

## In Memoriam

Whenever the Journal's Editor-in-Chief becomes aware of the passing of a well known pharmaceutical scientist who has contributed to the area of pharmaceutical technology and to *AAPS PharmSciTech* as an author, reviewer or member of the Editorial Advisory Board, a tribute will be published as a eulogy in an "In Memoriam" section of the Journal. Within the last year, several outstanding pharmaceutical scientists have passed from this world. The following eulogies recognize and pay special tribute to the memories of David Grant, Dane Kildsig, Arthur Mlodozeniec, Joseph Robinson and Joseph Schwartz. The following were composed from sources in print and speech.

### DAVID J.W. GRANT, PHD, DSC

1937–2006

David James William Grant was the William and Mildred Peters Endowed Professor in Pharmaceutics at the College of Pharmacy, University of Minnesota. He received his undergraduate and doctoral degrees from the University of Oxford, England. Before joining the University of Minnesota in 1988, Dr Grant had held academic appointments at the University College of Sierra Leone, University of Nottingham and the University of Toronto.

Dr Grant was internationally recognized for his work in the area of pharmaceutical materials science. His research work was aimed at improving the fundamental understanding of the solid state properties of drugs and excipients as well as their impact on compaction behavior, drug release, dosage form design and bioavailability. While taking a rigorous thermodynamic approach, he applied the state-of-the-art analytical techniques in materials science to solve problems of immense interest and importance to the pharmaceutical community. His research contributions had earned him numerous awards, including the Pharmaceutics Award in Excellence from the PhRMA Foundation and the Dale E. Wurster Award in Pharmaceutics from the American Association of Pharmaceutical Scientists (AAPS). He was a Fellow of the International Union of Pure and Applied Chemistry (IUPAC), American Association for the Advancement of Science (AAAS) and AAPS.

Dr Grant was a caring teacher and mentor and guided the research of over 50 graduate students and postdoctoral fellows. He authored over 200 research papers and book chapters. His book, coauthored with Professor Takeru Higuchi, "Solubility Behavior of Organic Compounds" is considered a classic. Dr Grant served as Associate Editor of the *Journal of Pharmaceutical Sciences* and he was a member of the editorial board of several journals including *Pharmaceutical Development and Technology* and *AAPS PharmSciTech*.

Professor Grant was a perfectionist, as reflected by the considerable time he spent on reviewing his presentations, lectures and manuscripts to ensure that they were communicated to the audience most effectively.

David had a strong and positive influence on the careers of many scientists. His friends and peers provided numerous warm sentiments. One which seems to sum these is: "It is like the loss of a big brother, and the family of pharmaceutics will be diminished by his passing. David was a guide, mentor and close friend. He truly deserves the ultimate compliments in academia. He was a gentleman and a scholar."

Professor Grant is survived by his wife Marilyn, sons Robert, his wife Joanne, and Kevin and sister Gillian Grant. His contributions have significantly elevated the field of pharmaceutics and he has left behind an impressive body of scientific work. His research findings and his writings will be of immense value to the scientific community and will guide us for many years to come.

### DANE O. KILDSIG, PHD

1935–2006

Dane O. Kildsig was Professor of Pharmaceutics in the School of Pharmacy, Purdue University, and founder and Associate Director of the Dane Kildsig Center for Pharmaceutical Processing Research. He received his BS in Pharmacy and PhD in Physical Pharmacy from the University of Wisconsin. He was employed by Wyeth Laboratories as a research scientist before joining Purdue in 1966, where he later served as head of the Industrial and Physical Pharmacy Department (IPPH).

During his tenure at Purdue, Professor Kildsig served as the mentor or co-major professor for nearly 100 graduate students. Many of his former students went on to become well-known in their own rights and are highly respected in the pharmaceutical industry. He published 70 articles and had 6 publications through the National Research Center in Cairo, Egypt. Professor Kildsig was also recognized as a Fellow of the Academy of Pharmaceutical Sciences in 1975, and a Fellow of the American Association of Pharmaceutical Scientists (AAPS) in 1986.

The Center for Pharmaceutical Processing Research (CPPR), founded in 1995 by Professor Kildsig, is one of over 40 such centers established by the National Science Foundation (NSF), and the only one devoted to pharmaceutical processing research. The CPPR is funded in part by NSF under the Industry/University Cooperative Research Centers (IUCRC) program, which encourages cooperative research between academia and industry. In May, 2005, NSF officially renamed

the center the Dane O. Kildsig Center for Pharmaceutical Processing Research in his honor.

On June 9, 2006, Professor Kildsig succumbed to leukemia. He is survived by his wife of 48 years Nancy, two sons Doug Kildsig, his wife Lisa, and Dane Kildsig Jr, and a half brother John Kildsig, his wife Helen, and half sister Josephine Bezvoda. Dane Kildsig significantly impacted many through his scholarship and humanity. He was not only a teacher, but also a friend, mentor, and colleague who was always willing to offer guidance and counsel and share in one's joys and accomplishments. Professor Kildsig was a brilliant scientist, contributing much to the pharmaceutical industry and Purdue University, and leaves the School of Pharmacy and the pharmaceutical sciences a legacy of dedication and commitment to excellence. The pharmaceutical sciences mourn his loss, for he contributed so much to so many.

An endowed professorship was established in Professor Kildsig's name prior to his death as a fitting recognition for his service to the Department of Industrial and Physical Pharmacy and for his founding and nurturing of the Center for Pharmaceutical Processing Research that bears his name.

#### **ARTHUR R. MLODOZENIEC, PHD**

**1937–2006**

Arthur (Art) R. Mlodozeniec was an academician, an industry scientist and a consultant to the pharmaceutical industry. Most pharmaceutical scientists would likely have come across Dr Mlodozeniec at some point in their careers and those who knew him personally would regard him as a forward thinking scientist, an inspiration to his peers, and a champion of young and upcoming scientists. He was a pharmacist (Fordham University), a scientist (PhD University of Wisconsin), as well as a motivational lecturer and teacher (Long Island University, University of Kansas, University of Kentucky, University of California Santa Cruz, University of California San Diego, and University of California Berkeley). His physical chemistry expertise spanned many disciplines, including preformulation, early stage product development, manufacturing, quality control, quality assurance, and quality management. His commitment to quality extended beyond the pharmaceutical sciences and included management and a company's commitment to quality. He was both a Baldrige Examiner and a Baldrige Judge.

During his tenure in industry Dr Mlodozeniec held such positions as Research Scientist and Section Leader (Upjohn); Group Leader (Advanced Technology-Hoffmann LaRoche); Director, Quality Control (Hoffmann LaRoche); Executive Director and Distinguished Scientist (Merck-Lawrence Kansas); Director of Manufacturing Engineering and Pharmaceutical Automation (Syntex); Chief Scientific Officer (PharmQuest Corp.). As a consultant, he worked with many large companies (Baxter, Lilly, Genentech, etc), as well as supported

companies (Computer Task Group, Strategic Decisions Group, Conformia, PharmQuest), and he took great pride in helping young, fledgling pharmaceutical companies. His latest projects and passion involved biotechnology.

Professionally, Dr Mlodozeniec contributed greatly to the pharmaceutical science profession. He was a past President and Fellow of the American Pharmacists Association (APhA) Academy of Pharmaceutical Sciences and a Founder and Fellow of the American Association of Pharmaceutical Scientists (AAPS). He was a Fellow of the American Association for the Advancement of Science (AAAS). He took a leadership position in the AAPS involvement with the Arden House Conference, and led many scientific symposia and AAPS committees. Aside from his professional and personal life, Dr Mlodozeniec devoted time for civic duties, including advising the Menlo Park City Council on Science Parks, and setting up a nonprofit agency for providing assistance to the underprivileged in Columbia. He also advised high schools on establishing programs that taught the risks of using drugs.

On September 2, 2006, Art Mlodozeniec died suddenly at his home in Menlo Park, CA. He is survived by two daughters, Tracey and Wendy, and their husbands, James McCormick and Michael Huigens; a granddaughter, Madison Huigens; three brothers, Gary, Eugene and Edward Young and sisters-in-law, Marianne, Joanne and Rita. His family and friends will cherish the memories of his caring and compassionate nature and wonderful sense of humor. The pharmaceutical sciences will miss his dedication to the profession. The family has established the Arthur Mlodozeniec Pharmaceutical Scholarship Fund. Contributions may be sent to: The Bank of America; Account No. 11307-41783; 2180 Sand Hill Road; Menlo Park, CA 94025.

#### **JOSEPH R. ROBINSON, PHD**

**1939–2006**

Joseph (Joe) R. Robinson was Professor of Pharmacy in the School of Pharmacy and Professor of Ophthalmology in the Medical School at the University of Wisconsin-Madison. He received his BS and MS degrees from Columbia University in New York and his PhD from the University of Wisconsin. His contributions were in several areas of pharmaceutical sciences, notably controlled drug delivery, ocular drug disposition and bioadhesives. His particular focus was on understanding how drugs moved into and through the eye and on improved drug delivery systems for oral, buccal and ocular routes of drug delivery.

Professor Robinson was the mentor of over 90 graduate students and postdoctoral fellows, many of whom are recognized leaders in the pharmaceutical sciences. He was an inspiring leader with a firm commitment to his students. His students were "part of his family." Two became the chief editors of premier pharmaceutical sciences journals. Joe

himself was an editor of the French journal *STP Pharma Sciences*. He was also the author or co-author of several textbooks and monographs, including the 1978 edition of *Sustained and Controlled Release Drug Delivery Systems*, the 1980 *Ocular Drug Delivery*, and the classic 1987 edition of *Controlled Drug Delivery: Fundamentals and Applications*. He was the author of 340 publications and gave more than 800 presentations. Professor Robinson was an inspiring and enthusiastic speaker and an eloquent spokesman for the pharmaceutical sciences.

Professor Robinson was conferred with Honorary Doctorates from the Royal Danish School of Pharmacy and the University of the Sciences in Philadelphia. He received numerous awards including a University of Wisconsin Distinguished Teaching Award, the Ebert Prize, the Maurice-Marie Janot Medal, the Nagai Award, the American Pharmacists Association (APhA) Research Achievement Award, the American Association of Pharmaceutical Scientists (AAPS) Research Achievement Award, the Controlled Release Society (CRS) Founders Award, the AAPS Dale E. Wurster Pharmaceutical Research Award, the APhA Takeru Higuchi Research Prize, and the AAPS Distinguished Pharmaceutical Scientist Award. Professor Robinson was an inspiring leader and dedicated contributor to several international organizations. He served as a President of CRS (1991–1992) and AAPS (1992–1993). He was a Founder and Fellow of AAPS.

On September 4, 2006, Joseph R. Robinson concluded his earthly sojourn. He is survived by his wife, Bonna, three children, James, Nancy and Daniel and their spouses, Jane, Eugene and Marsha, and ten grandchildren, Ian, Colin, Kelly, Connie, Sean, Corey, Keenan, Erin, Alton and Mason. In mourning his passing, the pharmaceutical sciences offers their sincerest condolences to Joe's family and also pays a deserving tribute to this most inspiring scientist. His vision, advice, leadership, enthusiasm and wit will be missed by family and friends throughout the world.

The family has established the Joseph and Bonna Robinson Graduate Student/Faculty Support Fund. Contributions may be sent to: Joseph and Bonna Robinson Graduate Student/Faculty Support Fund, c/o University of Wisconsin Foundation, 1848 University Ave, Madison, WI 53726.

## **JOSEPH B. SCHWARTZ, PHD**

### **1941–2006**

Joseph (Joe) B. Schwartz was the Burroughs-Wellcome Professor of Pharmaceutics and Director of Industrial Pharmacy Research at the Philadelphia College of Pharmacy (PCP), University of the Sciences in Philadelphia. He received his BS degree from the Medical College of Virginia School of Pharmacy, and his MS and PhD degrees in Pharmaceutical Chemistry from the University of Michigan. Prior

to joining the faculty at PCP in 1981, Professor Schwartz held various research and supervisory positions at Merck Sharp and Dohme in the Pharmaceutical Research and Development Division. While in industry he held adjunct faculty appointments at the University of Rhode Island and the Massachusetts College of Pharmacy.

Professor Schwartz's research interests were in solid dosage form technology, controlled release, coating technology, pharmaceutical unit operations, and formulation and process optimization. His research focused on the fundamental pharmaceutical sciences and its practical application to industrial pharmacy. He was internationally recognized in pharmaceutical technology; his publications include more than 23 book chapters, 100 manuscripts and 200 abstracts. He was dedicated and committed to effectively teaching pharmacy concepts to graduate and undergraduate students and mentored 32 graduate students in MS and PhD programs. He was highly respected by his students, encouraging them to present papers at pharmaceutical scientific meetings and supporting their professional and personal development. He took great pride in their accomplishments, whether in academia or industry. Joe's high scientific standards, integrity and respect for people were qualities that made him a "giant" in the profession. His warm smile, wonderful wit, and genuine caring for others endeared him to all. He was always eager to share his passionate interest and encyclopedic knowledge of Broadway musicals with people whom he met.

Professor Schwartz served as Chief Editor of the *PDA Journal of Pharmaceutical Science and Technology*, was a co-editor of the three volume series "Pharmaceutical Dosage Forms: Tablets," and a section editor for the "Remington: The Science and Practice of Pharmacy." He served as a consultant to the industry and the FDA and held memberships in the American Association of Pharmaceutical Scientists (AAPS), the American Association of Colleges of Pharmacy (AACP), the American Pharmacists Association Academy of Pharmaceutical Sciences (APhA-APS), the Controlled Release Society (CRS), the Parenteral Drug Association (PDA), Rho Chi and Sigma Xi, and served as an officer or executive committee member in many of these societies. Professor Schwartz lectured in the People's Republic of China, as well as Canada, Europe, Israel, Puerto Rico, South America, and throughout the United States. He was a Fellow of AAPS and APhA/APS Academy and in October will be honored as the 2006 AAPS Outstanding Educator in Pharmacy.

On August 14, Joseph B. Schwartz ended a courageous battle with Leiomyosarcoma. He is survived by his wife Gloria, children Mike, his wife Angie, Jeff, Dori, her husband Josh, and sister Meryl. His legacy of pharmaceutics research and teaching will continue in those he taught, and his memories will be cherished forever.