

# Dr. Stumpf Speaks to AOCS Northern California Section Meeting

More than 60 members and guests of the Northern California Section attended the May meeting held at Fisherman's Wharf, San Francisco. The after dinner speaker was Paul K. Stumpf, Professor of Biochemistry and Biophysics, University of California, Davis, and 1974 recipient of the AOCS Award in Lipid Chemistry. The title of his presentation was "Safflower Seeds—How They Became So Fatty."

Dr. Stumpf first briefly reviewed the importance of dietary lipids in cell structures of plants and animals, and traced metabolism of fats in humans. He then described recent advances in the biosynthesis of fatty acids by maturing safflower seeds. In a series of slides, Stumpf explained the systems responsible for: a) the conversion of CO<sub>2</sub> to sucrose to acetyl CoA; b) the condensation of acetyl CoA via the de novo acyl carrier protein (ACP) pathway to the terminal product, palmityl ACP; c) the elongation of palmityl ACP to stearyl ACP by a specific acyl ACP-elongation system; d) the desaturation of stearyl ACP to oleic acid by a highly specific, soluble stearyl ACP desaturase; e) the further desaturation of oleyl CoA to linoleyl CoA; and f) the transfer of acyl CoAs to glycerol-3-phosphate to the final product, a triacylglycerol and its coalescence to the typical high lipid containing mature seed, engorged with oil droplets.

The speaker stated that future research should be directed to a fuller understanding of how the maturing seed triggers these complicated series of reactions, how all these enzymes are coordinated to allow a smooth flow of substrates for the formation of oil droplets, and, finally, how biochemical engineering can further improve oil crops in the ever growing demand for high yielding systems. Dr. Stumpf concluded by answering a wide range of questions from the audience. ■



John Blum, Section Chairman-Elect (left), and Paul Stumpf, Speaker



Left to right: Mrs. Paul Knowles; Paul Stumpf; Richard Purdy, Section Chairman; Mrs. Paul Stumpf



Left side: Bill Wood; Mrs. Bill Wood; right side, front to back: Ben Beard; Lee Avera; Mr. Lee Avera



Left to right: Ben Beard; Mrs. Paul Knowles; Paul Knowles; Paul Stumpf; Mrs. Paul Stumpf



Left side, front to back: Robin Saunders; Toni Betschart; Cameron Lyon; Sanford Byers; right side, front to back: Peter Little; Bob Huff; Mrs. Dave Shaw; Dave Shaw



Left to right: Mrs. Ernest Jacobson; Mrs. Cameron Lyon; Mrs. Lee Avera; Mrs. Frank McKenna; Mrs. Will Frech; Unidentified; Will Frech; Cecil Lathrap; Frank McKenna