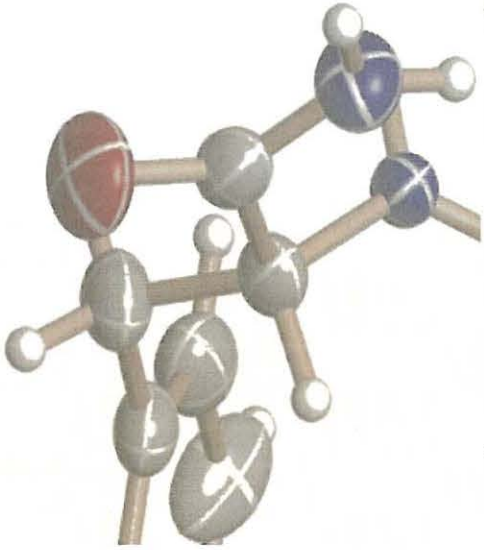

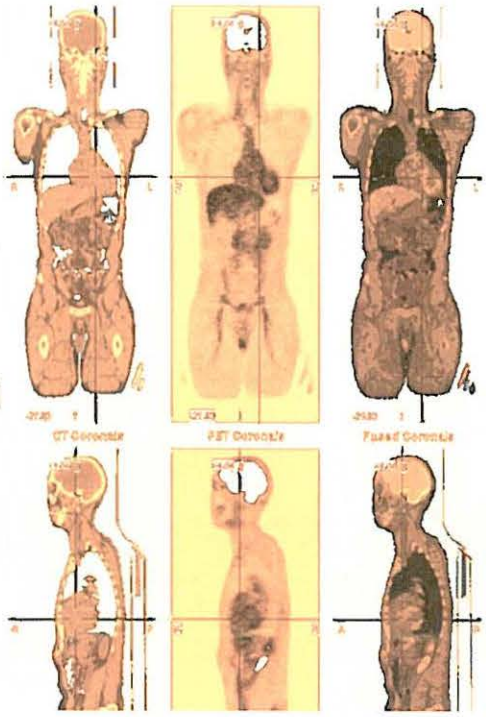

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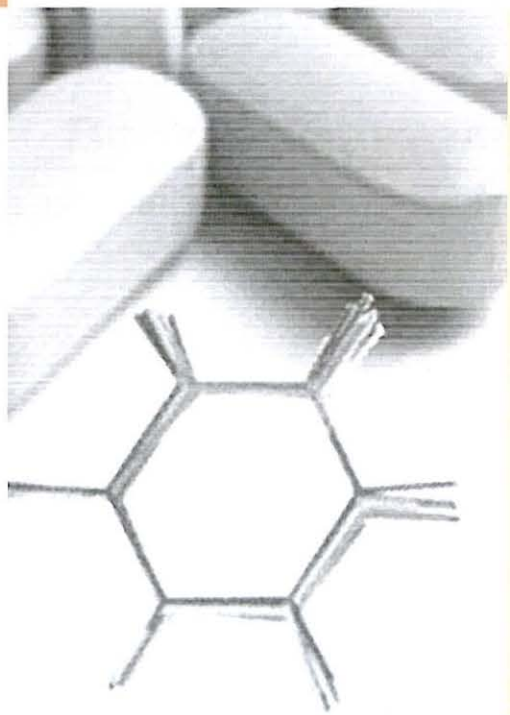

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Bioactive compounds in *Gyromitra esculenta* and *Helvella lacunosa* wild mushrooms from Northeast of Portugal

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The search for foods that can improve health or reduce the risk of disease, has been steadily gaining interest. Mushrooms could be examples of these foods because they are appreciated worldwide for their nutritional properties [1] and bioactive compounds [2]. The chemical characterization of wild species is very important, in order to promote their consumption and conserve their habitats. This feature might place mushrooms in the pharma–nutrition interface. The present study describes the bioactive compounds in two wild mushrooms (*Gyromitra esculenta* and *Helvella lacunosa* edible after proper pre-boiling and cooking) collected in Bragança (Northeast Portugal). The individual profiles of organic acids and phenolic compounds were obtained by high performance liquid chromatography coupled to photodiode array detection (HPLC-PDA); tocopherols and free sugars were characterized by HPLC-fluorescence and HPLC-RI (refraction index), respectively, and the fatty acids profile was obtained by gas chromatography coupled to flame ionization detection (GC-FID). *Gyromitra esculenta* was the species with the highest levels of free sugars (6.13 g/100g dw), tocopherols (112.83 μg/100g dw) and phenolic compounds (3.74 mg/100g dw). The major fatty acid found in this specie was linoleic acid (prevalence of PUFA), while *Helvella lacunosa* presented the highest level of MUFA (prevalence of oleic acid). The *Helvella lacunosa* sample revealed the highest levels of total organic acids (6.93g/100 g dw). Overall, wild mushrooms can be sources of bioactive compounds to be included in nutritional balanced diets.

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