Metabolites Produced by the Phytopathogenic Fungus *Rhizoctonia solani*: Isolation, Chemical Structure Determination, Syntheses and Bioactivity M. Soledade C. Pedras*, Yang Yu, Jun Liu, and Yudelsy A. Tandron-Moya Department of Chemistry, University of Saskatchewan, 110 Science Place, Saskatoon SK S7N 5C9, Canada. Fax: (1-306) 966-4730. E-mail: s.pedras@usask.ca

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The isolation, structure determination, syntheses and biological activity of N_b -acetyltryptamine and three proline containing dioxopiperazines, *cyclo*(*S*-Pro-*S*-Leu) (**2**), *cyclo*(*S*-Pro-*S*-Ile) (**3**), and *cyclo*(*S*-Pro-*S*-Val) (**4**), from cultures of *Rhizoctonia solani* Kuhn are reported here for the first time. Despite the small amounts isolated, the absolute stereochemistry of these naturally occurring dioxopiperazines was established by ¹H NMR using for the first time the chiral solvating agent (*R*)-(-)-2,2,2-trifluoro-1-(9-anthryl)ethanol.

Key words: Dioxopiperazines, Rhizoctonia solani