

**PS 5.10****Characterization and evaluation of antifungal activity in vitro of *Aloe vera* fractions against postharvest fungi**

**Maria Liliana Flores López<sup>1</sup>, Miguel Cerqueira<sup>1</sup>, Aloia Romani Pérez<sup>1</sup>, Diana Jasso de Rodriguez<sup>2</sup>, António Vicente<sup>1</sup>**

<sup>1</sup>IBB – Institute for Biotechnology and Bioengineering, Centre of Biological Engineering, Universidad do Minho, Campus de Gualtar, Portugal; <sup>2</sup>Universidad Autonoma Agraria Antonio Narro, Saltillo, Coahuila, México  
[avicente@deb.uminho.pt](mailto:avicente@deb.uminho.pt)

*Aloe vera* leaves can be separated in a liquid fraction (exudate) and a mucilaginous pulp (gel). Recently, the antifungal activity of their components has been reported. The common technique for gel extraction from *A. vera* leaves are the traditional manual (in this case the liquid fraction is not separated) and a mechanical methods. Moreover, as a result of its processing the bagasse is obtained. The aim of this work was to recover and characterize the fractions of *A. vera* and to identify the fraction with highest antifungal activity against phytopathogen postharvest fungi (*Botrytis cinerea* and *Penicillium spp.*). A simple and inexpensive extraction method was used to obtain *A. vera* fractions from 50 kg leaves by means of a designed laboratory roll processor. The yields of extraction were as follows: 15.76% ± 4.0, 51.20% ± 5.20, and 33.02% ± 5.0 for gel, liquid fraction and bagasse, respectively. The three fractions were physico-chemically characterized (protein, monosaccharide composition, ashes, lipids) and resulted to be mainly composed by glucose and mannose in all the cases. Results showed the effectiveness of *A. vera* fractions in the growth control of phytopathogen postharvest fungi, with visible reduction of fungal growth.