



Ingo Potrykus



Date of Birth 5 December 1933

Place Hirschberg (Germany)

Nomination 10 March 2005

Field Plant Sciences

Title Professor em. (ETH, Zürich)

Most important awards, prizes and academies

Honours: ISPMB International Award in Plant Molecular Biology and Biotechnology 2000; American Society of Plant Biologists (ASPB) Leadership in Science Public Service Award 2001; Crop Science of America (CSSA) 2001; CSSA President's Award 2002; European Culture Award in Science 2002; Honorary Doctor, Swedish University of Agricultural Sciences 2002; University of Freiburg, Germany 2007; "The most influential scientist" in the area of Agricultural, Industrial, and Environmental Biotechnology for the decade 1995-2005, elected by the peers of *Nature Biotechnology* 2006; Cover *TIME Magazine* July 31, 2000. *Academies:* Academia Europaea, Swiss Academy of Technical Sciences, Hungarian Academy of Sciences, Pontifical Academy of Sciences.

Summary of scientific research

Prof. Potrykus' work centred on the development and application of genetic engineering technology for and to 'food security' crops such as rice (*Oryza sativa*), wheat (*Triticum aestivum*), sorghum (*Sorghum bicolor*), and cassava (*Manihot esculenta*), in order to solve problems that are difficult to treat with traditional techniques. He also focused on the areas of disease- and pest resistance, improved food quality, improved yield, improved exploitation of natural resources, and improved bio-safety. He is the inventor and promoter of 'Golden Rice', a sustainable contribution to reduce vitamin A-malnutrition (www.goldenrice.org).

Main publications

Ca. 340 publications in refereed journals; ca. 30 international patents. Potrykus, I. (1971) Intra and interspecific fusion of protoplasts from petals of *Torrenia baillioni* and *Torrenia fournierii*. *Nature* 231, 57-8; Potrykus, I. and Durand J. (1972) Callus formation from single protoplasts of *Petunia*. *Nature* 327, 286-7; Potrykus, I. (1973) Transplantation of chloroplasts into protoplasts of *Petunia*. *Z.Pflanzenphysiol.* 70, 364-6; Potrykus, I. and Hoffmann, F. (1973). Transplantation of nuclei into protoplasts of higher plants. *Z.Pflanzenphysiol.* 69, 287-9, 1976; Potrykus, I., Harms, C.T. and Lo#rz, H. (1976) Problems in culturing cereal protoplasts. In: *Cell Genetics in Higher Plants*. D. Dudits *et al.* (eds), Akademiai kiado, Budapest, 129-40; Potrykus, I., Harms, C.T., Lo#rz, H. and Thomas, E. (1977). Callus formation from stem protoplasts of corn (*Zea mays L.*). *Mol. Gen. Genet.* 156, 347-50; Callus formation from cell culture protoplasts of corn (*Zea mays*). Brisson, N., Paszkowski, J., Penswick, J., Gronenborn, B., Potrykus, I. and Hohn, T. (1984). Expression of a bacterial gene in plants using a viral vector. *Nature* 310, 511-4; Paszkowski, J., Shillito, R.D., Saul, M.W., Mandak, V., Hohn, T., Hohn, B., Potrykus, I. (1984) Direct gene transfer to plants. *EMBO J.* 3, 2717-22; Potrykus, I., Paszkowski, J., Saul, M.W., Petruska, J., Shillito, R.D. (1985). Molecular and general genetics of a hybrid foreign gene introduced into tobacco by direct gene transfer. *Mol. Gen. Genet.* 199, 169-77; Potrykus, I., Saul, M.W., Petruska, J., Paszkowski, J. and Shillito, R.D. (1985). Direct gene transfer to cells of a graminaceous monocot. *Mol. Gen. Genet.* 199, 183-8; Shillito, R.D., Saul, M.W., Mu#ller, M., Paszkowski, J. and Potrykus, I. (1985). High efficiency direct gene transfer to plants. *Bio/Technology* 3, 1099-103; Schocher, R.J., Shillito, R.D., Saul, M.W., Paszkowski, J. and Potrykus, I. (1986). Co-transformation of unlinked foreign genes into plants by direct gene transfer. *Bio/Technology* 4, 1093-6; Paszkowski, J., Baur, M., Bogucki, A. and Potrykus, I. Gene targeting in plants. *EMBO J.* 7, 4021-6 (1988); Potrykus, I. Gene transfer to cereals: an assessment.

Bio/Technology 8, 535-42 (1990); Baur M, Potrykus I., Paszkowski J. (1990) Intermolecular homologous recombination in plants. *Mol. Cell. Biol.* 10, 492-500; Mittelsten Scheid, O., Paszkowski, J., and Potrykus, I. Reversible inactivation of transgene in *Arabidopsis thaliana*. *Mol. Gen. Genet.* 228, 104-12 (1991); Potrykus, I. Gene transfer to plants: Assessment of Published Approaches and Results. *Annu. Rev. Plant Physiol. Plant Mol. Biol.* 42, 205-25 (1991); Sautter, C., Waldner, H., Neuhaus-Url, G., Galli, A., Neuhaus, G. and Potrykus, I. Micro-Targeting: High efficiency gene transfer using a novel approach for the acceleration of microprojectiles. *Bio/Technology* 9, 1080-5 (1991); Spangenberg, G., Freydl, E., Osusky, M., Nagel, J. and Potrykus, I. Organelle transfer by microfusion of defined protoplast-cytoplasm pairs. *Theor. Appl. Genet.* 81, 477-86 (1991); Datta, S.K., Datta, K., Soltanifar, N., Donn, G. and Potrykus, I. 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