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

Message from the President



Dear members,

the next and 61st annual meeting of GA this year will be held at the University of Münster, Germany, from September 1-5. The congress will be organised by Prof. Andreas Hensel and Prof. Thomas J. Schmidt. According to my last information (end of May) already more than 600 registrants have submitted over 750 abstracts for oral or poster presentations and more than 25 invited speakers will present interesting and new facts concerning research on natural products, medicinal plants and phytotherapy. The abstracts of presentations will be published in Planta Medica, the official organ of our Society. Besides a "Young Researchers Workshop" two further GA-Workshops on "Regulatory Affairs on Herbal Medicinal Products" and "Manufacturing and Quality Control of Herbal Remidies" will take place. The European Cooperation in Science and Technology by a presymposium "Challenges and Limitations in Metabolic Pathway Engineering of Secondary Natural Products" offers insights in biotechnical production of natural products for medicinal applications.

In the course of the congress GA will also award the "Egon-Stahl-Award in Silver" for a young scientist who has published outstanding scientific work during the years following graduation, and the "Bionorica Phytoneering Award" acknowledging outstanding results of young scientists in the field of research with regard to herbal drugs focusing on phytoanalytics, pharmacokinetics, pharmacodynamics or phytomedicine. Planta Medica, the official scientific organ of GA, can celebrate its 60th anniversary this year and therefore in a specific session on Monday morning the history and future development of Planta Medica will be presented and the best paper in Planta Medica of the year 2012 will be awarded by Thieme, the publisher. GA and Thieme plan to award a high quality scientific Planta Medica paper every year in the future at the annual GA-meeting.

Unfortunately this year we had no valid application for the Dr. Willmar Schwabe Research Scholarship for Young Scientists, which is intended to support research of advanced PhD students or postdocs for projects focusing on pharmacological or clinical research of phytopharmaceuticals and their active substances. This scholarship will be announced again end of this/beginning next year and hopefully there then will be high-quality applications. During the congress also our members meeting will be organized on Tuesday, September 3 in the evening (see agenda in this NL). Besides others one important topic will be the election of the Board of Directors (President, Vice-Presidents, Secretary, Treasurer, Advisory Board) for the next two vears.

The venue of the congress is in the central university area, in front of the historic castle of Münster and near the picturesque city's historic centre. Also a nice and interesting social program will be offered including the congress dinner or final excursions to the UNESCO World Heritage Site "Zeche Zollverein" (a coal mine) or a unique nature field trip. Personal contacts, direct exchange of information, agreements on joint activities and networking will be possible at the scientific part as well as at the social events of the congress.

Since the joint meeting last year in New York our society was involved in some other successful and interesting congresses. These were the "13th International Congress of the Society for Ethnopharmacology", Sept. 2-6, 2012, in Graz, Austria, the "2012 Shanghai International Conference for TCM and Natural Medicine", Oct 20-21, 2012, in Shanghai, China, and the "12th Annual Oxford International Conference on the Science of Botanicals" (ICSB), April 15-18, 2013, in Oxford, Mississippi, USA. GA also by this way hopes to be able to intensify contacts to scientific societies and scientists all over the world. GA also is involved in the forthcoming congress "Phytopharm 2013", July 8-10, 2013 in Vienna, Austria, which is organized by the St.-Petersburg Institute of Pharmacy, Russia, the University of Veterinary Medicine, Vienna, and the Institute of Nutrition of the Russion Acacemy of Medical Science, Russia, For information on these and further congresses and activities of GA look at our website: www.ga-online.org.

In the last weeks I've got more than 80 new membership application forms for signature. GA is happy about each new member and especially about the fact that the new members are coming from countries from all over the world. On behalf of GA I would like to welcome all new members to the GA family. I hope to see you, new and old members of GA, in Münster during a fascinating congress or at any other event with participation of GA!

Cordially, Wolfgang Blaschek, GA president 2013, No. 1





The Society informs

Notes to all GA members

Editorial remark

All contributions for the GA-Newsletter are welcome.

Deadline for submission is fixed to November 20th 2013.

Please send all contributions by e-mail: Prof. Dr. A. Hensel University of Münster, Institute for Pharmaceutical Biology and Phytochemistry, Corrensstrasse 46, D-48149 Münster, Germany ahensel@uni-muenster.de



Deceased members

(to our knowledge)

Prof. Dr. Andrew Marston Bloemfontein 9300 South Africa Passed away 26th March 2013 (see also obituary in this newsletter)

Dr. Alexander Pauli Fürth, Germany Passed away in December 2012

Prof. Sulejman Redzic Sarajevo, Bosnia-Herzigovina Passed away end of 2012

The Society will keep commemoration and offers its sincere condolence.

Notes from the Society

Some Data from the Membership Data Base: New GA members

Since November 2012 the following 81 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.

Dr. Laila Abdelaty, Egypt; Andrews Obeng Affum, Ghana: Rizwan Ahmad, Belgium: Dr. Maurice Ducret Awouafack, Cameroon; Dr. Haruna Baba, Nigeria; Dr. Denis Barron, Switzerland; Dr. Marc Beyrouthy, Lebanon; Dr. Madhulika Bhagat, India; Sebastiaan Bijttebier, Belgium; Nadine Bohni, Switzerland; Dr. Anton Caffe, Suriname; Rica Capistrano I., Belgium; Obiadinma Chukwuma, Nigeria; Diego Francisco Cortes-Rojas, Brazil; Juliana Da Costa, Brazil; Binar Asrining Dhiani, Indonesia; Zeynep Dogan, Turkey; Dr. Esra Eroglu Ozkan, Turkey; Dr. Vasiliki Exarchou, Belgium; Dr. Nanang Fakhrudin, Indonesia; Quentin Favre-Godal, Switzerland; Marcel Flemming, Germany; Steven

Foster, United States of America; Dr. Luis Franco, Colombia; Paul Freudenthaler, Austria; Yasin Genc, Turkey; Mojtaba Ghasemi, Islamic Republic of Iran; Dr. Wouter Goutier, Netherlands; Gizem Gülsoy Toplan, Turkey; Ph.D. Ratooba Hashmi, Pakistan; Dr. Daniel Intelmann, Austria; Prof. Swamy B. Kaki, Malaysia; Duygu **Kaya**, Turkey; Laura **Klavina**, Latvia; Silke **Kunkel**, Germany; Sezin Kurtoglu, Turkey; Omodeboyin Lawal, Nigeria; Markus Löhr, Germany; Prof. Ann Louw, South Africa; Ph.D. Mohammed Magaji, Nigeria; Christina Elisabeth Mair, Austria; Dr. Angeliki Mathioudaki, Greece; Noor Wini Mazlan, Malaysia; Dr. Tohru Mitsunaga, Japan; Dr. Martin Mondigler, Germany; Dr. Ricardo Moreira Borges, Brazil; Ali Muddathir, Japan; Dr. Jadel Muller Kratz, Brazil; Dr. Dorota Nawrot, Finland; Mariana Neves Vieira, Germany; Dr. Dieudonne Njamen, Cameroon; Yanet Ocampo, Colombia; Prof. Wanderley Oliveira, Brazil; Sabine Ortmann, Austria;

Nadire Ozenver, Turkey; Dr. Didier Pesoni, France; Pattara Poungcho, Thailand; Dr. Ain Raal, Estonia; Hanieh Rafiee, Islamic Republic of Iran; Amit Rastogi, India; Ludivine Riffault, France; Prof. Shamansur Sagdullaev, Uzbekistan; Enass Salih, Finland; Dr. Marcus Tullius Scotti, Brazil; Dr. Burcu Sen, Turkey; Merve Sensov. Turkev: Dr. Dulce Silva. Brazil: Winai Suthanthangjai, New Zealand; Ahmed Tawfike, United Kingdom; Dr. Chau Ling Tham, Malaysia; Dr. Mart Theunis, Belgium; Emmy Tuenter, Belgium; Monika Untergehrer, Germany; Dr. Atul Upadhyay, Belgium; Sanja Vlaisavljevic, Serbia; Dr. Yuan-Chuen Wang, Taiwan; Zhixin Wang, China; Kosei Yamauchi, Japan; Secil Yazici Tutunis, Turkey; Gorawit Yusakul, Thailand; Dr. Dimiteira Zheleva-Dimitara, Bulgaria;

Dr. Birgit Benedek, GA Secretary



During the 61st annual meeting of our society which will take place in Münster, Germany, from September 1st–5th, 2013, a regular Members' Meeting will be held. It is scheduled for **Tuesday, September 3rd**, **2013, 7.00 p.m. – 8.30 p.m.** at a Central Lecture Hall Building of the University of Münster, Schlossplatz 46, D-48143 Münster, Germany.

This announcement in the Newsletter has to be considered as the official invitation to the Member's Meeting (in accordance with the GA bylaws), as this Newsletter is sent out to all members of our Society.

Preliminary Agenda:

- 1. Approval of the agenda
- Approval of the minutes of the Members' Meeting held in New York, USA, on July 30th, 2012; on 6 September 2011 (published in GA Newsletter 2-2012)
- 3. Annual reports of the President, Vice-Presidents, Secretary, Treasurer and the Auditors, and discharge of the Executive Council
- 4. Report of the Editor-in-Chief of Planta Medica
- 5. Reports of the Permanent Committees

- Election of the Board of Directors
 Election of the President
 - 6.2 Election of the two Vice-Presidents
 - 6.3 Election of the Secretary
 - 6.4 Election of the Treasurer
 - 6.5 Election of the members of the Advisory Board
- 7. Membership discount for members paying fees 5 years in advance
- 8. Future congresses, symposia and workshops
- 9. Miscellaneous

On behalf of the Executive Council Prof. Dr. Wolfgang Blaschek, GA President

OBITUARY

In memoriam, Andrew Marston, November 16, 1953 - March 26, 2013

It is very sad for a retired professor to write an obituary for a younger colleague and friend. Andrew studied chemistry at the University College, London University, and obtained the BSc. degree in 1975. I met him for the first time in the same year when he joined the University of Neuchâtel, Switzerland as a British Council award holder. He was involved in the phytochemistry of gentians and published his first paper with me on flavonoids of Gentiana pyrenaica. After Neuchâtel, Andrew went back to England to make a PhD thesis at Liverpool University in the field of peptide synthesis, followed by a postdoctoral stay at the German Cancer Research Centre, Heidelberg, Germany from 1979 to 1983. In October 1983, he joined the Institute of Pharmacognosy and Phytochemistry, University of Lausanne, Switzerland to work with me on a Swiss National Science Foundation research project for one year. He was just a brilliant young scientist and the initially planned one year stay became a stay of ... 26 years! Andrew was involved in the isolation of biologically active compounds from plants used in traditional medicine and in the application of new chromatographic techniques for the separation and isolation of plant constituents. He has done pioneering work in the field of centrifugal partition chromatography which resulted in the publication of nice research papers and in a couple of review articles. He also achieved original work in the development of enzyme inhibition tests on TLC plates (TLC bioautography) which

are useful for the search of acetylcholinesterase inhibitors from plants (treatment of Alzheimer's disease). For his important contribution in various fields of phytochemistry, Andrew received in 1994 the prestigious Rhône - Poulenc Rorer Award of the Phytochemical Society of Europe (PSE). He was a member of the Committee of this Society from 1996 to 2000. He attended many symposia of PSE and was involved in the organization of a PSE symposium in Lausanne. Andrew and I published together a book on preparative chromatography techniques which was translated in Japanese, Chinese, Indonesian, Farsi and Spanish. He is also coauthor of a very complete monography on saponins. In 1994, my Institute was transferred from Lausanne to Geneva University where Andrew hold the position of Maître d'enseignement et de recherche (which correponds to Senior Lecturer) until my retirement in 2009. When I retired, Andrew decided to leave Geneva University and became Professor of Chemistry at the University of the Free State, Bloemfontein, South Africa. He was conducting in his new job phytochemical investigation on indigenous plants and was teaching organic chemistry and natural product chemistry. Andrew was an outstanding phytochemist and his work resulted in the publication of more than 150 research papers and 35 review articles and chapters in books. Many of his papers were published in Planta Medica. He was a referee for this journal and was a member of GA since 1986. He attended many GA conferences and presented lectures and oral communications also in numerous other international symposia. He was teaching in workshops hold in Uruguay, Panama, Mexico, Peru, Brazil, Thailand, China, Indonesia, Zimbabwe, Botswana and Mali. We visited all these countries and many other more together. This created strong ties and friendship. Andrew was without any doubts my closest friend as we worked together for a total of 27 years and shared many beautiful things together. Life can be cruel: around two years ago, Andrew lost within four months his mother, his father and his wife! He passed away on 26 March in Bloemfontein after a surgery of the brain to control his Parkinson's disease which resulted in cerebral bleedings. He was born in Africa (Northern Rhodesia which became Zambia after independance in 1964) and died in Africa. He had always special links to this continent and was a friend of Africa. The scientific community is losing a great phytochemist. Everybody will miss Andrew because he was always modest, friendly and helpful - a real British gentleman! I shall miss a friend whom I considered as my younger brother. My thoughts go to his two sons Mark and Jonathan and to his brother Keith.

Prof. Kurt Hostettmann

Honorary Professor at the Universities of Geneva, Lausanne, Nanjing, Shandong and at the Institute of Materia Medica, Chinese Academy of Sciences, Shanghai



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Professor De-an Guo, BoD-Member of GA, honoured with a prestigious National Award

On January 18th 2013, Professor De-an Guo received a National Natural Science Award (Second Grade) in the People's Hall in Beijing, China. Thirteen State Leaders including Jin-ping Xi (Party General-Secretary), Jin-tao Hu (President) and Jia-bao Wen (Premier) issued the award to awardees or their representatives. This is the first National Natural Science Award in TCM field. GA would like to call on all members to congratulate De-an on his award.

Warmest congratulations, De-an!



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 presentation, 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

Münster, Germany

- Natural products against neglected diseases
- In vivo phytopharmacology
- Skin-active natural products
- Glycobiology and carbohydrate-based active compounds
- Ethnopharmacology of African medicineEthnopharmacology of Amazonian med-
- icineComputational 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.ga2013.org.





62nd International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research (GA)

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 congress. This congress intends to be an excellent forum for the presentation and discussion of research in the fields of phytochemistry, analytics, pharmacology, and clinical applications. Moreover, this conference will provide the appropriate environment for intense discussion of new technological approaches and networking between academia and industry. It is also a pleasure to announce the collaboration of the Association Francophone pour l'Enseignement et la Recherche en Pharmacognosie (AFERP), that will further contribute to the scientific program.

This Congress will be held at the University of Minho, Azurém Campus, at a walkable distance of the medieval city centre of Guimarães, classified as World Heritage Site by UNESCO. The historical city of Guimarães, where the Portuguese nation was founded in the early 12th century, is located in the north of Portugal, in the dynamic and colorful Minho Region, also famous by its landscape and vineyards where is produced the wine "Vinho Verde", which is unique in the world. The University of Minho is one of the biggest and leading universities in Portugal, with excellent conditions to host the Congress. To promote the visibility and impact of poster presentations, posters will be present throughout the whole meeting and different poster sessions will take place at central time frames. Additionally, several plenary lectures and workshops will provide deep insights into various aspects of medicinal plant and natural product research. Apart from the scientific program, a stimulant and diverse social program will be offered. This will include excursions to the National Park Peneda-Gerês and Esposende, with its wild beautiful coastal landscapes and unique biodiversity, to the Douro Valley and its famous terraced vineyards, and also to the cities of Porto and Guimarães, both classified as World Heritage Sites by UNESCO.

Main Scientific Topics will be:

Clinical phytomedicine Infection diseases in America Nanotech and drug delivery Natural compounds as leads Natural products from fungi and alga Nutritional phytochemicals Medicinal plants and bioeconomy Metabolomics Plant Molecular farming.

Prof. Dr. W. Blaschek, GA president

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hERGscreen - How safe are botanicals?

FP7-PEOPLE-2011-IRSES project 'hERG related risk assessment of botanicals' (295174)







An international network has been established in 2012 in the frame of a **FP7-PEO-PLE-2011-IRSES** programme aiming to assess the potential cardiotoxic risk of commonly consumed botanicals and supplements. This attempt is based on a multidisciplinary scientific exchange project named **'hERG related risk assessment of botanicals'** (hERGscreen, 295174) funded by the European Commission (2012–2016) with strong interactions to the *Society of Medicinal Plants and Natural Product Research* (GA).

The consortium coordinated by Prof. Judith M. Rollinger (University of Innsbruck) consists of nine highly renowned academic partners between European, South American, North American and South African educational and research entities forming an extended multidisciplinary scientific network:

- Universität Innsbruck (Austria)
- National and Kapodistrian University of Athens (Greece)
- Universität Basel (Switzerland)
- Biomedical Research Foundation, Academy of Athens (Greece)
- Universität Wien (Austria)
- University of Florida (US)
- Universidade Federal do Rio Grande do Sul – UFRGS (Brazil)
- UFSC Universidade Federal de Santa Catarina (Brazil)
- University of the Free State (South Africa)

hERGscreen aims at the identification of human Ether-à-go-go Related Gene (hERG) channel blockers in commonly consumed natural products like dietary supplements, spices, and herbal medicinal products. Blockage of these ion channels may result in ventricular tachyarrhythmia and an increased incidence of sudden death (torsade de pointes). Thus, the hERG channel is considered as an important antitarget. Several drugs have been removed from the market for this reason, and compounds have been blocked from proceeding further into phases of clinical development. As botanicals continue to increase in popularity there is an urgent need for studies aimed to critically assess the potential cardiotoxic risks of these products and to further improve consumer and patient safety by identifying safety liabilities of botanicals.

Though there are strict guidelines for torsadogenic risk assessment for pharmaceuticals in the drug discovery process (ICH S7B Guideline), commonly consumed botanicals have never been screened for this effect so far. This is especially remarkable since in developing countries and rural societies the use of medicinal plants is both, a valuable resource and a necessity, and furthermore it provides a real alternative for a primary health care system. Even in industrialized countries dietary supplements and herbal remedies continue to increase in popularity and are becoming part of the integrative healthcare systems of industrialized nations, known as "complementary and alternative system of medicines". It is noteworthy to mention that IKr blockade and proarrhythmic potential are dose-dependent. Thus, the concomitant use of agents/pharmaceuticals known to prolong the QT interval together with hERG channel blocking botanicals could therefore increase the cardiotoxic risk.

The project is taking full advantage of the capabilities of all individual participants in

a concerted effort to identify, analyse and investigate hERG channel blocking, thus potentially torsadogenic constituents and their corresponding botanicals. For a target-oriented selection of risky botanicals molecular modelling studies and in silico screening of available molecular NP databases and an extract in vitro screening of botanicals form South America, South Africa and the Mediterranean region will aim at a fast exploration of potentially harmful plant materials. State-of-the-art methodologies and techniques are incorporated for target-oriented identification and isolation of hERG channel blocking constituents. PK and PD studies will be performed and LC-MS based methods will be developed and applied towards the measurement of bioactive components in biofluids samples. Comparison of biofluids derived from administration of single chemical entities and corresponding botanicals will be achieved using MS- and NMR-based metabolomics. The obtained results will help to elaborate and evaluate hERG related safety aspects aiming towards the risk assessment of frequently consumed botanicals. Within this frame numerous short term and extended secondments of scientific staff will be accomplished, while the organization of several workshops will assure the proper dissemination of the produced knowledge throughout all the scientific community but also the public. The progress of the project can be monitored through the website: http://www.uibk.ac.at/pharmazie/ pharmakognosie/hergscreen/

Univ.-Prof. Dr. Judith Maria Rollinger

Meeting Reports

Symposium in Münster, Germany: Celebration of the 75th birthday of Prof. Dr. Mohamed T. Khayyal

The title of the symposium (January 18th, 2013) was "From Worms to Herbs: Adventures of a Curious Pharmacologist". Greeting addresses came from Prof. Dr. Eugen J. Verspohl and Prof. Dr. Fritz H. Kemper (Pharmacologists in Münster), Prof. Dr. Sam J. Enna (Kansas, USA; International Union of Basic and Clinical Pharmacology), Prof. Dr. Adolf Nahrstedt, Münster (Society of Medicinal Plant and Natural Product Research), Prof. Dr. Karin Kraft, Rostock (Society of Phytotherapy), Dean Prof. Dr. Azza Agha (Pharmaceutical Faculty of the Cairo University) and Prof. Dr. Ashraf Mansour (German University in Cairo).

Lectures were from Prof. Dr. Paul Vanhoutte, Hongkong ("The endothelial saga: when good guys turn bad") and Dr. Brian Callingham, Cambridge, UK ("Possible mechanisms of action of ibuprofen and diclofenac on the tone of vascular and other smooth muscle") both dealing with NO and endothelium in modern physiology and therapeutics. Prof. Dr. Sam J. Enna, Kansas, USA talked about herbs during the pharaoh time and empirical detection of drug targets ("Herbal Pharmacology: Queen Hatshepsut to Mohamed Khayyal"). Maybe there is a renaissance of basic pharmacological experiments in addition to molecular pharmacology assisted detection of drug targets. Prof. Dr. M. Schemann (Munich) talked about "Herbal preparations to treat gastrointestinal disorders" looking at presently important mechanisms and showing impressive video sequences.

In between there was a laudation by Prof. Dr. Eugen J. Verspohl, Münster: The childhood, the scientific career and especially the humanity of Prof. Khayyal were demonstrated including several anecdotes. He is a great motivator, communicator, cosmopolitan, has a characteristic



sense of humour, and is a great scientist with respect to herbs. The symposium was finished with standing ovations. Thanks to the perfect organizer Mrs. Dr. Heba Abdel-Aziz and the generous sponsorship of the company Steigerwald, Darmstadt (Germany).

Prof. Dr. Eugen J. Verspohl, Münster

Recent thesis (2012) on Medicinal Plant Research



Ph.D. thesis (2013) Structural characterisation of the carbohydrate and protein part of arabinogalactan proteins from *Jatropha curcas* L. seeds. By: Maria Sehlbach. Promotor: Prof. Dr. Andreas Hensel, Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Germany.

Ph.D. thesis (2013) Effects of a slightly acidic arabinoxylan and xyloglucans on human skin cells. By: Wei Nie. Promotor: Dr. Alexandra Deters, Prof. Dr. Andreas Hensel, Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Germany.

Ph.D. thesis (2013) Glycoconjugates from plants as antiadhesive compounds against Helicobacter pylori (*Ribes nigrum* L., *Abelmoschus esculentus*). Promotor: Prof. Dr. Andreas Hensel, Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Germany.

Ph.D. thesis (2013) *Althea officinalis* L.: Phytochemical characterization and investigation of cell- and proteinprotective effects of the root (in German). Promotor: Prof. Dr. Andreas Hensel, Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Germany. Ph.D. thesis (2013) Geschlechtsspezifische Untersuchungen zum Einfluss von Adenosinrezeptorliganden, STW 5 und enthaltener Einzelextrakte in einem in-vitro Entzündungsmodell am Colon der Ratte. By Ulrike Voß. Promotor: Prof. Dr. Karen Nieber, Universität Leipzig.

Dr. rer. nat. thesis (2013) Naturstoffe als Inhibitoren c-Myb-abhängiger Transkriptionsprozesse. By: Caroline Schomburg; Promotor: Prof. Dr. Thomas J. Schmidt, University of Münster, Institute of Pharmaceutical Biology and Phytochemistry, Münster, Germany.

Dr. rer. nat. thesis (2013) Modulation der interzellulären Signalübertragung humaner Hautzellen durch Sesquiterpenlactone. By: Marei Hoffmann; Promotor: Prof. Dr. Thomas J. Schmidt, University of Münster, Institute of Pharmaceutical Biology and Phytochemistry, Münster, Germany.

Ph.D. thesis (2013) Steroidal saponins from medicinal herbs. By: Victoria L. Challinor; Promotor: Prof. J. J. De Voss and Dr Joanne Blanchfield, School of Chemistry and Molecular Biosciences, The University of Queensland, Australia. Ph.D. Thesis (2013) Development of solid dosage form tablet containing spray-dried extract of *Trichilia catigua*. By: Renata Longhini; Promotor: Prof. Dr. J.C.P. de Mello; Co-Promotor: Prof. Dr. M.L. Bruschi, Department of Pharmacy, Universidade Estadual de Maringá, Brazil.

PhD Thesis (2013) Terpenoids for medicine. By: J.T. Fischedick; Promotor: Prof. Dr. R. Verpoorte, Leiden University, The Netherlands.

PhD Thesis (2013) Ornamental bulb crops as sources of medicinal and industrial natural products. By: A. Lubbe; Promotores: Prof. Dr. R. Verpoorte and prof. Dr. P.G.L. Klinkhamer, Leiden University, The Netherlands.

PhD Thesis (2013) Application of NMRbased metabolomics to identify bioactive compounds in herbs, spices and fruits. By: M. Iqbal; Promotor: Prof. Dr. R. Verpoorte, Leiden University, The Netherlands.

PhD Thesis (2013) Cannabinoids and zebrafish. By: M.T. Akhtar; Promotor Prof. Dr. R. Verpoorte, Leiden University, The Netherlands.



Ph.D. thesis (2013) Modulation of the endothelial nitric oxide synthase system by natural products. By: Angela Ladurner; Promotor: Prof. Dr. Verena M. Dirsch, University of Vienna, Austria.

Ph.D. thesis (2013) Selected natural products and their influence on cellular gucose uptake and metabolism. By: Matthias Kramer; Promotor: Prof. Dr. Verena M. Dirsch, University of Vienna, Austria.

Ph.D. thesis (2013) Phytochemical profiling of Iranian plants, and ECD calculation as tool for establishing the aboslute configuration of new natural products.By: Samad Nejad Ebrahimi; Promotor: Prof. M. Hamburger, Pharmaceutical Biology, University of Basel, Switzerland.

Ph.D. thesis (2013) Screening, identification, structure-activity, and mode of action studies with new antitrypanosomal leads of plant and fungal origin. By: Stefanie Zimmermann; Promotor: Prof. M. Hamburger, Pharmaceutical Biology, University of Basel, Switzerland.

Ph.D. thesis (2012) Phytochemistry of the Stereocaulon genus: study of *S. halei* Lamb and *S. montagneanum* Lamb, two lichen species from Indonesia. By Friardi Ismed; Promotors J. Boustie/F. Le Devehat Pharmacognosy Univ Rennes1, France/A Bakhtiar Univ Andalas Padang, Indonesia.

Ph.D. thesis (2012) Methodological developments in Centrifugal Partition Chromatography. By: Jonathan BISSON; Promotor: Dr. P. Waffo-Téguo, Université de Bordeaux, France.

Ph.D. thesis (2012) Anti-inflammatory effects of stilbenoids and their mechanisms of action in a model of cell cultures of microglia. By: Merian NASSRA; Promotor: Dr. Stéphanie KRISA, Université de Bordeaux, France.

Diploma thesis (2013) Isolierung, Charakterisierung und Analytik von cysteinreichen Peptiden aus Sambucus nigra L.. By: Hellmayr Johanna; Promotor: ao. Univ.-Prof. Dr. Sabine GlasI-Tazreiter, Department of Pharmacognosy, University of Vienna, Austria. Diploma thesis (2013) Effect of indirubin-3'-monoxime on leukotriene-induced vascular smooth muscle cell migration. By: Katharina Weinhäupl; Promotor: Prof. Dr. Verena M. Dirsch, University of Vienna, Austria.

Diploma thesis (2013) Metabolic reprogramming in activated macrophages – a possible target for anti-inflammatory Nrf2 activators. By: Corina Vouk; Promotor: Prof. Dr. Verena M. Dirsch, University of Vienna, Austria.

Diploma thesis (2013) Chemische Untersuchung von Eriosema laurentii. By: Gerald Pichler; Promotor: Ao. Univ.-Prof. Dr. L. Krenn, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2013) Testung von Extrakten aus Salinibacterium amurskyense auf Histondeacetylase-Inhibierung. By: Elisabeth Dantler; Promotor: Ao. Univ.-Prof. Dr. L. Krenn, Department of Pharmacognosy, University of Vienna, Austria.

Diploma/Master thesis (2012) Elizitierung von "hairy roots"-Kulturen des Edelweiß mit abiotischen Faktoren. By: Katharina Schmidtbauer; Promotor: Prof. B. Kopp, Department of Pharmacognosy, University of Vienna, Austria.

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

Diploma/Master thesis (2013) Contribution to the knowledge of the essential oils of Origanum species. By: Martin Babeluk; Promotor: Prof. B. Kopp and Prof. S. Cañigueral, Department of Pharmacognosy, University of Vienna, Austria.

Diploma/Master thesis (2013) Elizitierung von Hairy-Roots-Kulturen des Edelweiss mit biotischen Faktoren. By: Stephanie Prisching; Promotor: Prof. B. Kopp, Department of Pharmacognosy, University of Vienna, AUT. Diploma/Master thesis (2013) Untersuchungen zur Reifung und Keimung somatischer Embryos von Glycyrrhiza glabra L. By: Barbara Weinstabl; Promotor: Prof. B. Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Diploma/Master thesis (2012) Simultaneous determination of five ginsenosides in Panax Ginseng Radix et Rhizoma Rubra (Red Ginseng). By: Elisenda Pichler; Promotor: Prof. B. Kopp and Prof. D. Guo, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2013) Untersuchungen von Einzelextraktkombinationen von STW 5 auf die Kontraktilität von Dünndarmpräparaten der Ratte. By Natalia Mishenzon. Promotor: Prof. Dr. Karen Nieber, Universität Leipzig.

Diploma thesis (2013) Neuroprotektive Wirkung eines Safran-Extraktes bei oxidativem Stress. By Franziska Reitmeyer. Promotor: Prof. Dr. Karen Nieber, Universität Leipzig.

Diploma thesis (2013) Einfluss von Phyllostachysedulis-Extrakten sowie deren Hauptflavonoid Isoorientin auf die Freisetzung der Cytokine IL6, IL8 und VEGF in TNF α -stimulierten HaCaT-Keratinozyten. By Tony Daubitz, Promotor Prof. Dr. Veronika Butterweck, Fachhochschule Nordwestschweiz, Muttenz and Prof. Dr. Karen Nieber, Universität Leipzig.

Editorial remark

All contributions for the GA-Newsletter are welcome. Deadline for submission for the next edition is fixed to November 20th 2013. Please send all contributions to: **Prof. Dr. A. Hensel,** University of Münster, Institute for Pharmaceutical Biology and Phytochemistry, Corrensstrasse 48, D-48149 Münster, Germany; ahensel@uni-muenster.de