

# GABRÉ KEMP

## ADDRESS:

Department of Biochemical, Microbial and Food Biotechnology  
University of the Free State  
Room A52  
Tel: +27 (0)51 4017464

## POSITION:

Senior Researcher

## RESEARCH AREAS OF INTEREST:

Proteomics and small molecule residue analysis by LC/MS/MS

## EDUCATION:

*2001 - Ph.D in Genetics (UFS)*

Title of thesis: Isolation and characterization of a possible polygalacturonase-inhibiting protein (PGIP) from wheat.

*Supervisors: Prof. Z.A. Pretorius  
Prof. A.J. van der Westhuizen  
Dr. C.W. Bergmann - Complex  
Carbohydrate Research Center (CCRC),  
University of Georgia, USA*

## PROFESSIONAL EXPERIENCE:

### **September 2009 – current**

*Researcher:* Facility for Genomics and Proteomics, Microbial, Biochemical and Food Biotechnology, University of the Free State.

### **January 2007 – September 2009**

*Senior Professional Officer:* Department of Chemistry, University of the Free State.

### **January 2005 – 2006**

*Post-doctoral Associate:* Department of Plant Sciences, University of the Free State.

### **July 2002 – December 2004**

*Post-doctoral Associate:* Complex Carbohydrate Research Center, University of Georgia, USA.

## MANUSCRIPT AND ABSTRACT PUBLICATIONS:

**Venter P.B., Senekal N.D., Kemp G., Amra-Jordaan, M., Khan, P., Bonnet S.L. and Van der Westhuizen J.H. 2012.** Analysis of commercial proanthocyanidins. Part 3: The chemical composition of wattle (*Acacia mearnsii*) bark extract. *Phytochemistry*. 83: 153-167

**Gutierrez-Sanchez G., King D., Kemp G., and Bergmann C. 2012.** SPR and differential proteolysis/MS provide further insight into the interaction between PGIP2 and EPGs. *Fungal Biology*. 116: 737-746.

**Ngubo M., Kemp G. and Patterton H.G. 2011.** Nano-electrospray tandem mass spectrometric analysis of the acetylation state of histones H3 and H4 in stationary phase in *Saccharomyces cerevisiae*. *BMC Biochemistry*. 12:34

**Ells R., Kock J.L.F., Albertyn J., Kemp G. and Pohl C.H. 2011.** Effect of inhibitors of arachidonic acid metabolism on prostaglandin E2 production by *Candida albicans* and *Candida dubliniensis* biofilms. *Med Microbiol Immunol*. 200 : 23-28

**Joubert D.A., Kara I., Wagemakers L., Bergmann C., Kemp G., Vivier M.A. and Van Kan J.A.L. 2007** A polygalacturonase inhibiting protein from grapevine reduces the symptoms of the endopolygalacturonase BcPG2 from *Botrytis cinerea* in *Nicotiana benthamiana* leaves without any evidence for in vitro interaction. *Molecular Plant-Microbe Interactions*. 20(4) : 392-402

**Joubert D.A., Slaughter A.R., Becker J. vW., Kemp G., Bergmann C., Krooshof G.H., Benen J. , Pretorius I.S. and Vivier M.A. 2006** The grapevine polygalacturonase-inhibiting protein (VvPGIP1) reduces *Botrytis cinerea* susceptibility in transgenic tobacco and differentially inhibits fungal polygalacturonases. *Transgenic Research*. 15 : 687-702

**Kemp G., Stanton L., Bergmann C.W., Clay R.P., Albersheim P. and Darvill A. 2004** Polygalacturonase-inhibiting Proteins can Function as Activators of Polygalacturonase. *Molecular Plant-Microbe Interactions*. 17(8): 888-894.

**Kemp G., Bergmann C.W., Clay R., Van der Westhuizen A.J., and Pretorius Z.A. 2003** Isolation of a Polygalacturonase-Inhibiting Protein (PGIP) from Wheat. *Molecular Plant-Microbe Interactions* 16 (11): 955-961.

**Kemp G., van der Westhuizen A.J. and Pretorius Z.A. 2001** Polygalacturonase inhibiting protein in wheat. *South African Journal of Science* 97: 1-2 (ABSTRACT)

**Bergmann C.W., Stanton L., King D., Clay R.P., Kemp G., Orlando R., Darvill A. and Albersheim P. 2001** Recent observations on the specificity and structural conformation of the polygalacturonase-polygalacturonase-inhibiting protein system. *Proceedings of the 2001 Pectins and Pectinases Conference, Rotterdam*. Kluwer Academic Publishers, Dordrecht, Netherlands.

**Kemp G., Botha A-M., Klopper F.J. and Pretorius Z.A.** 1999 Disease development and  $\beta$ -1,3-glucanase expression following leaf rust infection in resistant and susceptible near-isogenic wheat seedlings. *Physiological and Molecular Plant Pathology* 55(1), 45-52.

**Kemp G., Botha A-M., Pretorius Z.A. and Kloppers F.J.** 1996 Effect of chitinase and  $\beta$ -1,3-glucanase on the germination of *Puccinia recondita* f. sp. *tritici* urediospores. In: Proceedings of the 9th European and Mediterranean Cereal Rusts & Powdery Mildews Conference, Kema GHJ, Niks RJ and Daamen RA (eds.), pp64. (ABSTRACT)