Fellows

Ten members of The American Phytopathological Society were honored as Fellows of the Society at the 1997 APS Annual Meeting in Rochester, NY. 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-1997-1117-01O

Jay L. Apple

J. Lawrence Apple is a native of Guilford County, NC. After being awarded a B.S. in agronomy, M.S. in plant pathology, and Ph.D. in plant pathology and genetics from North Carolina State University, he joined the faculty of the Department of Plant Pathology at his alma mater. He moved rapidly through the professorial ranks with responsibilities focused on research and teaching. Professor Apple's scientific findings included demonstration of the wide range of virulence and morphology of single zoospore isolates of *Phytophthora parasitica* var. *nicotianae*. He also discovered and researched physiologic races and various mating types of this pathogen.

In 1963, Dr. Apple began his extremely distinguished career in international agriculture by accepting an assignment as plant pathology advisor in Peru under a contract between North Carolina State University and the United States Agency for International Development. In 1965, he began his equally distinguished career as a science administrator when he became chief of North Carolina State University programs in Peru. Upon his return to NCSU in 1967, he was appointed director of the Institute of Biological Sciences and assistant director of research in the School of Agriculture and Life Sciences. Under his tenure in this position, his background and commitment to the discipline of phytopathology allowed him to provide leadership for many significant research initiatives, including work on aflatoxins and Southern corn leaf blight.

In 1977, Professor Apple was appointed to the position of associate director of research and coordinator of International Programs in the School of Agriculture and Life Sciences. In 1981, he became director of University International Programs and associate director for International Agriculture. In these positions, he made many important contributions to international agriculture. In recognition of this expertise, he served as president of the Association of International Program Directors.

In additional to Dr. Apple's leadership in international agriculture, he played a major role in representing phytopathology in the evolution of the philosophy, systems, and practices of integrated pest management. His leadership in the IPM arena included significant local, national, and international initiatives. Dr. Apple's many contributions as a scientist and administrator are documented in numerous scholarly publications. In addition, the worldwide economic impact of his plant breeding-genetics research and IPM initiatives have had major impacts that will continue for decades to come.

Dr. Apple held the position of director of University International Programs at North Carolina State University until his retirement in 1991. He currently serves as secretary general of the International Plant Protection Congresses. In this role, he is providing leadership for the Congress to be held in Jerusalem in July 1999, and expansion of the organization's role as a convener and communicator for integrated crop protection on a worldwide basis.

Isaac Barash

Isaac Barash was born in Tel-Aviv, Israel. He earned his M.Sc. degree in plant protection from the Hebrew University, Jerusalem, and Ph.D. in plant pathology from UC-Davis. After a brief stint in medical mycology at the Department of Medical Microbiology at UCLA, he returned to Israel in 1967 and joined the Department of Botany at Tel-Aviv University, where he has remained throughout his career. From 1980-1984 he served as head of the department, and in 1987, he was asked by the director of the Agricultural Research Organization, the Volcani Center, Bet Dagan, to chair the Department of Plant Pathology. Dr. Barash accepted this position while still maintaining his professorship and teaching obligations at Tel-Aviv University. After 5 years, he left the chair position, but was granted a "member for life" in the department. In 1995, he was appointed as dean of the Faculty of Life Sciences at Tel-Aviv University following election by the faculty.

Dr. Barash has spent his career doing research and teaching in the area of physiological and biochemical plant pathology. He has focused his work on the characterization of the various virulence determinants produced by plant pathogenic fungi and bacteria. In his early work, he made an important contribution to the understanding of the release of pectic enzymes during spore germination and the role of the various types of these enzymes on the mode of soft rot production in citrus. He was the first to demonstrate the cell-surface localization of endopolygalacturonase in fungal spores. His work on inhibitors of pectic enzymes on which a patent was registered, as well as the ecology and epidemiology of the sour rot pathogen, *Geotrichum citri-aurantii*, was a major contribution to the development of control measures in citrus packing houses. Dr. Barash has also devoted a significant amount of time to research on phytotoxins produced by pathogenic fungi. Most noteworthy are his studies on characterization of the glycopeptide responsible for the mal-secco disease symptoms in citrus.

During recent years, Dr. Barash's research has been focused on molecular genetic aspects of plant-microbe interactions. In collaboration with Dr. S. Manulis, he investigated the role of plasmid-borne genes in the pathogenicity of *Erwinia herbicola* pv. *gypsophilae* and characterized the genes conferring IAA and cytokinin production. This system is unparalleled with any of the previously known gall-forming bacteria since *hrp* genes present on the pathogenicity plasmid were proved mandatory for gall elicitation.

He has served on organizing committees of various international meetings and has recently been elected as the vice-president of the International Mycology meeting to be held in 1998 in Jerusalem.

Thomas J. Burr

Thomas J. Burr was born in Oshkosh, WI. He earned a B.S. degree in agricultural science and an M.S. degree in plant pathology from the University of Arizona. He obtained his Ph.D. degree in plant pathology from the University of California, Berkeley. As a graduate student at Berkeley, he was the first of Dr. Milton Schroth's students to investigate the effects of plant growth-promoting rhizobacteria on potatoes. He joined Cornell University at the Geneva campus in 1977 as assistant professor. He was promoted to professor in 1991. His research has focused on the biology and control of bacterial and fungal diseases of fruit crops.

Dr. Burr is well-known for his many accomplishments in research concerning *Agrobacterium vitis*, the cause of grape crown gall. This work has led to the development of strategies that are used for managing this important disease in vineyards. He confirmed the systemic survival of *A. vitis* in grape, a phenomenon that has since been verified in many viticultural regions worldwide and has led to the discovery that the pathogen had contaminated many sources of propagation material. He and his colleagues developed methods for indexing grape cuttings for *A. vitis* that include the development and use of a species-specific monoclonal antibody. The indexing and eradication procedures are being implemented on a commercial scale for the production of grapevines that are free of *A. vitis.*

Recently, it has been demonstrated in Dr. Burr's laboratory that certain strains of nontumorigenic *A. vitis* greatly inhibit or prevent grape crown gall caused by tumorigenic strains. Although some of the biological controls produce bacteriocins, it was demonstrated that these are not associated with biological control on grape.

Dr. Burr has also made significant contributions to research on streptomycin resistance in plant-pathogenic bacteria. Together with Dr. J. Norelli at Cornell, it was discovered that genetic determinants for streptomycin resistance in *Pseudomonas syringae* pv. *papulans* are carried on conjugative plasmids. Resistance determinants were cloned and used as probes to study the prevalence of this type of resistance in bacteria in apple orchards. Currently, Dr. Burr and colleagues are developing streptomycin resistance management strategies based on ecological fitness of resistant strains and on the use of alternative controls.

Dr. Burr has served as chairperson of the APS Bacteriology Committee and on the Chemical Control Committee. He is currently councilor-elect for the Northeastern Division of APS and a senior editor of APS Press. Dr. Burr was previously honored by APS in receiving the Ciba Geigy and Lee M. Hutchins Awards in 1986 and 1990, respectively.

Dennis Gross

Dennis Gross was born in Whittemore, IA, and received his early training at Iowa State University. Later, he transferred to UC-Davis where he obtained his Ph.D. in plant pathology. After serving a 4-year period at the University of Nebraska, he moved to Washington State University, where he has risen through the professorial ranks to his position today as professor of plant pathology.

Dennis is recognized internationally for his research program, both among plant pathologists and in a wider community of microbiologists. He has consistently made important discoveries that have significantly influenced our views of microbiological processes, especially those affecting secondary metabolite production, survival, and plant interaction. He is particularly well-known for his work on the peptide toxins produced by pseudomonads, defining a major role for such phytotoxins in phytopathogenesis. His work on syringomycin and syringopeptin production by *Pseudomonas syringae* pv. *syringae* has yielded fundamental information on their mode of action, genetic organization, biosynthesis, regulation, export, and contribution to disease development.

During the 1980s, Dennis did pioneering work to define the role of bacterial ice nucleation in frost injury to deciduous fruit trees, especially pome and stone fruit trees. His work for the first time established the occurrence of an intrinsic, nonbacterial ice nucleus in wood. Furthermore, he has documented the role of ice nucleation in cold hardiness and explained why control of ice nucleation active bacteria does not translate into significant frost protection of fruit trees.

Dennis has also significantly contributed to our understanding of antimicrobial compounds, e.g., bacteriocins produced by corynebacteria and rhizobia, siderophores produced by Pseudomonas, and detection as well as biological control of several plant pathogens. Thus, his research contributions range from applied and basic aspects of plant pathology to bacterial physiology to molecular genetics.

Dr. Gross has also served APS well having recently completed a 3-year term as editor-in-chief of *Phytopathology* after previously serving 3 years as senior editor. During his term, Dennis revamped the appearance of the journal with a more modern look, streamlined the handling of manuscripts speeding the review process, began publishing mini-reviews, established supplemental issues containing nonrefereed abstracts from APS meetings, and switched to desktop publishing of the journal at APS headquarters.

Gary E. Harman

Gary Harman was born near Las Animas, CO. He attended Otero Junior College in nearby La Junta before he enrolled at Colorado State University to obtain a degree in plant genetics, but then obtained a job working with Ralph (Tex) Baker. He participated in the NSF Education Program and published a short paper as sole author in *Phytopathology* that described his undergraduate research. This experience led him to pursue a career in plant pathology. Dr. Harman received his B.S. in botany from CSU and a Ph.D. from Oregon State University.

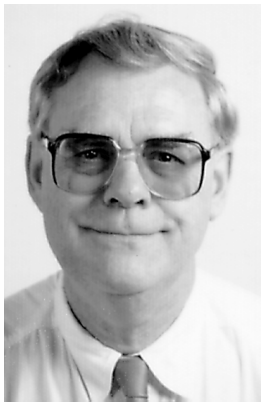
Dr. Harman was appointed assistant professor in the Department of Seed Investigations at Cornell University's New York State Agricultural Experiment Station in 1970, where he now holds the rank of professor. His early work at Geneva dealt primarily with seed storage and spermosphere ecology. These interests led directly to research in biological control, where Dr. Harman has probably made his most important findings. Strains of *Trichoderma*, *Gliocladium*, and *Enterobacter* were discovered and used as seed or soil treatments. He developed techniques for protoplast fusion for biocontrol fungi, showed that this process introduces great variability within progeny and that a small percentage of progeny are substantially improved in biocontrol efficacy. One protoplast fusion strain controlled a wide range of pathogens, was effective over a wide range of environmental conditions, and was useful as a seed treatment, as in-furrow or broadcast soil applica-

tions, and for foliar and fruit applications. It was registered with the EPA by a major corporation as a biological seed treatment on a range of crops. It is the first genetically altered fungus so registered.

Dr. Harman strongly believes that biological control should not end with research, but instead should provide useful tools for plant disease management in commercial agriculture. In 1993, together with two colleagues, he formed a company, TGT, Inc. (now BioWorks, Inc.) to commercialize biocontrol technologies. The company obtained a license from the Cornell Research Foundation to use patents from Dr. Harman's work. All products employ the same protoplast fusion progeny strain of *T. harzianum.* The company is expanding production facilities to produce as much as one million pounds of these products annually to meet the expected demand in 1997-1998. Dr. Harman remains employed full-time at Cornell University, while providing guidance and leadership for research and technology development in the company. He hopes that, in addition to providing new products for commercial agriculture, BioWorks will serve as a model for the commercialization of academic research.

He has also been active in APS. He was one of the organizers of the Seed Pathology Committee and has been an associate editor of *Phytopathology* and a member of the Biological Control Committee.

Alan C. Hayward



Alan Christopher Hayward was born in Birmingham, England. He was awarded the B.S. degree with honors and the Ph.D. degree from the University of Birmingham. After a brief period working as a process microbiologist at the Commonwealth Microbiological Research Institute in Trinidad, West Indies, he worked as a bacteriologist at the Commonwealth Mycological Institute (now the CAB International Mycological Institute) in Kew, England. He then joined the Department of Microbiology at the University of University of Queensland. In addition to his duties in the Department of Microbiology, Dr. Hayward is the program manager for the Education Program of the Cooperative Research Center for Tropical Plant Pathology at the University of Queensland.

Dr. A. C. Hayward is one of the most distinguished plant bacteriologists in the world and an international authority on bacterial wilt, one of the most important diseases of a large number of crops of great economic importance. His research at the University of Queensland in Australia, beginning in the mid-1960s and continuing to the present, has contributed greatly to our understanding of the taxonomy, genetics, and evolutionary relationships of strains of *Pseudomonas solanacearum*. Dr. Hayward's research is noted for its breadth and the incorporation of modern technologies throughout his entire career. In addition, he is considered one of the top instructors in the Department of Microbiology at the University of Queensland. It is this versatility and the wide scope of his contributions that have made him one of the truly outstanding scientists in Australia and a valued member of the plant pathology community worldwide.

Dr. Hayward's early experience in Trinidad brought him in contact with several bacteria diseases of tropical plants and, realizing the severe economic impact of these diseases, he began to concentrate his efforts on the etiology of the various causal agents. He selected *Pseudomonas solanacearum* because of the numerous strains that occur and the host specificity that they exhibit. At Kew, he studied the physiological characteristics of a vast array of strains and published a paper in 1964 in which he classified strains into several biotypes on a biochemical basis. That paper became a classic, because it provided a simple and yet effective way to group and identify strains. Many years later, when molecular methods became available and other systems for classification were devised in Hayward's laboratory, the evolutionary insight of the 1964 paper became evident.

During his career, Dr. Hayward has served as associate editor of the *Journal of Applied Bacteriology*, *Phytopathology*, and *Australian Plant Pathology*. He served as vice-president and president of the Australian Plant Pathology Society in 1974-1976 and 1991-1993, respectively. The numerous review papers in *Annual Review of Phytopathology*, *Fitopatolgia*, *Viewpoints in Biology*, and the large number of chapters in books that he has published attest to his preeminence in the field of phytobacteriology.

Hitoshi Kunoh

Hitoshi Kunoh was born in Tokyo, Japan. He received his B.S. and M.S. degrees in agricultural Biology and plant pathology, respectively, from Kyoto University. He earned the Ph.D. in botany from Southern Illinois University in 1970 and, in 1972, the degree Dr. of Agriculture with specialization in plant pathology from Kyoto University.

Dr. Kunoh joined the Laboratory of Plant Pathology at Mie University as a faculty member in 1970 and, in 1988, was promoted to the rank of professor. In this position, he functions as the administrative head of the plant pathology program.

Dr. Kunoh is recognized as a leader in the conceptualization and understanding of the fungal infection process. Much of his research has focused on *Erysiphe graminis* and the powdery mildew disease of barley. He was the first to recognize the primary germ tube of *E. graminis* and to confirm its importance to the success of the infection process of this pathogen. This work was accomplished by his revolutionary development and use of micromanipulation in concert with scanning electron microscopy. In the case of powdery mildew, his approach was the first to reveal the exact timing of the initial events of physiological contact between the host and the pathogen, and the demonstration of the nature and timing of the host cytoplasmic response.

Kunoh then delved into earlier events in the *E. graminis* infection process to determine factors that regulate the success of the pathogen. In work with Professor Nicholson at Purdue University, he and his collaborators made the significant discovery that, upon contact with the barley leaf, conidia release minute quantities of cutinase. This was the first demonstration of cutinase production by an obligate pathogen and the first demonstration that its importance to the infection process is independent of penetration. In summary, Kunoh's investigations on the barley powdery mildew interaction represent a foundation in our knowledge about what is currently referred to as recognition and signal transduction between a pathogen and its host.

Dr. Kunoh's research has also involved answering questions of immediate practical importance to agriculture and food production in Japan. For example, he elucidated the etiology of the Japanese flyspeck disease of grape, investigated the influence of various fungicides on the survival of fungi such as the rice blast pathogen, and looked extensively at the efficacy of various chemicals for systemic control of rice sheath blight. Recently, he has also focused on understanding the impact of environmental parameters on turfgrass diseases and the elucidation of practical means of turfgrass disease control.

That Dr. Kunoh is recognized internationally is evident from his invited participation in numerous international meetings.

Giovanni P. Martelli

Giovanni P. Martelli was born in Palermo, Italy. He graduated "cum laude" in agricultural sciences from the University of Bari. He joined the faculty of the University of Bari and the Institute of Plant Pathology and rose through the professional ranks to full professor in 1973. He serves as chair of plant virology. Dr. Martelli fostered the establishment and directs the Research Center of the National Research Council of Italy on Viruses and Virus Diseases of Mediterranean Crops, which is administered through the Department of Plant Protection, University of Bari.

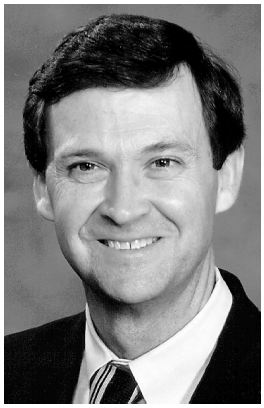
Dr. Martelli originally worked on plant protection and mycology, investigating the biology of fungal parasites of olive, grapevine, fruit and vegetable crops, and describing new pathogens and diseases. While at the University of California, Davis, in 1961-1963, he developed his lifelong interest for virology under the guidance of Dr. W. B. Hewitt. Dr. Martelli has investigated viruses and virus diseases of a great variety of Mediterranean crops including vegetables, fruit trees, and, to a lesser extent, ornamental plants and weeds. He is a recognized authority on viruses and virus diseases of grapevines. He was particularly active in the study of the virus-host relationship at the ultracellular level, and conducted exhaustive investigations on the cytopathology of virus infections, structure and nature of inclusion bodies, and intracellular site of synthesis of viral nucleic acids and proteins.

In the late 1980s, Dr. Martelli established a research unit for biotechnological applications and the development of improved laboratory reagents based on the recombinant DNA and monoclonal antibody technologies. He also initiated a clean stock program for the production of virus disease-free grapevines and fruit trees by securing support for facilities devoted to heat therapy, meristem tip culture, and micropropagation.

Dr. Martelli served as an associate editor of *Phytopathology* and of the *European Journal of Plant Pathology*. He was president of the Associazione Fitopatologica Italiana and a member of the Council of the Italian Phytopathological Society.

Dr. Martelli has demonstrated a career-long dedication to the science of plant pathology. He has been innovative in establishing laboratories and programs for pursuing basic knowledge of plant viruses, implementing sound strategies for their control, and training of young scientists from countries surrounding the Mediterranean Sea.

Gary A. Payne



Gary A. Payne was born in Highpoint, NC. He received his B.S. degree in agronomy from North Carolina State University, an M.S. and Ph.D. in plant pathology from Cornell University. After a short post-doc in Dr. J. M. Daly's laboratory at the University of Nebraska in 1978, he accepted a position as assistant professor in the Department of Plant Pathology at North Carolina State University. He was promoted to associate professor in 1985 and to professor in 1990.

The primary goal of Dr. Payne's research is to alleviate aflatoxin contamination problems in corn and other crops. His approach to this problem utilizes a diversity of strategies from studies on the epidemiology of fungal infection, study of fundamental biology and genetics of the fungus, and study of its toxin biosynthesis pathway. Dr. Payne's early work focused on the importance of preharvest infection in aflatoxin contamination in corn. He has also conducted extensive studies on nutritional and environmental factors that influence aflatoxin accumulation.

His most exciting work has focused on gaining understanding and basic information on the biosynthetic pathway for aflatoxin. He and his associates developed a genetic transformation system that has allowed them to isolate and characterize genes in the aflatoxin biosynthesis pathway and to determine their regulation. Another important aspect of Dr. Payne's research focuses on the development of molecular tools for screening corn germ plasm for resistance to *A. flavus* and to aflatoxin accumulation. These studies have led to the identification of two inhibitors, one that suppresses fungal growth and the other that interferes with aflatoxin accumulation. Dr. Payne has also been instrumental in developing *A. flavus* as a model genetic system.

In addition to Dr. Payne's outstanding research contributions, he has excelled in the classroom and as a student adviser. He is currently an active participant in two graduate training grant programs on his campus. He has also been highly effective in serving as the primary adviser for 12 graduate thesis projects as well as working with a similar number of postdocs and visiting scientists. He has served as associate editor for *Phytopathology* and currently serves on the editorial board of *Applied and Environmental Microbiology*. In addition to serving on review panels of a number of competitive grants programs, he served as the plant pathology panel manager for the USDA-NRI competitive grants program.

Steven G. Pueppke

Steven G. Pueppke was born in Fargo, ND, and reared on a grain farm near Erie. He obtained his B.Sc. degree from Michigan State University and then enrolled in the Ph.D. program in plant pathology at Cornell University, where he became the first student of Hans VanEtten and worked on the phytoalexin response of pea to fungal pathogens. After receiving his Ph.D., he spent 1 year as a research associate at the C. F. Kettering Laboratory in Yellow Springs, OH. He has held academic appointments at the University of Missouri-St. Louis, the University of Florida, and the University of Missouri-Columbia. He is currently professor of plant pathology and genetics and unit leader in plant science at the University of Missouri.

Dr. Pueppke's research utilizes the techniques of biochemistry and molecular genetics to focus on the basis of host-specificity between plants and bacteria, both pathogens and symbionts. His group was the first to identify soybean lines that lack seed lectin and to demonstrate that their ability to recognize rhizobia is not compromised. This and other discoveries resulted in a shift away from the lectin-recognition hypothesis as an explanation for specificity. During the early 1980s, his group also discovered that the binding of Agrobacterium cells to wounded host tissues could be explained in simple physico-chemical terms and that specificity of soybean infection is imposed at the stage of infection thread biogenesis.

For the past 11 years, Dr. Pueppke has held full-time administrative appointments at the University of Missouri. As chair of plant pathology, he became the youngest person (age 33) ever named chairman of plant pathology. In 1989, when the College of Agriculture was reorganized into a unit-structure, he became the plant science unit leader. Dr. Pueppke is considered an able teacher and administrator and continues to be well-liked and respected by

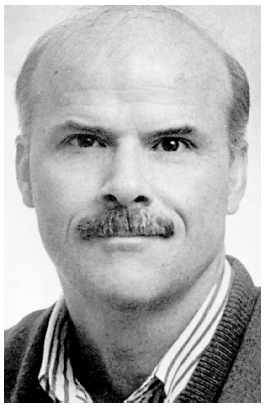
faculty, staff, and students even through the difficult budget reductions and major College reorganization. The Plant Pathology Department is known for the cooperative atmosphere he encourages.

He has maintained an active research program during this entire period. In the mid-1980s, Dr. Pueppke shifted the emphasis of his laboratory to a newly discovered symbiont of soybean, *Rhizobium fredii*. His laboratory is considered the premier location in world for study of this organism. Dr. Pueppke has been able to initiate ongoing research collaborations with colleagues in China, Spain, France, Germany, Switzerland, Mexico, and Argentina and finds this one of the most satisfying aspects of his job. Dr. Pueppke was program manager for biological stress in the USDA Grants Office in 1986-1987 and has served on numerous federal grant panels. He has been senior editor for *Phytopathology* (1988-1991) and chaired the APS Strategic Planning Committee in 1991-1992.

Excellence in Extension Award

This award was established in 1988 by the APS Council in recognition of excellence in extension plant pathology. The award is presented to those involved in formal plant pathology extension with recognized superior contributions in developing or implementing leadership roles in local, regional, or national honor societies or professional organizations.

Mark Gleason



Mark L. Gleason was born in New York, NY. He attended Carleton College in Northfield, MN, receiving his B.S. degree in biology. He then attended the University of Virginia and received his M.S. and Ph.D., both in environmental sciences. Mark's determination and thirst for knowledge are reflected in the fact that he received a second Ph.D. in 1985 from the University of Kentucky, this time in plant pathology. Since 1986, he has served as extension plant pathologist at Iowa State University, where is currently a full professor.

Dr. Gleason has established a nationally respected, statewide extension education program on the biology and management of diseases of horticultural commodities. His extension clientele include commercial growers of fruit, vegetable, and greenhouse crops, landscape care professionals, foresters, and homeowners. More than 10,000 Iowans, as well as hundreds of citizens in other states throughout the Midwest and East, are educated each year about disease biology and management through his outreach efforts, utilizing conventional and innovative communication methods.

His applied research focuses on field testing of IPM methods for production of apples, tomatoes, and strawberries, and this research underlies his extension recommendations. In 1993, Dr. Gleason obtained grant funds for and was co-author of a 175-page IPM manual (*IPM for Iowa Commercial Fruit and Vegetable Growers*).

The quarterly 'Strawberry IPM Update' newsletter is an outstanding example of Dr. Gleason's leadership in outreach to fruit growers. Dr. Gleason created the newsletter and continues to edit and distribute it to over 600 growers, educators, and researchers worldwide. He also posts the newsletter on the world wide web for universal access. Dr. Gleason is well-known for the development and release of 'Turbo Tomcast,' user-friendly software to operate the Tomcast IPM system for tomato disease control. This software is now being marketed nationwide by Gempler's Inc., a major mail-order agriculture supplier.

He annually delivers numerous oral presentations and demonstrations on IPM-related themes at field days and grower meetings and is consistently rated as the top speaker in such programs. As a result of these activities, he is recognized as the leader of interdisciplinary IPM education and research on fruit and vegetable crops at ISU and is valued not only in Iowa, but as a leader of IPM education throughout the Midwest.

Excellence in Teaching Award

This award was established in 1987 by the APS Council in recognition of excellence in teaching plant pathology. The award is presented to individuals with active responsibility for one or more courses in plant pathology and recognizes the individual's distinguished proficiency in teaching, as indicated by the development and effectiveness of courses taught.

Charles W. Mims

Charles W. Mims was born in Waukegan, IL. He received his B.S. degree in botany from McNeese State University and his Ph.D. degree in mycology/botany from the University of Texas in Austin. He then joined the faculty of the Department of Biology at Stephen F. Austin State University in Nacogdoches, TX. In August 1986, he moved to the University of Georgia, where he holds the rank of professor of plant pathology.

Dr. Mims has been actively involved in both undergraduate and graduate instruction throughout his career. At Steven Austin University, teaching loads were heavy, averaging three courses per semester. While there, Dr. Mims taught plant pathology, mycology, introductory botany, concepts of biology, biological ultrastructure, and a special mentoring course for graduate teaching assistants. Since moving to the University of Georgia, the nature of his job has changed, but his love for and commitment to teaching have not. In his current position, he teaches introductory mycology and fungi: friends and foes. Additionally, he has served as program director for an NIH-supported training Grant in cellular and molecular biology of fungi.

Dr. Mims is an exceptional educator. He has the ability to communicate effectively in the classroom and to develop exceptional teaching materials. Students praise his skills and talents as a teacher and consistently refer to the energy and fine sense of humor he brings to his classes. He creates a relaxed atmosphere in which students develop confidence, so that they can handle difficult subject matter. While he brings a superb competence to the profession, a major reason for his great success in teaching is his genuine and sincere concern for students. His enthusiasm for and knowledge of fungi, combined with his genuine concern for students, makes him as a colleague has stated, "a highly infectious teacher".

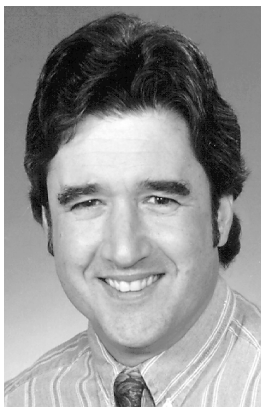
Dr. Mims' abilities as a teacher have been recognized nationally as well as locally. In 1988, the Mycological Society of America recognized his special teaching talents by presenting him with the highly prized *William H. Weston Award for Teaching Excellence*. In 1995 he received the *Josiah Meigs Award*, the highest award given for teaching at the University of Georgia.

Dr. Mims is co-author of the textbook *Introductory Mycology* published in 1979 with the late C. J. Alexopoulos. This book has influenced the lives of untold numbers of students in mycology, plant pathology, botany, and microbiology. A new edition of this book written with Dr. Meredith Blackwell was published in 1996.

Lee M. Hutchins Award

The Lee M. Hutchins Fund was established in 1979 by gifts from the estate of Dr. Lee M. Hutchins. The award, consisting of a certificate and income from the invested fund, is made for the best contribution to basic or applied research on diseases of perennial fruit plants (tree fruits, tree nuts, small fruits and grapes, including tropical fruits but excluding vegetables). The results of the research must have been published in an official journal of the Society.

Wayne F. Wilcox



Wayne Wilcox is a native of the San Joaquin Valley, CA. He was awarded the B.S. in pomology and M.S. and Ph.D. in plant pathology from the University of California-Davis. Between 1982 and 1984, Dr. Wilcox worked as assistant extension plant pathologist for the University of Kentucky at the West Kentucky Research and Education Center in Princeton. In 1984, he accepted a research and extension faculty appointment with responsibilities for diseases of tree fruit and berry crops in the Department of Plant Pathology at the New York State Agricultural Experiment Station of Cornell University in Geneva, New York.

Dr. Wilcox's principal professional interests and contributions are in the areas of etiology, epidemiology, and control of fungal diseases of fruit crops. Wayne is highly regarded worldwide for his research and considered by his colleagues as one of the best practicing fruit pathologists. He is widely known and respected for his work on *Phytophthora* diseases of raspberry, strawberry, cranberry, peach, cherry, and apple. He has also made strong research contributions in the areas of gray mold of strawberry, brown rot of cherry, and apple scab. In 1995, his primary commodity responsibility was changed to focus on diseases of grapevines.

The major theme of Dr. Wilcox's research has been contributing to knowledge of the biology of fruit crop pathogens and development of these research findings into disease management practices. Dr. Wilcox's research contributions on the biology of *Phytophthora* have allowed him to broaden the scope of his work to include biological control of *Phytophthora* with *Trichoderma* and *Gliocladium* spp., development of a sensitive and repeatable assay for enumeration of population densities of *Phytophthora cactorum* in orchard soils, and demonstration of the utility of protein electrophoresis and isozyme analysis for assisting in the identification of *Phytophthora* spp. Many of these contributions have resulted from strong collaborative efforts with graduate students and national and international colleagues.

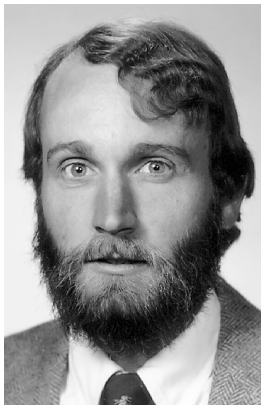
In 1989, Dr. Wilcox published a definitive paper on the epidemiology of brown rot blossom blight of sour cherry. This contribution documented the progression of inoculum development in the field and the impact of inoculum levels in determining temperature and wetness durations necessary for disease. More recent findings on the epidemiology of this disease include a description of the role of humidity during the incubation process.

In addition to Dr. Wilcox's excellence in research, he has also contributed significantly in his role as extension pathologist. Examples include contributions to the APS Compendia on Diseases of Grapes, Brambles, and Apples and Pears; Disease Scouting and Management Manual for Bramble Production; and Key to the Identification and Diagnosis of Bramble Problems. These outreach initiatives are designed to assure a viable fruit industry and enhance an overall understanding of the discipline of phytopathology.

Novartis Award

Sponsored by Novartis Crop Protection (formerly Ciba-Geigy Corporation), this award is given to individual plant pathologists who have made significant contributions to the advancement of knowledge of plant diseases or their control. The award consists of a trophy and an expense-paid trip to Basel, Switzerland.

Christopher C. Mundt



Dr. Christopher C. Mundt was born in New Jersey. He received his B.S. in plant science with honors from Cornell University. He completed an M.S. in plant pathology at Iowa State University and a Ph.D. in plant pathology at North Carolina State University. Dr. Mundt joined the Department of Botany and Plant Pathology at Oregon State University in 1985 as an assistant professor. He was promoted to associate professor in 1990. Since 1992, he has also been a visiting scientist at the International Rice Research Institute, where he spends several weeks per year doing collaborative research.

During his career, Dr. Mundt has developed an international reputation for his contributions to the understanding of genetics and host plant resistance. His research focuses on the quantitative analysis of the effects of host plant resistance on the epidemiology of plant disease and the population genetics of plant pathogens. He was recently described by a senior colleague as being the world leader in experimentation to determine the ecological and evolutionary effects of crop mixtures on plant-pathogen interactions.

He has developed a firm scientific foundation on how disease control can be achieved through cultivar mixtures. From a methodological perspective, he has shown how one can study co-evolution in a systematic and controlled manner using economically important organisms. From a basic research perspective, he has demonstrated the complicated functional relationships that exist between the pathogen and host populations. From an applied perspective, he has shown how mixtures can be best used in production agriculture for disease control.

His research is funded by a combination of grants, and his ability to attract funding from such diverse sources as the Oregon Wheat Commission, NSF, and the USDA-NRI program speaks for the excellent balance between basic and applied research that he has developed in his program.

Dr. Mundt has a reputation as an outstanding teacher and excellent mentor. He has made important contributions to the training of graduate students and post-doctoral scientists both at Oregon State University and at IRRI.

Dr. Mundt has made additional contributions to plant pathology through his service to our profession as a reviewer for manuscripts, grants, and in membership on committees for both APS and the International Society for Plant Pathology. Dr. Mundt has made an important contribution to international agriculture through his work with the APS Office of International Programs. While on that board, he authored a resolution on World Population/Hunger that was adopted by APS in 1996. His editorial in *Phytopathology News* in 1992 made a key contribution to convincing plant pathologists of the need to address world population growth to prevent hunger.

Ruth Allen Award

The Ruth Allen Memorial Fund was established in 1965 by gifts from the estate of Dr. Ruth Allen through the generosity of her heirs: Sam Emsweller, Mabel Nebel, Hally Sax, and Evangeline Yarwood. The award, consisting of a certificate and income from the invested fund, is given for outstanding contributions to the science of plant pathology.

R. James Cook **Linda S. Thomashow** **David M. Weller**

The Ruth Allen Award for research that has changed, or has the potential to change, the direction of research in any field of plant pathology is given this year to a team of three outstanding individuals for their work on the suppression of take-all disease of wheat. This work has served as a principal model system on which our current concepts of biological control of plant disease have been developed. Drs. R. James Cook, Linda Thomashow, and David Weller have worked together in the USDA-ARS Root Disease and Biological Control Research Laboratory on the Washington State University campus in Pullman, WA, to develop this system.

Because their individual efforts have been united in the study of a single system, they have developed a comprehensive view of the microbial interactions that govern disease development over time in agricultural fields. This view encompasses studies from the molecular to the community level, and each study has contributed in a meaningful way to the broad picture, rather than standing alone as an isolated fact.

Dr. Cook performed pioneering field experiments establishing that microorganisms were responsible for suppression of take-all disease of wheat, one of the most important diseases of wheat worldwide. His early studies in collaboration with Albert Rovira of CSIRO in South Australia attributed take-all decline, a phenomenon in which the severity of take-all declines with prolonged monoculture of wheat, to the presence of bacteria, particularly *Pseudomonas* spp., in take-all suppressive soil (i.e., those in which take-all has declined with monoculture). Subsequently, Drs. Cook and Weller demonstrated that fluorescent pseudomonads suppressive to the take-all fungus were present in greater numbers on roots of wheat grown in take-all suppressive soils than on roots grown in soils conducive to the disease. Strains of fluorescent pseudomonads isolated from the rhizosphere of wheat grown in suppressive soils were used as seed inoculants to mimic take-all decline.

The specific characteristics that contribute to suppression of take-all by the fluorescent pseudomonads were identified after Dr. Thomashow joined the Pullman team and initiated a genetic analysis of biological control traits exhibited by the disease-suppressive strains. Certain of the take-all suppressive strains, including *Pseudomonas fluorescens* 2-79, produced the antibiotic phenazine-l-carboxylic acid. From 2-79, Dr. Thomashow derived a series of transposon mutants that were deficient in phenazine production, cloned genes determining phenazine production, and complemented the mutants for phenazine production. When inoculated on wheat, mutants deficient in phenazine production were only 10-50% as effective as 2-79 or complemented mutants in suppressing take-all. A manuscript describing this study was the first published report demonstrating that an antibiotic contributed significantly to suppression of a soilborne fungal disease of plants. A later paper demonstrated the presence of phenazines in the rhizosphere of plants inoculated with a phenazine-producing strain of *P. fluorescens*, which provided the first definitive evidence for in situ production of an antifungal metabolite by bacteria inhabiting the root surface. More recently, the Pullman group demonstrated that isolates of the take-all fungus vary in their sensitivity to phenazine-l-carboxylic acid; this sensitivity correlates to their amenability to suppression by 2-79 and other phenazine-producing strains of *Pseudomonas* spp. This correlation provides further evidence for the importance of antibiotic production in biological control of take-all by fluorescent pseudomonads and also points to variability in the pathogen population as an important source of variation in the success of biological control.