John A. Parrish, M.D., and R. Rox Anderson, M.D.,
Receive Dermatology Foundation’s Discovery Award

The Dermatology Foundation (DF) recently recognized the profound impact Drs. John A. Parrish and R. Rox Anderson have had on the specialty of dermatology at their recent annual membership meeting. The DF’s prestigious Discovery Award was jointly awarded to Parrish and Anderson for their landmark development of the use of selective photothermolysis in treatment.

In presenting the award, Dr. Ilona J. Frieden, Professor of Clinical Dermatology and Pediatrics at the University of Southern California, San Francisco, said of Drs. Parrish and Anderson, “Their concept of selective photothermolysis shifted the paradigm for how lasers and other light sources are designed for skin diseases, leading to a whole new generation of lasers for birthmarks and other skin conditions. Their insights have led to better treatments and improved lives for our patients and the hope of more to come in the future.”

Their approach, first explained in a 1983 landmark article, minimized or eliminated the unwanted tissue damage and significant scarring severely impeding therapeutic use of laser energy for port-wine stains. It also opened a virtual treasure chest of therapeutic potential for a
range of vascular lesions, scar revision, tattoo removal, skin resurfacing, hair removal, and acne treatment—most of which Dr. Anderson later developed.

It all began after Dr. Parrish, a young physician, fell in love with dermatology during his Navy clinic experience. On his return to the United States, he undertook a residency in the specialty at Harvard Medical School. It was there that he first experienced the value of teamwork, playing a critical role in the multidisciplinary team that made a PUVA (psoralens plus ultraviolet A) regime feasible and safe; thus revolutionizing the treatment of severe psoriasis.

This success with photobiology research led Dr. Parrish to introduce lasers into the lab, as the “ideal light sources to help us understand the reaction of psoralens on the skin.” At this juncture, he hired Rox Anderson, a recent MIT (Massachusetts Institute of Technology) graduate who shared Parrish’s passion for light and biology, as a technician. His work with Dr. Parrish led Anderson, who had planned on a Ph.D. in physics, to the realization that his “greatest pleasure is helping people…I really wanted to be an M.D.”

In 1980, his first year in Harvard Medical School, Dr. Anderson learned of the high rate of scarring in argon laser treatment for port-wine stains. In children, especially, laser treatment could result in simply substituting one deformity for another. As Dr. Anderson pondered on how one could “use a laser to remove the tiny abnormal blood vessels without the risk of scarring,” he came up with the idea of using pulsed lasers for selective surgery. Working together, he and Dr. Parrish refined the idea and worked out treatment parameters.

Their new approach opened the way to a myriad of new therapies. In the years since, Anderson and Parrish continued to be a synergistic team, teaching each other and exploring new ways to use light to solve medical problems. Dr. Anderson became director of the multidisciplinary Wellman Center for Photomedicine at Massachusetts General Hospital (MGH), which Dr. Parrish founded. In addition to maintaining a clinical practice at MGH and teaching at Harvard and MIT, he continues his innovative research into the medical possibilities of light. Dr. Parrish became chairman of Harvard’s dermatology department and then founding director of the MGH-Harvard Cutaneous Biology Research Center and of CIMIT—the Center for Integration of Medicine and Innovative Technology.

The Dermatology Foundation was created in 1964 and is the leading private funding source for skin disease research. It provides funding that helps develop and retain tomorrow’s teachers and researchers in dermatology and enables advancements in patient care.