

## KATRIEN M. DEVOS

### Contact Information:

Title: Associate Professor

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### Professional Preparation:

State University Ghent, Belgium	Biological Sciences	Ph.D., 1987-1992
State University Ghent, Belgium	Plant Biotechnology	Lic.Sc., 1986
State University Ghent, Belgium	Biology	B.Sc., 1984

### Appointments:

2003-current	Associate Professor, University of Georgia, Athens.
2001-2002	Project Leader (Band 4), John Innes Centre, Norwich, UK
1996-2001	Project Leader (BBSRC fellow; Band 5-4), John Innes Centre, Norwich, UK
1992-1996	HSO/Band 6 (Post-doc), John Innes Centre, Norwich, UK
1989-1992	SO, IPSR/Cambridge Laboratory, Cambridge/Norwich
1987-1989	Research Assistant, Dept. of Physiological Chemistry, State University Ghent, Belgium
1986-1987	Bursar IWONL, Dept. of Physiological Chemistry, State University Ghent, Belgium

### Ten most relevant publications:

Dida MM, Srinivasachary, Ramakrishnan S, Bennetzen JL, Gale MD, Devos KM (2006) The genetic map of finger millet, *Eleusine coracana*. *Theor Appl Genet* 114:321-332

Srinivasachary, Dida MM, Gale MD, Devos KM (2007) Comparative analyses reveal high levels of conserved colinearity between the finger millet and rice genomes. *Theor Appl Genet* 115:489-499

Beales J, Laurie D, Devos KM (2005) Allelic variation at the linked *API* and *PhyC* loci in hexaploid wheat is associated but not perfectly correlated with vernalization response. *Theor Appl Genet* 110:1099-1107

Devos KM (2005) Updating the 'Crop Circle'. *Curr Opin Plant Biol* 8:155-162

Devos KM, Ma J, Pontaroli AC, Pratt LH, Bennetzen JL (2005) Analysis and mapping of randomly chosen BAC clones from hexaploid bread wheat. *Proc Natl Acad Sci* 102:19243-19248

Devos KM, Beales J, Ogihara Y, Doust AN (2005) Comparative sequence analysis of the *Phytochrome C* gene and its upstream region in allohexaploid wheat reveals new data on the evolution of its three constituent genomes. *Plant Mol Biol* 58:625-641

Doust AN, Devos KM, Gadberry MD, Gale MD, Kellogg EA (2004) Genetic control of branching in foxtail millet. *Proc Natl Acad Sci* 101:9045-9050

Qi X, Pittaway TS, Lindup S, Liu H, Waterman E, Padi FK, Hash CT, Zhu J, Gale MD, Devos KM (2004) An integrated genetic map and a new set of simple sequence repeat markers for pearl millet, *Pennisetum glaucum*. *Theor Appl Genet* 109:1485-1493

Yadav RS, Hash CT, Bidinger FR, Devos KM, Howarth CJ (2004) Genomic regions associated with grain yield and aspects of post-flowering drought tolerance in pearl millet across stress environments and tester background. *Euphytica* 136:265-277

Devos KM, Gale MD (2000) Genome relationships: The grass model in current research. *Plant Cell* 12:637-646

### **Synergistic Activities**

1. My lab has worked extensively on the elucidation of genome relationships between different grass species. This research was initiated by myself and Drs. Mike Gale and Graham Moore at the John Innes Centre, and has led to many international collaborations.
2. I served on the 1999 EU Life Sciences Panel, the 2002 NSF Plant Genome Panel and the 2005 USDA Functional Genomics Panel.
4. I am a co-editor of the journal 'The Plant Genome' and 'BioEnergy Research'
5. I administer travel funds of \$10,000, applied for on a yearly basis to the Rockefeller Foundation, to provide travel awards to developing country scientists to attend the yearly Plant and Animal Genome Meeting.

### **Selected Recent Presentations**

- 13<sup>th</sup> – 17<sup>th</sup> January 2007: PAGXV, San Diego; International Triticeae Mapping Initiative; Presentation: 'Understanding the organization and evolution of the wheat genome.'
- 18<sup>th</sup> – 20<sup>th</sup> August 2007: The 8<sup>th</sup> Conference on Plant Genomics in China, Shanghai, China; Plenary Talk: 'Organization and evolution of the wheat genome'
- 19<sup>th</sup> September 2007: New approaches to plant breeding of orphan crops – Conference, Bern, Switzerland; Invited presentation: 'Genomics of orphan crops'.
- 1<sup>st</sup> December 2007: National wheat genomics conference, Kansas City; Invited presentation: 'Wheat – A challenging genome to study'.

### **Research Interests**

My lab works on the genetics/genomics of grasses in particular wheat, millets and switchgrass. We also investigate and extensively exploit comparative information across all grass species, especially those that have fully sequenced genomes such as rice, sorghum and maize. In wheat, an important cereal worldwide for which good genomic tools are available, my research focuses on understanding genome organization and evolution so that strategies can be developed that will allow us to sequence and identify all genes in the 17,000 Mb wheat genome. In the millets and switchgrass, species that have not yet received much research attention, the focus is on tool development, including molecular markers and genetic maps, and the application of these tools in quantitative trait loci (QTL), biodiversity and association analyses.