BIOLIVAL

BIOLOGIE
INTEGRATIVE & VALORISATION

L.R. Bioressources, Biologie Intégrative & Valorisation
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ATVAB
Association Tunisienne pour la Valorisation des Bioressources

L'Association Tunisienne pour la Valorisation des Bioressources
ATVAB

Le programme scientifique

DES 5ES JOURNÉES SCIENTIFIQUES INTERNATIONALES SUR LA VALORISATION DES BIORESSOURCES

Les 02,03 et 04 mai 2014

à l'hôtel FRAMISSIMA Regency****

Cap Marina MONASTIR - TUNISIE

Spiruline Bio algues tunisie

AGENCE UNIVERSITAIRE DE LA FRANCOPHONIE

Istituto Italiano di Cultura Tunisi

INSTITUT FRANÇAIS TUNISIE

SOUSSE Poly technique

GROUPE ETOILE FORMATION

Liste des conférenciers aux Cinquièmes Journées

CONFÉRENCE I : Pr Mohamed HAMMAMI

Lab. Nutrition - Aliments Fonctionnels et Santé Vasculaire, Faculté de Médecine, Monastir, TUNISIE

Apport de la valorisation des co-et sous-produits dans le secteur oléicole

CONFÉRENCE II Pr. Isabel FERREIRA

Laboratory of Applied Chemistry and Biochemistry (LQBA), School of Agriculture of the Polytechnic Institute of Bragança, PORTUGAL.

Bioactivity of mushrooms: antioxidant, antitumor and antimicrobial properties.

CONFÉRENCE III : Professeur. GRIZEAU Dominique

LUNAM Université, CNRS, GEPEA, Université de Nantes, UMR 6144, Saint-Nazaire, France

Caractérisation de cultures continues de cyanobactéries en mode diazotrophique

CONFÉRENCE IV : Professeur David MAZURAIS

IFREMER, Lab. Adaptation Reproduction et Nutrition des poissons, Brest FRANCE.

Sensibilité et acclimatation des larves de poissons marins à leur environnement

CONFÉRENCE V : Professeur Nicolas RABET

UMR 7208 BOREA MNHN, Paris FRANCE

Les grands branchiopodes du Maghreb : biodiversité et ressources biologiques

CONFÉRENCE VI : Professeur Laura GASCO

Department of Agricultural, Forest and Food Sciences, University of Torino, ITALY

Effect of the supplementation of agro-industrial by-product on rabbit nutrition

SESSION III BIOTECHNOLOGIE VEGETALE & ENVIRONNEMENT

Modérateurs **Pr Zohra MARZOUK & Pr. Isabel FERREIRA**

14H30 15H15		**CONFÉRENCE II Pr. Isabel FERREIRA** Laboratory of Applied Chemistry and Biochemistry (LQBA), School of Agriculture of the Polytechnic Institute of Bragança, PORTUGAL. **"Bioactivity of mushrooms: antioxidant, antitumor and antimicrobial properties".**
15H15 15H30	C.O.11	Bioactive potential of *Rosa micrantha* Borrer ex Sm. and *Castanea sativa* Mill. flowers as functional food ingredients: antioxidant and antifungal activity **BARROS** Lillian & FERREIRA Isabel C.F.R.
15H30 15H45	C.O.12	Valorisation des plantes aromatiques et médicinales dans l'activité anticorrosion. Cas : Inhibition de corrosion du cuivre dans une Solution d'acide nitrique par l'Huile Essentielle d'*Artemisia* **HOUBAIRI Sara**, ESSAHLI Mohamed et LAMIRI Abdeslam
15H45 16H00	C.O.13	Phytochemical constituents and antioxidant activity of stems and leaves of Purslane (*Portulaca oleracea* L.) growing in Tunisia **DABBOU FEKIH Samia**, DABBOU Sihem, GUIDO Flamini, CHAHDOURA Hassiba et HELAL Ahmed Noureddine
16H00 16H15	C.O.14	Valorisation des plantes aromatiques et médicinales dans l'agriculture biologique : étude de l'activité insecticide d'une huile essentielle sur les ravageurs des céréales **EL-MIZIANI Inaam,** LHALOUI Saadia et LAMIRI Abdeslam
16H15 16H30	C.O.15	Étude de l'effet de la résistance génétique à la cécidomyie : *Mayetiola destructor* Say., sur le comportement agronomique d'une population de blé dur au Maroc **OURINICHE Siham,** NSARELLAH Naserlhaq, LHALOUI Saadia et HILALI Abderraouf
16H30 17H30		PAUSE CAFÉ et Session *e-POSTER* (II) du Poster N° 37 au Poster N° 72

Bioactive potential of *Rosa micrantha* Borrer ex Sm. and *Castanea sativa* Mill. flowers as functional food ingredients: antioxidant and antifungal activity

Lillian Barros*, Isabel C.F.R. Ferreira

Mountain Research Center (CIMO), ESA, Polytechnic Institute of Bragança, Campus de Santa Apolónia, 1172, 5301-855 Bragança, Portugal

*lillian@ipb.pt

Natural products represent a rich source of biologically active compounds and are an example of molecular diversity, with recognized potential in drug discovery and development. Particularly, the plant kingdom offers a wide range of natural antioxidants, recognized by having remarkable medicinal properties [1,2]. These beneficial effects could be related to the high content in phenolic compounds, known for being strong scavengers of free radicals, which have key roles in ageing and various diseases, such as coronary heart disease, cancer or neurodegenerative diseases [3].

Phenolic compounds of *Castanea sativa* Mill. and *Rosa micrantha* Borrer ex Sm. flowers from Northeastern Portugal were characterized by our research group using HPLC-DAD-ESI/MS. Furthermore, it was performed a screening of their antifungal potential against *Candida* species (*C. albicans*, *C. glabrata*, *C. parapsilosis* and *C. tropicalis*) and the antioxidant activity was accessed by four *in vitro* assays: scavenging effects on DPPH (2,2-diphenyl-1-picrylhydrazyl) radicals, reducing power (ferricyanide Prussian blue assay), inhibition of β-carotene bleaching and inhibition of lipid peroxidation in brain cell homogenates by TBARS (thiobarbituric acid reactive substances) assay. The detailed results and all the authors that contributed to the studies are available in references [1-3].

Hydrolysable tannins (e.g. tri and digalloyl HHDP glucose) were the main group of phenolic compounds in *C. sativa*, while flavonoids (e.g. (+)-catechin and procyanidin dimers and trimers) were the most abundant group in *R. micrantha*. Thus, the stronger effect showed by this latter against all the Candida species and, particularly its fungicide effects in *C. glabrata*, might be related to the mentioned flavonoids that were inexistence in *C. sativa* sample. Otherwise, *C. sativa* showed the highest antioxidant activity (EC_{50} values between 30-110 μg/mL of extract).

Therefore, these flowers may be incorporated as functional ingredients in food matrices to promote health benefits, but also to increase the products shelf life, through the observed antioxidant and antifungal properties.

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References:

[1] Guimarães, R., Barros, L., Carvalho, A.M., Ferreira. I.C.F.R. J. Agric. Food Chem., 2010, 58, 6277-6284.

[2] Barros, L., Oliveira, S., Carvalho, A.M., Ferreira. I.C.F.R. Ind. Crops Prod., 2010, 32, 572-579.

[3] Barros, L., Alves, C.T., Dueñas, M., Silva, S., Oliveira, R., Carvalho, A.M., Henriques, M., Santos-Buelga, C., Ferreira, I.C.F.R. Ind Crops Prod., 2013, 44, 104-110.

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Cinquièmes Journées Scientifiques sur la Valorisation des Bioressources
02 - 04 mai 2014, Hôtel FRAMISSIMA Regency**, Monastir, TUNISIE**

ATVAB Association Tunisienne pour la Valorisation des Bioressources

Monastir le 04/05/2014

ATTESTATION DE PARTICIPATION

Le comité d'organisation atteste par la présente que

BARROS Lillian & FERREIRA Isabel C.F.R.

Ont présenté la communication Orale intitulée :

Bioactive potential of *Rosa micrantha Borrer* ex Sm. and *Castanea sativa Mill.* flowers as functional food ingredients: antioxidant and antifungal activity

Au

5èmes Journées Scientifiques Internationales sur la Valorisation des Bioressources,

Du 02 au 04 mai 2014

*à l'hôtel FRAMISSIMA Regency**** Cap Marina, Monastir - TUNISIE.*

Pour le comité d'organisation

A.T.V.A.B
Association Tunisienne
Pour La Valorisation des Bioressources
Tél : 73 465 405 - Fax : 73 465 404

Avenue Tahar Hadded, B.P. 74, 5000, Monastir, TUNISIE. Tél.: +(216) 73 463 711, Fax: +(216) 73 465 404