BIOLIVAL

BIOLOGIE INTEGRATIVE & VALORISATION

ATVAB Association Tunisienne pour la Valorisation des Bioressources

PROGRAMME SCIENTIFIQUE

8es Journées Scientifiques Internationales sur la Valorisation des Bioressources

05 ~ 07 mai 2017, Hôtel SENTIDO Rosa Beach****

Monastir, TUNISIE.

ISBM Institut Supérieur de Biotechnologie de Monastir

ctaa المركز الفني للصناعات الغذائية Centre Technique de l'Agro-Alimentaire

UNIVERSITE DE MONASTIR

Springer

infoPoint

Spiruline Bio algues tunisie

AGENCE UNIVERSITAIRE DE LA FRANCOPHONIE

Novalys LABORATOIRE D'ANALYSE AGROALIMENTAIRE

The European Society for Marine Biotechnology

INSTITUT FRANÇAIS TUNISIE

Abed ARABI , Aicha LATTAB , Farida TALEB , Mounira OUAR KORICHI , Rachid DJIBAOUI
Résumé

P 250 302

Variation of essential oil composition, antioxidant and anticholinesterase activities between natural populations of *Hertia cheirifolia* L. (Asteraceae).

Najwa RAHALI , Mohamed BOUSSAID , Chokri MESSAOUD Résumé

P 251 310

Évaluation de la consommation des antibiotiques en milieu hospitalier dans le service de pédiatrie.

Soufiene BELKHATIR , Mohamed Amine LAOUAR Résumé

P 252 311

Contribution à l'étude de l'effet préventif de la vitamine c contre la neurotoxicité induite par le tebuconazole chez le rat de la souche Wistar.

Salma BERROUAGUE , Meriem ROUAG , Amel BOUMENDJEL , Mahfoud MESSARAH Résumé

P 253 313

Impact de la supplémentation de la cystéine sur la toxicité induite par le nitrate de sodium chez le rat de la souche Wistar.

Meriem ROUAG , Salma BERROUAGUE , Amel BOUMENDJEL , Mahfoud MESSARAH Résumé

P 254 316

Free radical scavenging and in vitro anticancer potential of tunisian rosemary extracts.

Soumaya BEN JANNET , Nolwenn HYMERY , Mokhtar LACHAAL , Riadh KSOURI Résumé

P 255 319

Bioactive properties and compounds in fruiting bodies and mycelia of *Pleurotus eryngii* (DC.) Quél and *Suillus bellinii* (Inzenga) Watling.

Fedia SOUILEM , Ângela FERNANDES , Ricardo C. CALHELHA , João C.M. BARREIRA , Lillian BARROS , Fathia SKHIRI , Anabela MARTINS , Isabel C.F.R. FERREIRA Résumé

P 256 320

Synthèse de nouveaux dérivés 1,2,3-triazoles 1,4-disubstitués de tyrosol et l'évaluation de leur activité cytotoxique.

Imen AISSA , Zaineb ABDELKAFI-KOUBAA , Karim CHOUAIB , Hichem BEN JANNET Résumé

P 257 321

Effects of maternal cadmium and zinc exposure during gestation and lactation periods on brain development in male rat offspring.

Safa BEN MIMOUNA , Sana BOUGHAMMOURA , Marouane CHEMEK , Mouhamed BANNI , Imed MESSAOUDI Résumé

Bioactive properties and compounds in fruiting bodies and mycelia of *Pleurotus eryngii* (DC.) Quél and *Suillus bellinii* (Inzenga) Watling.

Fedia SOUILEM[(1)], Ângela FERNANDES[(2)], Ricardo C. CALHELHA[(2)], João C.M. BARREIRA[(2)], Lillian BARROS[(2)], Fathia SKHIRI[(1)], Anabela MARTINS[(2)], Isabel C.F.R. FERREIRA[(2)]

[(1)] Research laboratory LR14ES06 Bioresources: Integrative Biology and Valorization (Biolival), University of Monastir, Avenue Tahar Haded - B.P. n° 74 - 5000 Monastir, Tunisia.
[(2)] Mountain Research Centre (CIMO), ESA, Polytechnic Institute of Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal.

souilemfedia@gmail.com

Mushrooms have been used as sources of natural compounds for pharmaceutical applications. Not just fruiting bodies, but also their mycelium have been recognized as important sources of bioactive molecules.

Pleurotus eryngii (DC.) Quél, in particular, is widely consumed due to its nutritional value and bioactive properties. On the other hand, *Suillus bellinii* (Inzenga) Watling is known as an ectomycorrhizal symbiont whose bioactivity has been scarcely studied.

In the present work, each one of this species (fruiting body, mycelium and culture media) was characterized in terms of well-recognized bioactive compounds namely, phenolic acids and ergosterol, by high performance liquid chromatography coupled to a photodiode array or an ultraviolet detector, respectively. The antioxidant activity of the samples was evaluated by four different assays: free radical scavenging activity, reducing power, b-carotene bleaching inhibition and thiobarbituric acid reactive substances (TBARS) assay. The cytotoxic activity, was evaluated either in human tumor cell lines (MCF-7- breast adenocarcinoma, NCI-H460- non-small cell lung cancer, HeLa- cervical carcinoma and HepG2- hepatocellular carcinoma), as also in a non-tumor porcine liver cells established in-house (PLP2).

S. bellinii fruiting body and its mycelium showed higher contents of ergosterol and phenolic acids, and higher antioxidant activity than *P. eryngii* counterparts, Nevertheless, *P. eryngii* mycelium showed a cytotoxicity similar (sometimes superior) to its fruiting body, in comparison with *S. bellinii* mycelium that presented a lower anti-proliferative activity than its fruiting body.

Overall, *P. eryngii* and *S. bellinii*, as well as their mycelia and culture media can be used as sources of bioactive compounds or as ingredients to be included in applications with antioxidant and cytotoxic properties.

Keywords: *Pleurotus eryngii* (DC.) Quél; *Suillus bellinii* (Inzenga) Watling; Ergosterol; Phenolic acids; Cytotoxic activity.

Retour Sommaire