DR. DONALD B. BECHTEL

Dr. Donald B. Bechtel retired on 3 January, 2005, after over 30 years of service as a Research Chemist with the USDA–ARS–GMPRC, Grain Quality and Structure Research Unit, in Manhattan, Kansas. He received his B.S. degree in Biology and M.S. degree in Botany, both from Iowa State University, and his Ph.D. degree in Microbiology from Kansas State University in 1982. He established the microscopy facility in 1974 at the GMPRC. Dr. Bechtel developed methodologies used for studying cereals, bacteria and fungi. His pioneering research on *Bacillus thuringiensis* (Bt) provided basic information on the formation of the biological pesticide containing parasporal crystal. He constructed the first electron microscopy and reassembling serial thin sections of Bt. Dr. Bechtel created numerous innovative techniques for preparing mature dry cereals for light and electron microscopy and is still the only person to successfully section and publish micrographs of long grain rice central endosperm. He showed how cereal storage proteins are packaged and processed during grain development. He developed freeze-fracture techniques.

In 1987, Dr. Bechtel was on a sabbatical to study cereal development in England. His research at Rothamsted Experimental station led to the development of several cytochemical and immunocytochemical techniques that identified a new developmental process in wheat endosperm and localized in situ a legumin-like storage protein within inclusions of wheat endosperm protein bodies. He also discovered a new method of vacuole formation in wheat endosperm cells, developed and applied novel methods to the study of wheat grain senescence during grain drying.

Dr. Bechtel was assigned to an urgent high-priority project involving an embargo on the importation of U.S. wheat into China, Brazil, Mexico, and India because of the presence of TCK (dwarf bunt fungus) spores in U.S. wheat shipments. That research showed no spores in mill fractions. Dr. Bechtel has developed starch isolation procedures and image analysis techniques that were incorporated into a reference method for measuring starch granule size distributions.

Dr. Bechtel is author or coauthor of 80 peer reviewed journal papers, including coauthor of a major review article, author or coauthor of 10 book chapters and editor of a book. In addition, he is author of two theses, author or coauthor of 49 published abstracts and numerous unpublished ones, and has made 51 in presentations.

Dr. Bechtel was an adjunct professor in the Division of Biology and a member of the Graduate Faculty at Kansas State University. He served two terms on the editorial board of the AACC as Associate Editor of Cereal Chemistry. He was the Technical Program Chair of the AACC/TIA Joint Meeting (2003–04), a member of the AACC Book Committee and Chairman of the AACC Book Committee for three terms (1986–91). He coauthored book chapters in AACC monographs on rice, rye and wheat, and served on the Whole Grains and Excellence in Teaching Committees. His research has gained national and international stature, and is a member of several professional and honor societies, and received several grants and USDA–ARS awards.

DR. OKKYUNG CHUNG

Dr. Okkyung (Okky) Chung will retire 30 September, 2005, with over 31 years of service with USDA–ARS–GMPRC, Grain Quality and Structure Research Unit (GQSRU), Manhattan, KS. Her career began in 1974 as a Research Chemist. She became Research Leader in 1987 of the GQSRU, Director of the 68-year old Hard Winter Wheat Quality Laboratory (HWWQL) and Supervisory Research Chemist. She received her B.S. degree in Pharmacy from Ewha Woman's University, Seoul, Korea; M.S. degree in Analytical Chemistry, and Ph.D. degree in Grain Science and Industry, both from Kansas State University. Dr. Chung has made significant contributions to basic and applied research in studies on the characterization and quantification of cereal lipids, interactions between lipids and other wheat flour components, functionality of native wheat flour lipids and mechanisms of the improving effects of lipid-related materials (surfactants) in breadmaking.º In addition, she has contributed to the improvement of U.S. HWW cultivar releases by evaluating and providing with intrinsic (milling and baking, more recently tortilla and noodle) quality of HWW progenies.

Dr. Chung has produced many Ph.D. and M.S. students as co-major professor. Her research accomplishment is evidenced by her publication of over 200 papers, including two theses, and 12 book chapters, in addition to nearly 200 abstracts. Dr. Chung is included in various HWW cultivar registrations including Ike, Arlin, Karl 92, 2137, and Jagger of the Kansas wheats; Tandem, Crimson, Harding, and Expedition of the South Dakota wheats; Ankor, Hatcher, Bond CL, and Protection of the Colorado wheat; and numerous germ plasm releases and registrations.

Dr. Chung has gained national and international stature as proven by many honors and numerous awards, nearly 200 invitations to various functions, and many offices and committee chairs held in several national and international professional societies. She is a full professor on courtesy appointment and is a member of the Graduate Faculty at Kansas State University. She served on the Editorial Board of the American Association of Cereal Chemists (AACC) as Associate Editor for Cereal Chemistry (1978–81), as the Technical Program Chair of the 74th AACC National Meeting (1988–89), symposia and short course organizer/lecturer, book reviewer, and editor of proceedings. Dr. Chung co-organized and coedited three International Wheat Quality Conferences (1987, 2001, and 2005) and their proceedings. She has served on the Board of Directors of the AACC (1989–91 and 1993–99), Korean Scientists and Engineers Association in America (KSEA) (1990–91) with 8,000 membership, and International Association for Cereal Science and Technology (ICC) (1994–2005). She is the U.S. Official Delegate to the ICC since 1994 and served as President of AACC (1997–98) and President of ICC (2000–02). Some of her awards and honors include**:** the W.E. Long Merit Award for Outstanding Graduate Research in North America; the W.F. Geddes Memorial Award, John C. Halverson Memorial Lectureship, and a Fellow of the AACC; Gold Medal Award for Summa Cum Laude and Distinguished Alumni Award, Ewha Woman's University; International Gluten Association's Best Paper Award; Friedrich Schweitzer Medal Award of the ICC; USDA Secretary's Group Honor Award; and numerous plaques and certificates of appreciations. She is a frequently invited international lecturer and advisor.

Dr. Okky Chung is globally known as 'The AACC Students' Mother**'** because of her contribution to mentoring students and young scientists. For the 25 years (1978–2003), since its inception, she has initiated the Student Travel Award Program and personally collected funding which paid, in part, for trips to the AACC national meetings for 1,450 students from all over the world with over $180,000. In addition, when Dr. Chung represents the USA to international scientific organizations, she delivers more than just scientific findings or knowledge to international customers. Exchange of culture, trust, and friendship among international colleagues/customers requires a higher degree of diplomacy. Dr. Chung's excellent leadership in people skills and her exuberant personality make her a superb ambassador representing ARS, U.S. agriculture, science, and technology.

DR. GEORGE L. LOOKHART

Dr. George L. Lookhart retired 30 September, 2004 after a 28-year career with USDA–ARS at the Grain Marketing and Production Research Center (GMPRC) as a Research Chemist in the Grain Quality and Structure Research Unit (GQSRU). He received his Bachelors degree majoring in Chemistry and Mathematics from University of Nebraska at Kearney in 1968 and his Ph.D. in Physical Chemistry from the University of Wyoming in 1973. He was a postdoctoral intern at the University of Kentucky in 1973–74 doing research on neutron activation analysis of lunar materials and teaching both freshman and physical chemistry. He was a postdoctoral fellow at the University of Missouri in 1974–76 doing research on dehydration mechanisms of carbohydrates. Dr. Lookhart joined USDA–ARS at the GMPRC as a Research Chemist in the GQSRU in autumn 1976 and began working on developing analytical methods for cereal components. Dr. Lookhart is a world-renown cereal protein chemist who has devoted his career to methodology development in order to: 1) quickly analyze protein fractions in order to quickly identify cultivars from gliadin patterns and predict quality parameters in early generation breeding lines; 2) elucidate the relationship of individual protein fractions to grain quality end-use quality parameters; 3) understand the effect of phenotypic (environment) interactions with genotype on end-use quality; and 4) develop lab-on-a-chip technology for the identification and quality prediction of cereal grains.

Dr. Lookhart received numerous honors and awards. Some include: Fellow of AACC; Fellow of AAAS; the 19th Donald Fox Lecturer Alumni Award (University of Nebraska, Kearney, NE); the G. Malcolm Trout Visiting Scholar (Michigan State University, Lansing, MI); the John C. Halverson Award (Milling and Baking Division of AACC); and held numerous offices in the AACC International organization, including Director of AACC Board of Directors (Chairman: 2005-2006) and elected President (2004-2005). Dr. Lookhart has nearly 150 publications, including 13 book chapters, two books, and 17 proceedings. In addition, he has authored 37 technical reports and popular articles, made 70 invited presentations and published about 200 abstracts. He has been awarded numerous grants by State and National funding agencies. He is a member of several professional and honorary societies and received numerous USDA–ARS awards.

Dr. Lookhart is currently a full professor and a member of the Graduate Faculty at Kansas State University. He has produced many Ph.D. and M.S. students as co-major professor. He served on the editorial board of the American Association of Cereal Chemists (AACC) as Associate Editor of Cereal Chemistry (1982–86), as the Technical Program Chair of the 83rd AACC National Meeting (1998–99), symposium organizer and lecturer, co-chair of the International Association for Cereal Science & Technology (ICC) Study Group on the Use of Electrophoresis to Identify Cereals, and Chair of the HWW Technical Board of the Wheat Quality Council. These accomplishments make Dr. Lookhart widely recognized both nationally and internationally as a significant contributor to all aspects of cereal protein chemistry, and to instrumental analytical chemistry in particular.

DR. DIETER METTIN

Dieter Mettin, retired director of the Central Institute of Genetics and Crop Plant Research of Academy of Sciences, Gatersleben (Germany), died on 25 August, 2004, after long cancer illness at his home in Naumburg (Germany).

Dr. Mettin was born in Berlin (Germany) 1 February, 1932. He attended Berlin Eosander Junior College from 1942 to 1943, Eisleben Martin Luther Gymnasium 1943 to 1950, Salzmuende Agricultural College from 1950 to 1952, and Halle-Wittenberg Martin Luther University from 1952 to 1955, where he obtained a M.Sc. degree in Agricultural Sciences. Dr. Mettin obtained his Ph.D. degree from Martin Luther University in 1961 with a major in Plant Breeding and Genetics under the supervisor, Prof. Dr. H. Stubbe (Thesis: Genetic and cytological studies in the genus *Vicia*). He was awarded a Dr.Sc. degree from that institution in 1977 (Thesis: Selection, identification and genetic utilization of aneuploids in hexaploid winter wheat, *Triticum aestivum* L.).

Dieter Mettin served as Instructor of Agriculture in M.T.S. Teuchern (Germany) from 1955–56, and as Junior Assistant at the Institute of Crop Plant Research, Gatersleben (German Academy of Sciences) in 1956–61. In the autumn of 1961, he moved to the Institute of Plant Breeding of Martin Luther University Halle. He began his professional career after graduation as Assistant Professor at the Institute of Plant Breeding, Hohenthurm (Germany). In 1968, he was appointed as Reader of Cytogenetics in Plant Breeding, and in 1977, as Full Professor of Plant Breeding. In 1983, Prof. Mettin accepted a call as Director of the Central Institute of Genetics and Crop Plant Research Gatersleben, from which he retired in 1991.

During his time at Martin Luther University Halle-Wittenberg he contributed significantly to the improvement of academic education in genetics, plant breeding, and seed production as well as applied cytogenetic research. His activity was internationally recognized. He became Vice Dean of the Agricultural Faculty in 1970–72, a member of the Scientific Council of University, and a member of Scientific Council of Agricultural Sciences of the Ministry of Higher Education (1981–84), Dr. Mettin had the opportunity to encourage and direct several graduate students. More than 40 B.Sc. and more than 60 M.Sc. students studied under his supervision. Many of the research projects involved the participation of the 12 Ph.D. and two D.Sc. applicants. He was well known for his interest in and his commitment toward helping younger research scientists in their developing careers. He retained contact with his former students and never lost interest in their progress. His interest in teaching continued throughout his career.

Mettin's research work encompassed many facets of basic and applied research ranging from cytotaxonomic studies of *Vicia*, induced auto- and allopolyploidization in *Brassica* and *Secale*, wide hybridization in Triticineae, production and utilization of aneuploids in *Aegilops*, *Secale*, and *Triticum*, genetic mapping of resistance genes to leaf diseases, and quantitative traits in wheat and homoeologous chromosome pairing in cereals to first applications of molecular genetics and biotechnology in plant breeding. He was among the pioneers of wheat aneuploid research in the world. The creation of the complete series of monosomics of the German wheat cultivar Poros (winter type) and Carola (spring type), the production of the first complete series of primary rye trisomics, the co-discoveries of the T1B·1R wheat-rye translocations/substitutions in hexaploid wheat, and the spontaneous homologous recombination between wheat and rye chromosomes are four of his most essential merits left.

Dieter Mettin was recognized widely in his profession as a consummate plant geneticist and cytogeneticist whose advice was often sought by plant breeders. He was the author of over 100 scientific papers, conference proceedings and book contributions. His awards include member of the Academy of Agricultural Sciences (Berlin), M.L.U Award of Sciences (Halle), and J. Kuehn Award (Halle). He was a cofounder of European Wheat Aneuploid Cooperation (EWAC), Curator of Aneuploid Research of the CMEC Agricultural Research (Odessa; Russia), member and President of Scientific Council 'Molecular and Cellular Genetics' of Biosciences Program of DDR.

Dieter Mettin's legacy will remain in memory of all his students, colleagues and friends. He is survived by his wife, Edelgard Mettin, who lives in Naumburg (Germany) and by his son, Albrecht Mettin.