for Somatic-cell Genetics & Biochemistry; SUNY at Binghamton; Binghamton, NY
Director **1976-1986**

Biomedical Research Support Grant SUNY at Binghamton; Binghamton, NY
Director **1978-1986**

MetaGene Corporation (a biotechnology company working on novel herbicides and antimicrobials active against phytopathogenic bacteria); Progress Park; Gainesville, FL **President** **1987-1997**

RESEARCH FUNDING

R. Jensen has received research funding for a career total of more than eight million dollars from many of the major granting agencies, including NIH, NSF, DOE, NASA and USDA.

PATENT

"Novel Method and Compositions for the Selective Control of Weeds, Pest and Microbes" **1994**

PUBLICATIONS

R. Jensen has published more than 225 research articles and reviews in the major journals of biochemistry, microbiology, genetics and evolution.

WEBSITES

www.aropath.lanl.gov **and** **http://theseed.uchicago.edu/FIG/Html/tyrASubsystem.html**

MILESTONE ACCOMPLISHMENTS

Delineation of the regulatory mechanism named Sequential Feedback Inhibition in *Bacillus subtilis* was one of the early findings indicating that alternative patterns of allosteric control existed in nature for the control of branched biochemical pathways. Comparative work in the Jensen Lab has since demonstrated a variety of allosteric control patterns in bacteria and in plants.

Formulation of the "Recruitment Hypothesis" (also called the "Patchwork Hypothesis") in 1976 is frequently cited as a credible mechanism for differential specialization of homologous proteins and the expansion of metabolic repertoires.

Discovery and proof-of-structure of L-Arogenate (first named pretyrosine) was accomplished using a cyanobacterium, where it was demonstrated as a precursor of L-tyrosine. It was later shown to be a precursor of L-phenylalanine (or of both amino acids) in certain other organisms.

The nature of pathway diversity for phenylalanine and tyrosine biosynthesis at the enzymological level has been elucidated by a comprehensive program for characterization of enzymes and their regulation from a variety of plant and microbial organisms over a period of 40 years. These include broad-specificity enzymes utilizing both prephenate and L-arogenate (cyclohexadienyl dehydrogenase and cyclohexadienyl dehydratase), as well as narrow-specificity enzymes utilizing only *L*-arogenate or only prephenate.