

- atmosphere exchanges on multiple time scales. *Journal of Geophysical Research Biogeosciences*. doi:10.1029/2009JG001016.
- Mencuccini M, Hölttä T. 2010. The significance of phloem transport for the speed with which canopy photosynthesis and belowground respiration are linked. *New Phytologist* 185: 189–203.
- Norby RJ. 2009. Introduction to a virtual special issue: probing the carbon cycle with  $^{13}\text{C}$ . *New Phytologist* 184: 1–3.
- Paterson E, Midwood AJ, Millard P. 2009. Through the eye of the needle: a review of isotope approaches to quantify microbial processes mediating soil carbon balance. *New Phytologist* 184: 19–33.
- Reichstein M, Beer C. 2008. Soil respiration across scales: the importance of a model-data integration framework for data interpretation. *Journal of Plant Nutrition and Soil Science* 171: 344–354.
- Stoy PC, Palmroth S, Oishi AC, Siqueira MBS, Juang JY, Novick KA, Ward EJ, Katul GG, Oren R. 2007. Are ecosystem carbon inputs and outputs coupled at short time scales? A case study from adjacent pine and hardwood forests using impulse-response analysis. *Plant, Cell & Environment* 30: 700–710.
- Zimmermann M, Leifeld J, Schmidt MWI, Smith P, Fuhrer J. 2007. Measured soil organic matter fractions can be related to pools in the RothC model. *European Journal of Soil Science* 58: 658–667.

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## Obituary



Image courtesy of Przemyslaw Ryszka, Jagiellonian University, Krakow, Poland

### Prof. Dr Gopi Krishna Podila, 1957–2010

The sudden death of Gopi Krishna Podila was a staggering blow to his immediate colleagues and to all those who knew this wise, amiable man with a great smile and infectious laugh. The world of plant and microbial sciences has lost one of its leading figures and a most respected champion of mycorrhizal biology and genetics. As such, he was an active member of the Advisory board to *New Phytologist* and an Editor of *Symbiosis* and *Journal of Plant Interactions*. That Gopi has been taken from us whilst at the height of a productive career is tragic, and particularly so given that he died alongside two colleagues after a shooting at the University of Alabama (Huntsville). He

is survived by his wife and two daughters, his mother and his three brothers.

Gopi was born in 1957 at Guntur, Andhra Pradesh, India. He initiated his academic career at the Nagarjuna University, India, where he obtained training in the fields of biology, plant pathology and soil microbiology at both undergraduate and postgraduate levels. Gopi followed this with a move to the USA, where he studied plant pathology at Louisiana State University, ultimately graduating with a Masters degree. He continued his graduate education at Indiana State University where he obtained a PhD in Molecular Biology in 1987 before undertaking a postdoctoral fellowship at the Ohio State University under the guidance of Dr Pappachan Kolattukudy. Gopi joined the Department of Biological Sciences at Michigan Technological University as Assistant Professor in 1990 and rose through faculty ranks to become the Professor and Adjunct Associate Professor in the School of Forestry within a short period of time. In 2002 Gopi moved to the University of Alabama in Huntsville, where he had been appointed to lead the Department of Biological Sciences both as Professor and Chair. In this dual role, Gopi was instrumental in strengthening both the teaching program in Huntsville as well as developing links with the broader biology community in the area, in particular the biotechnology industry. To top his scientific achievements, he was an excellent teacher, a trait he demonstrated with great enthusiasm while interacting with students of all levels, from high school through undergraduate to doctoral levels. Never to raise his voice, he was a patient, amicable and polite teacher and co-worker.

A brief review of his work, which led to so many insights, shows that, above all, he had the knack of seeing how new

molecular techniques could be used to decipher complex signalling mechanisms of plant–microbe interactions. A series of landmark papers published in *Science*, *Proceedings of the National Academy of Sciences (USA)* and *Nature* with several colleagues in Dr Kolattukudy's laboratory, concerned the rather puzzling signalling pathways between the phytopathogenic fungus *Fusarium solani pisi* and its host plant. These early works set the stage for a lifelong interest in how fungi interact with plants. At Michigan Technological University, his group identified several symbiosis-related genes regulated during ectomycorrhizal symbiosis development.

His laboratory was one of the first to genetically engineer mycorrhizal fungi for functional genomic studies. As an expert in symbiosis research, Gopi is perhaps now chiefly remembered for his contributions to our understanding of the mechanics of signalling that lead to ectomycorrhizal development, many of his papers having been published in *New Phytologist*. Gopi's efforts were instrumental to the success of the project leading to the sequencing of the genome of the ectomycorrhizal fungus *Laccaria bicolor*, the first, and only, mycorrhizal fungus genome to be sequenced to date. Only a few days before his tragic death, he was discussing how to use RNA-Seq data to improve the most recent annotation of this genome. There were, however, many other

areas, such as poplar genomics, in which he laid a firm foundation on which later work could thrive. As an *aficionado* of symbiotic systems, Gopi was a key member of the International Society for Symbiosis: he was a Governing Councilor of the Society for over 10 yr, and was among the most active editors of its journal *Symbiosis* since 2000. Present at all meetings of the Society, he contributed very often to the creation of cross-disciplinary interactions and to links between the different models.

To those who were fortunate enough to know him, his death leaves an empty space. He would listen attentively, with his head slightly tilted to one side and a twinkle in his eye, and then he would ask a question which would go straight to the heart of the matter. He was never harsh or malicious. His criticisms were kindly and his suggestions invariably constructive. An ardent lover of music, and a researcher to the core with an eye to catch the minutest detail, he was an excellent colleague and friend who shall be missed dearly; we will all remember his periodic emails of good wishes and seasonal greetings, and his infectious laugh, which enlightened our days no matter where we were in the world.

**Francis Martin & Marc-André Selosse**  
Interaction Editors, *New Phytologist*



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