



Stanley J. Roux

GRFP Recipient: 1967

Undergraduate Institution:
B.S. 1966, Spring Hill College

Graduate Institution:
M.S. 1968, Loyola University
Ph.D. 1971, Yale University

Graduate Field of Study: Botany

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Current Position:
Professor of Molecular Cell
and Developmental Biology,
Department of Cell and
Molecular Biology, University of
Texas at Austin

RESEARCH INTERESTS //

Stanley J. Roux carries out NSF- and NASA-funded research on how the environmental stimuli of light and gravity alter patterns of growth and development in plants. His current focus is on pioneering research to clarify how extracellular nucleotides help mediate the effects of environmental stimuli on plants. Roux teaches many courses to a diverse body of students. These include plant physiology to biology majors, sensory physiology of plants to non-majors, Discovery Laboratory to students in the Freshman Research Initiative Program, and treasures of native plants to freshmen.

THE BROADER IMPACTS OF MY WORK ON SOCIETY //

Both in my research and in my teaching career I try to communicate the excitement and value of the scientific method and the process of discovery, and to motivate students to participate in this process. To the extent that the students in my research laboratory and in my courses are motivated to contribute to the evolution of knowledge by being open to and helping to create new discoveries, they will be more productive members of society. This is because, I believe, the principles that guide the discovery process—a process that ultimately has to be evidence-based—are applicable not only to advancing scientific knowledge but also to advancing social values.

A PERSONAL ANECDOTE OF THE BENEFIT FROM THE GRF PROGRAM //

Knowing that NSF was paying my tuition and salary made me feel free to pursue my research interests wherever they led, even if they weren't the main interests of my dissertation advisor. I was fortunate to have advisors who encouraged this independence, and the result was that I carried out a Ph. D. research project for which I felt a deep and satisfying sense of ownership. Without the NSF support I would have felt obliged to carry out the research favored by the faculty grant that was paying my salary, which is a more typical experience of graduate students.

A FOND MEMORY OF MY EXPERIENCE AS A FELLOW //

I had two dissertation advisors, Arthur Galston at Yale University and Bill Hillman at Brookhaven National Laboratory. It would be too long a story to tell how this happened, but both advisors were so supportive of my dissertation research that my graduate career was a remarkably happy time for me, even though my project was very challenging and often frustrating. Both mentors were also outstanding models for my dual career as teacher and researcher. Art was a superb lecturer and inspired me to put significant effort into developing my teaching skills. As a result I still derive great satisfaction from my classroom experiences, and I wrote Art to thank him as my inspiration when I won teaching awards. Bill had a no-nonsense approach to science and research and his example has given me a uniquely valuable perspective on the value of sharing research results with others, how to present data at meetings, and when to publish. I owe a lot of my career success to these two mentors.

AWARDS/ HONORS //

- Orr Reynolds Distinguished Service Award from American Society for Gravitational and Space Biology (ASGSB) (1997)
- Teaching Excellence Award, College of Natural Sciences, University of Texas, Austin (1999)
- Selection to the University of Texas Academy of Distinguished Teachers (2000)
- The University of Texas Dads Centennial Teaching Fellowship Award (2001)
- Selected as Piper Professor (State-wide University teaching award) (2002)
- Founders Award for distinguished scientific contributions from ASGSB (2005)
- University of Texas System Board of Regents' Outstanding Teaching Award (2009)
- Elected Fellow of American Society of Plant Biologists (honor restricted to 0.2% of membership each year) (2010)

POSITION PROFILE //

After completing an NIH postdoctoral fellowship in biochemistry and biophysics at Yale University, Roux was an assistant professor at the University of Pittsburgh until 1978. Soon afterwards he joined the University of Texas at Austin, where he is currently professor of molecular cell and developmental biology and a university distinguished teaching professor.

