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Curriculum vitae

Date of birth: September 19, 1961

Education

1967-1971: Primary school, Carinthia
1971-1975: Grammar-school, Carinthia
1975-1980: High School, Carinthia
1980-1990: University of Graz

May 17, 1990

PhD conferred

Thesis title: Ultrastrukturelle und cytochemische Untersuchungen an der Kammergalle *Neuroterus quercusbaccarum* (L.)

November 13, 1997:

Habilitation for 'anatomy and physiology of plants'

Title: Assessment of ozone's genotoxic potential by recording chromosomal aberrations in root tip meristem cells of spruce trees [*Picea abies* (L.) Karst.]

Positions held

1989-1997 Research Assistant, Institute of Plant Physiology, University of Graz (Bund-Bundesländerkooperation, National Bank Fonds, FWF)

08/1997 – 09/1998 Assistant, Institute of Plant Physiology, University of Graz

10/1998 – present A.o. Professor, Institute of Plant Physiology, University of Graz

12/1999 – 03/2004 Deputy of the Institute of Plant Physiology, University of Graz

04/2002 – 03/2004 Head of the working group of Structural Cell Biology, Institute of Plant Physiology, University of Graz (since 04/2004 Institute of Plant Sciences)

Graz August, 2009

List of Publications (2004 – 2009)

Publications:

- Müller M., Zechmann B., Zellnig G. 2004. Ultrastructural localization of glutathione in Cucurbita pepo plants. *Protoplasma* 223: 213-219
- Kolb D., Müller M. 2004. Scanning electron microscopic (SEM) and light microscopic investigations of the trichomes of Cucurbita pepo L. subsp. pepo var. styriaca (Greb.): Comparable study between conventional scanning electron microscopy (CSEM) and environmental scanning electron microscopy (ESEM), histochemistry of secretion products and the way of the secretion process. *Annals of Botany* 94: 515-526
- Urbanek A., Zechmann B., Müller M. 2004. Plant regeneration via somatic embryogenesis in Styrian pumpkin: Cytological and biochemical investigations. *Plant Cell, Tissue and Organ Culture* 79: 329-340
- Fuchs R., Müller M. 2004. Pollination problems in Styrian pumpkin plants (Cucurbita pepo L. subsp. pepo var. styriaca GREB): can bumblebees be an alternative to honeybees? *Phyton* 44: 155-165
- Grill D., Tausz M., Wonisch A., Strnad B., Müller M., Raschi A. 2004. Effects of sulphurous gases in two CO₂ springs on total sulphur and thiols in acorns and oak seedlings. *Atmospheric Environment* 38: 3775-3780
- Glasencnik E., Ribaric-Lasnik C., Savinek K., Zalubersek M., Müller M., Batic F. 2004. Impact of air pollution on genetic material of shallot (*Allium cepa* L. var. ascalonicum) exposed at differently polluted sites in Slovenia. *Journal of Atmospheric Chemistry* 49: 363-376
- Zechmann B., Zellnig G., Müller M. 2005. Changes of the subcellular distribution of glutathione during virus-infection in Cucurbita pepo. *Plant Biology* 7: 49-57
- Müller M., Zellnig G., Urbanek A., Zechmann B. 2005. Recent developments in methods intracellularly localizing glutathione within plant tissues and cells (A Minireview). *Phyton* 45: 45-55
- Zechmann B., Müller M., Zellnig G. 2005. Effects of different freeze substitution methods on the ultrastructural preservation of ZYMV-infected Cucurbita pepo (L.) leaves. *Journal of Microscopy* 54: 393-402
- Zechmann B., Müller M., Zellnig G. 2006. Intracellular adaptations of glutathione-contents in Cucurbita pepo L. induced by GSH- and BSO-treatment. *Protoplasma* 227: 197-209
- Zechmann B., Müller M., Zellnig G. 2006. Immunochemical localization of glutathione precursors in plant cells. *Journal of Microscopy* 55: 173-181
- Urbanek-Krajnc A., Müller M., 2006. An insight into the defense mechanisms and the role of glutathione during advanced ZYMV infection in Styrian oil pumpkin. *Agricultura* 4: 27-35
- Zechmann B., Zellnig G., Urbanek-Krajnc A., Müller M. 2007. Artificial elevation of glutathione affects symptom development during ZYMV-infection. *Archives of Virology* 152: 747-762
- Urbanek Krajnc A., Zechmann B., Zellnig G., Wonisch A., Müller M. 2007. Elevated thiol levels affect virus infection in Cucurbita pepo plants regenerated via somatic embryogenesis. *Acta Phytopathologica et Entomologica Hungarica* 42: 253-271

- Zechmann B., Müller M., Zellnig G. 2007. Membrane associated qualitative differences in cell ultrastructure of chemically and high pressure cryofixed plant cells.- *Journal of Structural Biology* 158: 370-377
- Zechmann B., Zellnig G., Müller M. 2007. Virus-induced changes in the subcellular distribution of glutathione precursors in *Cucurbita pepo* (L.).- *Plant Biology* 9: 427-434
- Rieger G., Müller M., Guttenberger H., Bucar F. 2007. Amount of antioxidative compounds in herbs of *Calluna vulgaris* (L.) Hull originating from three different altitudes. *Planta Medica: natural products and medicinal plant research* 9.
- Zechmann B., Müller M., Zellnig G. 2008. Modified levels of cysteine affect glutathione metabolism in plant cells. In: Khan N.A., Singh S. and Umar S. (eds) *Sulfur Assimilation and Abiotic Stress in Plants*, Springer Verlag, Berlin, Heidelberg, pp. 193-206
- Urbanek Krajnc A., Zechmann B., Stabentheiner E., Müller M. 2008. Artificial elevation of salicylic acid affects thiol contents and symptom development in *Cucurbita pepo* during Zucchini Yellow Mosaic Virus (ZYMV) infection. *Phyton* 48 (in press)
- Zechmann B., Müller M. 2008. Effects of ZYMV-infection on the subcellular distribution of glutathione and its precursors in a highly tolerant *Cucurbita pepo* cultivar.- *Botany (former Canadian Journal of Botany)* 86: 1092-1100
- Zechmann B., Mauch F., Sticher L., Müller M. 2008. Subcellular immunochemical analysis detects the highest concentration of glutathione in mitochondria and not in plastids. *Journal of Experimental Botany* 59: 4017-4027
- Berghold H., Wagner S., Mandl M., Thaller A., Müller M., Rakowitz M., Pasteiner S., Böchzelt H. 2008. Ertrag, Gehalt und Zusammensetzung des ätherischen Öls von fünf Oregano-Zuchtstämmen (*Origanum vulgare* L.) in Abhängigkeit vom Entwicklungsstadium. *Z.f. Arznei- & Gewürzpflanzen – Journal of Medical & Spice Plants* 1: 36 - 43
- Rieger G., Müller M., Guttenberger H., Bucar F. 2008. Influence of altitudinal variation on the content of phenolic compounds in wild populations of *Calluna vulgaris*, *Sambucus nigra* and *Vaccinium myrtillus*. *Journal of Agricultural and Food Chemistry* 56: 9080-9086.
- Zechmann B., Mauch F., Zelena E., Müller M. 2009. Subcellular distribution of glutathione in plants. In: Sirko A., De Kok L.J., Haneklaus S., Hawkesford M.J., Rennenberg H., Saito K., Schnug E., Stulen I. (eds) *Sulfur Metabolism in Plants, Regulatory Aspects Significance of Sulfur in the Food Chain, Agriculture and Environment*, Backhuys Publishers, Leiden, Margraf Publishers, Weikersheim, pp. 225-229
- Kolb D., Müller M., Zellnig G., Zechmann B. 2009. Cadmium induced changes in subcellular glutathione contents within glandular trichomes of *Cucurbita pepo* L. *Protoplasma* (in press)