

Fellows

Ten members of The American Phytopathological Society were honored as Fellows of the Society at the 1995 Annual Meeting in Pittsburgh, PA. Election as a Fellow is a reflection of the high esteem in which a member is held by colleagues. The award is given in recognition of outstanding contributions in extension, research, teaching, or other activities related to the science of plant pathology, to the profession, or to the Society. Publication no. P-1996-1201-030

Zahir Eyal



Zahir Eyal was born in Haifa, Israel. He was introduced to modern agriculture and cereal pathology at Miquve-Israel Agricultural High School. After service with the Israeli Defense Forces, Dr. Eyal came to the United States where he earned his B.S. degree in agronomy and plant pathology at Oklahoma State University, followed by a Ph.D. degree in plant pathology from Rutgers. He pursued a postdoctoral term at Purdue University working on non-specific resistance to wheat leaf rust. An assignment with the small grains improvement program at Purdue played a key role in preparing him for a career on diseases of barley, oats, and wheat. He joined the Department of Botany at Tel Aviv University in 1967 and served as head of the department for two separate terms.

Dr. Eyal returned to Israel at the time CIMMYT semi-dwarf wheats were introduced into breeding programs and cultivation in Israel. The change in plant stature in cultivars susceptible to *Septoria tritici* and cultural practices enhanced its adverse effects on productivity. He began a multifaceted program integrating fundamental and applied research aimed at minimizing the economic impact of the pathogen on production. He investigated host and pathogen parameters and the interactions associated with protection, virulence, and yield. He provided yield loss data and designated chemical control and cultural strategies that provided Israeli growers with control alternatives. He established the presence of physiologic specialization in *S. tritici* on cultivated bread and durum wheats and on wild relatives. He identified resistance sources, developed wheat differential sets, and investigated national and global virulence patterns. The integration of biological and genetical parameters together with epidemiological aspects enabled him to establish guidelines for resistance breeding to this pathogen.

Dr. Eyal and his group investigated biocontrol of Septoria blotch with antagonistic bacteria, which resulted in a patent. Mechanisms associated with biocontrol of Septoria blotch were elucidated by chemical, biochemical, and molecular approaches. He also incorporated cutting-edge biotechnology into his holistic program using probes for polymorphism in *S. tritici*.

Dr. Eyal is currently the director of the Institute for Cereal Crops Improvement at Tel Aviv University where the germ plasm of wild ancestors of cultivated small grains are being preserved, characterized, and utilized in breeding.

Recently, Dr. Eyal and colleagues at home and at the Max-Planck Institute in Germany patented a method by which wheat and barley cultivars can be genetically transformed with foreign genes. The transformation method is independent of genes, cultivars, and tissue culture and is highly compatible with pathology/breeding programs.

Dr. Eyal was president of the Israeli Phytopathological Society from 1979 to 1982. He has been a member or chair of numerous university, national, and international committees. He is actively involved in teaching and training programs in Israel and developing countries where scientists, extensionists, and growers are exposed to concepts, methods, and strategies generated by his group and others. He strongly

advocated, initiated, and implemented close associations between plant pathologists and breeders in joint efforts to elevate and express the implanted yielding and quality potential.

Dr. Eyal launched a research and outreach program new to his country, grounded it in basic science, kept it state-of-the-art, and witnessed his program's positive impact, not only on wheat management in Israel, but on wheat improvement programs throughout the world. His many contributions in research, education, university, national, and international agriculture activities warrant his recognition as a Fellow of APS.

Donald L. Hopkins



Donald L. Hopkins was born in Sacramento, KY. He obtained his B.S. degree in agriculture and chemistry from Western Kentucky University, followed by his Ph.D. degree in plant pathology at the University of Kentucky. Following a postdoctoral assignment at the University of Wisconsin, he was appointed assistant professor of plant pathology at the University of Florida Research Center, Leesburg. He has spent his career at this center, rising through the professorial ranks, and now serves as assistant center director and professor.

Dr. Hopkins originally worked on diseases of cucurbits and grapevine. He focused on Pierce's disease of grapevine, continuing his interest in virus diseases. This resulted in reports in 1973 that Pierce's disease and phony peach disease, the two classic xylem virus disease examples cited in virology textbooks, were caused by a small xylem-limited rickettsia-like bacterium. He has since become a world authority on *Xylella fastidiosa*, the causal agent of these diseases. This discovery permanently shifted his research interests from viral to bacterial and fungal diseases.

Dr. Hopkins is also well known for his research on biological control of Fusarium wilt of watermelon. He found that when the watermelon cv. Crimson Sweet was grown in a monoculture it promoted a suppressive factor(s) to Fusarium wilt in soil. Other watermelon cultivars grown in a monoculture did not promote soil suppressiveness. This was the first report of cultivar-specific induction of a suppressive soil for a disease.

Dr. Hopkins has continued his pioneering work on the xylem-limited bacterium *X. fastidiosa*, for which he developed an improved detection method, making possible the detection of this pathogen in a variety of hosts and its association with leaf scorch diseases of hitherto unknown etiology. He also has devoted a tremendous amount of time and effort to resolving the watermelon fruit blotch disease problem. Because it is seedborne, it resulted in litigation against watermelon seed-producing companies, which then suspended the sale of watermelon seed in the United States. Dr. Hopkins' research and diplomacy contributed to an understanding among all parties that will allow seed availability for at least another year.

Dr. Hopkins has served as president of the APS Southern Division and is currently the southern division councilor. APS is pleased to recognize Dr. Hopkins with the Fellow Award.

John A. G. Irwin



John A. G. Irwin was born in Brisbane, Australia. He received B.S. and M.S. degrees in agricultural science from the University of Queensland, Brisbane. His Ph.D. degree in plant pathology was awarded by the University of Wisconsin. He was honored with a Doctor of Agricultural Science degree from the University of Queensland in 1992. He began his professional career as plant pathologist/senior pathologist with the Queensland Department of Primary Industries, and in 1982 he joined the Botany Department at the University of Queensland as a lecturer and moved quickly through the academic ranks,

becoming professor of botany and director of the Cooperative Research Centre for Tropical Plant Pathology in 1992 (CRCTPP).

Dr. Irwin's distinguished career has included major contributions to research and teaching and, more recently, to research administration. The major contributions of his research program have been to the understanding of the genetics and evolution of several fungal pathogens in the genera *Phytophthora* and *Colletotrichum*, the development of alfalfa and *Stylosanthes* cultivars with resistance to these pathogens, and the etiology of a wide range of other diseases that affect pasture legumes in Australia. He was the first person in Australia to demonstrate that two fungal root and crown diseases, caused by *Phytophthora* and *Colletotrichum*, were the major causes of poor persistence and productivity of alfalfa in eastern Australia. In collaboration with plant breeders, he released the resistant cvs. Trifecta and Sequel; these cultivars are still widely grown 12 years after their release. More recently, he and his collaborators introduced a *Stemphylium*-resistant cultivar, Quadrella. A major technological advance was the development of rapid, seedling-based techniques for the screening for resistance to *Phytophthora*-incited diseases of alfalfa, chickpea, soybean, and cowpea. The use of this method has resulted in development of resistant cultivars of these crops.

In the last 5 years, Dr. Irwin and his students have focused on the use of DNA markers for studies of the taxonomy, phylogeny, and evolution of *Phytophthora* and *Colletotrichum* species. This work and work on host-pathogen interactions had a major impact on the direction of research in plant pathology in Queensland. His research contributions are described in over 130 publications in refereed journals and in book chapters.

Dr. Irwin has been an effective teacher. He taught basic plant pathology and mycology at the University of Queensland and, for 10 years, taught courses in plant pathology and disease control at the Technical Correspondence School of the College of Technical and Further Education in Queensland. Additionally, he has trained 11 Ph.D. and 7 M.S. students.

In addition to Dr. Irwin's productive research and teaching program, he was the primary force behind the establishment in 1992 of CRCTPP, a unique institution that combines resources from the state and federal governments, Bureau of Sugar Experiment Stations, University of Queensland, seed industry, and others to integrate all the research in plant pathology in northern Australia and apply modern biotechnology to the solution of disease problems of the many crops in this area.

For his outstanding success in all of these activities, he has received several awards, including the Australian Medal of Agricultural Science and the Urrbrae Foundation Award for Outstanding Contributions to Agricultural Science.

Keisuke Kohmoto



Keisuke Kohmoto was born in Okayama, Japan. He received his B.S. degree from Tottori University and his M.S. degree in plant pathology from Kyoto University. He earned his Ph.D. in agriculture degree in plant pathology from Nagoya University. In 1960 he joined the Biological Research Laboratories of Nippon Soda Company as a plant pathologist. He returned to the Laboratory of Plant Pathology at Tottori University in 1968 as an assistant professor. He was promoted to associate professor in 1970 and professor in 1981.

Dr. Kohmoto's early research concerned the development of chemicals for controlling plant diseases, which resulted in the discovery of two new antibiotics and a new systemic fungicide, thiophanate methyl. The latter became one of the most popular fungicides worldwide for many years. For this important contribution to international agriculture, he was awarded the Prime Minister Award from the Japanese Association for Invention, the highest award for new inventions in Japan. During the same period, he found that the sudden outbreak of black leaf spot of Japanese pear was due to a new strain of the pathogen that was tolerant to the fungicide used to control the disease. He solved the problem by developing a rotation spray program using several fungicides with different modes of action. The procedures he developed have been used as guidelines for investigating fungicide-tolerant pathogen strains and solving fungicide tolerance problems in Japan.

Most of Dr. Kohmoto's later research has been on host-selective toxins produced by different pathotypes of *Alternaria alternata*. He was among the first to demonstrate the causal relationship between toxin production and diseases caused by pathotypes of strawberry, rough lemon, tangerine, and tobacco. With perseverance and ingenuity, Dr. Kohmoto has isolated and determined the chemical structures of AF-, ACR-, ACT-, and AK-toxins produced by the Japanese pear pathotype. He also has revealed the primary target sites of a number of host-selective toxins and identified the essential molecular component responsible for host selectivity.

Dr. Kohmoto was among the first to demonstrate the tissue selectivity of AM-toxin in susceptible apple cultivars. He was also among the first to show that the primary role of AM-toxin is to render the host defenses ineffective rather than causing necrosis. His laboratory demonstrated that a saprophytic *A. alternata* strain can become a pathogen by acquiring the ability to produce host-selective toxins, revealing a possible evolutionary origin of plant pathogens.

Dr. Kohmoto has served as a councilor of the Phytopathological Society of Japan since 1986 and has organized and managed several domestic and international joint research grant programs. He organized Tottori University's International Symposium on Host-Specific Toxins in 1988 and 1993. He has been invited to present papers at international and national symposia and has published over 110 papers in scientific journals, as book chapters, or as review articles.

Dr. Kohmoto is an inspiring teacher. He teaches a broad range of subjects and has attracted many students. He is regarded as a leader in physiological plant pathology in Japan, always making himself available to those who seek advice and guidance.

In recognition of his outstanding contributions to the science of plant pathology, he shared the Distinguished Award of Agricultural Sciences of the Japanese Society of Agricultural Sciences and the 25th Agricultural Science Award of Yomiuri Newspapers in 1988, two of the highest research honors in agricultural sciences in Japan.

T. Jack Morris



T. Jack Morris was born in Quebec and completed his B.S. and M.S. degrees at McDonald College of McGill University. He graduated with a Ph.D. degree in plant pathology from the University of Nebraska and held research and teaching postdoctoral positions before moving to the University of California at Berkeley as an assistant professor of plant pathology and rising to the rank of full professor. In 1990 he returned to the University of Nebraska as director of the School of Biological Sciences and is responsible for the administrative leadership of this large and interdisciplinary instruction and research unit.

Dr. Morris has made many significant contributions to plant pathology, particularly in virology. His contributions are remarkable because of the variety of viruses, viroids, MLOs, and disease problems he has investigated. Each effort has been one of quality, and he has established himself as one of the world's leaders in plant virology.

Dr. Morris has made outstanding contributions to the science, beginning with his research on tobacco rattle virus. After completion of his Ph.D., Dr. Morris demonstrated his versatility by moving from virology to citrus exocortis viroid (CEV). He tackled CEV and applied the available techniques to characterize this RNA. He used his knowledge of viroid molecular biology to apply methods to the agricultural gel detection problems of indexing potato propagation materials for potato spindle tuber viroid. This was a critical breakthrough and an early demonstration that basic molecular biology could be applied to plant pathological problems.

Dr. Morris also collaborated with Alan Dodds to develop dsRNA analysis as a method for plant virus diagnosis, one of the most commonly used and important diagnostic methods for plant and fungal viruses in recent years. dsRNA analysis is also valuable in providing clues to virus taxonomy and has revealed information about replication strategies. The numerous citations of Morris' research in this area testify to the importance and practicality of his contribution.

Dr. Morris' research at Berkeley focused on both applied and basic projects, and he was responsible for the characterization of several strawberry virus diseases and the development of tools for routine detection. His early molecular characterization of carnation mottle, turnip crinkle, and tomato bushy stunt viruses established these viruses as some of the best of the model systems for studying RNA plant virus replication and infection processes.

Investigations with tomato bushy stunt tomosvirus in Morris' lab led to the discovery and molecular characterizations of defective-interfering RNAs (DIRNAs) associated with plant viruses. One of the significant aspects of DI-RNAs is that they can be generated *de novo* and that they undergo recombination during evolution. As such, plant DI-RNAs are good models for understanding this fundamentally important process.

Dr. Morris' research record reveals his significant contributions in several areas of plant pathology and virology. He also has provided an excellent training facility for numerous graduate students and postdoctoral fellows, as well as visitors. His enthusiasm for research and demands for quality have had an important impact on the development of molecular studies of plant viruses.

Dr. Morris has been a member of APS since 1968, is a charter member of the American Society of Virology, and is a member of the American Association for the Advancement of Science and the Society for General Microbiology. He has participated as a member of the APS Virology Committee and has been an editor for the journal *Virology* since 1980. In 1995 he was designated Nebraska's Sigma Xi Scientist of the Year.

Randall C. Rowe



Randall C. Rowe was born in Baltimore, grew up in suburban Detroit, and attended Michigan State University, where he received a B.S. degree in botany. While at Michigan State, he gained his first exposure to plant pathology working in faculty laboratories in the Department of Botany and Plant Pathology. He earned a Ph.D. in plant pathology at Oregon State and spent 2 years at North Carolina State University studying disease development and pathogen dispersal of *Cylindrocladium* root rot of peanuts, the first studies on this new disease. Dr. Rowe joined the Department of Plant Pathology at The

Ohio State University in 1974 and for 21 years has been located at the Ohio Agricultural Research and Development Center in Wooster, where he has research and extension responsibilities for vegetable diseases. He was promoted to associate professor in 1979, professor in 1984, and, since 1989, has served as associate chair, the administrative department leader in Wooster.

Dr. Rowe has made many contributions in the study of vegetable crops. His primary research has been on fungal root diseases. His studies of *Fusarium* crown and root rot showed that airborne microconidia of the pathogen escape soil steaming and rapidly recolonize steam-disinfested soil. He used a fungicide drench onto warm, freshly steamed soil to prevent recolonization by airborne propagules. This method was adopted in Ohio and adjoining states and eliminated the disease as a serious threat until a resistant cultivar was developed.

Since 1980, Dr. Rowe and colleagues have made major advances in understanding potato early dying disease (PED). After developing a microplot technique that permits precise, reproducible field studies, they showed that PED results from a synergistic interaction between *Verticillium dahliae* and the root-lesion nematode *Pratylenchus penetrans*. Their research demonstrated that the combination of both pathogens, at densities that do not individually cause significant damage, resulted in severe PED symptoms and lower potato yields. A goal of this research has been to develop yield-loss, risk-assessment models for PED that growers can use in potato IPM programs.

Throughout his career, Dr. Rowe has worked closely with vegetable and potato growers in Ohio and other states to assist in disease management. He has conducted extensive tests of fungicide efficacy and application strategies, published numerous bulletins, fact sheets, and trade journal articles, and made many field visits to diagnose disease problems. For 3 years, he worked with colleagues across the country to organize, write, and edit *Potato Health Management* for APS Press.

Dr. Rowe has served his department and college on faculty and administrative committees and assignments and is active in both APS and the Potato Association of America (PAA). For PAA, he has taken a leadership role in its plant pathology activities. His service to APS has been extensive. He has chaired several APS committees and served as section editor for *Fungicide and Nematicide Tests*. He served as a member of APS Council, during which time he chaired seven APS committees and served on several others, and he has held several elected offices. He served as vice-president in 1990 and as APS president during 1992 to 1993, leading the organization and implementation of the first strategic plan for the Society, working to reorganize the structure and function of APS Council, and speaking widely to the membership about important issues facing plant pathology and the Land Grant System.

Dr. Rowe has published over 200 journal papers, books and book chapters, technical articles, and extension and trade-journal reports. He has obtained numerous competitive grants and gifts to conduct research on vegetable diseases. His accomplishments have been acknowledged with the Ciba-Geigy Agricultural Achievement Award from APS and the Ohio Potato Growers' Association Achievement Award.

Dharma D. Shukla



Dharma D. Shukla was born in Narainpur, India. He received a B.S. degree in agriculture from the University of Gorakhpur, India and an M.S. degree in plant pathology from Banaras Hindu University, India. He received a Ph.D. in agriculture degree in plant virology from the German Academy of Agricultural Sciences, Berlin, and a Ph.D. in science degree on structure and immunochemistry of potyviruses from the University of Queensland, Australia.

In 1965 he joined the University of Udaipur, India, as assistant professor of plant pathology, where he was involved in research on plant diseases

caused by fungi and in teaching undergraduate plant pathology courses. In 1968 Dr. Shukla was awarded a fellowship by the German Democratic Republic (GDR) to study for a higher degree. He chose plant virology at the Institut für Phytopathologie, Aschersleben. His doctoral thesis identified 209 virus-host combinations involving 10 viruses and 191 species of cruciferous plants belonging to 58 genera and provided the most comprehensive information on the occurrence, distribution, and epidemiology of viruses infecting members of a plant family in the GDR.

In 1972 Dr. Shukla returned to his position at the University of Udaipur. He developed and taught graduate and postgraduate courses in plant virology and served as supervisor for postgraduate students. Dr. Shukla was awarded a postdoctoral fellowship to the University of Queensland, Australia, in 1976, where he worked on the mechanism of soil transmission of galinsoga mosaic virus.

In 1977, Dr. Shukla joined the Commonwealth Scientific and Industrial Research Organisation (CSIRO) in Melbourne as senior research scientist. He was promoted to principal research scientist in 1982 and to senior principal research scientist in 1989.

After joining CSIRO, Dr. Shukla was involved in developing techniques for rapid detection of plant viruses. He pioneered the application of protein A from *Staphylococcus aureus* in immune electron microscopic detection of plant viruses. Dr. Shukla and his colleagues were among the first to adopt the Western blotting technique for the identification of plant viruses.

For 13 years, Dr. Shukla and his colleagues have concentrated on devising suitable criteria and an approach for accurate identification and classification of potyviruses. Dr. Shukla and his colleagues established a molecular basis for potyvirus taxonomy that has provided a foundation for the identification and classification of potyviruses. For this work Dr. Shukla and colleague C. W. Ward were awarded the most prestigious CSIRO award, the 1994 Chairman's Medal, which consists of a gold medal and \$25,000 in cash.

In 1987 Dr. Shukla was awarded a Senior Fulbright Fellowship for research at the University of Illinois, where he collaborated with colleagues to develop a serological approach for potyviruses by producing virus-specific antibodies directed to the N-terminus of coat protein (CP). This approach showed that 17 strains of sugarcane mosaic virus belonged to 4 distinct potyviruses. This surprising result has been confirmed by detailed sequence analysis of the CP.

Dr. Shukla has 130 research publications to his credit. His international standing is reflected by the many invitations he receives to chair sessions, present papers at international conferences, and write reviews on potyviruses. Along with C. W. Ward and A. A. Brunt, he has published an authoritative monograph, *The Potyviridae*. In recent years, he has coordinated an international collaboration with laboratories in the United States, the Netherlands, Germany, Yugoslavia, and India to resolve some of the confusion regarding characterization of some of the most important species of the potyvirus family. He has served as an associate editor of *Phytopathology* and is a member of the American Society of Virology and the Indian Virological Society.

Michael E. Stanghellini



Michael E. Stanghellini was born in San Francisco. He received his B.A. degree in biological sciences from the University of California, Davis, earned an M.S. degree in plant pathology from the University of Hawaii (where he met his wife Joan), and received a Ph.D. degree from the University of California, Berkeley. In 1969 he joined the Department of Plant Pathology at the University of Arizona. He was promoted to associate professor in 1972 and to professor in 1976.

Dr. Stanghellini is recognized internationally for his comprehensive studies on the ecology and epidemiology of soilborne plant pathogens. He and his colleagues have developed five quantitative soil isolation techniques used worldwide for studies on the ecology and epidemiology of *Pythium ultimum*, *P. aphanidermatum*, *Erwinia carotovora*, and *Monosporascus cannonballus*.

He is also a recognized authority on the genus *Pythium*. His studies on the in situ rhizosphere biology of *P. aphanidermatum* led to one of the first predictive systems for the control of root disease. He also pioneered studies on the influence of soil moisture in relation to the radial extent of the rhizosphere and the use of infrared thermometry for nondestructive detection of root disease prior to above-ground symptoms. Dr. Stanghellini also is an authority on root diseases of hydroponically grown vegetable crops. His discovery and documentation of the role of *P. dissotocum* as a root pathogen of hydroponically grown lettuce illustrated the significance of subclinical root infection on yield loss. His more recent accomplishments include the discovery of a unique downy mildew pathogen on lettuce roots, *Plasmopara lactucae-radicis*. His recent discovery and documentation of shore flies as aerial vectors for soilborne plant pathogens *P. aphanidermatum* and *Thielaviopsis basicola* has been of major economic benefit to the greenhouse industry.

For 20 years Dr. Stanghellini has taught the introductory course in plant pathology and a graduate course on the rhizosphere biology of root-infecting fungi and is recognized as an outstanding, enthusiastic instructor. He also has served as the major research advisor for 27 M.S. and Ph.D. candidates.

In 1980 Dr. Stanghellini was a member of the U.S. delegation at the US/USSR Bilateral Conference held in Russia. He served as a panelist for the USDA Competitive Grants Program (Biological Control) and was an invited instructor for an APS-sponsored "Pythium Workshop" held in Las Cruces, NM, in 1994. He also conducted an invitational *Pythium* workshop in the Department of Plant Pathology at the National Chung Hsing University, Taiwan, in 1992.

Dr. Stanghellini has been recognized worldwide for his many contributions to the profession of plant pathology. Over the past 10 years, he has delivered approximately 30 invitational seminars in 11 states and 6 countries. Additionally, Dr. Stanghellini was a keynote speaker for the 33rd Congress of the Southern African Society for Plant Pathology, and he presented six invited lectures at various universities in South Africa during a month-long visit in 1995.

Dr. Stanghellini has served as an associate editor of *Phytopathology* and has served twice as an associate editor of *Plant Disease*. He was elected president of the APS Pacific Division, served as chairman of the Local Arrangements Committee for the 1978 APS Annual Meeting, and cochaired local arrangements of the APS Pacific Division meeting in Tempe, AZ, in 1993. Additionally, he has served as chairman, or cochairman, of the program and local arrangements for the Soil Fungus conferences in 1974, 1985, and 1993. He has also served as chair of the APS Soil Microbiology and Root Disease Committee.

Walter R. Stevenson



Walter R. Stevenson was born in Cortland, NY. He received his B.S. degree in biological sciences from Cornell University and his Ph.D. degree in plant pathology from the University of Wisconsin. Immediately thereafter, he joined the Department of Botany and Plant Pathology at Purdue University as an assistant professor with extension responsibilities for diseases of vegetable crops. In 1979 he joined the Department of Plant Pathology, University of Wisconsin, as an associate professor with extension and research responsibilities for vegetable crops. He was promoted to professor in 1984 and was

awarded the prestigious Vaughn-Bascom Professorship in 1993.

Dr. Stevenson has a comprehensive research and extension program of vegetable crops, reflected in over 124 research papers and abstracts and 170 extension publications. His program includes reducing pesticide inputs, improving food and environmental safety, increasing knowledge of disease management, and improving the economics of crop production. He has made notable research contributions on potato early blight, late blight of potatoes, potato seed piece decay, Verticillium wilt of peppermint, Alternaria and Cercospora leaf blights and Pythium root dieback of carrots, Botrytis leaf blight of onions, and Aphanomyces-Pythium root rot and white mold of beans.

Dr. Stevenson is also widely recognized for his outstanding vegetable extension program. He provides grower training and an improved flow of information from plant pathologists to extension agents and agri-business personnel. He annually participates in 40 to 50 vegetable grower meetings, where clientele are served through training activities on topics such as disease identification and management, pesticide use, IPM programs, disease forecasting, cultivar selection, and use of computers in crop and pest management. Additionally, he is involved in scout training schools, training manuals, specimen diagnosis, newsletters, developing and transmitting pest alerts, and maintenance of Pest Profile computer programs. Dr. Stevenson has always been a leader in computer technology, and his interest resulted in the development of the Potato Crop Management software, which is now in use in the Midwest and has been modified for use with crops outside the United States. Most recently, he collaborated with colleagues at the University of Wisconsin to develop a computer program, WISDOM (released in 1995), for potato crop management that integrates irrigation applications and weed, insect, and disease management information.

Dr. Stevenson's research and extension accomplishments illustrate his devotion to duty and thoughtful, innovative approaches to plant disease forecasting and management. He is recognized as being on the forefront of computer utilization for plant disease management. His disease management approaches are widely embraced, as evidenced by the invited presentations he has made in the United States and internationally. In addition to his contributions in research and extension, Dr. Stevenson has trained, or is training, five M.S. and four Ph.D. students and has served on the graduate advisory committee for 21 other students.

Dr. Stevenson has received many awards for his contributions, including the University of Wisconsin Extension Award for Excellence, APS Extension Award, Researcher of the Year Award from the Wisconsin Potato and Vegetable Growers, and Distinguished Service Award from the National Potato Council.

Dr. Stevenson has made many contributions to his department and extension through committees and other activities. He has served on the APS Chemical Control Committee, on the Subcommittee on Chemical Registration for Disease Control in Minor Crops, and as an associate editor of the *Biological and Cultural Test* and *Phytopathology*.

Neal K. Van Alfen



Neal K. Van Alfen was born in Ogden, UT. He received a B.S. degree in chemistry and M.S. degree in plant physiology from Brigham Young University. In 1972 he received a Ph.D. degree in plant pathology at the University of California, Davis. From 1972 to 1975 he was assistant plant pathologist at the Connecticut Agricultural Experiment Station. In 1975 he became assistant professor of biology and extension plant pathologist at Utah State University and was promoted to professor of biology in 1982. In 1990 he became professor and head of the Department of Plant Pathology and Microbiology at Texas A&M University.

Dr. Van Alfen has made advances in understanding the chemistry and role of pathogen-produced molecules in vascular wilt diseases, the molecular basis of hypovirulence of the chestnut blight pathogen, and biocontrol of fungal pathogens. His insight into plant-microbe interactions epitomize his research career. He is author or coauthor on more than 60 journal papers, book chapters, and review articles.

Dr. Van Alfen has identified the macromolecular basis of altered water relations in plants infected with *Clavibacter michiganense* subsp. *insidiosum*. His research included purification and characterization of pathogen-produced polysaccharides and development of sensitive assays for changes in water relations of occluded vascular elements, constantly expanding his technical expertise and serving as a model for his students in achieving a holistic understanding of disease biology.

Dr. Van Alfen has made contributions to biocontrol of plant disease through research on hypovirulence caused by a mycovirus associated with *Cryphonectria parasitica*. His research on the nature of hypovirulence and its application to biocontrol of the chestnut blight pathogen has stimulated the interest of many scientists. His work has shown that the success of the virus as a biocontrol agent is derived from its nonlethal effects on the fungus and its ability to move rapidly with the fungal population. He also has a program designed to apply molecular information to practical management of this disease.

At Utah State University, he served as the first extension plant pathologist in the state and initiated a disease clinic and county agent training programs and conducted field research on a range of diseases, which he coupled to his basic interests in disease physiology. His extension efforts served the needs of growers and identified the need for a full-time extension plant pathologist in Utah.

Dr. Van Alfen was a leader in establishing interdepartmental graduate training programs in Molecular Biology/Biochemistry at Utah State University and the NSF-funded graduate program for the Biology of Filamentous Fungi awarded to Texas A&M. He also led the development of an undergraduate program in environmental sciences offered by the Plant Pathology Department at Texas A&M. Dr. Van Alfen is an outstanding teacher with extensive knowledge, teaching courses in introductory and advanced plant pathology, forest pathology, molecular host-pathogen interactions, advanced microbiology, diseases of agronomic crops, mycology, and general education courses in plant science.

Dr. Van Alfen receives numerous invitations to speak at meetings. He has served on NSF, EPA, and USDA panels and as program manager for the USDA-NRI Competitive Grants Program. He has served on two National Research Council studies of biological control. Dr. Van Alfen is a member of APS, the American Association for the Advancement of Science, the International Society for Molecular Plant-Microbe Interactions, and the American Society for Microbiology. He served as associate and senior editor of *Phytopathology* and is serving on the editorial committee of the *Annual Review of Phytopathology*. He has served on several APS committees, with continuing service on the Placement Committee and as APS councilor-at-large.