Nutritional Value of Protein from Vegetative Mycelia of Edible Mushroom *Pleurotus ostreatus*

Julián A. Parada[1]; Elena Urdaneta[2]; Florencio Marzo[2]; Lucia Ramírez[2]; Antonio G. Pisabarro[2]

[1]*Department of Agrarian Production and Department of Environmental Science. Public University of Navarre E-3006. Pamplona-Spain*
julianparada@yahoo.com

Protein represents an essential part of our daily nutrient intake; wich has to cover our requirements for growth, maintenance and metabolic activity of cells and organs during all stages of life.

The use of fungi as food is not new. Higher fungi (mushrooms), have been used as food flavouring for centuries. Early man picked wild mushrooms from natural habitats, largely as a supplement to an otherwise monotonous diet, but probably did no use mushrooms as a primary source of protein. *Pleurotus ostreatus* (oyster mushroom) is an edible basidiomycete and it a wood destroying saprophytic fungus. This fungus is object of increasing biotechnological interest due to its chemicals related to lignin degradation products and become it produces secondary metabolites with pharmaceutical applications and some proteins of industrial potential.

The present work was designed to study the effects of supplementation a control diet with *P. ostreatus* mycelium for evaluation a nutritional value of mycoprotein and possible cholesterol lowering.

Forty-four male Wistar rats were divided into six groups that were fed during thirty-one days with diets supplemented with 2,5% and 5% *P. ostreatus* mycelia and/or 1% cholesterol (Control; C + M 2,5%; C + M 5%; C + Ch 1%; C + M 2,5% + 1% Ch; C + M 5% + 1% Ch) respectively. All the diets were isoenergetic and isonitrogenous and meet the requirements of growing animals (AIN-93). Body weight, food and water intake, faecal and urine excreted were registered daily, after decapitation fresh weight of main organs was registered and parameter haematics were analysed. An inter laboratory study involving all nutritional parameters were carried out.

The nutritional analysis of mycelia and mushrooms showed higher nitrogen content expressed as protein percentage in the vegetative mycelia (23-30%) than in oyster mushrooms (20%). This percentage was determined us-

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ing Kjeldhal method and amino acid profiles using High Performance Liquid Chromatography (HPLC). No differences in food intake, final body weight, weight gain, and daily weight gain were founded among the six groups. Cholesterol reduction in animals feed with Ch 1% + M2, 5% and Ch 1% + M5% was 26% and 30% ($P < 0.050$) respectively, compared to control group Ch 1%. Also Cholesterol LDL was diminished in same groups 32% ($P < 0.050$) and 42% ($P < 0.010$), respectively.