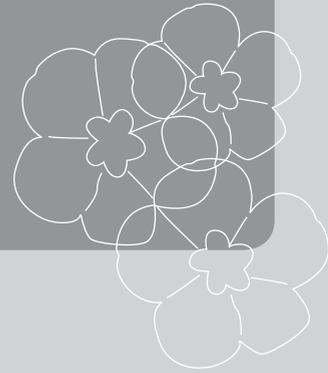


W



Workshops

Talleres

Ateliers

ISE 2010

- W1. Challenges for junior researchers
- W2. Use of ethnobotanical results in outreach and education: from community workshops to curriculum development and cultural sensitivity training
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- W8. Plantas y salud. La etnofarmacología en los programas de acción de las ONGs

W1-01 Ethnobiology and Ethnopharmacology: challenges for junior researchers

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Background: The research of novel pharmaceuticals is a scientific task that is always in progress. The most integrative method for reach this goal is thought the folk medicine, being the Ethnobiology and Ethnopharmacology the appropriate research tools. The junior researchers confront this challenging scenario, and demand the set up of networks with colleagues from different fields and regions. The workshop is intended to postgraduate students, mainly doctoral and/or postdoctoral students, with full result original researches who want to show their work and create scientific nexus.

Objectives: Show the scientific production of junior researchers involved in Ethnobiology and Ethnopharmacology areas.

Methods: The scheme of the workshop will be round tables with at least five junior researchers from different parts of the world whose investigation will have a similar topic, *e.g.* "Ethnobotany studies", "Natural products pharmacology"; each participant will have 15 minutes for present his work. At the end of the whole session there is going to be an additional 15 minutes gap for questions and general discussion. The discussion is going to be chaired by a research specialized in the general topic.

Results and conclusions: The junior researchers will show their work in a proper forum being capable of establish a networks between the different researchers members of the International Society for Ethnopharmacology (ISE) around the world.

Keywords: Junior researcher, Ethnobiology, Ethnopharmacology.

W2-01 Use of ethnobotanical results in outreach and education: from community Workshops to curriculum development and cultural sensitivity training

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This workshop will look into applied aspects of ethnobotanical research in relation to community outreach as well as education and training of healthcare providers, students and other stakeholders. Questions to be addressed are: How can the results from ethnobotanical research be used to adequately and effectively support the communities that ethnobotanists are working with?; How can we build on and expand education and curricula in schools based on ethnobotanical research? What are new avenues for ethnobotanical outreach and education? And what are the challenges for the future of Ethnobotany education and outreach in a constantly changing world?



W2-02 Missouri Botanical Garden: partnership and capacity building in ethnobotanical research in Northern Peru

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Background: The William L. Brown Center (WLBC) is Missouri Botanical Garden's research unit specializing on plant use. Currently operating in over a dozen countries, WLBC is one of the largest programs on Economic Botany in the world. Projects conducted by the WLBC include significant training programs ranging from botanical field techniques and ethnobotanical research to collections management, market development, sustainable production and public health.

Objectives: WLBC has been documenting and preserving traditional knowledge in Northern Peru, in close collaboration with local universities, herbaria and traditional as well as western clinics.

Methods: Northern Peru represents the center of the Andean "health axis", where the continuous use of more than 500 medicinal plants has been documented.

Results and conclusions: The WLBC program brings together a unique team of Peruvian and American students and researchers, traditional healers, western doctors, market vendors, plant collectors and community members. The program attempts to document the use of traditional medicinal plants and the often complex plant mixtures prepared by local healers. In addition, it established the local infrastructure to conduct bio-assays aiming to verify the efficacy of local preparations and evaluate possible toxicity to allow a safer use of traditional medicine in public health programs. Local communities are encouraged to establish their own ethnobotanical gardens through the through the WLBC Sacred Seeds program in order to preserve these important plant resources and the traditional knowledge attached for the future.

Keywords: Ethnobotany, education, medicinal plants, public health.

W2-03 School kids as Ethnobotanists - Knowledge transmission in the Biosphere Reserve Großes Walsertal (Austria)

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Background: Traditional ecological knowledge (TEK) is mainly investigated by adults with adults as respondents. Recently also children's perspective on plants is increasingly addressed in ethnobotanical research. Hardly any projects are conducted with children as actors to transmit knowledge in their communities between generations nor is the role of children in the transmission process addressed sufficiently.

Objectives: The aim of this research project with applied components of research for development is to better understand TEK on gathered plant species; but also to enhance the intergenerational transmission (IT) of plant related knowledge. Through IT, we want to increase adult's awareness of the value of their own knowledge and raise children's interest in wild plant gathering. In addition, the documentation of ethnobotanical knowledge through video shall make the results accessible for a broad audience.

Methods: In the seven primary schools of the Großes Walsertal, workshops were held to introduce children to plant gathering. Afterwards they were motivated interviewing their parents and grandparents with a survey based on previous Freelist-results including the 20 most frequently mentioned plant species. The collected results were discussed in school-workshops. Children returned these results to their families. Participatory video-workshops with two groups of children recorded interesting stories concerning gathering and use of plants in the valley.

Results and conclusions: 506 men and women from the valley participated in the survey. 96% of the 20 plant species from the survey were known by local people, 81% of the listed plant species were answered to be used as food or drink, in folk medicine, for customs and ornamental purposes. With this high participation plant gathering became "the hot topic" in the valley. Further transmission was encouraged through the research process as the value of people's own knowledge was well recognized by themselves. The appreciation of nature and related TEK is crucial for a sustainable conservation and use of Biosphere Reserve resources.

Keywords: community participation, participatory video, intergenerational transmission of knowledge.

W2-04 Sharing traditional ethnobotanical knowledge: some experiences in Madrid Sierra Norte, Asturias, and the Catalan Pyrenees

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Background: As researchers realize the importance of returning knowledge to society, outreach activities are becoming more common in ethnobotanical research. In the recent past, traditional knowledge about the use of wild plants and landraces in the study areas was discarded due to socioeconomic changes that rendered the knowledge not necessary for survival. However, today there is a growing interest in recovering this knowledge, both among traditional and new settlers.

Objectives: Here we report outreach activities derived from ethnobotanical research conducted in three rural mountain areas of the Iberian Peninsula, where traditional ethnobotanical knowledge is now mainly kept by the elders and is eroding quickly.

Methods: To locally disseminate the results of our research, we used a wide range of formats adapted to different sectors of the population: agriculture calendars widely used by farmers, a memory game with landraces for kids, posters with landraces, illustrated brochures and books co-written by local population and researchers. We also worked with pre-university students who helped both in the collection and dissemination of ethnobotanical knowledge.

Results and conclusions: To improve our dissemination strategies, we mimic local ways and places of transmitting ethnobotanical knowledge, using the local social networks and public open spaces as main squares or markets for some outreach activities. Finally, we advocate for the active role of the researcher in the community, as a driving force of the process of enhancing traditional knowledge in the new context of rural communities.

Keywords: Traditional ethnobotanical knowledge, outreach activities, result dissemination.

W2-05 Ethnobotanical knowledge and its possible applications: different solutions to make people aware of its importance in an UNESCO World Heritage Site

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Background: Amalfi Coast has always been characterized by a close relationship between people and the environment, which has contributed to the inscription of its "cultural landscape" within the World Heritage Site list of UNESCO.

Objectives: To evaluate the extent and preserve the ethnobotanical knowledge of the Amalfi Coast, and especially promote its conservation among the local people.

Methods: A preliminary ethnobotanical random survey (2006-2008) was carried out in order to quantify the extent of EK in the area. Different actions have been carried out and planned to make people aware of the importance of this kind of knowledge.

Results and conclusions: Many plants (179 species) have an ethnobotanical use in the area; however, it turned out that EK is disappearing as younger generations (6,8 - mean of cited plants) seem to know less plants than their parents (9,7) and grandparents (8,6). The results of this research will be published, in scientific papers, but also in a popular guide on the EK of Amalfi Coast and it will be mainly distributed in local shops. Various meetings were organized to awaken local stakeholders to the importance of the natural and cultural heritage of Amalfi Coast which contributed to the granting of a project aimed at the valorization of local plants with ethnobotanical uses or naturalistic value. Their experimental cultivation is giving encouraging results and, at the end of the project, a meeting involving the local farmers will be organized in order to promote the cultivation of this "unconventional" crop plants. The setting of an Ethnobotanical educative garden, which may promote the transmission of EK to kids of local schools, is in phase of definition. Hopefully, all these activities will contribute to the preservation of EK of this World Heritage Site.

Keywords: ethnobotanical knowledge (EK), Amalfi Coast, supporting actions

Acknowledgement: Comunità Montana "Penisola Amalfitana" for granting a great part of the activities here described.



W2-06 Adaptation of Ethnobotany to the Educative curricula in Castilla-La Mancha (Spain)

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Background: The team started studying the relationships with plants of the Traditional Knowledge System in Castilla-La Mancha (Spain) fifteen years ago. We focused mainly in Ethnobotany. The dissemination strategy adopted included printed and electronic materials, courses and workshops. We wish to raise the awareness of our own community on this knowledge, as a valuable cultural heritage and a resource for sustainable development.

Objectives: Systematically record the interactions between the environment, natural resources and the Traditional Knowledge System (TKS).

Spreading and disseminating these results within the different education levels.

Methods: *Ethnobotanical research:* open interviews to local people about general ethnobiological topics, specific questionnaires on gathered food plants, general questionnaires carried out in primary and secondary schools, workshops with elder rural people in cities and rural areas.

Dissemination of Knowledge: introductory lectures on basic and applied Ethnobotany in "Centros de Formación Permanente del Profesorado" (Secondary Teachers Training Centres), Ethnobotany courses for adults in "Universidad Popular de Albacete" (Adult Continuing Education).

Results and conclusions: Curricular materials for secondary school, Books and booklets addressed to the general public, papers in specialized journals of the Educational community.

Curricular materials reached nearly 200.000 children of primary and secondary school. Specialized courses were attended by over 200 primary and secondary school teachers. "Universidad Popular" courses were followed by 1.500 adults during the last 12 years. Books and booklets are available in public libraries of Castilla - La Mancha.

This methodology is helping to reevaluate, preserve and transmit the TKS within the community and complements the oral transmission system, almost lost.

Keywords. Ethnobotany, Castilla - La Mancha, Curricula.

W2-07 The Open Science Network and New Developments for Ethnopharmacology Education

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Background: For the past two years an international network of science educators, students, cultural practitioners and representatives of organizations applying educational content in training, have been working together under the name of the Open Science Network of OSN.

Objectives: This presentation will present the goals and objectives of the OSN and lead in a discussion of ways that members of the ISE could benefit from and participate in the OSN.

Methods: We expect that the discussion will focus specifically on the subset of Ethnopharmacology education and its future as well as the educational methodologies that are currently being emphasized.

Results and conclusions: We will present models that have been developed and tested with the OSN. We will suggest ways that these can be applied for instruction across geographical and disciplinary boundaries.

Keywords: science education; curriculum development.

W2-08 Linking communities and universities: the online Cook Islands Biodiversity and Ethnobiological Collaborative

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Background: Using multimedia and online collaborative platforms is an increasingly popular and effective way to enhance traditional research and teaching methods and produce deliverables that facilitate knowledge dissemination across communities and disciplinary boundaries.

Objectives: This paper will introduce the use of the Open Science Network in ethnobiological research and teaching in the Pacific (Hawaii and the Cook Islands) and Europe (UK). Specifically, it will discuss the Cook Islands Biodiversity and Ethnobiology Collaborative as a model "social computing platform" that has been under development funded by the Cook Islands Government with technical assistance by the Centre for Social Anthropology and Computing.

Methods: The project includes a social computing platform that consists of a participatory web-based application enabling distributed participants to contribute and amend content, as in a "wiki". This project practically supports local people who record the detail of their knowledge, society and environment in a form that can be directly and dynamically related to expert scientific information about biodiversity and the island ecosystem, relating local knowledge to scientific frameworks for describing ecosystems and ecosystem services.

Results and conclusions: The Open Science Network facilitates the incorporation of in situ ethnobiological research into undergraduate and postgraduate teaching programmes in Europe and the Pacific by making high quality teaching resources available free and online, thereby contributing to a new kind of scholarship that crosses the boundaries between universities and local communities, and delivers benefits to a wider audience.

Keywords: Ethnobiology, biodiversity, online collaborative platforms, community engagement.

W2-09 Intercultural community healthcare Workshops and cultural sensitivity training in medical schools: examples from Bolivia and New York City

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Ethnobotany as a discipline is an ideal vehicle to promote cultural sensitivity and build a trusted relationship during the clinical encounter between a minority patient and health care provider. To accomplish this, one must generate educational materials and provide training to clinicians about the traditional knowledge, beliefs and practices of the patient group. We conducted cultural competency training sessions with several medical schools (Albert Einstein College of Medicine, Bronx-Lebanon Hospital Center, Montefiore Medical Center and Columbia University Medical Center) and a community clinic (Mt. Hope Family Practice) in New York City, and with a medical university center (Centro Universitario de Medicina Tropical, Universidad Mayor de San Simon) in Bolivia. In New York City, training tools included Powerpoint presentations, workshops, role play exercises, tours of the living plant collection at The New York Botanical Garden, guided visitations of botánicas (community-based shops providing traditional healthcare), classes on ethnomedical Spanish, patient-interviewing and topic-oriented language immersion sessions during internships in a community clinic. In Bolivia, we organized video-recorded workshops with local physicians specializing in tropical medicine, medical students, traditional healers and indigenous community members to promote dialogue about how health conditions prevalent in indigenous communities were recognized by and treated with biomedical and traditional healthcare. Evaluation of the training program consisted of both oral and written reflections by trainees and community members, as well as administration of a self-evaluation instrument containing statements related to trainees' knowledge, attitudes and skills. Projects such as these demonstrate the usefulness of Ethnobotany as an applied tool that extends beyond research and underscores its applicability to address pressing societal issues, including those related to the existence of health disparities in immigrant and indigenous communities.

Keywords: cultural competency training, medical education, botanical medicines, applied Ethnobotany, community healthcare.

Acknowledgments: Austrian Academy for Sciences, MAB-Programme.



W3-01 Commercialization of bioactive compounds or extracts from plants

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Many of the publications in the field of Ethnopharmacology are focussed on discovering compounds that can be developed into pharmaceutical products or therapeutically useful complex extracts. Yet there are very few examples where success has been attained. The complications in developing commercially useful plant based products and examples where success have been attained would provide an interesting topic for discussion. There are many factors that play a role in this process.

W3-02 Ethnobotanical, historical and commercial perspectives on natural product development in South Africa

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Despite the fact that an estimated 25% of the plant species of the world is found in Africa, only a few have hitherto become fully commercialised as medicinal products. In recent years there has been an upsurge in research and development of new medicinal products and new medicinal crops.

Some of the best known and most promising South African medicinal plants will be briefly discussed in the context of what is known about the importance of Ethnobotany, chemistry, pharmacology, horticulture and the marketing approach during the complicated process of commercialisation.

The history of product development relating to the following species will be presented: *Agathosma betulina* (buchu), *Aloe ferox* (bitter aloe), *Artemisia afra* (African wormwood), *Aspalathus linearis* (rooibos tea), *Cyclopia genistoides* (honeybush tea), *Harpagophytum procumbens* (devil's claw), *Hypoxis hemerocallidea* (African potato), *Pelargonium sidioides* (umckaloabo), *Sceletium tortuosum* (kougoed), *Sutherlandia frutescens* (cancer bush) and *Warburgia salutaris* (pepperbark tree).

The main factors that are apparently responsible for failure or success will be highlighted, especially the importance of marketing strategy, duration of development, proof of concept and barriers to entry.

W3-03 The road to developing commercially useful products from plant secondary compounds

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We have learned a number of lessons in our attempts to commercialize plant extracts and isolated compounds from plants. A number of patents have arisen out of these attempts and one product is currently on the market. Examples will be presented on work that has been done to deliver a plant extract with double the antioxidant activity of its competitors in the industry, a plant product with better activity than gentamicin in treating wound infections in rats, a plant extract with the potential to become a tooth paste, a plant product with excellent and antibacterial activity, a plant product with higher activity than commercial fungicides against plant pathogens, a plant product with very good anti-*Candida* activity, a plant product with excellent activity in treating aspergillosis in poultry, and finally a mixture of plant products that can be used to replace antibiotic feed additives in poultry production. All these lessons will be discussed and our approach to developing commercially useful products will be explained in more detail.

W3-04 Combining modern sciences with ancient knowledge: new products from medicinal plants

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Scientific research on traditional medicines can lead to new pharmaceutical products, typically herbal formulations or new chemical entities. The Bioprospecting research group of CSIR, Biosciences focuses on the discovery and development of herbal remedies and new drugs based on South Africa's medicinal plants as well as its rich biodiversity.

An appetite suppressant agent from *Hoodia* developed by CSIR scientists, promises to become the first natural ingredient for weight management based on a plant indigenous to the African Continent. The research programme that led to this potential product started at CSIR in 1963, and included major multi-national companies, farmers and communities. An analysis of the key innovative steps in the research programme illustrates the value of combining modern science and ancient knowledge on the use of South Africa's rich biodiversity.

Hoodia illustrates the potential of bioprospecting to produce significant economic and social benefits for a nation. The processes leading to the creation and protection of intellectual property, licensing to commercial partners and the benefit-sharing agreement with the San people, custodians of indigenous knowledge on the use of *Hoodia*, is discussed.

The progress with *Hoodia* to date already positioned South Africa as a country with the scientific and technological capability to produce leads of interest to the multinational companies. The CSIR is currently involved in a number of collaborations with the industry interested in future inventions that might flow from its investigation of the possible commercial use of the country's indigenous plants and knowledge on the use thereof. The ongoing bioprospecting activities of CSIR have produced a rich portfolio of natural product leads, including potential new treatments for diseases such as malaria, HIV, asthma, diabetes and analgesics. The further development of these candidates, benefit substantially from the product development platform that resulted from the *Hoodia* research programme. Selected leads are discussed using a stage-gate approach.



W4-01 Herbal medicines, Systems Biology and Synergy

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Phytomedicines are highly complex, and it has long been considered that their effects are not always due to the presence of a single "active" molecule. Synergistic effects have been shown to take place between constituents in some cases, and individual components of a mixture can act on different biological targets related to the therapeutic indication, providing what is sometimes known as a multi-factorial approach. The session aims to give an overview of these effects and how they can be measured, for example using metabolomics, as well as the implications for bioassays and evaluating interactions with other herbs and conventional drugs.

W4-02 A place for natural products in the multi-targeted approach to cancer therapy

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The traditional Western approach to the therapy of cancer, where the cancer cell was targeted with potent cytotoxic drugs, has long been known to represent a very narrow view of how best to deal with a tumour in a patient. Tumours are no longer considered to be balls of proliferating cells, but rather a complex microenvironment of cancer, immune, endothelial and stromal cells which may all be potential targets for therapy. Although cancer therapy continues to rely primarily on cytotoxic drugs, which include the plant-derived paclitaxel, etoposide and vinca alkaloids, there is a growing hope that synergistic effects may be obtained by attacking the tumour through inflammation-related processes, the tumour blood supply (angiogenesis) or by inhibiting other non-tumour cells that have been recruited to cooperate in tumour growth. For example, NF- κ B is an important transcription factor with both anti-apoptotic and pro-inflammatory roles. Thus, NF- κ B-inhibitory drugs, of which there are dozens in nature, could potentiate the direct effect of cytotoxic drugs on tumour cells, and/or potentiate their effect by inhibiting chronic inflammatory processes that are often protumoral. Plants have been shown to contain both direct and indirectly (e.g. anti-inflammatory) active anticancer constituents and synergy may be more apparent when using whole extracts rather than isolated compounds ⁽¹⁾. However, although synergy may be observed between constituents within a total extract of a single herb, as well as between different herbs in a formulation ⁽²⁾, perhaps the most promising approach, in the case of cancer, would be to look for synergy between plant extracts, or compounds, and the highly cytotoxic agents already available.

Keywords: synergy, inflammation, cancer.

Acknowledgements: Proyecto LOCTI, Venezuela

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W4-03 Assessing the interaction risks of medicinal plants extract using a metabolomic approach

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Two core challenges in Ethnopharmacology are the study of the phytochemical complexity of herbal medicines used and their overall safety. For the first challenge metabolomics, in particular metabolomic fingerprinting offers a state of the art and fast developing approach for analysing herbal medicines. NMR spectroscopy is a key analytical technique in this area and is very sensitive, non-selective, fast, offers a relatively high-throughput and an uncomplicated sample preparation. It has often been used to assess the composition of complex mixtures and in the area of herbal medicines the concomitant use of this technique with *in vitro* or *in vivo* pharmacological studies is of particular interest (e.g. Liu et al, 2010⁽¹⁾; Modarai et al 2010⁽²⁾). For the second challenge a wide range of *in vitro* techniques are now available to assess, for example, the interaction potential of herbal medicines (or the lack thereof⁽²⁾).

We have used such a multidisciplinary approach for assessing the link between of *in vitro* CYP3A4 inhibition (as an indicator of an extract's interaction risk) and correlated this with the NMR metabolomic profiles of *Echinacea* preparations. Six *Echinacea* Liquid Preparations were studied in detail. PCA and partial least squares regression analysis were used to identify regions in the NMR spectra that are associated with CYP3A4 inhibitory activity. In parallel we analysed the alkylamide content of all ELPs to investigate whether particular alkylamides were associated with the more potent ELP. This approach enabled us to better understand the composition of the various preparations⁽²⁾.

Overall, this approach offers opportunities to optimise plant extracts in terms of their composition of bioactive substances and better understand the biological-pharmacological profile of extract based medicines. Such extracts can then be develop into ones with a more reproducible composition. Using the example of *Echinacea* and of Devil's Claw we will discuss the opportunities and limitations of such an approach in the context of Ethnopharmacology.

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W4-04 Ethnopharmacology and Systems biology: a perfect holistic match

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There are many definitions of systems biology. But basically systems biology is an unbiased measurement of as many different parameters as possible under different conditions (e.g. healthy versus diseased organism, e.g. plants or humans) and uses various statistical/mathematical methods to determine possible correlations between the observations made. This can be, for example, correlations between certain compounds of the metabolome of the organism and a disease. In case of a medicinal plant it concerns searching for correlations between compounds found in the plant and the activity. With other words there is no starting hypothesis, systems biology is fully based on observations, which are subsequently analyzed using various chemometric methods to find possible correlations between the different data, and based on that try to find (novel) explanations for what is observed. I.e. the hypothesis is made after the experiments.

The methods used in systems biology include metabolomics (determining as many as possible metabolites in an organism, or in an extract), proteomics (to determine possible changes in an organism on the level of proteins) and transcriptomics (which should detect up- and down regulated genes), as well as all kind of physiological measurements (e.g. plant growth; leave size; blood pressure). Such a systems biology approach is quite promising as, for example, for phytomedicines it offers new possibilities to relate activity to certain compounds, including the possibility to detect synergy and pro-drugs, which can not be found in a reductionist approach such as bioassay-guided fractionation.

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W4-05 Synergy in herbal medicines

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Plant extracts are complex mixtures, and this is often suggested as one of the main therapeutic advantages of using herbal medicines over pure single compounds. Multiple constituents may interact with different targets, or modify the effects of each other at the same target. Synergism is considered to be one of the most important phenomena involved when the effect of a compound is augmented by the presence of another, however proving synergy is challenging and the terminology is often used incorrectly. "Synergism", "additivity" and "antagonism" are terms applied to combinations where all components induce the effect of interest, whereas "potentiation" should be used where an inactive compound enhances the effect of another active, and "inhibition" where an inactive component reduces the effect of an active compound. "Masking" is when components have opposite effects, resulting in no overall activity being observed from the combination. Together, these are now usually referred to as "multi-factorial effects" to cover a multitude of mechanisms and scenarios which include: a single compound interacting with multiple targets; several compounds interacting with the same target (which may include synergy); multiple compounds affecting different but related targets; and the metabolism and/or bioavailability of an active being altered by other components of the extract. These multifactorial effects are sometimes described as the "herbal shotgun" approach, compared to that of a single substance acting at a single target, or the "silver bullet" approach⁽¹⁻³⁾. There are widespread implications arising from the presence of synergistic and multifactorial effects: for example the use of herbal extracts and mixtures may offer a safer clinical approach than isolated compounds, since lower doses of a compound may be effective if present as part of a mixture, thus minimising side effects⁽⁴⁾, and a natural "cocktail" of ingredients may also help to avoid some problems of drug resistance. There are also important consequences for the development of herbal medicines and natural product drugs, since drug discovery from natural sources usually relies upon bioassay-led isolation to identify the "active molecule". However, if multifactorial effects are responsible for the activity in question, once some of the relevant compounds are removed, activity is lost⁽⁵⁾. Therefore, to ensure reproducible therapeutic effects, standardisation of extracts becomes very important, and a specific extract may need to be considered the "active pharmaceutical ingredient" (API) of a herbal medicine. These principles will be discussed with reference to examples.

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W5-01 How to write and submit a world class paper

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Science is based on communication: communication between scientists to share their results, their ideas; communication with the public about what science mean for the society; communication with authorities to get funding; communication with students to teach knowledge and to educate. Science itself is built upon all the results produced by researchers in many institutes all over the world. Each result being a small brick of the large building of knowledge we are creating. These results we communicate via scientific papers which are published in journals, where they are stored as hardcopies all over the world, and which nowadays are stored and can be retrieved electronically. Any result produced and published will be stored and can be used by others. The value of a result is determined by its originality, and of course should be the result of a proper experimental design.

The role of scientific journals is to facilitate the communication between scientists, to control the quality and the originality of the reported experiments, and to store and disseminate the information.

In this whole process the writing of the communication is a crucial step. Most researchers see the need but do not really enjoy writing. Writing a paper is a long process, first the idea needs an incubation time in your mind, where the idea gradually is growing into a plan how to do it. This plan will result in a first draft, followed by many versions in which the different authors help to polish the paper into a final manuscript for submission. The objectives of the study and the paper play a central role in this process, by clearly defining these the writing of the introduction becomes easier. By first trying to find the best way to show the results in figures and/or tables the writing of the results and discussion becomes easier.

The workshop will go through step by step the different aspects of writing, coming from idea to final paper, seen through the eyes of an author, a reviewer and an editor. One should be aware of the unwritten rules about who are authors and in which sequence; the rules for titles and abstracts, for figures, tables and their legends; and last but not least the specific written rules in "Instruction to authors" that each journal has. Knowing and obeying the rules will certainly help in getting your paper published, but with rejection rates for most journals being over 80% nowadays you and me regularly will experience that a paper is rejected. But one should not be discouraged by that, one should see it as a learning experience, like anything in science you will know how to do better next time. For every experiment one does, one knows better how to do the next. So write, write, write!

W6-01 Continuum between ritual and medicinal plant uses

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Ethnobotany studies the interactions between plants and people and foremost among these the management of wild plant resources and the traditional use of medicinal plants. In many cultures, not only medicinal plants, but also rituals and the use of ritual plants for healing are essential. However, ethnic groups take advantage of medicinal plants to different degrees. While some have a broad knowledge on medicinal plant uses, others rely mainly on the use of rituals and ritual plants to treat diseases and support well-being. To tackle the question, why the use of a given medicinal flora can differ largely between neighbouring ethnic groups and local communities, we take a closer look at the specific characteristics of ritual plants and their uses. This workshop focuses on the continuum between medicinal and ritual uses of plants, on the different types of ritual plants, and on the rationale for the use of specific plants in a ritual context. Certainly, the use of incense plants is important among ritual plant uses. A special focus will therefore be on plants which are burned or roasted for application.

W6-02 Plants in the Polish church calendar and their apotropaic and medicinal functions

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Background: Peasant life in rural Poland was strongly tied to the cycle of seasonal agricultural activities. Magical means, combining pagan and Christian beliefs, were employed to provide for the well-being of the farm. Plants were often used in these practices. There is a need for an overview of the knowledge about the ritual plants of Poland. Although we have an immense quantity of ethnobotanical documentation, including 19th century voucher specimens of plants blessed on Assumption Day and 20th century maps of tree species used to decorate houses at Pentecost, these traditions are now decreasing and one of them is already extinct (decorating thatched roofs with certain apotropaic species on St. John's eve).

Objectives: The aim of the study is to present ritual plant use in the Polish church calendar and to discuss the relationship between the ritual and medicinal plants used.

Methods: Literature data were used as well as the results of photographic documentation performed in 2008-2009 in selected localities.

Results and conclusion:

1. On Palm Sunday oblong structures are woven using plant material, and blessed as "palms". 2. On the day of Pentecost house walls are decorated with certain trees species (mainly *Tilia* and *Betula* or *Acorus calamus*). 3. On the eighth day after Corpus Christi (in June), Oktawa Bożego Ciała, wreaths of predominantly medicinal plants were woven and brought to church. They were later hung on the premises and used as incense to protect from summer thunderstorms, to smudge ill people and animals, or as infusions. In some areas of Poland (e.g. S and SE) the wreaths are mixed, whereas in NE Poland each medicinal species is woven into a separate wreath. 4. On the 15th of August (Assumption Day) special bouquets are brought to churches, containing medicinal and apotropaic plants, cereals, vegetables and fruits.

The above mentioned traditions are still practised throughout the whole country although the state of their preservation varies. They are an important reservoir of the knowledge about medicinal plants. Some plants, formerly used in Ethnomedicine, are now remembered only as ritual plants. Comparison with the 19th century data shows that the use of around 50% of species has ceased. On the other hand some new medicinal, crop and ornamental plants have been added.

Keywords: apotropaic, transmission of ethnobotanical knowledge, Assumption Day, Corpus Christi, photographs.



W6-03 Continuum of medicinal and ritual plant uses in the eastern Himalayas

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Background: In the foothills of the eastern Himalayas, China, we find diverse ethnic groups living in an environment characterized by a high biodiversity and known for a rich medicinal flora. While some of the groups have a broad knowledge on medicinal plant uses, others rely mainly on the use of rituals and so-called ritual plants to treat diseases and support well-being. Similar observations are known from other regions of the world.

Objectives: Knowledge of ritual plants and their uses among different Tibeto-Burman ethnic groups in the Shuiluo Valley, Southwest Sichuan, as well as among ritual specialists is analyzed comparatively.

Methods: Repeated field studies in the area, conduction of semi-structured interviews, pilesorts of plants and photos, participatory observation.

Results and conclusions: Ritual plants are commonly used among the ethnic groups in the Shuiluo Valley and related knowledge is widespread. While the use of ritual plants may be traced back to ancient Bön-traditions, nowadays the influence of Tibetan Buddhism is getting stronger and influences the local interpretation of rituals and ritual plant use.

Different types of ritual plants are distinguished: incense plants burned fresh or dry to please the deities and ancestors and thus to support well being of the communities and families, evergreen plants to invite the deities, and spiny plants to drive ghosts off. The plants are chosen according to different characteristics such as smell, color and quality of smoke, and habitat. A north-south gradient can be found in the valley regarding the taxa used.

The daily use of ritual plants links the people with the surrounding landscape and reflects a notion of place and identity.

Keywords: Ethnobotany, ritual plants, incense, China, Tibetan Buddhism.

W6-04 Meaning and medicinal plants: how the meaning of plants influences their effectiveness in human populations

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In this illustrated presentation, I argue that many medicinal plants gain at least some of their effectiveness from their meanings rather than their biological constituents. For example, it is unlikely that an ethnopharmacologist will be able, in her laboratory, to find appropriate secondary compounds in a plant used by some indigenous people for protecting an infant from evil spirits as she sleeps in her crib. At the same time, anyone familiar with the Ethnopharmacology of native peoples anywhere recognizes that plants are used at least as often for such purposes - witchcraft protections, sports medicines (allowing one to run faster while in a race or while playing a game like lacrosse), hunting medicines to make arrows fly true, medicines to bring back a wandering spouse, or to weaken an opponent in warfare, etc. - that such treatments are at least as common as are treatments for colds, wounds, sore eyes, rheumatism, etc. And they are often the same plants.

In particular, I will consider the use of cranesbills (*Geranium maculatum*, Geraniaceae) by the Iroquois, and yarrow (*Achillea millefolium*, Asteraceae) by the ancient Greeks, plus a range of other familiar plants as used by native Americans and others. I will also argue that meaning cannot be detected in a laboratory, but can only be gained by talking with the users of the plants; if one has collected all the medicinal plants and the voucher specimens, and has collected all the native names and uses, but has not asked about the plants' meanings, the work is not over, but has hardly begun.

W6-05 Masterwort and palm fronds – examples of plant burning in alpine regions of Austria and Switzerland

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Background: In Europe, ritual plant burning is not a common practice of the medicinal system nowadays. Nevertheless, plant burning is practiced traditionally in some rural societies. This contribution presents two examples encountered during ongoing ethnobotanical projects in the Grosses Walsertal, Austria, and in the region of the Napf, Switzerland.

Objectives: The aim of the two projects is to document traditional ecological knowledge and local plant use as expression of cultural identity, thus also practices of plant burning related to religious beliefs and life conditions within the specific cultural context.

Methods: Semi-structured interviews were conducted with inhabitants of the two respective areas. Participatory observation was used to identify the plant species and to gain deeper insight in the practices.

Results and conclusions: The masterwort (*Peucedanum ostruthium* (L.) W.D.J. Koch) is known as a medicinal plant in the Grosses Walsertal. Internal and external uses for different health problems are reported. The smoke of the burned root is said to be disinfectant. It is used in Ethnoveterinary medicine, but fumigation is also practiced ritually at special days of the year like Christmas, New Year's Eve and Epiphany.

Palm fronds are small bunches of several twigs (e.g. *Salix* sp., *Ilex aquifolium* L.) differently combined in the Napf-region and the Grosses Walsertal. The palm fronds are taken to church and blessed during the mass of Palm Sunday. The blessed palm fronds are then kept at home to protect the family and its livestock from harm during the whole year. If a thunderstorm is coming up, a twig of the palm frond is burnt in order to avert the danger.

Similar practices of plant burning are known for example from the the Val d'Anniviers, Switzerland (Masterwort) and from Tyrol, Austria (palm fronds). Plant burning is thus practiced in alpine regions of Europe, but not systematically investigated.

Keywords: Ethnobotany, ritual plants, Ethnoveterinary medicine, traditional ecological knowledge.

W6-06 Ritual Healing and the use of Plant Substances in Western Kenya

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In the aftermath of the 1978 Alma-Ater conference and the World Health Organization's exhortation to African countries to embrace traditional medicine, many African countries initiated programs aimed at analyzing the therapeutic effects of traditional remedies with a view to incorporating them in formal health care programmes. While this was a commendable step, a closer look at this directive and the ways in which it has been actualized in Africa shows that it does not extend to ritual healing. Most of the initiatives in this regard have concentrated more on herbalism with the setting up of laboratories aimed at not only ascertaining the therapeutic efficacy of herbs, but creating grounds for their mass industrial production. The result has been the stripping off, of the ritual aspects in the production and consumption of herbs in the healing process. These developments have however not dampened the presence of ritual healers and ritual healing in Africa. Outside the bio-prospecting and standardization associated with the WHO initiative, one finds a parallel and thriving ritual healing practice that incorporates the use of effective physical and pharmacologic therapies operating at community level and tied to local contexts in Africa. The success or popularity of these healing practices is tied more to the manipulation by healers of the cosmological repertoire that not only defines health and illness but defines the appropriate mechanisms for amelioration of social, physical and psychological imbalances. In this paper, I use the example of Francis Shisia, a famous ritual healer in Western Kenya whose healing rituals combine the use of herbal remedies in dealing with the myriad of problems brought to his attention by his clients. I argue that with the "modernization" of healing practices in Africa, ritual healers maintain their popularity more from their ability to locate etiology within the African cosmology and to discern healing techniques that are sensitive to the understanding of health and disease within this cosmology. With the advancement in means of transport and communication, ritual healers such as Shisia can obtain a wide range of herbal remedies from within and outside their localities that they incorporate in their overall corpus of healing techniques. Once the cause and range of an affliction has been determined to the satisfaction of the clients through divination, healing becomes primarily a function of a successful diagnosis while the use of the pharmacopeia and other reconstructive strategies play a secondary role.



W6-07 A continuum between pharmacognosy and ritual use in medicinal plants in mother roasting and steam sauna in tropical Asia and the Pacific: meta-analysis of 100 studies

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Medicinal plants have a significant role in regulating pregnancy, during pregnancy, childbirth and postpartum care in many rural areas of the world. Plants used in women's health related conditions such as female fertility, menorrhoea, birth control, pregnancy, birth, postpartum and lactation, including infant care, have been documented for many ethnic groups. In Western traditional medicine the label "old wives' tales" has been applied to all knowledge of interest to women – fertility, birth, childcare – transmitted orally from one generation of women to the next, and the derogatory label reflects male devaluation and relegation to folklore of this exclusively female realm of knowledge. This had led to a male bias in research, and scholars have missed a wealth of knowledge that is held by women.

This study compares plant species used mainly for volatile oil content in mother roasting, steamsauna and steambath rituals to other uses reported for these species in women's healthcare in Southeast Asia. The hypothesis is that species reported in multiple studies are more likely to have volatile oils containing bioactive secondary metabolites through which the traditional ritual use can be explained, than those that are mentioned only once, which may have other necessary functions in the traditional use. *Unicatos* are also more likely to be reported for benign ailments or chronic complaints related to women's healthcare, and merge seamlessly into the realm of ritual use.

W6-08 Ongoing study on incense and ritual plant use by the Bai people in Shaxi, China

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Background: Humans use smoke since ancient times in rituals and as medicine (1,2). In Shaxi, a remote valley in the Hengduan mountains of Southwest China (Yunnan province), the majority Bai people and neighbouring ethnic groups use incense and ritual plants for various religious purposes. The main goal of this study is therefore a comparative analysis of these plants and their use, as well as finding a rationale for the selection of the specific plants.

Objectives: Documentation and analysis of incense and ritual plant uses and related knowledge, practises, and beliefs by the Bai and neighbouring ethnic groups in Shaxi.

Identification of the volatile compounds of the incense and analysis of the correlation between the compounds and specific uses.

Methods: During fieldwork in Shaxi (September 2009 and May-July 2010), semi-structured interviews, participant observation and pile sorting are used to document the local knowledge; All relevant plant species are vouchered; Volatile compounds of the smoke are collected using the headspace sorption method and analysed at the Institute of Systematic Botany, University of Zurich, Switzerland, with a gas chromatographer with mass selective detector (GC-MS).

Results and conclusions: ongoing.

Keywords: Ethnobotany, Shaxi, Yunnan, Southwest China, incense, ritual plant, Bai, ethnic minority.

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W7-01 East meets West– From Traditional Chinese Medicine to Modern Phytomedicines

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Traditional Chinese medicine has been practiced in China for thousands of years and played a vital role in treating various diseases along the civilization of Chinese people, and continues to be popular in modern society, perhaps due to epidemics like HIV/AIDS, malaria and other diseases like cancer. But due to the complexity and lack of modern scientific knowledge of Chinese Medicine, it is still hard to be recognized and accepted by the modern world. While it has become an important part of health care in Europe, North America and Australia, genuine concerns have been raised by the public and contemporary scientists and health practitioners about the efficacy, safety and quality of traditional Chinese medicine. This symposium is intended to address global and national perspectives of traditional Chinese medicine use and efforts that have been directed toward bridging the gap between the science of traditional Chinese medicine development and its acceptance by contemporary health care researchers and providers.

W7-02 Anti-oxidant and anti-fatigue and immune modulations of mixture of *Ganoderma lucidum*, American Ginseng and Fermentation *Cordyceps* in rats and mice

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Ganoderma lucidum, American Ginseng and Fermentation Cordyceps are commonly used as the reinforcing medicines in China, and the mixture of extracts from *Ganoderma lucidum*, American Ginseng and Fermentation Cordyceps (GGF) has been proved by State Food and Drug Administration of China as a healthy product for anti-fatigue and immune modulation. The pharmacological activities of GGF on anti-oxidant, anti-fatigue and immune regulation function were investigated. Normal SD rats Balb/c mice or immunosuppressive Balb/c mice were orally given GGF for 10 days. Body weight and burden swimming time were detected, levels of serum SOD, MDA, urea nitrogen and IFN- γ were analyzed by corresponding kits, ratio of CD4⁺T cell with CD8⁺T cell in peripheral blood and NK cell activity were detected by FACS. The results showed that GGF could obviously increase serum SOD level and decrease serum MDA level in normal SD rats. It could also significantly enhance the burden swimming time in normal mice and decrease the rising content of serum urea nitrogen after strenuous exercise. In addition, GGF was able to improve the ratio of peripheral CD4⁺/CD8⁺ T cells, promote the expression of IFN- γ , and enhance the activity of NK cells in immunosuppressive mice. The immune regulatory function of GGF was better than using either *Ganoderma lucidum*, or American Ginseng or Fermentation Cordyceps alone. It was concluded that GGF could enhance anti-oxidant effect, relieve physical fatigue and improve immune regulation function.



W7-03 Learning History to Develop Traditional Chinese Medicine

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Traditional Chinese Medicine (TCM) has been proved to be remarkable effective and safe by thousands of years clinic practices. Its unique diagnosis and treatment methods, the particular thinking when medicating are favorably recognized by more and more peoples and countries. However, the active constituents and molecular mechanisms related to their therapeutic effectiveness are still unclear. I highlight here that learning the valuable traditional experiences of TCM instead of using TCM only as a source of natural compounds, and employing various modern chemical and biological technologies is the short cut way for investigation the effective foundation of TCM, which allows the discovery of numerous leading compounds with diverse structure and novel molecular mechanism in our lab. The research work following the above ideas has provided lots of scientific evidence to the efficacy and safety of TCM and contributed to the modernization and globalization of TCM. In this presentation, I will introduce some recent work of my lab as examples to demonstrate and highlight that learning from the history is the better way of facing future in TCM study.

W7-04 *Aconitum* in Traditional Chinese Medicine. A valuable drug or an unpredictable risk?

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In Traditional Chinese Medicine, in contrary to the European methods, herbal drugs are - in addition to drying and cutting - further processed by often complex methods. One of the main reasons behind this kind of thorough preparation is the detoxification of toxic herbal drugs into pharmacologically active but non-toxic products⁽¹⁻³⁾.

Chinese traditional processing methods have played an essential role in detoxification of *Aconitum* that can cause fatal cardiac poisoning when it is processed improperly. The toxicity of *Aconitum* is mainly caused by the diester diterpene alkaloids (DDAs), namely aconitine, mesaconitine and hypaconitine.

In the *Chinese Pharmacopoeia 2005*⁽²⁾ Yanfuzi, Heishunpian and Baifupian are recorded as the main products of *Aconitum*. These products are obtained by variations in heating of the crude roots in salted water. The toxic DDAs decompose during the heating process into monoester diterpene alkaloids (MDAs) which reduces the toxicity. Modern processing techniques have been developed in China such as pressure-steaming. Because of the remaining high potential toxicity, quality control of marketed herbal drugs and their products is indispensable (4).

In different publications the DDA contents of marketed drugs were determined by HPLC, reaching maximum values of 0.03%. A stipulation for a maximum level of DDA content of *Aconitum* is urgently needed, for example not exceeding 0.03%. The maximum level of DDA defined could be as standard for processing methods such as the pressure-steaming technique and alkaloid quantification by HPLC to ensure product safety.

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W7-05 Authentication of plants used in medicines, especially traditional Chinese medicine: challenges and opportunities

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We are in a decade when there is an increased interest in looking back as well as forward to the plant world for innovation in drug design. However, there are some challenges that need to be overcome if the opportunities are to be realised. In the western world some of the most difficult challenges are associated with getting leads through the different forms of legislation but there are some basic research challenges that face the scientists at the early stage of a project. Have I collected all the published data on the plant, how do I get research samples and could I get sustainable supplies? This talk will illustrate some of these challenges that scientists need to address earlier rather than later if they are to get more of their leads to market. This talk will provide an overview of how Kew has gone about developing a collection of species used in traditional Chinese medicines that can be used as standards to check the identity and quality of plants entering the trade in Britain as well as supporting research on these species. The collection contains samples for DNA based bar-coding, chemical fingerprinting and anatomical analysis as well as traditional taxonomic specimens. It is also supported by knowledge about the names of the plants being traded.

W8-01 Las ONGs y la Etnobiología, Etnobotánica y Etnofarmacología

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Antecedentes: La Etnofarmacología, Etnobotánica y Etnobiología han alcanzado un notable desarrollo como disciplinas científicas en la segunda mitad del siglo XX y el primer decenio del siglo XXI. Las publicaciones resultantes de estos trabajos han contribuido a promover una conciencia global sobre el valor de los recursos naturales y de su aprovechamiento tradicional, de cara a un desarrollo sostenible.

Por otra parte han surgido numerosas ONGs que, de diversos modos, incorporan criterios o procedimientos con base etnofarmacológica, etnobotánica o etnobiológica en sus programas rutinarios de actuación.

Objetivos: Promover la comunicación, el intercambio de experiencias y el conocimiento mutuo entre las diversas ONGs y los investigadores y docentes que participan en el congreso, orientado a estimular las sinergias entre los aspectos teóricos y los aplicados.

Métodos: Presentación por parte de las diversas ONGs de sus objetivos y programas activos en una sesión específica del congreso, teniendo en cuenta la diversidad de estructura y orientación de cada una de ellas. Discusión en una mesa redonda de las posibilidades de cooperación y mejora y propuesta de enfoques integradores.

Resultados y conclusiones: Esperamos que el foro que abrimos aquí pueda encontrar una continuidad y unas vías de colaboración entre las diversas ONGs y de éstas con los investigadores.

Palabras clave: Etnofarmacología, Etnobotánica, ONGs, Etnobiología.



W8-02 Entre red temática caribeña y ONG internacional: TRAMIL, para identificar, validar, difundir usos populares de plantas medicinales en relación a la APS.

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Antecedentes: Con el fin de determinar los usos populares tradicionales de plantas medicinales en 30 territorios de la Cuenca del Caribe, una metodología etnofarmacológica cuantitativa original (10% de las familias encuestadas, se descartan los usos "anecdóticos" o circunstanciales no repetidos en mínimo 20% de las respuestas) tuvo que ser diseñada por TRAMIL en el año 1982 y vigente hasta hoy, en el marco de una investigación aplicada en Salud Pública.

Objetivos: Organizarse para racionalizar las prácticas de salud basadas en el uso de plantas medicinales alrededor de la Cuenca Caribeña.

Métodos: La decisión de trabajar articulando universidades con servicios de salud en un marco de APS, nos llevo a conformar una red pluridisciplinaria y multinstitucional para diseñar una metodología de validación que analice la seguridad y actividades biológicas de los usos significativos, respetando estrictamente la preparación y la vía de administración tradicionales.

Resultados y conclusiones: Finalmente elaboramos una estrategia de difusión (TRADIF) para su apropiación por los sistemas oficiales de Atención Primaria de Salud del uso racional validado de plantas medicinales locales, así como la revinculación de estos análisis a las poblaciones previamente encuestadas y/o participantes.

Palabras clave: Etnofarmacología, plantas medicinales, atención primaria, Caribe, TRAMIL.

Agradecimientos: UAG, red TRAMIL.

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W8-03 El papel asociativo en la divulgación de la Etnobiología en el ámbito universitario

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Asociación Eubacteria - Oficina Verde de la Universidad de Murcia. Facultad de Biología, E.30100, Murcia, España.

Antecedentes: La Oficina Verde es una herramienta puesta al servicio de la defensa y el conocimiento de la naturaleza. Desde el ámbito universitario se debe promover el espíritu crítico y ofrecer información y fuentes fiables para poder opinar sobre el estado de nuestro planeta. El grupo de trabajo está compuesto por voluntarios miembros de la comunidad universitaria, estudiantes, investigadores y profesores de las facultades de Biología, Educación y Químicas.

Objetivos: Desde el punto de vista didáctico y divulgativo es muy importante dar a conocer los usos de la flora y la fauna por el ser humano. Las fórmulas tradicionales de gestión en el territorio son cruciales para la conservación de los recursos florísticos y faunísticos bajo el principio del equilibrio frente al crecimiento.

Métodos: Se han elaborado material educativo y divulgativo en línea. Realizado visitas organizadas: a los jardines botánicos del campus, al Museo de la Facultad de Biología. Cursos de promoción educativa sobre diversidad en la Región de Murcia; salidas interdisciplinares al medio natural y un proyecto sobre recuperación de la cría del gusano de seda.

Para la realización de los materiales se han utilizado herramientas informáticas libres y novedosas que han permitido además de divulgar estos proyectos la difusión de la revista editada por la Oficina Verde que se puede consultar en esta dirección www.um.es/eubacteria

Resultados y conclusiones: durante los 12 años del proyecto de la Oficina Verde y de la revista Eubacteria se han desarrollado 10 proyectos anuales de voluntariado ambiental que han contado con la participación de una buena parte de los centros de secundaria de la Región así como de los estudiantes de la Univ. De Murcia. En el caso del gusano de seda se ha creado una red de intercambio de simiente que ayudará a que esta tradición no se pierda.

Palabras clave: Divulgación científica, Educación Ambiental, *Bombyx mori*, Etnobiología.

W8-04 El papel de una ONG en la conservación de la biodiversidad agropecuaria.

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Antecedentes: La regresión de variedades tradicionales y razas autóctonas constituye uno de los fenómenos más preocupantes de pérdida de biodiversidad. La Asociación de Naturalistas del Sureste (ANSE) viene desarrollando diversas iniciativas de mantenimiento y recuperación de la diversidad agropecuaria.

Objetivos: La Asociación ha desarrollado diversas iniciativas que pretenden:

- Conservar razas ganaderas y variedades tradicionales de plantas cultivadas.
- Divulgación de la diversidad agropecuaria tradicional.
- Puesta en valor de la biodiversidad doméstica y agricultura ecológica.

Métodos: Los métodos aplicados para la consecución de los objetivos han sido:

- Propagación, conservación y distribución de material. Cesiones gratuitas.
- y c) Edición de material divulgativo accesible (póster, folletos, guía e inventario on line). Visitas de escolares y estudiantes. Charlas de formación. Noticias en medios de comunicación. Comercialización a través de un grupo de consumo responsable "Coccinela".

Resultados y conclusiones: Más de medio centenar de variedades tradicionales y razas ganaderas se encuentran conservadas y son accesibles. Los ciudadanos disponen de material divulgativo e interpretativo y unas 150 familias pueden adquirir productos. Además, un millar de escolares visitan el proyecto. En definitiva, las ONG, especialmente aquellas de carácter ambientalista, deben integrar la conservación de la diversidad agropecuaria en sus iniciativas.

Palabras clave: ONG, variedades tradicionales, razas autóctonas, conservación, biodiversidad.

W8-05 Recuperación, sensibilización y fomento del uso de las plantas medicinales tradicionales en la ciudad de Bukavu (R. D. del Congo)

J. García Botía

Umoya-Comité de Solidaridad con África Negra- de Albacete España.

Antecedentes: Umoya-Comité de Solidaridad con África Negra- de Albacete está llevando a cabo junto a Afia ni haki, una asociación de la ciudad de Bukavu (R. D. del Congo) un proyecto de recuperación, sensibilización y fomento del uso de las plantas medicinales tradicionales en esta ciudad africana. Las condiciones de pobreza son extremas de manera que la mayor parte de la población, cuando enferma, carece de asistencia sanitaria ya que aún recibéndola gratis no dispone de dinero para pagar el coste de las medicinas. La colonización supuso para ellos, entre otras pérdidas, la pérdida de la soberanía sanitaria. Los ritos y concepciones de los curanderos tradicionales fueron estigmatizados como "obras del demonio", siendo incluso perseguidos a nivel local. Las guerras que ha sufrido la región agrava el problema ya que han producido la muerte de gran parte de los "ancianos" y mayores, los conocedores de los saberes tradicionales. El proyecto cuenta con el apoyo económico del Ayuntamiento de Casas Ibáñez (Albacete) y la congregación religiosa de las Hermanas Ursulinas

Objetivos: recuperación, sensibilización y fomento del uso de las plantas medicinales tradicionales en esta ciudad africana

Métodos: Hasta la fecha de hoy se está trabajando a nivel de sensibilización en barrios pobres intentando restaurar la confianza en las plantas medicinales como recurso autónomo que puede mejorar el nivel sanitario en la zona. También se han buscado en la ciudad a personas conocedoras de las plantas y otros recursos medicinales locales, pidiéndoles colaboración con el proyecto.

Resultados y conclusiones: Se dispone en estos momentos de información de unas 150 plantas medicinales y sus usos. En la sede de la asociación local se ha creado un jardín con las plantas medicinales locales que se consideran más útiles.

A principios de 2010 empezamos una segunda fase en donde, con la colaboración de un curandero local, se está empezando a tratar a algunas personas que acuden al centro pidiendo ayuda.

Palabras clave: Plantas medicinales, medicina popular, África, curanderos locales.



W8-06 Phytosalus (salud por las plantas)

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Phytosalus (salud por las plantas), se conoce en África Occidental y Central, Europa y América.

En 1981, un padre blanco de origen español llamado César Fernández de la Pradilla formó un equipo inicial de herbolarios de cinco miembros jóvenes procedentes de los pobladores del pueblo Pabré en un seminario menor, donde enseñó ciencias naturales. Frente a la fuerte demanda de los pacientes, principalmente de la capital a unos veinte kilómetros, la Cooperativa de Hierbas Pabré decidió instalarse en Uagadugú.

En 1993, tuvo su reconocimiento oficial. Desde 25 de mayo 1999, un acuerdo firmado con el Gobierno de Burkina Faso le concedió el estatus de organización no gubernamental (ONG) para la medicina tradicional.

En la actualidad, emplea Phytosalus a veinte personas, cuenta con un laboratorio para la preparación de medicinas tradicionales mejoradas, un centro polivalente en Ouagadougou, y sucursales en el país y el extranjero. Además de contribuir a la creación y operación de redes y asociaciones de curanderos tradicionales, Phytosalus es ahora un socio y un interlocutor de los agentes de salud pública, los organismos e instituciones que participan en programas de desarrollo en la base.

W8-07 Jardins du monde

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Esta breve presentación tratará la importancia de las plantas para la ciencia, pero sobre todo para la salud de la humanidad que no tiene acceso a la medicina "moderna".

El 80% de la población del planeta dispone de sólo del recurso de las plantas y de los saberes de la medicina tradicional.

En base a la demanda de determinadas comunidades humanas, JDM valoriza las plantas medicinales en la salud humana y animal. A partir de la confección de jardines medicinales, JDM capacita a las poblaciones locales en atención a la salud y en el uso y gestión de las plantas.

Esta asociación humanitaria interviene en Centro América, África Occidental, Madagascar y el Himalaya (Tíbet y Mongolia).

A partir de algunos ejemplos tomados de los diferentes proyectos de JDM, presentamos una metodología apropiada en el desarrollo de las farmacoformas tradicionales en los países del Sur.

Durante esta intervención, se abordarán los siguientes temas:

- a) Metodología etnobotánica de JDM.
- b) Investigaciones científicas.
- c) Organización con las comunidades.
- d) Creación de jardines pedagógicos y de producción.
- e) Elaboración de documentos pedagógicos.
- f) Capacitación de la población y del personal de salud.

W8-08 Traditional Medicine in the Tibet and "Jardins du Monde Montagnes"

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For many years native or traditional pharmacopoeia have been studied from an ethno-anthropological perspective which focuses on usage, rather than on the nature and exploitation of specific medicinal properties, as is the case with anthropological studies of medicine. The recent fascination of western medicine for these pharmacopoeia however has effectively impacted their material identity in incorporating them into the mass-market phenomenon of "complementary and alternative medicines" as evinced by the diffusion of a Tibetan mushroom currently marketed in Africa as a treatment for AIDS. Establishing the life-cycle of a materially and symbolically changing medical object requires studying it in its different geographical and cultural contexts. The biological characteristics of this object determine its chemical fluctuation and thus the extent to which it can be standardized. The commercial cultivation of this object impacts its "natural" identity and frequently destabilizes the local economy from which it originates. Subsequent inevitable modifications brought to bear on the medical object reveal the various stages of its manufacture. Commodification, mass production, and global diffusion alter its original properties, threaten its status as a natural resource, and generate considerable economic and political stakes. Chinese and North American (USA) efforts to establish intellectual copyright for the clinical value of a "natural" cure and its "traditional" uses call attention to the matters of biodiversity and biological pirating. The wide-ranging circulation of information and increased marketability occasioned by the Internet undermine legislative control and attest to the exaggerated influence of the media. The anthropology of science is particularly useful in analyzing the pharmacological discourses surrounding the legitimization of traditional pharmacopoeia, and in identifying the cultural components of ancillary discourses used to valorize the medical product as natural and exotic, not to say miraculous. However, to explore fully the sanitary, environmental, and social consequences of such products and their massive diffusion gives cause to consider the elaboration of an "anthropology of phytomedicine".

W8-09 La Sociedad Española de Fitoterapia y el uso de los preparados a base de plantas medicinales

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La Sociedad Española de Fitoterapia, Asociación para el Desarrollo y Estudio de las Plantas Medicinales y sus Aplicaciones (SEFIT), es una sociedad científica que aglutina a los profesionales de diversos campos (universidad, industria, oficina de farmacia, consulta médica, etc.) con el objetivo de promover la investigación, la difusión y el uso terapéutico de las drogas vegetales y sus derivados, en el marco del uso racional y de los criterios científicos, al objeto de favorecer la salud de la población.

La acción de la SEFIT se desarrolla principalmente a través de la organización de congresos y jornadas específicas sobre sectores terapéuticos, la participación en actividades docentes para profesionales y la difusión de información a través de la Revista de Fitoterapia (órgano oficial de la SEFIT que todos los asociados reciben gratuitamente). Además, la SEFIT colabora con otras sociedades científicas y profesionales en numerosas actividades, y actúa como entidad consultora del Ministerio de Sanidad y Consumo en relación con iniciativas legislativas que le puedan concernir.

SEFIT es miembro de ESCOP (European Scientific Cooperative on Phytotherapy) y CIAF (Consejo/Conselho Iberoamericano de Fitoterapia).

Para más información: <http://www.fitoterapia.net/sefit/sefit.php> y página 197 de este libro de resúmenes.

Palabras clave: Fitoterapia, SEFIT, Jornadas, Congresos, ESCOP, CIAF, Revista.