

Phytochemical Pioneer Award



Norman G. Lewis currently holds positions of Regents Professor and Eisig-Tode Distinguished Professor, Institute of Biological Chemistry, at Washington State University, as well as Affiliate Scientist at the New Mexico Consortium (NMC) and the National Center for Genome Resources (NCGR). He serves as Regional Editor of *Phytochemistry*, and has been on the Editorial Board since the early 1990's.

Professor Lewis has received numerous forms of external recognition including elections to: Corresponding Fellow of the Royal Society of Edinburgh (FRSE), Scotland's National Academy of Science and Letters; Fellow, American Society for Plant Biologists (ASPB); Fellow, American Association for the Advancement of Science (FAAAS); Life Member, Phytochemical Society for North America (PSNA), and Fellow, International Academy of Wood Science (IAWS). He also held a Fulbright Distinguished Professor Fellowship (Science without Borders) to Brazil for 2014/2015. He has held many leadership positions in various learned societies, such as President, PSNA, and President of the American Society of Gravitational and Space Biology (ASGSB) as well as responsibilities/offices with the American Chemical Society and other professional organizations. He serves on several editorial boards, federal and international grant review panels, and scientific advisory boards worldwide.

Dr. Lewis' current research interests are largely in discovering/studying/modifying plant biochemical pathways, as well as with bioenergy/bioproducts and medicinal plant biosynthetic pathway research (e.g., using transcriptomics, metabolomics and tissue metabolite imaging). His laboratory discovered the "dirigent" proteins, the first example of control over radical-radical phenolic coupling *in planta*, and which lead to anticancer compounds such as podophyllotoxin and etoposide. He has published in excess of 220 scientific papers and patents, and personnel from his laboratory now hold academic positions in the U.S., Canada, Brazil, China, France, Japan, Korea, New Zealand, Thailand, and the United Kingdom.

His research program has largely been supported by the U.S. Department of Energy, National Aeronautics and Space Administration, National Institutes of Health, National Science Foundation, U.S. Department of Agriculture, as well as the Thomas G. and Anita Hargrove and Arthur M. and Katie Eisig-Tode Foundations.

Presentation at the Award Banquet

Reflecting on some favorite agricultural and medicinal plant biotechnological discoveries

Norman G. Lewis

Institute of Biological Chemistry, Washington State University, Pullman, WA 99164-6340. USA

Plant medicinal and agricultural sciences have progressed at near breakneck speed. This includes: extension of dirigent protein involvement from lignan to terpenoid, lignin and stilbene biochemistries; multi-omics and synthetic biology approaches to unravel biosynthetic steps to complex medicinals and specialty chemicals, as well as progress in various imaging technologies *in situ*.