

*Research Article* (Dette er en oppsummering, hele artikkelen er refert over).

## Effect of **Agaricus blazei Murill** on the Pulmonary Tissue of Animals with Streptozotocin-Induced **Diabetes**

Fábio Cangeri Di Naso,<sup>1</sup> Rodrigo Noronha de Mello,<sup>2</sup> Sílvia Bona,<sup>1</sup> Alexandre Simões Dias,<sup>1, 3</sup> Marilene Porowski,<sup>1, 4</sup> Alexandre de Barros Falcão Ferraz,<sup>2</sup> Marc Franco Richter,<sup>5</sup> and Norma Possa Marroni,<sup>1, 2</sup>

<sup>1</sup>Laboratory of Experimental Hepatology and Physiology, Porto Alegre Clinical Hospital, Federal University of Rio Grande do Sul, 90035-903 Porto Alegre, RS, Brazil

<sup>2</sup>Universidade Luterana do Brasil, 92425-900 Canoas, RS, Brazil

<sup>3</sup>Centro Universitário Metodista IPA, 90240-111 Porto Alegre, RS, Brazil

<sup>4</sup>Universidade Federal de Ciências da Saúde de Porto Alegre, 90050-170 Porto Alegre, RS, Brazil

<sup>5</sup>Universidade Estadual do Rio Grande do Sul, 90010-191 Porto Alegre, RS, Brazil

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The present study was designed to evaluate the oxidative stress as well as the therapeutic effect of *Agaricus blazei* Muril (*A. Blazei*) in rats with streptozotocin-induced diabetes. We used 25 Wistar rats, and DM was induced by injecting streptozotocin (70mg/Kg i.p.). *Agaricus blazei* Muril was administered daily starting 40 days after disease onset. *A. Blazei* was tested as an aqueous extract for its phytochemical composition, and its antioxidant activity in vitro was also evaluated. Lipoperoxidation (LPO), and superoxide dismutase (SOD), catalase, and glutathione peroxidase activities were measured in the pulmonary tissue, as well as the presence of inducible nitric oxide synthase (iNOS), through immunohistochemistry. An anatomopathologic study was also performed. Phytochemical screening of *A. Blazei* detected the presence of alkaloids and saponins. The extract exhibited a significant antioxidant activity in the DPPH-scavenging and the hipoxanthine/xanthine oxidase assays. Pulmonary LPO increased in diabetic animals ( $0.43 \pm 0.09$ ;  $P < .001$ ) as compared to the control group ( $0.18 \pm 0.02$ ), followed by a reduction in the *A. Blazei*-treated group ( $0.33 \pm 0.04$ ;  $P < .05$ ). iNOS was found increased in the lung in diabetic rats and reduced in the *A. Blazei*-treated group. The pulmonary tissue in diabetic rats showed oxidative alterations related to the streptozotocin treatment. **The *A. Blazei* treatment effectively reduced the oxidative stress and contributed to tissue recovery.**