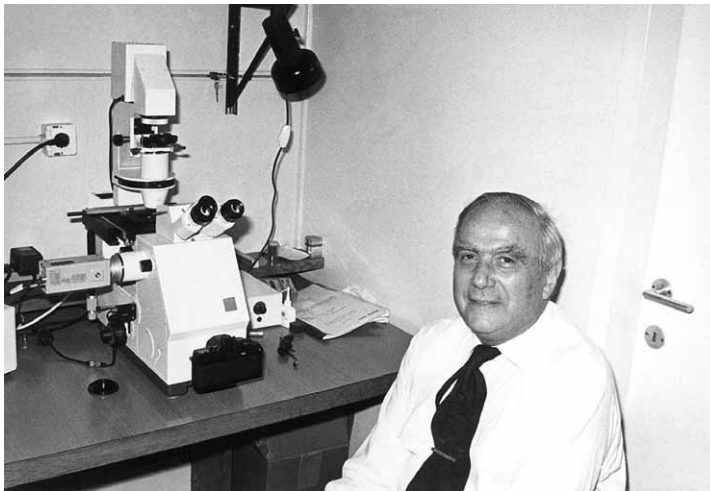


**Professor Zvonimir Devidé, on the occasion of
his 90th birthday on August 6th 2011***



Professor emeritus of Zagreb University, fellow of the Croatian Academy of Sciences and Arts, distinguished biologist and botanist Zvonimir Devidé is celebrating his 90th birthday this year. On this occasion let us remember his fruitful scientific and academic career, which is matched only by his unique life philosophy that reflects his qualities as a naturalist, humanist, and musician.

Zvonimir Devidé was born in St. Lenart, a small town in northeastern Slovenia. After completing his secondary education in Maribor, he studied natural sciences at the Universities of Zagreb and Vienna, graduating in biology, physics and chemistry in 1944 from Vienna University. Under the guidance of the distinguished Austrian Professor Lothar Geitler, Z. Devidé specialized in cytology. He returned to Yugoslavia, completed compulsory military service and in 1948 accepted an assistant position at the Botanical Institute and Garden in Zagreb. During that time he intensively studied chromosomes in ciliates and the cytology of chemoautotrophic leucothiobacteria. In 1953 he won a British Council scholarship to carry out specialized studies in the cytology department of the John Innes

* We regret to announce the death on September 10, 2011, during the printing of this issue of the journal, of Professor Zvonimir Devidé

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Horticultural Institute in Bayfordbury, England. His supervisor was the distinguished biologist and geneticist Professor Cyril Dean Darlington, who elucidated the mechanism of crossing over.

After returning to Zagreb, Zvonimir Devidé submitted his doctoral thesis on the biology of sulphurous bacteria. His thesis defense in 1954 showed him to be a respectful but passionate advocate of his convictions, whose mastery of language and persuasion made him a zealous but respectful fighter. His supervisor and head of the Institute, Professor Vale Vouk, disagreed with some statements he made in the dissertation. Although most candidates at this point would have retreated from in-depth argumentation, this particular candidate finally convinced esteemed professor Vouk, by the strength of his arguments, that his conclusions were correct. In his later work, Zvonimir Devidé would show that he not only »talked the talk« but also »walked the walk«. He continues to insist that his students and collaborators clearly express their thoughts and provide evidence to support their statements and conclusions. As a mentor to many generations of students, he continues to pay attention to writing style, insisting on the correct use of vocabulary and grammar, as well as on writing concisely. If he corrects someone's manuscript, he always reviews it thoroughly, making numerous constructive comments. Whether he finds the manuscript in need of slight or extensive revision, his corrections always lead to significant improvements in the quality of the final publication.

After earning his habilitation in 1960, Zvonimir Devidé applied for the position of assistant professor of botany at the Botanical Institute of the Faculty of Science and Mathematics in Zagreb. Thanks to his scientific achievements, his candidacy was never questioned and he was immediately promoted to the higher rank of associate professor. Ten years later he was promoted to full professor.

Professor Zvonimir Devidé introduced and developed modern approaches to inquiry-based teaching. His karyology and chromosome studies led to the creation of several modern laboratories for cytogenetics and molecular genetics at the University of Zagreb. Professor Devidé was the first to start a modern course on cell biology at the Faculty of Science in Zagreb. He organized practical exercises on light microscopy that included different cytological techniques. He emphasized the understanding of concepts and dissolved the boundaries erected by different disciplines. For example, professor Devidé based his lectures on a rigorous discussion of microscopy, giving due attention to the laws of optics, resolving power and the physical limits on resolution. He was adamant about helping students develop the essential analytical skills of noticing, recognizing and accurately recording details from microscopic specimens. In addition, since he was well aware of the dangers of artefacts, he arduously worked to help students learn to distinguish biological structures from optical effects caused by the interaction of light and specimen components.

Professor Devidé was also instrumental in introducing a modern course on plant physiology that included an excellent laboratory component. In plant physiology practicals, students worked in small groups, which provided ample opportunity for individual experimentation. Although exercises were simple and the equipment very modest, students practised the principles of the scientific method by planning, conducting, evaluating and presenting their own research.

Another legacy of Professor Devidé is the laboratory of plant cell and tissue culture, which he initiated in the late 1960s. Since then, those who worked as his assistants have be-

come experts in plant developmental biology. The team has earned an international reputation in the areas of somatic embryogenesis, *in vitro* morphogenesis, plant regeneration and cloning, as well as plant cell differentiation and tumor transformation. The interests of Professor Devidé extend beyond cytology and physiology into biochemistry. For example, he encouraged one of his assistants to study serotonin, a mysterious biogenic amine in plants that had just been discovered in animals and humans. He was also interested in the effect of the photoperiod on the induction of flowering in Lemnaceae. This work strongly motivated one of his graduate students, who dedicated his scientific career to studying the biology of duckweed.

For postgraduate students, Professor Devidé organized special courses on microscopy techniques and methods of scientific research. These courses attracted not only biologists, but students from other disciplines as well. Some of them still remember the Professor's recommendation to always be honest, fair, precise, and conscientious while conducting research. He emphasized that a researcher should never base his or her conclusions on the results of only one method. The real investigator should not be limited by his hypothesis and should always strive to discover the truth. Professor Devidé's visionary spirit led him to explore another line of research. In the 1960s, he joined a group of physicists and chemists seeking to establish interdisciplinary postgraduate studies at Zagreb University. The result of their efforts eventually evolved into an excellent school of biophysics. Unfortunately, the progressive idea of organizing interdisciplinary postgraduate studies at the university level lost support, and the various faculties of Zagreb University began to organize their own postgraduate programs.

As an expert in microscopy, Z. Devidé was invited by Ivan Supek to start a laboratory for electron microscopy at the newly founded Croatian Institute of Science »Ruđer Bošković«. He quickly assembled a small but excellent team of assistants that within a few years established an electron microscopy centre with a remarkable international reputation. Their excellent electron micrographs of plant cell ultrastructure earned the respect of the Croatian and international scientific communities. The team's focus was on elucidating the intricacies of the function and development of plastids and mitochondria. Their work created images that can still be found not only in their numerous scientific papers but also as illustrations in international textbooks on cell biology.

It would be nearly impossible to list all the professional activities and engagements that Professor Devidé has been involved in. In addition to directing the Department of Biology at the Faculty of Science and Mathematics in Zagreb and the Institute of Botany with Botanical Garden, he represented the Council of Former Yugoslav Academies on the OECD Environmental Committee, and he was a member of the Committee for the Protection and Advancement of the Environment in the former Yugoslav Parliament. In 1973 he became an extraordinary fellow, and in 1991 a full fellow, of the Yugoslav (now Croatian) Academy of Sciences and Arts. For his scientific work he was awarded the Ruđer Bošković Prize and the Order of Work with Gold Wreath, and he received a State Prize in recognition of his lifetime achievements.

In addition to his legacy in research and science education, Professor Devidé organized numerous scientific meetings on electron microscopy and plant physiology. One meeting on photomorphogenesis in 1967, in the beautiful setting of the Croatian island Hvar, marked the beginning of collaboration between Eastern and Western European scientists in

the field. Participants of this meeting still remember it as an unforgettable scientific and social event.

It would be impossible to reflect on Professor Devidé's contributions without mentioning his permanent concerns for the environment and the protection of biodiversity during a period when most in the developed world lived by the mantra of enjoying endless resources and relying on the power of an »omnipotent« human species to fix any problem. Professor Devidé is one of the visionaries who strive to convince his students and collaborators to understand the importance of a balanced relationship between humanity and its biogeochemical environment, a balance in which all the components deserve to be respected. For example, Professor Devidé once attended a departmental meeting with a gas mask on his face, to call attention to the health risks of cigarette smoking. Nowadays nobody would imagine smoking in such public meetings. Is this not proof of how visionary he was? In casual encounters, Professor Devidé would report on the status of trees in the streets of Zagreb and on the significant damage caused by air pollution. Drawing on his knowledge of plant biology, he would emphasize the importance of photosynthetic organisms, with which our survival is intricately connected. He tackled the problem of using nuclear energy at a time when its benefits appeared to surpass its risks, and he would tirelessly point out the risks and problems of storing radioactive waste.

Professor Devidé is not only a scientist, but also an excellent musician who has played first or second violin or viola da more in more than 280 concerts of the Orchestral Society of the Croatian Musical Institute. As a botanist he is also interested in how the characteristics of the wood used to make string instruments affect sound quality. He demonstrated these effects in one of his public lectures using resonance boxes he constructed for this occasion.

As further indication of his wide-ranging intellect and talent, Professor Devidé used to impress his students and colleagues with an excellent introduction to the night sky, in which he showed extensive knowledge of constellations, stars and planets. As an amateur astronomer he constructed his own telescopes and could adjust and correct optical instruments better than professional technicians.

Although Professor Devidé has been retired since 1986, he continues microscopy research of plant cell and tissue organization at home. He is still active in publishing scientific articles (WRISCHER et al. 2000; LJUBEŠIĆ et al. 2003, 2005). Recently, he has been invited to write a review in the latest edition of Strasburger's celebrated European botany book, of which Professor Devidé had translated the chapter »Physiology and Morphology« into Croatian in 1979. He has also written an excellent review of photobiology in the book »Photobiology, The Science of Life and Light« edited by L. O. Björn and another on geological eras in the book *The Concise Geologic Time Scale* (Authors: J. G. Ogg, G. Ogg, M. Gradstein).

Professor Devidé remains a director of the Institute of Ornithology at the Croatian Academy of Sciences and Arts. With support from his younger colleagues in botany and plant biology, he plans to establish a Committee of Botany at the Croatian Academy in order to increase and improve networking and collaboration among plant researchers.

More detailed information on Z. Devidé's scientific achievements was published in *Acta Botanica Croatica* on the occasion of his 65th and 80th birthdays (PAPEŠ and JELASKA 1986, REGULA 2001).

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