ANEXA 4.1 - LUCRĂRI COTATE ISI

SPECIFICAȚIE		2002 01.11.02-31.12.02	2003	2004	2005	2006	2007 01.01.07 – 31.10.07	TOTAL
LUCRĂRI ŞTIINȚIFICE ANEXA 4.1.1.	Număr	**0**	**0**	**0**	**0**	**0**	**1**	**1**
	Punctaj	**0**	**0**	**0**	**0**	**0**	**30**	**30**
PUNCTAJ CUMULAT ISI ANEXA 4.1.2.	Număr	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Punctaj	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CITĂRI REVISTE ISI ANEXA 4.1.3.	Număr	**0**	**0**	**1**	**0**	**0**	**0**	**1**
	Punctaj	**0**	**0**	**5**	**0**	**0**	**0**	**5**
TOTAL	Număr	**0**	**0**	**1**	**0**	**0**	**1**	**2**
	Punctaj	**0**	**0**	**5**	**0**	**0**	**30**	**35**

NEXA 4.1
JCRĂRI ŞTIINŢIFICE / TEHNICE PUBLICATE ÎN REVISTE DE SPECIALITATE COTATE ISI

L.3. NUMĂR DE CITĂRI ÎN REVISTE DE SPECIALITATE COTATE ISI
STA DE CITĂRI–perioada noiembrie 2002-noiembrie 2007

r. t.	Revista / vol.	ISSN	Titlul articolului / autori	Citare	Punctaj
	1	2	3	4	5
			ANUL 2004		
	Computers and electronics in agriculture / vol. 44 (2004) 161-171	0168-1699	A GIS web based tool for the management of the PGI potato of Galicia / Ines S. and colab.	Olteanu Gh., Dudui S., 1997. Using GIS for monitoring of agricultural resources and integrated potato crop management . In: Proceedings of the 12th ESRI European User Conference, Copenhaga, Denmark, ESRI, Redlands, CA.	5
				Total puncte anul 2004	5
				TOTAL PUNCTE	**5**

Planta Medica

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Abstracts

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P 292

The metabolism of *Lonicera japonica* by artificial gastric juice

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Using high-performance liquid chromatographic method, the metabolism of multi-constituents in the decotion of *Lonicera japonica* by artificial gastric juice was simultaneously studied. The original decotion and the incubated samples were separated on Agilent-C_{18} column using methanol-water as mobile phase. The chromatographic peaks of chlorogenic acid, caffeic acid, galuteolin and rutin were identified in all samples. At different intervals (0.5, 1.0, 1.5, 2.0, 4.0, 6.0 h) after incubating the decotion of *Lonicera japonica* by artificial gastric juice, the concentrations of the constituents chlorogenic acid, galuteolin and rutin, were detected and compared with the ones in the original decotion and the metabolic tendencies were described. The experimental results showed: The major chromatographic peaks of the incubated samples were relegated to the original decotion, no ingredients emerged nor disappeared. The content of chlorogenic acid and galuteolin in incubated samples was lower than in the original decotion. The metabolic curves of chlorogenic acid and rutin presented an adscendent tendency, but the one of galuteolin showed little change. It was concluded, in brief, that the study established the bases for searching for *L. japonica*'s pharmacodynamic components. *Acknowledgements:* This project was supported by the National Natural Science Foundation of China (Grant No. 30672601). **References:** [1] The pharmacopeia committee of China, China pharmacopeia of 2005 edition, publishing company of chemical industry:117 – 118. [2] L. Lin, et al. (2007) China J. CMM. (Accepted).

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Variation of the morphological characteristics and active principles in wild and cultivated *Gentiana lutea* L. from Romania

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Gentiana lutea L., whose use as Radix Gentianae is well-known [1], is an endangered plant because of its large scale cropping and now is protected in Romania [2]. In order to start its large scale cultivation in Sibiu area, by in vitro multiplication, we have analyzed several plants from various locations, considering both certain morphological characteristics, as well as the amount of volatile oil and active principles. The results are briefly shown in the table below.

Origin	Material	Bitterness degree	Volatile oil (%)
Experimental field Braşov – 1	radix	11400	0,025
	folia	4270	
Experimental field Braşov – 2	radix	9230	0,022
	folia	4090	
Piatra Craiului wild flora	radix	10450	0,028
	folia	4600	
Postăvarul (wild flora)	radix	11150	0,031
	folia	5600	

Due to these characteristics and morpholigical data (radix length and weight, crown diameter, number of fruits, shoot height) we decided to focus our attention and start the in vitro multiplication from plants originating from the Experimental field Brasov – 2, and Postavaru Mountain. The gas chromatography-mass spectrometry analysis of the hydro-ethanolic (50:50, v/v) radix extracts [3] gave the following results (%, DW): Gentian from Postavaru Mountain – amarogentin: 0.05 – 0.5, gentiopicrin: 3.5 – 2.0, gentianin: 0.03, su-

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P 294

Free radicals scavenging and hepatoprotective activitie the rwandese medicinal herb, *Crassocephalum vitellinum* composition of the essential oil

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The treatment of liver diseases occupies an important place Rwandese traditional medicine and several plants or combin of plants, among which are *Crassocephalum vitellinum* leave used by the traditional healers. The present work investigat claimed antihepatotoxic and antioxidant activities of leaves extracts, comparing to N-acetyl cysteine (reference antihepat cant) and both quercetin and Trolox (reference antioxidan order to evaluate the direct and protective effects of *C. vite* methanolic extract on liver, rats precision cut liver slices were prepared and incubated in a Williams medium E with 10 mg/ml of the extract either alone or in the presence of ac nophen (hepatotoxicant, 10mM). The measurement of ATP lev CYP2E1 activity were used as endpoints to assess liver toxici metabolic activity. Chlorzoxazone was used as a probe to CYP2E1 enzymatic activity and the metabolite 6-OH-chlorzo formation was quantified by HPLC [1]. In addition to a sign hepatoprotective activity (1 mg/ml), the methanolic extrac *vitellinum* leaves strongly scavenged the stable radical 1, 1-dip 2-picryhydrazyl (DPPH) and reduced the peroxidation of l acid. The essential oil was isolated by hydrodistillation ((v/w yield) and analyzed with GC and GC/MS [2]. Identified minating constituents that represent 95.8% of the total oil are limonene (34.8%), (E)-β-ocimene (21.8%), β-pinene (8.5% nene (6.6%), myrcene (6.3%), β-phellandrene (5.5%), germac (4.04%), α-phellandrene (3.6%),terpinolene (1.8%), Sabinene and β-caryophyllene (1.14%). **References:** [1] Evdokinova E (2001) Toxicology in vitro 15: 683 – 690. [2] Lameck S. et al. Flavour and Fragrance Journal 20: 316 – 317

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Anti-inflammatory activity of a new triterpenoidal sa from *Bauhinia variegata* Linn. (Fabaceae)

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Many *Bauhinia* species are used extensively for traditional nal uses especially as anti-inflammatory agents [1,2,3]. The study aimed to the identification of triterpenoidal saponi polyphenols from the leaves of *B. variegata*. The *n*-butanol ar acetate extracts of *B. variegata* leaves were separately fract on silica gel columns, followed by successive chromatogra

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Application note

A GIS web-based tool for the management of the PGI potato of Galicia

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Abstract

Galicia, in north–west Spain, produces a potato crop, specific to the region, which is protected under the Geographical Indication system as the PGI potato. This Note describes a GIS tool to aid management and decision-making in organization of the production of this crop, together with examples of its application in a region characterized by land fragmentation.

Keywords: GIS; Web; Management tool; Geographical indication; Potato crops

1. Introduction

Galicia is an autonomous region of Spain, located in the north–west of the country, with 3476 km^2 of farmland and a population of almost 3 million people. One third of the land is dedicated to agriculture, which is characterized by a high degree of land fragmentation with an average parcel area of 2500 m^2 (Crecente et al., 2002). Potato cultivation is important to the Galician agricultural economy since it represents 15% of the total cultivated area and 17.5% of the agricultural production, contributing an annual income of € 62.3 million to the sector in 1999. The Protected Geographical Indication (PGI) (WIPO, 2003) Potato

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of Galicia consists of three production zones: A Limia, Terra Cha and Bergantiños, which include 19 municipalities, 496 registered farmers, 1192 parcels and a cultivated area of 724 ha with a production of 3770 metric tons per year. These numbers will increase as two new zones (Lemos and A Mariña) have joined the PGI in 2002. The Regulatory Council (RC) is the control and certification organization that manages, promotes and protects the Geographical Indication. It represents the potato farmers association for the follow-up and improvement of the production quality so that its better management helps to preserve the potato quality standards.

The RC has been using paper maps as support for spatial information, which involve great efforts to relate attribute information (e.g., farmers, productions and yields) to the parcels drawn on paper. This Note addresses the architecture and functionalities of a GIS tool and its web implementation to manage the PGI Potato of Galicia. It draws on previous experiences of our research group in the development of GIS applications to aid land consolidation projects (Touriño et al., 2001, 2003). The initial objective of the PGI Regulatory Council was to have a tool to aid parcel registration and location tasks. However, in the tool development process it was decided to incorporate advanced capabilities, such as controlling the compliance with the PGI Technical Regulation, or monitoring quality control parameters. On the one hand, the tool allows the integration, maintenance and validation of alphanumeric and cartographic information received from different sources by the RC during every season. It thus facilitates the graphical identification of the parcels cultivated by every potato farmer in a certain season, as required by the PGI Technical Regulation. On the other hand, the spatial analysis of this information makes the tool a decision support system for the RC and potato farmers regarding issues, such as phytosanitary treatments, fertilizers or irrigation management. It also allows a detailed follow-up of quality control indicators of the potato production chain, from the parcel level to the sale in the market. An additional advantage is the speeding up of administrative steps as the tool provides the means to create queries and reports about farmers, parcel characteristics, evolution of production factors. Moreover, the web implementation provides these functionalities to farmers and sector companies, not necessarily skilled in GIS, that cannot afford complex and expensive GIS. This tool is, therefore, a strategic instrument to develop crop management plans, as well as to know and control the potato production, the number of parcels, the cultivated area and its location, as will be required by the European Union in a future establishment of a European potato Market Common Organization.

The International Potato Center in Lima, Peru, has developed an application, DIVA-GIS (Hijmans et al., 2001), focused on plant cultivation (analysis of spatial, ecological and genetic patterns of potato variety distribution), but not on crop management and monitoring. In addition, Hijmans (1997) has proposed GIS-linked simulation models to study the effect of yield-limiting factors on potato production, and to compare different varieties in order to guide crop improvement efforts. The coordinated use of GIS, GPS and simulation models has been applied by Olteanu and Dudui (1997) to monitor agricultural resources and manage potato crops in a precision farming approach. This tool and DIVA-GIS are not web-based applications. Jensen et al. (2000) have designed a web-based decision support system that supplies farmers with real-time information and technical advice for crop management, but it does not take advantage of GIS potential for the spatial analysis of these data.

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