

GA Society for Medicinal Plant and Natural Product Research Gesellschaft für Arzneipflanzen- und Naturstoff-Forschung e.V.



Message from the President



Dear members,

the International Congress on Natural Products Research 2012 (ICNPR 2012), July 18 - August 1, in New York, was a very successful joint meeting with 1.300 participants from all over the world. It was mainly organized by ASP; other participating and co-organizing societies were AFERP, GA, PSE and SIF. On behalf of GA, I would like to thank especially Barbara Timmermann (President of ASP), Edward Kennelly (Chair of the Local Organizing Committee), Guy T. Carter (Chair of the Scientific Organizing Committee) and their team for all the excellent work and engagement. The very interesting program involved various workshops, 48 invited lectures, 8 award lectures, more than 70 short lectures and nearly 1.100 poster presentations. Before the congress a Planta Medica Editorial Board Meeting on Friday evening and a GA-BoD Meeting on Saturday took place. Monday morning in a special session it was a great pleasure to present the GA award winners. The Egon Stahl Award in Bronze was presented to Dr. Ulrike Grienke, the Dr. Willmar Schwabe Award to Dr. Elke Heiss, and the Dr. Willmar Schwabe Scholarship for Young Scientists to Dr. Fahimeh Moradi-Afrapoli (more details later on in this newsletter). On Monday evening the GA Members Meeting was held, a report is given in this newsletter. On Wednesday morning a special session with three very interesting lectures was organized by GA. Prof. H. Derendorf, Univ. of Florida, gave a lecture entitled "Pharmacokinetics of Natural Compounds", Prof. A. Crozier, Univ. of Glasgow, a lecture on "Recent studies on the bioavailability of dietary (poly)phenolics", and Dr. A. Scalbert, IARC in Lyon, a lecture entitled "Mining the polyphenol metabolome to identify in population studies its components most protective against chronic diseases". The abstracts of all presentations of the congress have been published in Planta Medica

(many thanks to the issue editor Edward Kennelly) and can be seen by GA members on the GA homepage in the members' area. Highlights of the social program of the congress were a visit of the New York Botanical Garden combined with a picnic and the congress dinner on Wednesday evening. The next joint meeting of all societies will be organized by GA together with Prof. Anna Jäger in 2016 in Copenhagen, Denmark.

The next Annual GA Congress will be in Münster, Germany, 1-6 September, 2013. Local organizers will be Prof. A. Hensel and Prof. T. Schmidt together with their team. For details see the announcement in the internet: http://www.ga2013. org/. At the GA congress in Münster 3 Awards will be presented: the Egon Stahl Award in Silver, the Bionorica Phytoneering Award and the Dr. Willmar Schwabe Scholarship for Young Scientists. These Awards are announced in this newsletter, but also on the GA homepage and in Planta Medica. Applications of GA members are welcome.

The number of GA members compared to data presented one year ago decreased somewhat to more than 1.300. The reason is that members who have not paid their fees for more than 2 years were excluded. We think it's better to count only real active members of our society. In the last months again some more scientist from various countries became members of GA - they all are very welcome.

For various reasons the impact factor of Planta Medica in 2011 decreased somewhat to 2.153. All efforts are undertaken by the Editor-in-Chief, Luc Pieters, the Editorial Board of Planta Medica, and Thieme to come to an increasing impact factor again. Of course all members of GA are also asked to help and to send high quality papers to Planta Medica, which is the official scientific organ of GA. GA recently has also applied for the 7th framework program of the European Union and now is happy to be a validated partner and able to participate in European and international projects as a legal entity. For more details see later on in this newsletter.

Also a new foundation "Plants for Health" has been created by GA. The aim is to provide funding of research networks, innovative projects and junior research groups (more details later on in this newsletter and on the GA homepage). Everybody is asked to support this foundation financially in order to really enable the promotion of research activities in the field of medicinal plant research. I wish all of you a happy, healthy and successful year 2013 and I'm looking forward to see many of you at the Annual GA Congress in Münster.

Cordially,

Wolfgang Blaschek GA president



"Plants for Health"

A foundation of the Society for Medicinal Plant and Natural Product Research (GA)

A new foundation supporting research into all aspects of medicinal plants and natural products has been created by the Society for Medicinal Plant and Natural Product Research (GA) and is asking for your support.

Medicinal and natural product research is thriving all over the world. There is a considerable interest in this field of research especially from younger scientists. This is also an area of tremendous interest for the general public with new products offering opportunities for farmers, producers and retailers. However, there is a consistent and deepening lack of public funding particularly for projects which are at an early stage of development.

Our key goal is to support highly innovative and multidisciplinary research projects which will strengthen the academic basis of medicinal plant and natural product research and to nurture emerging research networks.

Specifically the Foundation will:

- Initiate scientific collaboration and the development of research networks
- Provide start-up funding for innovative projects
- Provide start-up funding for best in class junior research groups and their leaders.

The funds will initially be used for travel and equipment facilitating proof-of-concept projects. Your donation will help to foster innovation and research in the fields of medicinal plant and natural product research and you will benefit from tax concessions (depending on your tax status and the regulations in your country of residence).

Contributions can be made to:

Recipient: Foundation "Plants for Health" Bank: UniCredit Bank AG,

UniCredit Bank AG, Oberer Markt 42.

D-92318 Neumarkt, Germany

IBAN: DE26 7602 0070 0018 2195 90

BIC: HYVEDEMM460



For further enquiries please contact the Chairman of the Foundation Board, Prof. Gerhard Franz (Gerhard.franz@chemie. uni-regensburg.de), the President of GA, Prof. Wolfgang Blaschek (vbla@pharmazie.uni-kiel.de), or visit the website www.ga-online.org/plants-for-health. On behalf of the many researchers in this

On behalf of the many researchers in this field, thank you very much in advance for your support.

Gerhard Franz
Michael Heinrich
Andreas Hensel
Board of Directors of the Foundation

The Society informs

Notes to all GA members



Editorial remark

All contributions for the GA-Newsletter are welcome.

Deadline for submission is fixed to May 20th 2013.

Please send all contributions by e-mail: Prof. Dr. A. Hensel University of Münster, Institute for Pharmaceutical Biology and Phytochemistry, Hittorfstrasse 56, D-48149 Münster, Germany ahensel@uni-muenster.de



Deceased members

(to our knowledge)

Prof. Dr. Hilmar Friedrich Born 15.02.1920 in Leipzig, Germany Deceased 16.10.2012 in Leipzig, Germany Honorary member of GA See also obituary in this Newsletter

Prof. Dr. Heinrich Glasl Born 09.12.1940 in Wasserburg, Germany Deceased 08.11.2012 in Hamburg, Germany

The Society will keep commemoration and offers its sincere condolence.



Announcement of the Egon Stahl-Award in Silver 2013

On the occasion of his 60th birthday, Professor Dr. Dr. h.c. mult. Egon Stahl donated a medal, a document and a monetary prize in order to recognize and promote young scientists working in the field of Pharmacognosy (Pharmaceutical Biology) and Analytical Phytochemistry.

As a rule, the silver medal and an award of € 3.000 should be awarded to scientists up to the age of about forty, who have published outstanding scientific work during the years following their graduation.

In 2013 the ESA Silver will be given during the 61st International Congress and Annual Meeting of GA in Münster, Germany, 01–05. Sept. 2013 (www.ga2013.org).

Members of the Society for Medicinal Plant and Natural Product Research (GA) are invited to submit nominations for candidates together with supporting data to the president of GA, Prof. Dr. Wolfgang Blaschek.

A nomination for the prize has to include a curriculum vitae incorporating the candidate's scientific career, an index on her/his publications, and reprints of several of his/her more recent publications. All publications can be taken into consideration. All documents have to be submitted in **electronic form** (as CD in 5 copies). Deadline for submission is **March 15th 2013**.

Prof. Dr. Wolfgang Blaschek, GA President



Documents to be sent to: Prof. Dr. Wolfgang Blaschek University of Kiel, Institute of Pharmacy, Pharmaceutical Biology, Gutenbergstraße 76, D-24118 Kiel, Germany E-Mail: wbla@pharmazie.uni-kiel.de

Announcement Bionorica Phytoneering Award 2013

BIONORICA SE is globally one of the leading companies in the area of phytotherapy, producing plant-based medicines with proven efficacy, safety and quality. BIONORICA's headquarters are located in Neumarkt i. d. Opf. (Germany/Bavaria). The company is family-owned since 80 years.

A significant focus of BIONORICA's work is concentrated on R & D activities with annual capital investments of about 15 % of the company's turnover. Although the center of all R & D activities is in Neumarkt, BIONORICA has established further research institutes in Innsbruck (Austria) and Hong Kong. In addition BIONORICA has built a scientific network with multiple renowned institutions, organizations and scientists worldwide.

The Bionorica Phytoneering Award (BPA) acknowledges outstanding research and development with regard to medicinal plants. The award is endowed with 10 000 €.

The purpose of the award is to motivate scientists (normally younger than 45 years of age) all over the world to perform research with regard to herbal drugs focusing on the following:

Generally any new discovery and innovative application related to

- phytoanalytics / pharmacokinetics / pharmacodynamics / phytomedicine
- analytical approaches including active principles / metabolomic approaches
- research leading to the identification of new pharmacological mechanisms
- new techniques especially applied for herbal drugs.

Scientists or research groups of universities and other noncommercial scientific institutions are entitled to apply. Three scientific publications on a specific topic which have been published during the last three to five years can be considered. They must be submitted in **electronic form** (as CD in 5 copies) until **April 15, 2013** along



The symbol of the Bionorica Phytoneering Award "Key to Sciences"

with a CV and a list of publications to the President of the GA.

The Bionorica Phytoneering Award will be bestowed during the 61st International GA congress in Münster (Germany), September 1–5, 2013 (www.ga2013.org). The award-winner will present the scientific results during the congress in a lecture of 30 minutes.

Applications/documents to be sent to: Prof. Dr. Wolfgang Blaschek University of Kiel, Institute of Pharmacy, Pharmaceutical Biology, Gutenbergstraße 76, D-24118 Kiel, Germany E-Mail: wbla@pharmazie.uni-kiel.de

Announcement of the Dr. Willmar Schwabe Research Scholarship for Young Scientists 2013

Awarding Institution: Society for Medicinal Plant and Natural Product Research (GA) Endowing Sponsor: Dr. Willmar Schwabe GmbH & Co. KG, Karlsruhe (Germany) Endowment: 10.000 €

Frequency: upon announcement Objective: The aim of the Dr. Willmar Schwabe Research Scholarship for Young Scientists is to support research of young scientists, especially from develop-

ing countries in leading research institutions. Projects focusing on pharmacological or clinical research of phytopharmaceuticals and their active substances are particularly welcome. The award is exclu-



sively used for travelling and living costs of the awardee and not for consumables. A duration of at least 6 months is mandatory. *Criteria for Application*

- Advanced (year 2 onwards) PhD students and postdocs.
- In case of similar scientific quality of applications applicants from developing countries shall have priority.
- GA membership for at least one year prior to application, with paid fees.
- Age: preferably 30 years of age (postdocs) or younger (PhD students).
- The hosting institution states in the Letter of Acceptance that it is prepared to cover the cost for the consumables used for the research project, that the student will have an adequate laboratory infrastructure and that a tutor is assigned, who supervises the applicant during his/her working period.

Documents for Application

- Letter of Motivation (applicant)
- Letter of Support (supervisor)
- · CV and list of publications
- Project description including experimental design, time schedule and justification why the research shall be performed in the respective institution
- Letter of Acceptance (hosting institution)
- Confirmation of the host institution to cover the laboratory costs (consumables)

Specification of costs for travelling and living

All documents have to be submitted to the president of the Society for Medicinal Plant and Natural Product Research in electronic form (as CD-Rs in 5 copies) until a fixed deadline.

Jury

The president of the Society for Medicinal Plant and Natural Product Research appoints at least 2 independent experts to evaluate and compare the submitted applications.

The jury will decide on the basis of the expertises and select the winner.

The jury consists of the president and the vice-presidents of the Society for Medicinal Plant and Natural Product Research, the editor-in chief of Planta Medica and a representative of Dr. Willmar Schwabe GmbH & Co. KG.

Further details

The **Dr. Willmar Schwabe Research Scholarship for Young Scientists** will be bestowed in a ceremony during the Annual Congress of the Society for Medicinal Plant and Natural Product Research. The scientific results of the project shall be presented during the next annual congress preferably in a short lecture (or at least as a poster).

The awardee has to prepare a final report on the research supported by this grant

and its outcome. This report has to be signed by the head of the research institution. A copy of the signed report has to be sent to the GA president and to Dr. Willmar Schwabe GmbH & Co. KG. In case of publication of the results the award has to be mentioned in the Acknowledgement.

The award is announced via the website of GA, a circular email to all GA members, in the GA newsletter and during the Annual Congress of the Society for Medicinal Plant and Natural Product Research via an info flyer.

The deadline for submissions for the **2013** announcement is **February 15, 2013**.

Prof. Dr. Wolfgang Blaschek, GA President

Applications/documents to be sent to: Prof. Dr. Wolfgang Blaschek University of Kiel, Institute of Pharmacy, Pharmaceutical Biology, Gutenbergstraße 76, D-24118 Kiel, Germany

E-Mail: wbla@pharmazie.uni-kiel.de

Some Data from the Membership Data Base: New GA members

Since May 2012 the following 25 members have joined our Society. GA warmly welcomes all new members and hopes that the Society may get an international platform for many scientific and personal contacts. We are looking forward to your active participation in many GA events! All the best for you all!

Matthias **Agbo**, Nigeria; Francis Alfred **Attah**, Nigeria; Sunday Buru **Ayuba**,

Malaysia; Ashutosh Bhatt, India; Sunita Dhawan Singh, India; Justin Fischedick, Netherlands; Ioan Grozescu, Romania; José Hipólito Isaza Martinez, Colombia; Nuanjan Jaiarree, Thailand; Eirini Kouloura, Greece; Krishanthi Peshala Kumaragamage, Sri Lanka; Christopher Larbie, Ghana; Frédéric; Martin, Switzerland; Florence Nwakaego Mbaoji, Nigeria; Giacomo Mele, Italy; Johanna Michl, United Kingdom; Vidushi Neergheen-

Bhujun, Mauritius; Ifeoma Amarachukwu Nwabunike, Nigeria; Johnny Olukunle, Nigeria; Collins Azubuike Onyeto, Nigeria; Angela Paterna, Portugal; Mariana Reis, Portugal; Sina Rostami, Turkey; Adina Segneanu, Romania; Engin Yol, Turkey

Dr. Birgit Benedek, GA Secretary

Travel grant winners for ICNPR 2012 in New York

GA was able to sponsor several travel grants for graduate students and post-doctoral fellows to attend the 2012 International Congress on Natural Products Research from July 29 to August 1 in New York. The GA travel grant committee 2012 consisted of Judith Rollinger, Veronika Butterweck and Hebba Abdel Aziz. The committee has received a total of 16 applications and finally 11 travel grants were awarded on a competitive basis from among the accepted abstracts. The GA congratulates the following recipients:

PhD Student Level

Hamid Reza Adhami, Austria (1125 €)
Dr. Marie-Caroline Jonville, Belgium (1125 €)
Andrea Derksen, Germany (1125 €)
Sandra Ebeling, Germany (1125 €)
Caroline Schomburg, Germany (1125 €)
Nikolaos Lemonakis, Greece (1125 €)
Nikitia Mexia, Greece (1125 €)
Siau Hui Mah, Malaysia (2000 €)
Sin Soek The, Malaysia (2000 €)
Samad Ebrahimi, Switzerland (1125 €)

Postdoctoral Fellow Level

(for Young Researchers from developing countries):

Dr. Festus B.C. Okoye, Nigeria (2000 €)



Orbituary Prof. Dr. Hilmar Friedrich

Professor Dr. Hilmar Friedrich, Professor emeritus of Pharmaceutical Biology and Phytochemistry (Pharmacognosy) at the Westfälische Wilhems-University of Münster (Germany) and Honorary Member of the Society for Medicinal Plant and Natural Product Research since 1985, passed away on September 23, 2012.

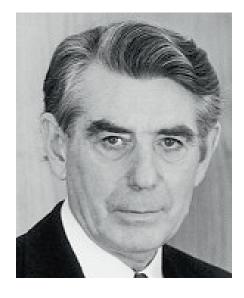
Professor Friedrich was born on February 15, 1920 in Leipzig. After the Second World War he studied Pharmacy and Food Chemistry at the University of Leipzig; he received his M.S. (Staatsexamen) in Pharmacy and shortly later his approvement as a Food Chemist from the University of Leipzig (1949). From there he changed to the Univeristy of Halle (Germany) and the German Academy of Sciences at Gatersleben. As a coworker of the unforgotten Prof. Kurt Mothes (1900-1983) he graduated as PhD (Dr.rer.nat.) in 1953 and completed his habilitation in 1957 under the supervision and promotion by Prof. Mothes. After lectureships at the Universities of Leipzig, Münster and Hamburg (Germany) he joined the Faculty of Biology, Institute of Applied Botany, at the University of Hamburg in 1962 as a Professor of Pharmacognosy (Extraordinarius) and a successor of Prof. Ilse Esdorn (1897-1985). In 1968 he was appointed full professor at the University of Münster as the successor of Prof. Dr. Eduard Schratz (1901-1977).

During his research Professor Friedrich studied phytochemical and physiological aspects mainly in medicinally used plants. Metabolites such as phenolics

with flavonoids, tannins, anthranoids, further essential oils, saponins, valepotriates and tropane alkaloids were in his focus. He investigated their chemistry, analytics, cultivation, contamination by herbicides and their residues, production by cell cultures and common physiology. He published numerous papers in these fields and supervised 28 PhD students. Thereby he contributed to the important change of pharmacognosy from a descriptive research of crude drug material to an experimental one with an analytical and biochemical perspective of plant natural products. He belonged to the endangered species of professors with a broad and substantial knowledge in pharmacognosy and plant science.

Additionally he accepted several honorary appointments. Already as young fellow he served as Editor in Chief of the journal "Die Pharmazie". He was elected as dean and vice-dean of the Department of Chemistry (which covered pharmaceutical institutes at that time) from 1970 to 1972; from 1978 to 1980 he was a member of the Senate of the University of Münster. He was president of the GA from 1966 to 1971, vicepresident from 1972 to 1977 and served as member of the Advisory Board of the GA from 1978 to 1985. He organized the 13th (Hamburg) and the 26th (Münster) Annual Meeting of the GA. From 1972 to 1976 he chaired the Section "Medicinal Plant Research" of the "Federation Internationale Pharmaceutique".

As a scientist, teacher and senior chief of



the Institute Professor Friedrich was of high reputation. He maintained good relationships to the American Society of Pharmacognosy via his friend, the late Prof. V.E. Tyler (1926–2001). After his retirement he retreated step by step from academic life, but undertook extended journeys as long as this was possible, thereby caring for his interest for exotic cultures and plant vegetation. Since 2007 Professor Friedrich spent his remaining time again in Leipzig and closed his life cycle in his hometown.

Adolf Nahrstedt Rolf Engelshowe

Prof. Dr. Chlodwig Franz

A farewell to his Professorship at the Veterinarian University of Vienna (Veterinärmedizinische Universität Wien)

On September 27th 2012 a Symposium took place to celebrate the retirement of Chlodwig Franz, who was Professor for Botany and Pharmacognosy at the Veterinarian University of Vienna since the year 1985. As a matter of fact, this event was not the

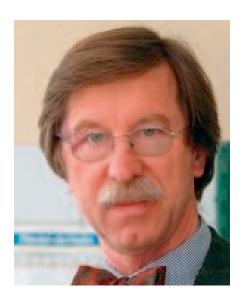
As a matter of fact, this event was not the end of an academic career. On the contrary, Chlodwig Franz will continue his global research activities in the future. He was only finalizing his teaching duties for the students of the Veterinarian Vienna University.

Chlodwig Franz started his academic career in 1968 at the BOKU in Vienna (Universität für Bodenkultur) and finished with a degree of 'Dipl. Ing. agr.' i.e. engineer for agricultural technologies. Thereafter he left Austria and went to Bavaria: University of Munich (TMU/LMU München) and obtained his PhD 1971 as 'Dr. agr.' in Freising/Weihenstephan) and in 1981 as 'Dr. agr. habil.', the optimal start for an academic career, which followed consequently.

In Freising/Weihenstephan he discovered his interest in Medicinal Plants (nick name 'Kamillen-Franz') breeding, agriculture, genetics, everything what was needed for highly potent herbal drugs utilized in human and animal phytotherapy.

Back in Austria 1985, Chlodwig Franz was nominated as Full Professor at the Veterinarian University Vienna. Here he could continue his above mentioned research activities. During these years Chlodwig Franz had attracted many scientists to his Institute, further a series of PhD students and young 'Privatdozenten', starting their academic career. The overall output of scientific papers in many high ranking journals was obvious everywhere. Consequently, his distinctions, medals and awards are numerous, as well as his functions in Scientific Committees around the world.

However, something is worth to be mentioned besides the academic merit and honors of Chlodwig Franz: his broad inter-



est in and activities in European Culture, documented by the Annual Meetings in his castle 'Schloss Bach', where he and his wife Johanna organized the so called 'Carinthische Tage,' which are an annual get-together of outstanding personalities contributing to various actual topics. These activities certainly will go on for the next years to come!



Prof. Chlodwig Franz will not fade away, he has too many activities which will keep him young and active for many, many years to come. But never mix him up with Gerhard Franz (who retired some years earlier); that is the reason we named him Franz II.

How to distinguish between Franz I and Franz II? Franz I is always wearing a **tie** whereas Franz II can be distinguished by his **colored bow** (see picture above).

With the best wishes from all his friends around the globe.

Prof. Dr. G. Franz, University of Regensburg, Germany, Franz I



Egon Stahl Award in Bronze 2012 for Dr. Ulrike Grienke

The aim of the Egons Stahl Award in Bronze is to recognize and promote young scientists working in the field of Pharmacognosy (Pharmaceutical Biology) and Analytical Phytochemistry. The bronze medal and an award of 1.500 € is given to young scholars up to the age of about thirty whose thesis was of outstanding quality. On occasion of the ICNPR 2012 the award was presented to **Dr. Ulrike Grienke**.

Ulrike Grienke studied Pharmacy at the University of Innsbruck, Austria. In 2007 she finished her diploma thesis and in 2008 she started her PhD studies under the supervision of Prof. Judith M. Rollinger at the Institute of Pharmacy/Pharmacognosy at the University of Innsbruck, Austria. She was awarded a PhD scholarship granted by the Austrian Science Fund. In 2011, Ulrike Grienke accomplished her PhD thesis entitled "In silico guided approaches in the search for anti-inflammatory and anti-influenza natural leads" which was awarded with distinction. In close col-

laboration with several research partners she dealt with phytochemical studies, analysis, isolation and structure elucidation of anti-inflammatory constituents from medicinal plants and fungal sources by means of computer-assisted techniques and bioassay-guided approaches. Furthermore, exploiting ethnopharmacological hints, she isolated and identified anti-viral natural compounds which act as inhibitors of influenza neuraminidase. She has successfully communicated her research findings in peer-reviewed journals and at national and international conferences as oral and poster presentations.

She went on to pursue her studies in the field of natural product research and currently is at the National University of Ireland in Galway as a postdoctoral researcher working on marine natural products within the Irish Marine Functional Food Research Initiative "NutraMara programme" under Prof. Deniz Tasdemir.

On Monday morning at the ICNPR2012



Dr. Grienke gave an award lecture entitled "Targeting inflammation and Influenza: Integration of computional methods into lead finding from natural sources". She presented results on the pharmacophore based discovery of anti-inflammatory and farnesoid-X-receptor-inducing lanostane-type triterpenes from the fungus *Ganoderma lucidum* as well as the identification and in silico binding studies of a diarylheptaoid isolated from *Alpinia katsumadai*, which turned out to be an effective influenza neuraminidase inhibitor.

Dr. Willmar Schwabe Award 2012 for Dr. Elke Heiss

The Dr. Willmar Schwabe Award acknowledges outstanding results of pharmacological and/or clinical research in the field of herbal medicinal products. The award is endowed with 10,000 € by the endowing sponsor Dr. Willmar Schwabe GmbH, Karlsruhe, Germany. The aim of the award is to motivate preferentially young scientists (normally 40 years or younger) to resolve phytotherapeutical and phytopharmaceuti-

cal problems in an interdisciplinary approach, in order to support the evidence-based use of natural products.

This year, the award was given to **Dr. Elke Heiss** for her outstanding scientific investigations of effects of medicinal plants and natural compounds especially in the field of metabolic and vascular dysfunction.
Elke Heiss was born in Germany. She studied Biochemistry at the Universities of





Regensburg, Germany and Canterbury, UK. After graduating with a diploma she pursued her scientific career at the German Cancer Research Center in Heidelberg, Germany. There she received her PhD under the supervision of Prof. Bartsch and Dr. Gerhäuser. As postdoctoral researcher she has been in the laboratories of Prof. M. Sporn at Dartmouth, USA, and Prof. L. Rönnstrand in Malmö, Sweden. Since 2005 she works as University Assistant and Senior Researcher in the group of Prof. Dirsch at the Department of Pharmacognosy, University of Vienna, Austria.

At the ICNPR2012 on Monday morning Dr. Grienke gave an award lecture entitled "Targets, Tools and Leads – The different Roads natural Products can take us". Her research is focused on bioactive natural products alleviating vascular and metabolic dysfunction. In some of her investigations she could show that ascorbate modulates the phosphorylation state of endothelial nitric oxide synthase (eNOS) and thereby rapidly enhances production of NO in endothelial cells resulting in vasodilation. In another project she used a derivative of oleanolic acid for activation of the cytopro-

tective nuclear erythroid 2-related factor (Nrf2). Activated Nrf2 then could be shown to prevent endothelial dysfunction under hyperglycemia. In a third part she presented results demonstrating that a derivative of indirubin inhibits vasculoproliferative complications which are characteristic e.g. in atherosclerosis. The target of the indirubin derivative could be shown to be a specific transcription factor signal transducer and activator (STAT3). Indirubin derivatives might become important lead compounds for the development of drugs against vasculoproliferative disorders.

Dr. Willmar Schwabe Research Scholarship for Young Scientists 2012 for Fahimeh Moradi-Afrapoli

The aim of the Dr. Willmar Schwabe Research Scholarship for Young Scientists is to support research of young scientists, especially from developing countries, in leading research institutions. Projects focusing on pharmacological or clinical research of phytopharmaceuticals and their active substances are particularly welcome. The scholarship is endowed with 10.000 €. The money is exclusively used for travelling and living costs and not for consumables. GA is very thankful to Schwabe company as endowing sponsor. Six excellent young scientists have sent applications to the scientific committee of GA and it was a difficult decision for the experts and the ExC to select the winner of the scholarship, but finally it was a great pleasure for the GA President and Dr. Meng (Schwabe company) to present the

award to **Fahimeh Moradi-Afrapoli** during the congress in New York.

Fahimeh Moradi-Afrapoli is born in Iran. In 2006 she obtained a Pharm. D. degree at the Mazandaran University of Medical Sciences, Iran. In the same year she also got a top student award. In April 2012 she received her Ph.D. in Pharmacognosy at the Tehran University, Iran, and since June 2012 she serves as Assistant Prof. of Pharmacognosy at the Mazandaran University. Fahimeh Moradi-Afrapoli has started to work in October at the Institute of Pharmaceutical Biology (Prof. Matthias Hamburger), Department of Pharmaceutical Sciences, University of Basel, Switzerland, with investigations on the penetration of the blood-brain-barrier by metabolites of flavonoids in a model with different immortalized human cell lines. This is of great in-



terest, as little is known on the biological activity and the pharmacokinetics of flavonoid metabolites.

Ms. Moradi-Afrapoli will present results of her investigations next year at the annual GA-Congress in Münster, September 1–5, 2013, Germany.

Lecture of Dr. Marija Lesjak, winner of the Dr. Willmar Schwabe Research Scholarship for Young Scientists 2011 at ICNPR 2012

In 2011 at the Annual GA Congress in Antalya, Marija Lesjak from Serbia, University of Novi Sad, had been selected for the Dr. Willmar Schwabe Research Scholarship for Young Scientists (see Newsletter 2011-2). With the help of the scholarship she could work in the Laboratory of Prof. Surjit Kaila Singh Srai, Research Department of Structural and Molecular Biology, ISMB, Division of Biosciences, University College London. UK.

Dr. Lesjak presented the results of her research in a special lecture on Monday morning during ICNPR2012. The aim of her investigations was to elucidate the effect of flavonoids, esp. Quercetin, on in-

traperitional iron uptake. Her lecture was entitled "Role of Quercetin on iron homeostasis". Rats fed on an iron deficient diet were used for the studies. Iron uptake and levels in various organs and gene expression of selected intestinal proteins was quantified. According to her investigations, after longer oral treatment with quercetin animals became iron deficient. Quercetin affected iron homeostasis by changing expression of proteins involved in iron absorption. Moreover quercetin chelates iron, and the complexes seem to remain in enterocytes without being transported into circulation.



The GA Board of Directors during the last meeting in New York

Minutes of the GA members meeting 2012

The Members Meeting took place during the Joint Meeting in New York on 30 July 2012 from 7.00 to 8.15 p.m. 54 GA members attended the meeting.

1. Approval of the Agenda

President Prof. W. Blaschek welcomed all participants. The agenda, published in the GA Newsletter 1-2012, was unanimously approved.

2. Approval of the Minutes of the Members Meeting

The minutes of the previous Members Meeting on 6 Sept. 2011 in Antalya, published in the GA Newsletter 2-2011, were unanimously approved.

3. Annual reports

3.1. Report of the President Prof. W. Blaschek

- He participated in the Mistletoe Symposium in November 2011 in Nonnweiler.
 The so-called "Nonnweiler-Erklärung" on the reimbursement of the costs of parenteral mistletoe preparations not only for palliative but also for adjuvant cancer treatment by statutory health insurance funds was signed by W. Blaschek on behalf of GA. The next symposium will take place in 2014.
- He attended the meeting of the initiative "Zukunft Phytotherapie" on 15. Dec. 2011 in Berlin. A website about this initiative will be created containing information for all interested parties.
- He attended the official farewell party of Prof. E. Stahl-Biskup in February in Hamburg. He gave a welcome address in the name of GA and gave a lecture.
- He had a meeting with Dr. Meng, Schwabe, and discussed the open issues related to the awards sponsored by Schwabe.
- He visited Alberto Dias in Portugal in February and discussed the organisation of the Annual Congress 2014.
- He attended the "11th Annual Oxford International Conference on the Science of Botanicals" in Oxford, Mississippi, USA, in April and gave a lecture.
- He attended the congress "Phytotherapeutika 2012 – Wissensfortschritte im 21. Jahrhundert" and participated in the panel discussion.



3.2. Reports of the Vice-Presidents3.2.1. Report of Vice-President Prof. B. Kopp

- She has written the Message of the President and the Laudationes of the awards given in 2011 for the Newsletter 2-2011.
- She attended the symposium BREEDMAP in June in Vienna as representative of GA.
- She was responsible for the Dr. Willmar Schwabe Research Scholarship for Young Scientists 2012. Six applications have been received. The award winner is Ms. Fatimah Mohradi who is going to work in M. Hamburger's lab.
- She participated in the symposium "Phytotherapeutika 2012 Wissensfortschritte im 21. Jahrhundert" in Vienna and represented GA at the press conference.
- She was member of the jury for the Egon Stahl Award in Bronze and the Willmar Schwabe Award.

3.2.2. Report of Vice-President Prof. M. Hamburger

- He was involved in the planning of the scientific programme for the Joint Meeting in New York.
- He has set up initial contacts with A. Jäger, the organiser of the Joint Meeting in Kopenhagen in 2016.
- He attended the congress of the Brazilian Society in Brazil in April. GA was present with some members. The meeting was quite successful and good contacts with the Brazilian Society could be established.
- He was member of the jury for the Egon Stahl Award in Bronze and the Willmar Schwabe Award.
- Based on a suggestion of the BoD member N. Fokialakis GA has recently applied for the 7th framework programme of the European Union. GA is now a validated partner and is able to participate in Euro-

pean and international projects as a legal entity being responsible for the dissemination of scientific results. An informative circular mail has been sent to all GA members shortly before the congress. N. Fokialakis gave a short report.

3.3. Report of the Secretary Dr. B. Benedek

- She presented the members statistics: GA currently has 1308 active members (07/2011: 1501, 08/2010: 1418). Currently 716 members pay the regular fee of 60 EUR, 528 members pay the reduced fee of 20 EUR. GA currently has 36 company members (one new: Indena S.p.A., Italy; one cancellation: Gustav Klein GmbH, Germany). For 28 members fees are waived. 11 thereof are Honorary Members, for 17 members the fees have been waived due to more than 40 years of GA membership.
- She arranged the production of the PR material (new GA info flyer, banners for speaker's desk and GA desk, flyer for the foundation "Plants for Health" in German and English).

3.4. Report of the Treasurer Dr. B. Roether

- He reported about the current financial situation of GA:
- The total assets of GA currently amount to 125.429 EUR (funds value: 56.530 EUR, cash: 68.899 EUR). One fund has been terminated by the bank in July 2012. Therefore a new investment form was needed. A fund with an adequate risk profile has been chosen.
- The Egon Stahl fund currently amounts to 54.615 EUR (funds value: 52.000 EUR, cash: 2.615 EUR).
- The total revenues in 2012 were 41,672 EUR so far (status 07/2012, budget 2012: 89,200 EUR). The total expenses in 2012 were 17,962 EUR so far (status 07/2012, budget: 91,050 EUR).



- Regarding the Foundation "Plants for Health" a bank account has been established. The status of the foundation is now a "preliminary foundation", until a sum of 50.000 EUR has been reached. The PR material is already available, so that the fundraising can be started.
- Planta Medica online subscriptions: 21 members have subscribed to PM online back to 1998, 29 members back to 1953.

3.5. Discharge of the Executive Council

As the cash auditors Prof. E. Stahl-Biskup and Dr. Bruno Frank could not attend the members meeting, Prof. R. Bauer presented the Report of the Auditors: Both cash auditors had independently assessed the annual cash report 2011. Their reports were very positive, no irregularities have been found.

Based on the Report of the Auditors Prof. Bauer asked for the discharge of the ExC which was accepted unanimously by the whole assembly.

4. Report of the Editor-in-Chief of Planta Medica Prof. L. Pieters

- L. Pieters presented facts and figures about Planta Medica like submitted versus published manuscripts (rejection rate 78 %), published manuscript types (original papers, letters, reviews, rapid communications and perspectives), origin of published manuscripts (leading country: China).
- In 2012 one special issue has been published ("Herb Drug Interactions" by Butterweck & Derendorf). Another special issue on "Women's Health" edited by G. Vollmer (2012 or 2013) is planned.
- The impact factor has decreased to 2.153 in 2011 (2.369 in 2010). Measures

to increase the impact factor again include publication of more original papers and less letters, continuing efforts to publish reviews and special issues, visibility and electronic accessibility of the journal.

5. Reports of the Permanent Committees

During the Joint Meeting in New York 2012 no workshops of the Permanent Committees took place.

- Prof. V. Butterweck will remain chair of the PC "Biological and Pharmacological Activity of Natural Products" with Prof. G. Vollmer (TU Dresden) as co-chair. The next workshop will be organised during the annual congress in Portugal 2014.
- Prof. O. Kayser (TU Dortmund) is the chair of the PC "Breeding and Cultivation of Medicinal Plants", I. Göhler (Bionorica) his co-chair. The next workshop will be organised during the annual congress in Münster 2013.
- Dr. C. Erdelmeier (Schwabe) is the chair of the PC "Manufacturing and Quality Control of HMPs". The next workshop will be organised during the annual congress in Münster 2013.
- Prof. A. Vlietinck is the chair of the PC "Regulatory Affairs of HMPs" with Prof. S. Alban as co-chair. The next workshop will be organised during the annual congress in Münster 2013.
- The committee of the Young Researchers Workshop consists of A.-R. Bilia, A. Hensel, T. Efferth, J. Rollinger, D. Tasdemir and J.-L. Wolfender. The next YRW will be organised during the annual congress in Münster 2013.

6. Future Congresses, Symposia and Workshops

6.1. Annual GA Congresses

- 2013: Münster, Germany, 1–6 Sept. (organisers: Profs. A. Hensel, Th. Schmidt).
 A short report was given by the organisers
- 2014: Guimaraes, Portugal, 31 Aug.-5 Sept. (organiser: Prof. A. Diaz, Joint Meeting with AFERP)
- 2015: Budapest, Hungary (organiser: J. Hohmann)
- 2016: Copenhagen, Denmark (Joint Meeting, organiser: Dr. A. Jäger). A short report was given by Dr. Jäger.
- 2017: Basel, Switzerland (organiser: M. Hamburger)
- 2018: Beijing/Shanghai, China (organiser: D. Guo)

6.2. Future Congresses and Workshops

- "13th International Congress of the Society of Ethnopharmacology", 2–6 Sept. 2012, Graz, Austria, sponsoring GA 1,500 EUR
- "Shanghai International Conference on Traditional Chinese Medicine and Natural Medicine", 20–21 October 2012 (organiser: D. Guo), sponsoring GA 1,500 EUR

7. Miscellaneous

No further contributions.

Dr. Birgit Benedek, GA Secretary

Meetings of GA

Next Annual Meeting



The Society for Medicinal Plant and Natural Product Research (GA) invites all scientists from academia and industry dealing with natural products, medicinal plants and phytotherapy, to this conference. In

addition to presentation and discussion of excellent research in the fields of phytochemistry, analytics, ethnopharmacology, pharmacology and clinical applications of natural products and herbal drug materials, it will be a major goal of this conference to provide a basis for intense networking between scientists of academia and industry from all over the world.

It is a pleasure to the organizers that the



European Cooperation in Science and Technology within the COST 1006 framework will be integrated into the meeting by a presymposium "Challenges and Limitations in Metabolic Pathway Engineering of Secondary Natural Products" highlighting the latest insights in biotechnical production of natural products for medicinal applications. This scientific meeting will be held in the central university area, in front of the historic castle of Münster which is located in the middle of the city's historic downtown area. Münster, located in the Northwestern part of Germany, is a picturesque city which played an important role in European history. The University of Münster with more than 40.000 students and an exciting research profile is one of the biggest and leading universities in Germany. In order to promote the impact of poster presentations, three poster sessions at central time frames within the congress will bring together scientists from different

disciplines. Workshops will provide indepth insights into various aspects of medicinal plant research. Apart from the scientific presentations and discussions, a full social program will be offered, which will leave you with unforgettable memories of Münster and its very typical and beautiful surrounding countryside. One-day excursions to UNESCO World Heritage Site "Zeche Zollverein", the world's most beautiful coal mine and a unique botanical trip will generate exciting insight in cultural and biological surroundings of the Münster region of Westphalia.

MAIN SCIENTIFIC TOPICS

- Natural products against neglected diseases
- In vivo phytopharmacology
- Skin-active natural products
- Glycobiology and carbohydrate-based active compounds

- Ethnopharmacology of African medicine
- Ethnopharmacology of Amazonian medicine
- Computational methods in natural products chemistry
- Hyphenated analytical techniques and target fishing
- Natural product chemistry
- Plant phenols: structures, analytics and activities
- Quality control methods for medicinal plants, extracts and isolated natural products
- Animal and veterinary herbal medicine

The detailed program and titles of plenary lectures, plenary speakers, workshops, symposia and social events can be found at www.2013.org.

Registration and abstract submission will be starting at February 1st, 2013.

Meeting Reports

International Congress on Natural Products Research (ICNPR), New York 2012

"Global Change, Natural Products and Human Health" was the title of the 8th. Joint Meeting of the American Society of Pharmacognosy together with GA, the French-speaking Society of Pharmacognosy (AFERP), the Italian Society of Pharmacognosy (SIF) and the Phytochemical Society of Europe (PSE) which was held from July 28th to August 1st in New York in Grand Hyatt Hotel. More than 1300 scientists from 66 countries came together for presentation and discussion of newest results and many hot topics within more than 20 symposia, workshops and 4 poster sessions. The local organizers Dr. Edward J. Kennelly and the scientific organizing committee chaired by Dr. Guy T. Carter hade been surprised very positively on this overwhelming participation; but clearly shows that the topics and natural products per se are highly attractive to science. The manifold presentations gave a very good overview on the actual state of natural products chemistry and pharmacognosy. It was very obvious that natural products research is science from all over the world, not restricted to one or two areas; it is really of global interest and investigated in labs around the world.

During this conference natural products from maritime organisms and ethnobotanical research were two main topics. While marine natural products are mainly investigated by labs from U.S., Australia and East Asia, ethnobotany and ethnopharmacology questions are investigated around the world.

It seems interesting that modern methods lead in many cases to a renewal and different assessment of old and traditionally used medicinal plants, based on the new phytochemical data, new and sometimes different biological activities based on new and sometimes surprising mode of action. For that in many cases a new interpretation of old data for old plants can be done today, based on actual and modern state of science. Especially antiinfective effects of many traditionally used plants can be seen nowadays as new lead structures for further development of antiinfectives, using new and until now not described molecular targets, which may overcome development of pathogen resistance. Also the use of secondary natural products from endophytic microorganisms indicates exciting insights into plant ecosystems and the biotechnological production of new active compounds against viruses

Still unbowed is the search for new active compounds from plants used in traditional medicine, especially in Asia, South America and Africa. This was clearly supported by looking at the absolute number of participants from these countries, and by counting the manifold presentations on this topic within the poster sessions. It has to be mentioned that scientists from Brazil definitely accounted for the largest group in this conference with many exciting reports on all aspects of natural products research.

DNA-barcoding and use of in silico screening are getting more and more into practi-





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cal daily routine for unambiguous plant identification and effective activity screening. DNA-barcoding was shown to have



established as routine method for analytical characterization of plant extracts, but also for functional food and nutraceuticals preparations, as it was shown for different Cimicifuga-preparations. In this context it was interesting to see that in many presentations held by scientists from U.S. the so called "Botanicals" are used with the same therapeutic impact as the registrated plant-derived drugs in Europe. The problems arising from the different quality parameters in such botanicals was highlighted by R. Upton (U.S.A.) as representative from the American Herbal Pharmacopoeia; the data he presented clearly showed the major problems within standardization and quality assurance: "In God we trust - for all other things you have to show data" - the need for a high quality analytic within quality assurance and pharmacognosy was obvious. This has to be assured not only during production process, but also within R&D and in the education of well-trained scientists, dealing with the different aspects of pharmacoanosy.

Other highlights of the conference dealed with computer-assisted screening and drug-design and the use of huge data bases on natural products for time- and cost-effective screening on potential biological activity. Such data bases are established more and more over the last few years and a typical example may be the "Phenol-Explorer", funded by European Commission and established by A. Scalbert (France); all available data to plantderived phenolics, occurrence, biological activity and analytical and photochemical properties can be found in the web under www.phenol-explorer.eu). A really great possibility for free and quick access to the respective data and the science behind the compounds.

During and after the conference it got obvious that the borders between reiterated phytotherapeutical drugs, botanicals, nutraceuticals and other specialized food



The New York Botanical Garden: an impressive evening in a charming atmosphere; so many plants in the middle of a global metropole © MF Melzig

compounds have been lost; also the regulatory classification is difficult, and in many cases the science behind the health claims for such products is getting more difficult. Other topics highlighted the clinically relevant interactions between different natural products or plant extracts with other drugs and active compounds, which was discussed heavily, also together with data provided on pharmacokinetic properties of natural products. Especially many oldfashioned theories on bioavailability of flavonoids and other antioxidative compounds after oral intake had to be revised completely; on the other side the immense impact of the fecal catabolism indicated the formation of manifold new catabolites with interesting pharmacokinetic and pharmacodynamic effects. These data again will provide many new aspects for a reassessment of the use of some herbal materials. New projects have to be established in the next years to react on these findings and to prove the new scientific hypothesis arising from the new data sets. We can expect exciting times.

Summarizing a great conference, well organized and we are sure that the meeting boosters the research on natural products and will initiate manifold cooperations in science. Looking forward to the next meetings in Münster (2013), Portugal (2014), Budapest (2015) and for the next joint meeting in Copenhagen (2016).

M.F. Melzig, A. Hensel

GA in Dissemination of European Research projects

Communication, dissemination and exploitation - are some of the common activities of an FP7 project that will bring research results and achievements to the attention of as many relevant people as possible. The word 'communication' here is more than just an additional reporting burden. Europe's future economic growth and jobs will increasingly have to come from innovation to products, services and business models. With this in mind, communication about European research projects should aim to demonstrate the ways in which research is contributing to a European 'Innovation Union' and account for public spending by providing tangible proof that collaborative research adds value by:

- showing how European collaboration has achieved more than would have otherwise been possible, notably in achieving scientific excellence, contributing to competitiveness and solving societal challenges;
- showing how the outcomes are relevant to our everyday lives, by creating jobs, Introducing novel technologies, or making our lives more comfortable in other ways:
- making better use of the results, by making sure they are taken up by decision-makers to influence policy-making and by industry and the scientific community to ensure follow-up.

Taking into consideration those needs, GA, since June 2012, has been a validated





partner (with a PIC number: 952979702) for participating in European research projects under the frame of FP7.

So what GA can mainly do for you:

- → Participate in EU and international projects as a legal entity
- Bring you in contact with industrial stakeholders to build up your consortium
- → Bring you in contact with academic partners from a specific geographical region and expertise
- → Advertise the project in more than 1300 members in 80 countries

- → Disseminate scientific achievements and results of the project
- → Organise workshops and seminars

One of the main strong points of GA is that it has an extended international network with scientists from academia as well as from industry and can actively contribute from building a new consortium up to the implementation of a multi-partner international project. The main interests of GA are research, educational or networking projects.

FP7 is the tool of European Union for supporting research for the period of 2007 until 2013. In 2014 a new programme will start the "HORIZON 2020" that will last until 2020.

Researchers or industrial partners that are interested in involving GA in their projects should contact GA secretary or GA president

Nikolas Fokialakis

A typical example of an interdisciplinary EU project with strong GA interaction on natural products with agrochemical and cosmetic applications

AGROCOS is the acronym of an EU funded project supported under the Seventh Framework Programme (KBBE-2009-3-1-04-245336). The project has a duration of four years starting from 2010 and a total budget of 4,274,788.00 €.

The high-caliber consortium is constituted from multidisciplinary, interconnected authorities from different sectors:

- 3 universities: National and Kapodistrian University of Athens (Greece), The University of Basel (Switzerland), Universidad de Panamá (Panama),
- 3 research institutes: Centre National de la Recherche Scientifique (France), Council for Scientific and Industrial Research (South Africa) and National Center for Scientific Research "DEMOKRI-TOS" (Greece)) and
- 3 industrial partners: BASF (Germany), KORRES S. A. (Greece), Bruker BioSpin GmbH (Germany).

The whole project is under the coordination of Prof. Leandros Skaltsounis who is a Professor of Pharmacognosy and Natural Products Chemistry in the Faculty of Pharmacy of University of Athens (Greece).

All entities involved are recognised experts in small molecule natural products research, bioprospection, agrochemistry, cosmetics, and spectroscopic data management and analysis. AGROCOS aims to discover and carry to the stage of development candidates, plant derived small molecules with potential as new agrochemical and cosmetic agents exploiting global biodiversity. A state-of-the-art technological platform, emphasizing on the integration of natural products discovery technologies has been established. The cornerstone of AGROCOS is the invaluable biodiversity hotspots in Europe, Africa, Latin America, and the Asia-Pacific region offering understudied plants that could however offer extraordinary small natural products, in terms of both structure and activity.

The project launched based on a highly diverse chemical natural product library of 500 compounds generated from the consortium that was screened for agrochemical and cosmetic properties thus identifying promising chemical scaffolds. This led to a rational selection and targeted collection of 1800 plants based on chemotaxonomy and chemodiversity criteria. The derived 3600 extracts were sequentially screened using the same biological assays.

Regarding agrochemicals 60 extracts (20 from Greece, 12 from Panama, 9 from Madagascar, 7 from South Africa, 7 from French Guiana and 5 from New Caledonia) were revealed exhibiting a significant potential as antifungal, herbicidal, or insecticidal agents and are currently being submitted to peak-based microfractionation procedure in order the responsible compound(s) to be traced.

On the other hand, for cosmetic properties, 29 extracts were characterized by promising antioxidant activity, based on DPPH and UV-protection assays and 11 extracts by anti-hyperpigmentation properties, as anti-tyrosinase assay indicated. The Likewise, both groups of extracts have been forwarded to microfractionation. The most promising plants for cosmetics were: 14 from New Caledonia, 12 from French Guiana 5 from Panama, 5 from Greece and 4 from South Africa.

Furthermore, a NMR based reference database of natural products as well as plant derived extracts is created under the coordination of Bruker company which is a worldwide recognized leader in Nuclear Magnetic Resonance – NMR science. The NMR spectral data will be framed by UV and HRMS information aiming to the complete characterization of the installed chemical entities. Critical ingredient of the AGROCOS database comprises the presence of meta-data which will frame the





tities related to botanical, chemotaxonomic, chemical, physicochemical and most important biological properties thereof. The ultimate goal of the consortium is by the end of the project the AGROCOS database to be fully established, functional and open-access aiming to facilitate the identification of natural products as well as the dereplication of known compounds in complicated mixtures and extracts.

The final outcome will be natural compounds as development candidates for novel agrochemical and/or cosmetic agents with new or improved properties over existing active ingredients. The progress of the project can be monitored through the website: http://www.agrocos.eu





Nikolas Fokialakis



Recent thesis (2012) on Medicinal Plant Research

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(Notices of Ph.D- and M.Sc./diploma thesis to the editor are welcome any time!)

Ph.D. thesis (2012) Bioassay guided isolation of compounds with acetylcholinesterase- inhibitory activity from selected medicinal plants used in Iranian Traditional Medicine. By: Hamid-Reza Adhami. Promotor: ao. Prof. L. Krenn, University of Vienna, Austria.

Ph.D. thesis (2012) Pharmacological evaluation of selected indigenous medicinal plants for their antiurolithic and diuretic activities. By: Aslam Khan. Promotor: Prof. A.H Gilani, Faculty of Pharmacy, University of Karachi, Pakistan.

Ph.D. thesis (2012) Contributions to the quality control of two crops of economic importance: hops and yerba mate. By: Mrs. Erica G. Wilson. Promotores: Prof. Dr. R. Verpoorte and Prof. Dr. P.G.L. Klinkhamer, Natural Products Laboratory, IBL, Leiden University, The Netherlands.

Ph.D. thesis (2012) Evaluation of medicinal plant at genetic level. By: Dipto Bhattacharyya. Promoter: Prof. Sharmila Chattopadhyay, CSIR-Indian Institute of Chemical Biology, Kolkata, India.

Ph.D. thesis (2012) Hepatoprotective and toxicity studies on *Annona muricata* Linn. for the treatment of jaundice in rats. By: Christopher Larbie. Promoter: Dr. Fareed K.N. Arthur. Department of Biochemistry and Biotechnology, Kwame Nkrumah University of Science and Technology KNUST, Kumasi, Ghana.

Ph.D. thesis (2012) An ethnopharmacological study of Australian medicinal plants used in dermatological and wound healing remedies. By: Joshua Smith; Promotor: A/Professor Graham Lloyd Jones and Professor Ken Watson, Pharmaceuticals and Nutraceuticals Group, Centre for Bioactive Discovery in Health and Ageing, School of Science and Technology, University of New England, Armidale 2351, Australia.

Master thesis: Neuroprotektive Wirkung eines Safran-Extraktes bei oxidativem Stress. By Franziska Reitmajer; Promotor: Prof. Karen Nieber, University of Leipzig, Institute of Pharmacy and Prof. Paul Stevenson, University of Leipzig, Institute of Biology, Germany.

Diploma thesis (2012) Phytochemisches Screening auf Pflanzenpeptide in ausgewählten Drogen. By: Birgit Semper; Promotor: Ao. Univ.-Prof. Dr. Sabine Glasl-Tazreiter and Dr. Martin Zehl, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2012) Entwicklung von Methoden zur chemotaxonomischen Charakterisierung von *Potentilla pusilla* HOST (Rosaceae). By: Gero Anzinger; Promotor: Ao. Univ.-Prof. Dr. Sabine Glasl-Tazreiter and Ao. Univ.-Prof. Dr. Johannes Saukel, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2012) Optimierung der Isolierung von Oleocanthal. By: Marco Stadler. Promotor: ao. Prof. L. Krenn, University of Vienna, Austria.

Diploma thesis (2012) Potential effects of selected medicinal plant extracts and natural products on vascular smooth muscle cell proliferation. By: Lisa Rath; Promotor: Prof. Dr. Verena M. Dirsch, University of Vienna, Austria.

Diploma thesis: Untersuchungen zur Kooperativität von Inhaltsstoffen des Phytopharmakons STW5 auf den Tonus und die Acetylcholin-induzierten Kontraktionen an Dünndarmpräparaten der Ratte. By Anja Baumgärtel; Promotor: Prof. Karen Nieber, University of Leipzig, Institute of Pharmacy, Germany.

Diploma thesis: Untersuchungen zum Synergismus von Extrakten des Phytopharmakons STW5 im Zellkulturmodell. By Victoria Winkelmann, Promotor: Prof. Karen Nieber, University of Leipzig, Institute of Pharmacy, Germany.

Diploma thesis (2012) Quality control of medicinal plants by thin layer chromatography. By: Böhm Steven; Promotor: Prof. Dr. Dr. h.c. Brigitte Kopp, Department of Pharmacognosy, University of Vienna, Austria, and Prof.Dr. Salvador Canigueral, University of Barcelona, Spain.

Diploma thesis (2012) Hairy roots of *Peucedanum ostruthium* (L.) Koch: Establishment and HPLC analysis. By: Gössnitzer Florian; Promotor: Prof. Dr. Dr. h.c. Brigitte Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2012) Identifizierung von bioaktiven Verbindungen eines anthocyanreichen Heidelbeerextraktes. By: Brunner Melanie-Andrea; Promotor: Prof. Dr. Dr. h. c. Brigitte Kopp and Prof. Dr. Doris Marko, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2012) Elizitierung von "hairy roots" – Kulturen des Edelweiß mit abiotischen Faktoren. By: Schmidtbauer Katharina; Promotor: Prof. Dr. Dr.h.c. Brigitte Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2012) Untersuchungen zur Synthese von Baccatinen in Zellkulturen von Corylus avellana L. By: Schatzl Elisabeth; Promotor: Prof. Dr. Dr.h.c. Brigitte Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2012) Überarbeitung ausgewählter Monographien des Österreichischen Arzneibuches: Valerianae tinctura aetherea und Vitis-idaeae folium. By: Hageneder Martin; Promotor: Prof. Dr.Dr.h.c. Brigitte Kopp, Department of Pharmacognosy, University of Vienna, Austria.

M. Pharm. thesis (2012) Investigation of herbal extracts for therapeutic importance. By: Puja Sandbhor: Promotor Prof. A. R. Juvekar, Institute of Chemical Technology, Mumbai, India.

M. Pharm. thesis (2012) Preclinical evaluation of plant material for potential pharmacology activity. By: Manjula Konka: Promotor Prof. A. R. Juvekar, Institute of Chemical Technology, Mumbai, India.

M. Pharm. thesis (2012) To study the pharmacological activity of medicinal plant. By: Dharmendrakumar Khatri: Promotor Prof. A. R. Juvekar, Institute of Chemical Technology, Mumbai, India.

Editorial remark

All contributions for the GA-Newsletter are welcome. Deadline for submission for the next edition is fixed to May 20th 2013. Please send all contributions to: **Prof. Dr. A. Hensel,** University of Münster, Institute for Pharmaceutical Biology and Phytochemistry, Hittorfstraße 56, D-48149 Münster, Germany; ahensel@uni-muenster.de

