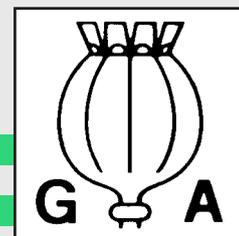


Society for Medicinal Plant Research Gesellschaft für Arzneipflanzenforschung e.V.



Message from the President



Dear members,

the 55th annual congress of GA has been held in Graz, Austria, from Sept 2nd – 6th 2007. One of the highlights was the opening lecture by Prof. Dr. H.R.H. Princess Chulabhorn Mahidol from Bangkok, Thailand. But also the plenary and keynote lecturers, as well as the presenters in workshops, short lecture and poster sessions contributed to the success of the congress. During the congress, Prof. Dr. Alessandra Braca, University of Pisa, has been announced as the winner of the Egon Stahl award in silver 2007. Moreover, 34 travel grants have been awarded to students and 12 to post docs from developing countries.

With about 900 participants it has so far been the biggest GA congress. I am very pleased that the GA annual meetings are so well accepted and that our society has developed to a globally leading society in the field. The new policy to include the congress dinner in the registration fee was also a big success, since 670 persons, young and old, jointly celebrated a wonderful Styrian evening.

I want to thank my co-workers and everybody who contributed to the organisation of the congress very much. I am also very grateful to the sponsors who allowed to keep the fees relatively small. The ca. 760 abstracts of the presentations have again been published in *Planta Medica*, the official organ of our Society. I want to thank the publisher, Thieme Verlag Stuttgart, Dr. Kuhlmann, and the is-

sue-editor Prof. Franz Bucar very much for all their efforts and for the good collaboration. A comprehensive report on the 55th annual congress of GA in Graz can be found in this Newsletter.

As you have been informed, we succeeded to negotiate with Thieme a low rate on-line access to *Planta Medica* articles for members of GA. I hope that this service will intensively be used and that more members will consider *Planta Medica* for the publication of their valuable results in the future.

During the member's meeting in Graz, the BoD of GA has newly been elected. The detailed results of the elections are also published in this Newsletter. Prof. Brigitte Kopp has been elected as the new president of GA. I want to congratulate her very much and wish her a successful presidency. Prof. Blaschek and me have been elected as vice presidents, Dr. Seitz for secretary and Dr. Roether as the new treasurer. I want to thank all colleagues from the previous ExC and Advisory Board very much for the continuously good collaboration and support. It has always been a pleasure to work with such a good team. Special thanks to Prof. Wolfgang Kreis who acted as vice-president for four years and as Advisory Board member for many years, and to Prof. Chlodwig Franz and Prof. Peter Houghton, who did not candidate anymore. I wish the new team a fruitful collaboration and great success.

In 2008, the 56th annual congress of GA will be held within the 7th Joint Meeting in Athens, Greece. It will be organized by Prof. Leandros Skaltsounis on behalf of AFERP together with GA, ASP, PSE and SIF (Soc. Ital. Fitochimica).

Last but not least I want to say good bye as president of GA. It was an honour to serve GA in this way for six years and I want to thank everybody for his/her support and trust.

I wish you a healthy, lucky and successful year 2008 and I am looking forward to seeing many of you in Athens.

Cordially

Rudolf Bauer
GA President

NEWSLETTER

Egon-Stahl-Award in Gold and Bronze 2008 and Dr. Willmar Schwabe Award 2008

Egon-Stahl-Award in Gold

The Egon Stahl-Award in Gold is the highest scientific honour of the Society for Medicinal Plant Research (GA). It acknowledges the outstanding scientific lifetime work of a research scientist who has been closely attached to Pharmaceutical Biology (Pharmacognosy, Chemistry of Natural Products), in its whole range, through his scientific work.

The Egon Stahl-Award in Gold is endowed with a gold medal and with Euro 5000. The prize will be awarded during the annual congress of the Society for Medicinal Plant Research (2008: Joint meeting with AFERP, ASP, PSE and SIF, Aug 3–8 in Athens, Greece).

Nominations can be made by all regular members of the Society for Medicinal Plant Research. Self nominations can not be considered.

The following must be enclosed with the nomination:

A detailed acknowledgment of the scientific works and names of further experts who could be consulted. **Nominations** must be submitted to the coming president of the Society for Medicinal Plant Research, Prof. Dr. B. Kopp, Vienna, **by March 1, 2008**

Egon Stahl-Award in Bronze

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.

The bronze medal and an award of € 1500 will be given to a young scholar up to the age of about thirty whose thesis is of outstanding quality.

In 2008 the ESA will be awarded during the joint meeting of GA with AFERP, ASP, PSE and SIF in Athens, Greece, Aug 3–8, 2008. Members of the Society for Medicinal Plant Research are invited to submit nominations for candidates together with supporting data to the coming president of GA, Prof. Dr. Brigitte Kopp, Vienna.

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 **triplicate**. Deadline for submissions is **March 15, 2008**



Dr. Willmar Schwabe Award of the Society for Medicinal Plant Research

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 10000 € sponsored by Dr. Willmar Schwabe GmbH, Karlsruhe (Germany).

The aim of the award is to motivate scientists to resolve phytotherapeutical and phytopharmaceutical problems in an interdisciplinary approach.

Research groups and scientists of universities and other non-commercial scientific institutions are entitled to apply.

Up to three relevant scientific publications on a specific topic which have been published during the last three years can be considered. They must be submitted together with CV(s) and list(s) of publications to the coming president of the Society for Medicinal Plant Research Prof. Dr. Brigitte Kopp, Vienna, in printed form in **five copies until April 15, 2008**.

The *Dr. Willmar Schwabe Award* will be bestowed during the joint meeting of GA with AFERP, ASP, PSE, SIF, in Athens, Greece, Aug 3–8, 2008.

Prof. Dr. R. Bauer, President of GA

Notes to all GA members



Note to all GA members

Please inform the secretary by phone, fax or mail of any change in your coordinates, especially in case of changes in E-mail addresses.

Fax / phone: ++49 8141 613 749

e-mail:
Ga-secretary@ga-online.org

The GA-homepage (www.ga-online.org) contains a special members area for which an access code is needed: username "gamember", password "morphine".



Deceased members

(to our knowledge)

Prof. Dr. Max von Schantz
(Honorary member)

The Society will keep commemoration of Prof. von Schantz and offers its sincere condolences.
(see also page 3)



Editorial remark

All contributions for the GA-Newsletter are welcome.

Deadline for submission is fixed to May 30th 2008.

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

Obituary: Prof. Dr. Max von Schantz (1922 to 2007)

On 25 November 2007 Professor Dr. Dr. h.c. Max von Schantz, honorary member of the Society for Medicinal Plant Research since 1987, passed away.

Prof. von Schantz was born on 20 January 1922 in Helsinki, Finland. After his matriculation examination in 1940 in Turku, Finland, he started to study natural sciences at the Åbo 'Akademi' in Turku and graduated from there as a Master of Science in 1949. In the same year, he also graduated as a Bachelor of Science (Pharmacy) at the University of Helsinki, and in 1951 as a Master of Science in Pharmacy, also in Helsinki. In 1954 he obtained a Licentiate degree in Natural Sciences at the University of Turku, and in 1958, his dissertation for the Doctorate in Philosophy was approved by the University of Turku. In addition to his academic pursuits at the University of Turku, during 1951 to 1954 he was sequentially an assistant in the Divisions of Pharmacognosy, Chemistry and Pharmaceutical Chemistry at the Department of Pharmacy (University of Helsinki). He was awarded an associate professorship in Pharmacognosy (1955-1957), and was acting professor (1957-1960). In December 1960, he was invited and appointed as a full professor in Pharmacognosy. For thirty years he held the chair in Pharmacognosy and during the last two decades in this position, he simultaneously acted as Head of the Department of Pharmacy (University of Helsinki), until his retirement in 1987.

Because of his unusual strengths in the natural sciences, e.g. chemistry, biology, botany and pharmaceutical sciences, he was ideally suited to educate and encourage young aspiring scientists and to drive forward scientific endeavours which during that epoch were entirely innovative in the field of pharmacy. He intensively followed the development of emerging technologies, for instance, in novel separation techniques. At that time a young talented researcher carrying out his research at the University of Karlsruhe, Dr. Egon Stahl, had just created a new separation technique, namely thin layer chromatography. Professor von Schantz had recognized the importance of this technique and immediately started to correspond with Dr. Stahl to explore the application of this completely

new technique in natural products research. Dr. Stahl pronounced to the then Ph.D. student von Schantz in the middle of 1950s "This new technique will have an extremely high importance in separation techniques in the future". Professor von Schantz incorporated this technology in his studies of volatile oils and specifically *Acorus calamus* L. – the theme of his doctoral dissertation.

In the early 1960s, once the first generation of commercial devices were readily available, he thereafter incorporated the application of gas chromatography in his volatile oil research. He was amongst the first scientists in Finland to introduce the hyphenated technique of gas chromatography and mass spectrometry (GC-MS). He envisaged the importance of such techniques in the field of pharmacognosy, and this was again the beginning of a new epoch in research, which would also influence teaching in the Department of Pharmacy.

After the completion of his doctoral dissertation, his interests principally centered on plant volatile oils, from members of subclasses (Coniferous trees) and families such as Asteraceae and Lamiaceae with emphasis not only upon analytical studies but also on the elucidation of the biosynthetic terpene pathways. In addition he was also interested in, and intensively studied, non-volatile plant secondary metabolites, e.g. steroids, saponins, phloroglucinols, anthroquinones, alkaloids, phenylpropane derivatives, flavonoids etc. Furthermore, he pursued his interests in plant breeding, e.g. selective breeding of *Vicia faba* L. in order to improve L-dopa production and the cross-breeding of summer turnip rape (*Brassica campestris* L. var. *annua*) to alter the fatty acid content and composition.

As Head of the Division of Pharmacognosy and the Department of Pharmacy, Professor von Schantz did not forget the importance of other departmental divisions and ensured they had sufficient resources to strengthen and expand their role within the Department of Pharmacy. In addition to this, he inspired young researchers in their work, and developed a strong international collaboration between leading university departments and institutes.



Throughout his academic career Professor Max von Schantz was extremely hard working; his enthusiasm was complete not only for the science of his chosen subject, pharmacognosy, but also for the administrative tasks associated with running a Department of Pharmacy.

Professor von Schantz was a board member of a number of scientific societies including the 'Akademi' of Finland (Research Council for Natural Sciences), the Finnish Society of Young Researchers and Teachers (Chairman), and the Finnish Society of Entomology (Associate Chairman). In addition, he has been a long-time member of the Society for Medicinal Plant Research, to which he was awarded the position of honorary Member in 1987.

It is truly amazing that despite his devotion to the Division of Pharmacognosy and the Department of Pharmacy, Professor von Schantz was also an expert in entomology, especially in the group of *Microlepidoptera*. During his academic career Professor Max von Schantz published more than 200 original articles within the scientific disciplines of chemistry, pharmacognosy and entomology, two books, hundreds of congress presentations, posters, proceedings, and numerous articles in non-scientific journals.

We have lost a great and enthusiastic teacher, mentor and a faithful friend, but will always remember him for these qualities.

Prof. Dr. Raimo Hiltunen, Helsinki;
Prof. Dr. R. Bauer (president)

Professor Dr. Ewald Sprecher, Hamburg, 85 years

Professor Dr. Ewald Sprecher, honorary member of the GA since 1995, celebrated his 85th birthday on November 17th 2007. As president of the GA in 1988/89, as Vice-President for 8 years and as a long-standing member of the advisory board he has dedicated extensive and devoted service to the GA. He brought his detailed knowledge of GA into the excellent chronicle of the GA which appeared on the occasion of the 50th anniversary of the society in April 2003. He has been and still is a very reliable participant at the annual meetings from the beginning of the GA together with his wife Helga. Together they now enjoy the au-

turn of their lives in their house full of wonderful books and mementos from their many interesting journeys in Europe and abroad. After an admirable life committed to science, teaching and intensive interchange with colleagues and friends, he deserves the pleasure of looking back on his personal achievements with satisfaction. The GA congratulates him on his birthday and wishes him and his wife vigour and health for the years to come.

*Prof. Dr. E. Stahl-Biskup;
Prof. Dr. R. Bauer (president)*



Professor Dr. Gerhard Franz, Regensburg, 70 years

Professor Dr. Gerhard Franz, honorary member of GA celebrated his 70th birthday on March 26th 2007. Prof. Franz has been president of GA from 1994 to 1997 and always active in pushing forward GA towards a modern society with international flair. Gerhard Franz held the chair of Pharmaceutical Biology at the University of Regensburg, Germany, since 1977, where he retired in 2004. His research was based on manifold aspects of modern pharmacognosy, starting from biosynthetic questions over carbohydrate analysis to immunomodulatory-, anti-inflammatory- and anti-coagulant polysaccharides. He became more and more interested in quality aspects of herbal medicinal products. A major interest was and still is the development of modern quality monographs for the German and European Pharmacopoeia. In Strasbourg he still acts as member of the European

Pharmacopoeia Commission and as chairman of the Expert Group 13B Phytochemistry. In 2006 he was awarded with the honorary membership of GA in recognition of his extraordinary contributions to medicinal plant research, his great impact on the development of modern herbal monographs for the pharmacopoeias and his long and intense engagement for the aims of our Society. His efforts to promote quality and application of herbal medicinal products have been acknowledged by the German Government and by high-impact awards of different scientific societies.

The GA congratulates him on his birthday and wishes him and his wife vigour and health for the next years.

*Prof. Dr. A. Hensel;
Prof. Dr. R. Bauer (president)*



Professor Dr. Elisabeth Stahl-Biskup, Hamburg, 60 years and retirement

Professor Dr. Elisabeth Stahl-Biskup celebrated her 60th birthday at January 14th 2007. In March 2007 she retired from the active academic life at University of Hamburg after successful research and an immense education of many generations of students after 35 years.

Professor Stahl-Biskup studied Pharmacy and did her PhD in 1975 on the nature and distribution of volatile oils within Lamiaceae, especially within the thyme genus. This subject was the main point of her habilitation in 1982. Since 1984 she was professor at University of Hamburg. Many phytochemical publications and several research-associated books, but also some famous textbooks are significant markers of a highly productive work. Especially the book "Anatomie und Histologie der Samen-

pflanzen" for enabling an effective microscopic identification and purity control of herbal materials can be assessed as standard text book within the pharmacognostic education of pharmacists, but it is also in heavy use within phytopharmaceutical industry. She was always active in writing the official comments for the European Pharmacopoeia in order to achieve modern and reliable monographs. Prof. Stahl-Biskup served GA many years within the advisory board and as the former editor of the GA newsletter. The GA congratulates her on her birthday and wishes her and her husband all the best for the next years!

*Prof. Dr. A. Hensel;
Prof. Dr. R. Bauer (president)*



Retirement of Prof. Dr. Arnold Vlietinck

After his 65th birthday on October 23, 2006 Prof. Arnold Jozef Vlietinck celebrated his official retirement from academic duties at University of Antwerp, Belgium, on September 30th 2007 after many active years in research, students education and regulatory affairs.

Arnold Vlietinck obtained his Pharmacist's degree in 1964 at the University of Leuven and his Ph.D. in Pharmaceutical Sciences at the same university in 1968. After specialisations in Industrial Pharmacy and Drug Analysis (1969, KULeuven) and Clinical Biology (Medical Biochemistry, Microbiology and Serology) (1973, KULeuven), he obtained the position of Research Assistant as a Fulbright-Hays, NATO- and WHO-fellow at the School of Pharmacy, Laboratory of Biochemistry, University of Wisconsin-Madison, Wisconsin, USA (1973-1974). In 1974 he became professor of pharmacognosy and phytochemistry at the newly founded University of Antwerp (Universitaire Instelling Antwerpen), and the first director of the Laboratory of Pharmacognosy and Phytochemistry. He started the different research lines that have turned the Laboratory into a highly performing research unit on national an international level, including (a) the pharmacological, chemotherapeutical and biochemical evaluation of plants used in traditional medi-

cine; (b) the search for new chemotherapeutic (antibacterial, antifungal, antiviral and antiparasitic), insecticidal, immunomodulating, anti-oxidative, wound-healing, antidiabetic and anti-tumoral substances from plants and other natural sources; (c) structure-activity relationship studies of biologically active natural products; and (d) drug analysis and quality control (UV, IR, NMR, MS, GC, GC-MS, HPLC, LC-MS).

Prof. Vlietinck has contributed to the formation of more than 30 promotions of pharmacists at the University of Antwerp. He is author or co-author of 230 scientific publications in international scientific journals, and an important number of chapters in books, contributions in congress proceedings.

More than for any other reason, the important role Prof. Vlietinck has to be pointed out in the field of quality, safety and efficacy of herbal medicinal products on European and even global level. This expertise was integrated by Prof. Vlietinck into the activities of many scientific societies and institutional organisations, as the European Pharmacopoeia Commission, ESCOP, EMEA, GA, International Society of Ethnopharmacology and many other. Especially GA has made great benefits from the input of Prof. Vlietinck over many years. Nearly every GA member knows the famous work-



shops on regulatory affairs during many GA conferences organized by him; he served many years in the advisory board and in many other cases GA was always keen to profite from his excellent expertise. The Society wishes Prof. Vlietinck all the best for the next years, best health and much time for continuing all activities for which the time was sparse during the last decades. All the best!

*Profs. L. Pieters, A. Hensel,
R. Bauer (president)*

Retirement of Prof. Winterhoff

On the occasion of Professor Dr. rer. nat. Hilke Winterhoff's retirement, GA would like to acknowledge her merits.

Professor Hilke Winterhoff was born on July 30, 1941, in Heidelberg, Germany.

In 1959 she started studying Biology and Chemistry at the Universities of Hamburg and Muenster and received her PhD in Biology in 1966 from the Westfaelische-Wilhelms Universitaet Muenster, Germany. From 1968 to 1969 she was a research assistant at the Institute for Human Genetics of the University of Duesseldorf, Germany, where she helped to establish a Chromosome Laboratory. In 1969 she joined the group of Prof. Dr. h.c. mult. F. H. Kemper at the Institute of Pharmacology and Toxicology of the Westfaelische-Wilhelms Universitaet Muenster as a research assistant. Her 'habilitation' in Pharmacology and Toxicology with the topic "Pharmacological characterization of herbal medicines and natural products with endocrine activities" followed in 1988. In 1993 she was appointed with an extraordinary Professorship of the Westfaelische-Wilhelms Universitaet Muenster.

Since 1975 Professor Winterhoff's research focus is on phytotherapy; she dedicated her scientific career to the pharmacological profiling of herbal extracts including refined fractions and active ingredients. Prof. Winterhoff formed new relationships

between pure scientific research and therapeutical applications, resulting in creative approaches in the development of new phytotherapeutics over the past years. In 55 publications in national and international journals and 12 book chapters Professor Winterhoff has made important contributions to the scientific study of medicinal plants. She presented her results on numerous national and international conferences and was honored in 1978 with the Sebastian-Kneipp-Award for her contribution "Pharmacological influence of phyto-medicines on endocrine organs" as well as in 1998 with the "Rudolf Fritz Weiss Award" of the German Society of Phytotherapy" together with her colleagues V. Butterweck, F. Petereit and A. Nahrstedt for their contribution "Solubilized hypericin and pseudohypericin from *Hypericum perforatum* exert antidepressant activity in the forced swimming test" (*Planta Medica* 1998; 64: 291-294).

The professional activities of Prof. Winterhoff are manifold. For instance, she is member of the German Commission E, member of GA since 1984, member of the Advisory Board of GA since 2000, member of the Board of Directors of the German Society of Phytotherapy, Co-Editor of the Zeitschrift fuer Phytotherapie, and chair of the working group "Efficacy and Safety" of the Kooperation Phytopharmaka, Bonn,



Germany. Starting in 1996 she also served as Chair of the permanent committee "Pharmacology" of GA.

Professor Winterhoff completes her career knowing that her life's work has stimulated the scientific community, trained more than 60 exceptional graduate students and received the respect from her closest peers and colleagues in the field of phytotherapy research.

GA acknowledges her as an outstanding researcher and wishes her good health and unlimited creativity for many years to come.

*Profs. Dr. V. Butterweck,
R. Bauer (president)*

Egon-Stahl-Award 2007 for Prof. Dr. Braca, Italy

The Egon-Stahl-Award 2007 with the silver medal has been awarded to Prof. Dr. Alessandra Braca, Department of Bioorganic Chemistry and Biopharmaceuticals, University of Pisa, Italy, in recognition of her highly valuable contributions to pharmacognosy and analytical phytochemistry, in particular by her outstanding phytochemical and pharmacological studies in the field of natural products with biological, pharmacological and chemotaxonomic interest.

Prof. Braca has a broad field of research in current pharmacognosy, a good and diverse publication record, and an outstanding scientific curriculum. Taking into account the number of publications related to her age, and the personal merits deduced from the CV, she is a famous prize winner of the ESA.

Alessandra Braca was born in 1972, and obtained her PhD degree at the University of Pisa in 2000. After a stay at the University of Calabria, she returned to the University of Pisa where she is presently active as associate professor. She has – also in view of her age – an outstanding publication record of **74** papers mainly in the field of bioassay-guided isolation and structure elucidation of natural products, in the leading journals of the field of pharmacognosy such as *Planta Medica*, *Journal of Natural Products*, *Phytochemical Analysis*, *Phytochemistry* etc.

It should be pointed out that she is not specialised in a narrow field of research, her publications cover a wide range of compounds and techniques.

The panel of judges for the Egon Stahl Award decided unanimously that the studies of Prof. Braca are an excellent example of an interdisciplinary approach in medicinal plant research, covering the fields of pharmacognosy and analytical phytochemistry, and therefore fully reflect the spirit of the Egon Stahl Award.

Prof. Kopp congratulated Prof. Braca and presented her the silver medal, the document and the monetary prize.

Prof. Braca gave a lecture entitled “Chemical and biological study of secondary metabolites from medicinal plants”:

Despite competition from other drug discovery methods, natural products are still providing their fare share of new clinical candidates and drugs. Natural sources offer a wealth of chemically diverse compounds that have been evolutionary preselected to modulate biochemical pathways. In this way, many natural compounds with innovative structures, mechanism of action, and different pharmacological activities, were isolated and characterized. In this context chemical and biological studies of several medicinal and food plants were carried out during the years, leading to the isolation and structural characterization by

extensive spectroscopic methods including 1D- (^1H , ^{13}C , ^{13}C DEPT, TOCSY, ROESY) and 2D-NMR experiments (DQF-COSY, HOHAHA, HSQC, HMBC), as well as ESIMS analysis, of numerous secondary metabolites with interesting biological activities. In this lecture, constituents obtained from species belonging to various families such as Chrysobalanaceae, Asclepiadaceae, and Leguminosae were reported. Molecules that showed the most interesting biological activity were diterpenes, steroidal, and triterpenoidal saponins. In the last few years, the attention was also focused on the identification and structural characterization of pregnane glycosides through ESIMS, as well as on the rearrangements of oligosaccharide chains.

Prof. Dr. Brigitte Kopp (vice-president)



Egon-Stahl-Award in Silver for Prof. Dr. Alessandra Braca during the ceremony in Graz, awarded by president Bauer and vice-president Kopp

Honoray doctorates for GA member

On Nov. 9th 2007, **Prof. Dr. Dr. h.c. mult. Heinz Schilcher**, Prof. em. was venerated

by the Semmelweis University of Budapest, Hungary, with the promotion to the

“Doctor honoris causa” in appreciation of his merits to medicinal plant research. Congratulations!

New GA members since June 2007

The Society welcomes you all warmly and wishes that GA may get a platform for many scientific and personal contacts. All the best for you and GA is looking forward to your active participation in all GA events!

M.Sci. Abdulkadir Abubakar, Nigeria; **Dr. Abdullahi Yaro**, Nigeria; **MSc Abubakar Noah Saidu**, Nigeria; **Mr. Adebayo Adeneye**, Nigeria; **Mr. Adeda Micheal Oloyede**, Nigeria; **Dr. Ahmed Daboob-Mohamed**, Libya; **Dr. Aliyu Musa**, Nigeria; **M.Sc. Amos Abolaji**, Nigeria; **Mr. Andreas Nievergelt-Meier**, Switzerland; **Stud. Pharm Anna Maria Baldia**, Austria; **Dr. Aurelia Brezeanu**, Romania; **Mr. Basden F. C. Okoye**, Nigeria; **Dr. Bola Oboh**, Nigeria; **Msc. Chinwendum Alaribe**, Nigeria; **Prof. Dr. Christoph Schempp**, Germany; **MD Dagoberto Brandao**, Brazil; **Ms. Daniela Hanganu**, Romania; **Ms. Danieal Benedec**, Romania; **Mr. Edwin Omeje**, Nigeria; **Ms. Emilija Jovin**, Serbia; **Prof. Dr. Fatma**

Hashem, Egypt; **Dr. Ferna Braga**, Brazil; **Ms. Florentina D. Gatea**, Romania; **Dr. Fred Nwodo**, Nigeria; **Ms. Gabriele Tatranga**, Romania; **Dr. erg. Gabriela Paun**, Romania; **Ms. Georgeta Balica**, Romania; **MSc. Gloria Mbogo**, Tanzania; **Mr. Godwin Mbaka**, Nigeria; **Dr. Hedda Sützi-Klein**, Austria; **Prof. Hee-Juhn Park**, South Korea; **Dr. Hippolyte Kamdem Wabo**, Cameroon; **HND Ian Sherwood**, United Kingdom; **MSc. Ismaila O. Ishola**, Nigeria; **Dr. Ivan Cordova**, Mexico; **MSc. Ivana Beara**, Serbia; **Dr. Kakasaheb Mahadik**, India; **Dr. Luzimar Fernandez Gonzaga**, Brasil; **Dr. Mahmoud Ottai**, Egypt; **Dr. Manju Gupta**, India; **Dr. Marcel Duda**, Romania; **MSc. Mauricio Gonzales**, Mexico; **Ms. Melanie Wiesner**, Germany; **Dipl.-Ing. Melanie Malszczyk**, Germany; **Dr. Mohamad Mroueh**, Lebanon; **Mr. Mohamad Bagher Hassanpouraghdam**, Iran; **Mr. Monde Nyila**, South Africa; **Prof. Dr. Nahla Sayed Abdel-Azim**, Egypt; **Dr.**

Ning-Sun Yang, Taiwan; **Dr. Olayinka Taiwo Asekun**, Nigeria; **MSc. Olufunmi-layo Ogunrinola**, Nigeria; **Mr. Olumide Adebessin**, Nigeria; **Ms. Onyekachi Iroanya**, Nigeria; **Dr. Paul Cox**, USA; **Dr. Peter Taylor**, Venezuela; **Ms. Pimolvan Tap-payuthpijarn**, Thailand; **Dr. Rabab El Dib**, Egypt; **Ms. Rashmi Kulshrestha**, India; **Mag.Pharm. Renate Baldia**, Austria; **Ms. Reyhan Bahtiyarca Bagdat**, Turkey; **Mr. Roy Upton**, USA; **Mag. Ruxandra Popescu**, Austria; **Dr. Sabry Mahfouz**, Egypt; **BSc. Sandra Gallant**, Canada; **Dr. Sebastian Jäger**, Germany; **MSc. Slavica Terzieva**, Macedonia; **Prof. Dr. Somsak Ruchirawat**, Thailand; **Prof. Dr. Sulejman Redzic**, Bosnia-Herzegovina; **MSc. Sunmontha Vadhanasin**, Thailand; **MSc. Sūra Baykan Erel**, Turkey; **Dr. Tejpal Singh Katiyar**, India; **Ms. Vesna Tepavcevic**, Serbia; **Ms. Viorica Coroiu**, Romania; **Ms. Wafaa A.-M. Tawfik**, Egypt; **Dr. Yang Ye**, China; **Ms. Yi Lu**, Germany

Minutes of the Members' Meeting 2007 held in Graz, Austria

The annual Members' Meeting was held on 4 Sept 2007 during the Graz annual congress. President Prof. Bauer welcomed the 162 participants.

1. Passing of the agenda

The agenda which had been sent out to all members with the invitation in GA NL 1-2007 in July 07 was approved unanimously.

2. Approval of the minutes of the annual Members' Meeting 2006 in Helsinki, Finland

The minutes of the Members' Meeting 2006 in Helsinki, Finland, were published in the GA-NL 2/Dec 2006. They were accepted from the assembly unanimously with no remarks.

3. Annual reports

3.1 Report of the President

Prof. R. Bauer

- On 14. April 2007 Prof. Dr. R. Hegnauer, Honorary member of GA since 1978 and first ESA Gold awardee in 1999, passed away in the age of 87 years. The assembly commemorated him in a minute of silence.
- Prof. Bauer congratulated honorary members Prof. Otto Sticher to his 70th birthday on 8 October 2006, Prof. Max von Schantz for his 85th birthday on 20 January 2007 and Prof. Gerhard Franz for his 70th birthday on 26 March 2007;
- On April 1, 2007, Dr. Volker Christoffel resigned as treasurer of GA for personal reasons. The president thanked for his impact and enthusiasm. Prof. Blaschek

has taken over the duties of the treasurer in interim until the elections;

- The Executive Council of GA had meetings on Febr 2 and on July 2 2007 in Vienna, the BoD meetings were held on 2 March 2007 in Düsseldorf and on 1 Sept. 2007 in Graz.
- Based on a workshop of the BoD on the future of GA, which took place in Helsinki last year, some projects and decisions were initiated:
 - The BoD proposed a new name of our Society: Society for Medicinal Plant and Natural Product Research – Gesellschaft für Arzneipflanzen- und Naturstoff-Forschung (GA).
 - A new travel grant for post docs from countries with reduced membership fees; 10000 € for this and 10000 € for the regular students' TG were both fixed in the budget of 2007; 12 travel grants for postdocs from developing countries and 34 for students were awarded for the congress in Graz (TG board for both: Th. Schmidt (chair), Luc Pieters, Anna Rita Bilia). The new category of TGs shall be discussed after the experience of 2 years.
 - According to a general inquiry a "young scientists committee" is requested and will be organized by Prof. Bilia (ideas and proposals to ar.bilia@unifi.it).
 - A foundation called "GA research trust" for funding of awards and of research activities shall be

founded, the necessary starting capital is 50000 €.

- GA has been granted the German Brand patents (Markenmeldung) for its organ "Planta Medica" and for the GA Logo (poppy capsule);
- GA has introduced the paygate system in order to facilitate paying the membership fees via internet per credit card (established by Dr. Christoffel);
- A new membership administration software with synchronized database for treasurer and secretary by supplier Gruen is in negotiation, which can be operated via the internet;
- The contract with the Internet Provider NetworkSolutions was prolonged for 5 years; the homepage is operated by Prof. Kopp, Dr. Wawrosch and Ms. Szabo, Vienna (many thanks to them!)
- GA became a member of the "Freundeskreis des Deutschen Apothekenmuseums in Heidelberg", as the pharmacy museum stores the GA archives.
- Egon Stahl Awards. The ESA silver 2007 has been awarded to Prof. Alessandra Branca, Dip. Chimica Bioorganica e Biofarmacia, Pisa; congratulations!
- The Egon Stahl Award in Gold has been advertised for 2008
- The new "Bionorica Phytoneering Award of GA" was negotiated by President Bauer and Prof. Popp, Bionorica, and was announced to all members. The jury decided not to award in 2007.

- 2 issues of the Newsletter have been prepared by Prof. Hensel, many thanks!
- GA participated in a series of Workshops and Symposia
- GA, represented by Prof. Kopp, acted as a co-organiser of the Phytotherapy congress in Berlin on Sept 28 – 30, 2006, and had also contributed to a memorandum.
- The LOF Symposium Groningen planned for 20 Oct. 2006 was cancelled by the organizer Prof. Kayser due to lack of registrations.
- GA, represented by Pres. Bauer with the opening lecture, acted as a co-organiser at the 1st Iberoamerican Symposium on Phytotherapy in Mexico City on 30 Nov–2 Dec, 2006.
- GA in person of Pres. Bauer was invited guest at the 50th anniversary symposium of the Phytochemical Society of Europe in Cambridge, on 11 – 14 April 2007. Prof. Bauer gave a plenary lecture.
- GA has co-organized and supported a Meeting of the Polish Herbal Committee in Poznan-Poland, May 24-25, 2007, organized by Prof. P. Mrozikiewicz, Poznan. Prof. Kopp represented GA.
- GA has also been involved in the symposium Phytopharm-2007, June 27 – 30, in Leiden, organized by Prof. Verpoorte and Prof. Makarov, Prof. Blaschek acted as representative of GA;
- GA has been invited to a series of meetings of the so-called EU-FEPS Presidents' Club to discuss collaboration within several societies in the field of pharmaceutical sciences; Profs. Kopp and Blaschek attended.
- GA received an invitation to the hearing of interested parties by the HMPC at EMEA on March 7, 2007 in London and to comment drafts of community herbal monographs and community list entries; Prof. Bauer prepared and sent a statement.
- GA has also been invited to meetings of German stakeholder organisations in the field of herbal medicinal products (BPI, BAH, KFN, DPhG, GPhyt) to discuss future developments in the field (represented by Prof. Blaschek).
- President Prof. Bauer met with the BoD of the German Pharmaceutical Society on June 2nd, 2007, to discuss common interests and future common activities.

3.2 Reports of the Vice-Presidents Prof. Dr. B. Kopp

- She acted as jury chair for ESA Silver 2007 and was responsible for the procedure of the Bionorica Phytotherapy Award 2007.

- Prof. Kopp represented GA at the GPhyt meeting in Berlin (28–30 Sept 2006) and at the Poznan meeting on 24–26 May 07 with a welcome address and attended the celebration of the 80th birthday of Prof. Kemper in Münster
- She supervises the actualisation of the GA homepage in Vienna.

Prof. Dr. W. Blaschek

- Since April 1st 2007 Prof. Blaschek acts as interim GA treasurer.
- He was GA delegate in 2 meetings initiated by KFN bringing together all interested groups involved in phytotherapy and will also attend the next meetings.
- He attended Phytopharm 2007 in Leiden on 28–30 June 07 and negotiated on Phytopharm 2008 in St. Petersburg in collaboration with GA.
- He was involved in the organisation of the satellite meeting at the DPhG-GA congress in Erlangen in Oct 07.

3.3 Report of the Secretary (Dr. R. Seitz)

She gave the latest statistics: On 1 Sept 2007 GA had in total **1212** members (in 2006 1192) from **83** countries with **11** honorary members, **134** (compared to 144 in 2006) new members since last year; **2** members deceased, **43** cancelled their membership; **69** members, who haven't paid for 3 or more years, were excluded; at the moment GA has 34 company members. 271 members are from countries with reduced fees; of 175 members we have no actual e-mail address.

The request for update of e-mail addresses along with the NL was quite successful, but needs to be continued.

Since June 2007 membership cards will be sent out only when fees are paid.

Despite our efforts not all difficulties with visa applications for Graz could be solved successfully.

3.4 Report of the Treasurer and report of the auditors

Prof. Blaschek presented Dr. Christoffel's annual cash report 2006 (income 90.862,25 € inclusive congress reimbursement, expenses 96.465,45 €, cash on hand and bank balances per Dec 31, 2006: 76.319,87 €), the budget draft for 2007 and the annual statement of the Egon Stahl-Awards budget (securities and bank balances per Dec 31, 2006: 46.944,65 €).

Since 1 March 2007 the new payment system for creditcard runs safely and successfully.

For all GA accounts on-line-banking was established and the daily financial status can be controlled at a glance.

A new software for internet-based members management and accountancy will be introduced end of 2007.

The **cash auditors Profs. Stahl-Biskup and Schlicher** thanked the treasurers Dr. Christoffel (for 2006 – 31 March 2007) and Prof. Blaschek for their transparent and clear accountancy. They agreed to act again as cash auditors for 2008.

3.5 Discharge of the ExC

Dr. Christoffel separately in absence and the ExC were unanimously discharged with 4 abstentions.

Prof. Bauer thanked for discharging the ExC and also thanked the team in the ExC for the enthusiastic work.

4. Planta Medica

- Prof. Hamburger resigned as Editor in Chief of Planta Medica by 31 Dec. 2006 due to an overload of work;
- GA negotiated with Thieme regarding the support of the Editorial team and the workflow resulting in a new editorial structure; under these conditions Prof. Luc Pieters agreed to act as the new editor-in-chief from Jan 1, 2007 on;
- the editorial board was extended to 16 co-editors with more competences;
- many thanks to Prof. Hamburger for all his efforts in a modernization of the submission and reviewing process of Planta Medica in the last 2 years and to Prof. Pieters for taking over the job as Editor in Chief.
- GA is negotiating a general agreement with Thieme regarding Planta Medica and the relation to our Society.
- As one of the results the abstracts of the annual meetings in Helsinki and Graz were published in a regular issue of Planta Medica.
- A questionnaire in Sept 06 among GA members revealed the high interest by many members in a cheaper and easier online access to Planta Med.
- After long negotiations with Thieme GA offers now an online subscription for individual GA members at reduced rates. Prize: 60 € for access of the last 10 years, 100 € for access to all volumes back to 1981;
- From now on invoices for membership and the option of an online subscription will be sent out in Oct. and have to be paid by the members till Dec.

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

In 2006 over 900 papers were submitted, 255 were published with pharmacology/toxicology as the leading topic; China submitted most of the papers followed by Germany, Korea, Japan, US, Taiwan and Brazil. IF is now 1.75,

total citations over 7200. *Planta Medica* has maintained or improved its position compared to all competing journals and is becoming more and more a “pharmacology” journal.

5. Reports of the Permanent Committees (more in www.ga-online.org)

5.1 Biological and Pharmacological Activity of Natural Products (Report Prof. Winterhoff)

The title of the Graz workshop was “Models for testing addictive behaviour” with the speakers P. Bäckstroem, Helsinki-Fi, and R. Doetkoe/H. Winterhoff, Muenster-D.

5.2 Breeding and Cultivation of Medicinal Plants (Report Prof. Ch. Franz)

He organized the workshop with the title “Identification and authentication of plant starting material with the panelists”. B. Klier, E. Reich and J. Nowak.

As ICMAP president (International Council of MAPs) he pointed at the next World conference on MAPs (WOCMAP 4) in Capetown, SA, on Nov. 9-14, 2008 (organized by ICMAP).

5.3 Manufacturing and Quality Control of HMPs (Report Prof. Meier)

The question “Pharmakokinetics of HMPs – useful or not?” of his Graz workshop was discussed by the panelists R. Länger, F. Lang and K. Wölkert.

5.4 Regulatory Affairs on HMPs (Report Prof. Vlietinck)

For the 1st time Prof. Vlietinck organized a half day workshop together with Prof. Alban, Kiel, with the title “Importance of HMPC community monographs and community list entries for the marketing authorisation and registration of HMPs in Europe”. The panelists H. Pittner, HMPC chair at EMEA, B. Steinhoff, Co-chair of ESCOP and AESGP, B. Roether, Bionorica, and P. Coppens of EBF contributed to all aspects of the topic.

6. Discussions and decisions

The proposal of the BoD for the **change of the name** of the Society into “Society for Medicinal Plant and Natural Product Research – Gesellschaft für Arzneipflanzen- und Naturstoff-Forschung (GA)” was intensely discussed; a majority of the participants was in favour to change the name as proposed, but another proposal came into discussion: “Society for Natural Product and Medicinal Plant Research”. Due to time pressure it was not clear whether the first version “Society for Medicinal Plant and Natural Product Research – Gesellschaft für Arzneipflanzen- und Naturstoff-Forschung (GA)” reached the necessary two-third majority; therefore this decision was postponed to the next meeting; an e-mail voting of all members was suggested to

get a broader view on the acceptance of the new name.

GA Research Trust: Still more money is needed to found the trust, no rules have been prepared so far.

The assembly agreed to the **new ESA monetary values:** ESA bronze 1500 €, ESA silver 3000 €.

The proposed **change of § 8 of the by-laws** for future online membership application without signature was accepted unanimously. The change reads as follows:

§ 8 – Initiation and Termination of Membership

(1) The initiation of membership either as a regular or supporting member needs a written request to the Executive Council by letter, fax or internet using the appropriate application forms.

The acceptance of a new member is effected by appropriate action of the President and the Secretary acting for the Executive Council. The Secretary informs the applicant in writing by letter, fax or internet concerning acceptance or non-acceptance.

7. Election of the Board of Directors

ExC candidates were for president Prof. Dr. Brigitte Kopp, for vice presidents Prof. Dr. Rudolf Bauer and Prof. Dr. Wolfgang Blaschek, for secretary Dr. Renate Seitz, for treasurer Dr. Bernd Roether.

Additional to the 15 candidates proposed by the BoD for the Advisory Board (Prof. Dr. Susanne Alban, Germany, Dr. Anna Rita Bilia, Italy, Prof. Dr. Veronika Butterweck, USA, Dr. Clemens Erdelmeier, Germany, Prof. Dr. Dean Guo, China, Prof. Dr. Matthias Hamburger, Switzerland, Prof. Dr. Michael Heinrich, U.K., Prof. Dr. Andreas Hensel, Germany, Prof. Dr. Wolfgang Kreis, Germany, Prof. Dr. Marie-Aleth Laccaille-Dubois, France, Prof. Matthias Melzig, Germany, Prof. Dr. Deniz Tasdemir, U.K., Prof. Dr. Arnold Vlietinck, Belgium, Prof. Dr. Heikki Vuorela, Finland, Prof. Dr. Yang Ye, China) the audience proposed 2 additional candidates: Dr. (Mrs.) O. Adeyemi, Nigeria, and Prof. Dr. KHC Baser, Turkey.

Profs. Stahl-Biskup and Schilcher as returning officers chaired the elections and presented the results out of 162 votes:

President

Prof. Dr. Brigitte Kopp (votes: 145 yes, 8 no, 8 abstentions)

Vice-Presidents

Prof. Dr. Rudolf Bauer (votes: 148 yes, 0 no, 2 abstentions)

Prof. Dr. Wolfgang Blaschek (votes: 150 yes, 0 no, 2 abstentions)

Treasurer

Dr. Bernd Roether (votes: 154 yes, 0 no, 8 abstentions)

Secretary

Dr. Renate Seitz (votes: 156 yes, 0 no, 6 abstentions)

The Advisory Board

The following 8 candidates were elected:

Prof. Dr. Susanne Alban, Kiel-Germany (votes: 81)

Prof. Dr. Anna Rita Bilia, Florence-Italy (97)

Prof. Dr. Veronika Butterweck, Gainsville, FI-USA (97)

Prof. Dr. Matthias Hamburger, Basel-Switzerland (98)

Prof. Dr. Andreas Hensel, Muenster-Germany (93)

Prof. Dr. Michael Heinrich, London, UK (77)

Prof. Dr. Arnold Vlietinck, Antwerp – Belgium (94)

Prof. Dr. Heikki Vuorela, Helsinki-Finland (84)

All candidates accepted.

Two additional members of the advisory board will be coopted by the new ExC.

8. Future congresses, symposia and workshops (see also www.ga-online.org)

- 2008, 3–8 Aug., Joint meeting in Athens organized by AFERP (organizer Prof. L. Skaltsounis, Athens) together with GA, ASP, PSE and SIF (Soc. Ital. Fitochimica)
- 2009, 16–20 Aug., Annual Congress in Geneva (organizer Prof. Dr. K. Hostettmann)
- 2010, 29 Aug. – 2 Sept., Annual Meeting in Berlin (organizers Profs. Melzig and Kolodziej)
- 2011: Annual Meeting in Antalya, Turkey (organizer Prof. H. Baser)

Other symposia and workshops of GA

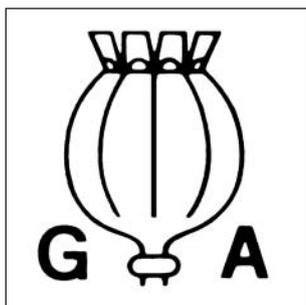
- 2007, 10–13 Oct, Erlangen: DPhG Congress (in collaboration with GA and ÖPhG and a post symposium organized by Prof. S. Alban on “Interactions”)
- 2007, 5–8 Nov, Nonnweiler: 4th Mistletoe Symposium (Prof. Kreis as GA representative)
- 2008, 14–16 Feb., Gphyt/GA-Meeting in Berlin (organized by Prof. Schulz)
- 2008, 18–21 Feb., Bernburg/Germany 5. Fachtagung Arznei- und Gewürzpflanzen (organized by Prof. Pank and C. Franz for GA)
- 2008, April 24–25, Workshop on Metabolomics und Systems Biology in Leiden (farewell symposium of Prof. Scheffer, organized by Prof. Verpoorte and Prof. Scheffer)
- 2008, 12–16 April, 7th Oxford International Conference on Science of Botanicals (ICSB) at the University of Mississippi, USA (organized by Prof. I. Khan in collaboration with GA)
- 2008, 2–4 July St. Petersburg: Phytopharm 2008 (organizer Prof. Makarov and GA)

9. Miscellaneous

Prof. Bauer thanked all members and the BoD for continuous support during his presidency and closed the meeting.

Oct. 20th 2007, Prof. Dr. Rudolf Bauer, GA President; Dr. R. Seitz, GA secretary





55th International Congress and Annual Meeting of the Society for Medicinal Plant Research

GRAZ
2007

Graz, Austria
September 2–6, 2007

<http://www.ga2007.org>



Annual GA congress 2007 in Graz, Austria

Our annual GA congress 2007 was held in Graz, the capital of the province of Styria and Austria's second largest and famously charming city, cultural capital of Europe in 2002 and UNESCO world heritage since 1999. From September 2 – 6 over 870 participants from 75 countries worldwide had followed the invitation of GA and congress president Prof. Rudolf Bauer, head of the Institute for Pharmaceutical Sciences in Graz. The conference started on Sunday evening with a Get-together-Party in the historical main hall of the Karl-Franzens-University of Graz (founded in 1585), the other days the scientists met at the Graz Convention Centre, also a historical site in the centre of the city.

772 abstracts had been accepted to make a pretentious programme with the main topics "anti-inflammatory and immunomodulatory active natural products, natural products with antimicrobial activity, analysis and biopharmaceutics of herbal medicinal products, traditional herbal medicinal products, and medicinal plants in animal healthcare". Again the abstracts were printed in a regular issue of *Planta Medica* (# 9, vol. 73). The contributions resulted in 9 invited plenary lectures, 9 keynote lectures, 73 short lectures and 664 posters. Additionally, 7 workshops on various topics plus the already traditional Young Researcher Pre-Symposium were held (the detailed programme under www.ga-online.org/previousevents)

The congress was opened with welcome addresses of the Austrian Federal Minister for Science and Research, Dr. J. Hahn, the governor of Styria, F. Voves, the mayor of Graz, BM S. Nagl, the rector of the Karl-Franzens University, Prof. Dr. A. Gutschelhofer and by the congress president Prof. R. Bauer. He thanked for the great worldwide interest in his congress and consid-

ered it as a great honour that the opening lecture with the title "Bioactive Natural Products: A journey of a Thai Scientist" was held by. She presented some promising Thai plants under investigation in her institute with a main focus on cancer research. Princess Chulabhorn was later honoured with the golden ring of the Graz University. In the following award ceremony, GA vice president Prof. Brigitte Kopp introduced the winner of the Egon Stahl award in silver of 2007, Prof. Dr. Alessandra Braca from the University of Pisa, who then presented her outstanding research in the award lecture. Prof. T. Schmidt, Münster, chair of the travel grant committee 2007, announced the 34 happy winners from all over the world of the student's travel grant (in sum

10000€) and 12 winners of the newly installed travel grant for post docs from developing countries (also 10000 €). Unfortunately and despite great efforts on GA side, some of these TG awardees could not attend the conference due to visa restrictions.

Three plenary lectures topped the daily scientific programme continuing in 2 parallel sessions of keynote and short lectures: P.A. Cox, Institute for Ethnomedicine, Jackson Hole, Wyoming, USA, started with "Biodiversity and the search for new medicines". S. Gibbons from the School of Pharmacy in London, U.K., spoke about "Phytochemicals for bacterial resistance – strengths, weaknesses and opportunities", followed by Louis Maes, Laboratory of Mi-



Prof. Dr. HRH Princess Chulabhorn Mahidol, president of the Chulabhorn Research Institute in Bangkok, Thailand obtains a guest present in form of a picture of historic down town Graz from president Prof. Bauer, the organizer of 2008 GA-Symposium

crobiology, Parasitology and Hygiene (LMPH), University of Antwerp, Belgium, with "Natural products with antimicrobial activity: from figures to facts". The other plenary speakers were Chlodwig Franz, Institute for Applied Botany and Pharmacognosy of the University of Veterinary Medicine Vienna, Austria, with "Functional Plant Products in Veterinary Medicine and Animal Nutrition", Oliver Ullrich of the Institute of Anatomy, Faculty of Medicine, University of Zurich, Switzerland, with "Immune surveillance of the central nervous system in health and disease – therapeutic intervention by natural products", Verena Dirsch, Department of Pharmacognosy, University of Vienna, Austria, with "Natural products and chronic inflammatory vascular processes", also Yang Ye, State Key Laboratory of Drug Research, Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Shanghai, China with "Structures and bioactivity of alkaloids from *Stemona*", and Nikolaus J. Sucher, Herbal Analysis and Pharmacology Laboratories, Centre for Complementary Medicine Research, University of Western Sydney, Australia, with "Chips and Qi: microchip-based authentication of traditional Chinese medicinal plants".

All posters could be displayed throughout the whole congress and were individually presented in 3 poster sessions.

- The workshops organized either by the chairs of the Permanent Committees of GA or special research groups dealt with
- Pharmacokinetics of herbal medicinal products – useful or not?
- Models for testing addictive behaviour
- Identification and authentication of plant starting materials

- Nasal innate and adaptive immune response and their influence by herbal preparations
- State of the art in clinical and preclinical studies with EPs® 7630 (Umckaloabo®)
- Echinacea: Update on current research
- The workshop on regulatory affairs discussing the "Importance of HMPC community monographs and community list for the marketing authorisation and registration of herbal medicinal products in Europe" was organized as a half day pre-symposium.

The congress was supported and sponsored by the Austrian Federal Ministry for Science and Research, the government of Styria, the city of Graz, the Karl-Franzens-University of Graz and by 31 pharmaceutical companies, most of them also contributing to an interesting phytopharmaceutical exhibition.

As usual the annual members meeting of the Society for Medicinal Plant Research was held during the congress on Tuesday late afternoon with elections of the new Executive and Advisory Board of the Society. Unusually many members – 162 – attended the meeting (see also report of the members' meeting). A special GA booth for personal inquiries and the possibility to pay open membership fees in cash was very well accepted by the members. 43 congress participants applied there for GA membership (see welcome address to our new members in this NL). Thanks to the treasurer's assistant, Ms. A. Lahse!

A great variety of social events gave ample opportunities for private mingling: After the Get-together-party on Sunday, the governor of Styria and the mayor of Graz invited to a reception in the Grand Hall of the "Old

University" on Monday evening. A organ concert was arranged for Tuesday night in the majestic Graz Cathedral. Highlight on Wednesday was the Congress dinner in an ancient "soap factory", organized as a Styrian evening with local food, folklore, music and dancing. For the first time the dinner was included in the general registration fee, earlier leaving participants were asked to return their tickets for students on a waiting list. As a nice result younger and older participants were nicely mixed with the final unanimous opinion: a wonderful evening!

On the last day of the congress 3 excursions were offered: One to the wine-growing area of Western Styria ("Plants, culture and wine"), the other ("Spirit and spirits") to typical monasteries in Eastern Styria with a visit to a pumpkin oil mill and spirits tasting. Due to bad weather and snowfall down to 1000 m the traditional botanical excursion to the Styrian alps ("Alpine plants in their habitat") had to be cancelled, instead of the group visited the famous convent and library of Admont in Northern Styria.

For accompanying persons (and those needing a break in science) interesting walking tours through the city of Graz, the historical centre of Graz and some famous historic pharmacies were offered. A visit to the breeding farm of the world famous Lipizaner horses was organized as a pre-symposium tour on cloudless Sunday.

Surely most participants of the Graz congress agree, that congress president Bauer had not promised too much by wishing all of us a successful meeting with a perfect meeting atmosphere in the charming city of Graz. Thanks to him and his indefatigable and charming crew!

Renate Seitz

3rd Young Researcher Workshop (YRW) in Graz

During the Graz conference the 3rd YRW of GA took place and was attended by 85 highly motivated young people from all over the world. From 55 abstracts which had been submitted, 12 had been selected for oral presentation. The speakers came from 8 different countries, covering a quite wide range of actual research: beside bio-synthetic questions, analytical innovations, structure elucidation and molecular target biochemical research were topics of the talks. Nearly all presentations had a very high scientific standard, excellent rhetoric quality and were presented with much enthusiasm. The discussions together with the auditorium were open and very constructive. 2 of the best presentations were chosen for a special prize; additionally the best contributions coming from the audience were also selected for a monetary prize. All awards have been sponsored by Bionorika AG.

A survey was made by the organisers (A.R. Bilia, A. Deters, A. Hensel, M. Keusgen) by all attendees, with the result that over 90% found the YRW useful for the daily lab work. The YRW will therefore be continued within the next years.

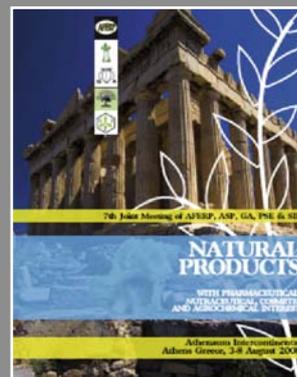
Hensel



The winner of the YRW awards 2007

56th International Congress and Annual Meeting of the Society for Medicinal Plant Research

Athens, Greece
August 3–8th, 2008



Dear colleagues and friends,

We have the privilege and pleasure to inform you that the **7th Joint Meeting of the scientific societies AFERP, ASP, GA, PSE & SIF** will be held in Athens, Greece at the Athenaeum Intercontinental Hotel on **August 3-8th, 2008**.

Our primary intention is to gather experts and scientists in natural products with phar-

maceutical, nutraceutical, cosmetic and agrochemical interest from all over the world and invite them to present their researches and to describe current scientific trends. There will be many opportunities during the Congress, for extensive discussions and exchange of knowledge and views.

The Scientific and the Organizing Committees, as well as the five Scientific Societies cordially invite you to participate, thus decisively contributing to the Congress success.

With the warmest salutations

*Prof. Leandros Skaltsounis,
President of the Congress*

Main Scientific Topics

1. Drug discovery from natural sources
2. New sources of bioactive natural products: from biodiversity to chemodiversity
3. Cell cycle regulation and natural products
4. Biosynthesis and biomimetic synthesis of natural products
5. Natural products with cosmetic, agrochemical and veterinary interest
6. Bioavailability and quality of herbal drugs
7. Health improvement through dietary phytochemicals
8. Modern approaches to traditional medicines
9. New trends in extraction, separation and structural determination processes

Workshops

- Young Researcher workshop on 3rd August 2008.
- Regulatory Affairs on Herbal Medicinal Products on 3rd August 2008.
More workshops will be announced on second announcement.

Abstract submission deadline: 5th April. Abstracts will be published in *Planta Medica*. The second announcement will be send out in January 2008.

Official website:
www.jointmeeting.2008athens.gr

CORRESPONDENCE

Scientific aspects: Prof. L. Skaltsounis, Chairman of scientific committee, University of Athens, Faculty of Pharmacy, Department of Pharmacognosy and Chemistry of Natural Compounds, Athens, 15771, Greece, Tel:+302107274598 / Fax: +30210 7274594 E-mail: skaltsounis@pharm.uoa.gr

For **registration & hotel reservation** please contact the congress secretariat: AFEA Travel Consultants & Congress Services, 39-41 Lykavittou Str., 10672 Athens, Greece, Tel. +302103668852 / Fax +302103643511 Email: afea.jointmeeting@2008athens.gr

Other Meetings

Berlin, Germany

14 – 16th February 2008
Phytopharmaka und Phytotherapie 2008 – Forschung und Praxis
http://www.ga-online.org/files/Berlin/flyer08_07.pdf

Bernburg-Strenzfeld, Germany

18 – 21st. February 2008
18. Bernburger Winterseminar und

5. Fachtagung Arznei- und Gewürzpflanzen; Qualität, Wirtschaftlichkeit und Nachhaltigkeit
<http://www.llg-lsa.de>;
Sybille.Richter@llg.mlu.lsa-net.de

University, MS, USA

April 12 – 16, 2008
7th Annual Oxford International Conference on the Science of Botanicals &

American Society of Pharmacognosy
4th Interim Meeting
<http://www.OxfordICSB.org>

Leiden, The Netherlands

April 24–25th 2008
GA Symposium: Plants systems biology and medicinal plants
Systems biology is revolutionizing science. It means a different approach to study bio-

logical systems, *i.e.* studying the systems in a more holistic way. In complex organisms such as plants this offers many new opportunities and many challenges. For studying plant resistance against pests and diseases, or studying the effect of medicinal plants in living systems (cells, animals or humans), systems biology will be of great value. Key technologies in systems biology are transcriptomics, proteomics and metabolomics. Particularly the latter technology is of great interest for finding compounds that correlate with biological activity, e.g. in resistance against insects, or a pharmacological activity. Metabolomics is also an important tool for quality control of plant products, e.g. showing equivalence of GMOs, or for control of consistency of the composition of botanicals. The 2-days symposium will highlight a number of aspects of plant systems biology in relation to the above mentioned applications. Topics of the invited talks: Systems biology; TCM and systems biology; Unraveling biosynthesis in medicinal plants; Transcriptomics for unraveling pathways; Plant NMR-based metabolomics; Essential oils analysis, metabolomics *avant-la-lettre?*; Proteomics; Metabolic Fluxes.

Course in Metabolomics

In connection with the meeting we will organize a Course in Metabolomics, starting April 21 and finishing April 29, not including

the meeting. Further information can be obtained from R. Verpoorte (address see below).

R. Verpoorte, Department of Pharmacognosy, Section Metabolomics, IBL, P.O. Box 9502, 2300 RA, Leiden, The Netherlands; FCOGSYMP@LACDR.LeidenUniv.NL

London, U.K.

May 1st 2008

APSGB meeting: Royal Pharmaceutical Society Headquarters, London, U.K.

Diet and health: cause for concern or over-hyped? Nutrition and immunity; Pharmacological effects of dietary unsaturated fatty acids; Is lycopene a biologically important carotenoid for humans? Sulfur-containing compounds from the cabbage family; Isoflavones and other phytoestrogens – links with cancer prevention and gynaecological conditions? Anthocyanidins, mental health and cardiovascular disease; Phenolics from tea, coffee and other drinks; Are antioxidants of any real use in disease prevention?

<http://www.rpsgb.org.uk/worldofpharmacy/events/>

Andhra Pradesh, India

March 7-9th 2008

International seminar on medicinal plants and herbal products.

The seminar is expected to be attended by several experts from well-known research and academic institutions, eminent medical physicians, traditional practitioners, NGOs, manufacturer of herbal products, members from the corporate sector, marketing consultants and farmers from all over India. The delegates will get ample opportunity for exchange of ideas through individual and group discussions. The aim of the seminar is to provide a platform for mutual understanding and discussion between scientists about various aspects of research related to Medicinal plants and for formulating strategies to achieve the common goals.

The seminar will cover cultivation, extraction of Medicinal plants and Herbal Products, Plant biotechnology, Supply of planting material and herbal products, applications in Ayurveda, Herbal Cosmetics and Pharmaceuticals, standardization and quality control issues and marketing aspects.

Organized by Department of Botany, S.V. University, Tirupati & AP Medicinal Aromatic Plant Board, Hyderabad; <http://ismphp.blogspot.com/>

St. Petersburg, Russia

July 2 – 4, 2008

12th International Congress

“Phytopharm 2008”

<http://www.adaptogen.ru/phyto2008.html>

Meeting Reports

4th Mistletoe Symposium, Europäisches Bildungszentrum, Nonnweiler-Otzenhausen (Germany), 8th to 10th November 2007: Mistletoe in Tumour Therapy – Basic Research and Clinical Practice

Treatment with mistletoe preparations is one of the most important methods of complementary oncology. More than 110 scientists and physicians from different therapy approaches and scientific disciplines, manufacturers of mistletoe preparations and representatives of authorities came together in the to present and discuss the current status of mistletoe in tumour therapy in 51 contributions. The symposium was organised and sponsored by the Karl und Veronica Carstens Stiftung and the Gesellschaft Anthroposophischer Ärzte in Deutschland (German Society of Anthroposophical Doctors) together with the GA, Society for Phytotherapy), German Pharmaceutical Society and Central Association of Doctors in Naturopathic and Regulation Medicine. The International Association for Pharmaceutical Technology was a co-operation partner. As in the previous three symposia, the organisational director was Dr. Rainer Scheer from Carl Gustav Carus-Institut in Niefern-Öschelbronn. The range of viewpoints of the organising associations and speakers lent this symposium its particular character. It took place in a constructive atmosphere, which is typical of this se-

ries of symposia held every four years. The aim of these meetings is to create a forum for discussion, enabling participants to review current studies and the latest findings. It is hoped that medical doctors (whether in general or hospital practice), pharmacists and health insurance funds will obtain as objective a picture as possible of the use and current state of scientific knowledge about mistletoe extracts in basic research and therapy, but also identify their potential and their limitations. The symposia are also intended to bring about factually based dialogue and stimulate further research.

The contributions dealt with current and important topics from the fields of biology, pharmacy and pharmacology. In detail, these involved the effects of different ingredients, immunological and clinical results as well as reports from clinical practice through to clinical trials aimed at identifying specific effects or demonstrating the efficacy of mistletoe preparations. As in the previous symposia, advances in the scientific as well as the medical sphere could be identified. The participation of a number of young researchers should again be highlighted. Naturally the eight summary papers, 33 short papers and 10 posters focused on clinical subjects. *Prof. Dr. Stefan F. Martin (Department of Dermatology, Freiburg University Medical Center)* talked about the dual role of inflammation in cancer: on the one hand the rather tumour-pro-

moting effect of chronic inflammation and, on the other hand, the acute inflammation that can be exploited for therapeutic purposes, in relation to which the role of mistletoe preparations was discussed. The importance of mistletoe in oncology today was highlighted by two clinicians from the perspectives of anthroposophical medicine (*Dr. Boris Müller-Hübenthal, Filderklinik, Filderstadt*) and herbal medicine (*Dr. Peter Holzauer, Veramed-Klinik am Wendelstein, Brannenburg*). Other topics were studies on the efficacy and safe use of mistletoe preparations, alone or as an adjunct to standard oncology treatments (surgery, chemotherapy) with the aim of producing a beneficial effect on the immunosuppression caused by the standard therapies. Various instruments of clinical research were used, such as controlled (randomised and non-randomised) studies and cohort studies, but also observational studies which reflect everyday clinical practice more closely, as well as case histories and reports of clinical experience, mainly concerning breast cancer patients but other tumour entities as well. The patients' quality of life, which was reduced by side effects associated with standard therapy and the disease, was improved in many cases. Another presentation dealt with mistletoe therapy in paediatric oncology. In addition to the whole range of clinical trials, there were questions about dosage, phar-



macokinetic studies, through to the development and validation of new mistletoe-specific instruments for clinical testing, such as Cancer Fatigue or Internal Coherence questionnaires, and the development of a database embracing both hospital and general practice, which is an instrument of health services research. Several speakers dealt with methodological questions. *Dr. Matthias Rostock (Klinik für Tumorbologie, Freiburg)* presented results of the Cochrane Review, the latest meta-analysis in which 21 randomised clinical trials were comparatively reviewed. *Dr. Gunver S. Kienle (Institute for Applied Epistemology and Medical Methodology, Bad Krotzingen)* gave an overview of other systematic study reviews and their analysis, stressing that the critical evaluation of a therapy mainly depends on the quality of the method, meaningfulness in medical and medicinal terms and relevance to practice. It became clear from the discussion that comparisons should also take account of the diversity of the mistletoe preparations tested. It is difficult to conduct randomised clinical trials with mistletoe preparations because people often cannot be randomised, i.e. they are understandably reluctant to leave their therapy to chance, and because patients in the non-mistletoe group frequently still take mistletoe, which means the real difference from the mistletoe group is diminished. In addition, the dosage regimen in mistletoe therapy is usually determined on an individual basis, which is why this essential approach in clinical practice cannot always be tested in a rigid trial regimen. In his summary paper, *Dr. Harald Matthes (Gemeinschaftskrankenhaus Havelhöhe, Berlin)* therefore contrasted health service research with randomised clinical trials and commented on the use of this instrument in complementary oncology.

It was particularly pleasing that the German Federal Institute for Drugs and Medical Devices was represented by *Dr. Christiane Kirchner* on the “Regulatory options for *Viscum album* preparations”. Other scientific reports covered particular characteristics of different mistletoe ingredients, their interactions with each other and galenical subjects such as liposomes and the further pharmaceutical development of mistletoe preparations. Biology was represented by chronobiological and specific questions about the host trees of mistletoe. In the pre-clinical sphere *Prof. Dr. Reinhild Klein (Department of Internal Medicine II, Tübingen*

University Hospital) gave an overview of “Effects of mistletoe extracts on immunocompetent cells *in vitro* and *in vivo*”, while subjects covered in short papers and posters included apoptosis, cytotoxicity and again the exclusion of tumour stimulation by mistletoe extracts.

All abstracts were published in *Phytomedicine* and are freely available on the internet (www.ScienceDirect.com)

Dr. Rainer Scheer, Carl Gustav Carus-Institut, Niefern-Öschelbronn



Representatives of the scientific associations and organisers of the Mistletoe Symposium (left to right): *Dr. Harald Matthes, Berlin, Prof. Dr. Wolfgang Kreis, Erlangen, Dr. Rainer Scheer, Niefern-Öschelbronn, Prof. Dr. Dr. h.c. mult. Fritz H. Kemper, Münster, Prof. Dr. Hans Becker, St. Ingbert, Prof. Dr. Wolfgang Blaschek, Kiel*

How to write and to submit a manuscript for *Planta Medica*

By *L. Pieters, Editor-in-Chief of *Planta Medica**

In conjunction with the Workshop for Young Researchers during the 55th International Congress & Annual Meeting of the Society for Medicinal Plant Research in Graz (September 2 – 6, 2007), a seminar was organised on “How to write and to submit a manuscript for *Planta Medica*”. Quite often it is observed that authors have not taken into account some basic requirements for a publication in *Planta Medica*, which leads to rejection of the manuscript or a delay in the review process. Therefore it was decided to highlight the most important points of the Guidelines in the GA Newsletter.

According to its subtitle *Planta Medica* is “An International Journal of Natural Prod-

ucts and Medicinal Plant Research”. The journal is not restricted to medicinal plants, but covers all research on bioactive natural products. Manuscripts can be submitted exclusively online at <http://mc.manuscriptcentral.com/plamed> or using the link at <http://www.thieme.de/plantamedica>.

Manuscripts cannot be accepted for publication in *Planta Medica* unless the following conditions, if applicable, are fulfilled:

1. Submission of a manuscript to *Planta Medica* implies that it represents **original research** not previously published and that it is **not being considered for publication elsewhere**. Authors inves-

tigating the chemistry of a single species should aim to publish their results in a single manuscript rather than in a series of papers. **Manuscripts should not report fragmentary parts of a larger study.**

2. Language of publication is **English**. Manuscripts written by authors whose mother language is not English should



be checked by a native speaker or a professional language editing service before submission.

3. **Plant material** (as well as other organisms) must be properly identified. The scientific name (in *italic*), the author of this name and the family must be given. It should be mentioned who identified the material. The manuscript must include references to **voucher specimens** of the plants (deposited in a major regional herbarium) or the material examined.

4. **Isolation of compounds:** Extraction and isolation should be described in detail. The kind and amount of material, solvents and extraction methods must be indicated. The description of chromatographic systems should contain the quantitative information that allows the reader to repeat the work. Column dimensions, elution volumes, fraction sizes, etc. should be reported.

5. Papers dealing with the **biological screening of series of uncharacterised extracts** of plants or other organisms will not be considered for publication in *Planta Medica*.

6. **Pharmacological investigations of extracts require detailed extract characterisation.** Chromatographic profiling (e.g. HPLC profile with at least the major peaks identified) should be carried out, or qualitative and quantitative information on active or typical constituents should be provided.

7. **Pharmacological investigations:** *Planta Medica* will only consider manuscripts in which conclusions are based on adequate statistics. In each case **positive controls** (reference compounds) should be used and the dose / activity dependence should be shown.

8. **Pharmacological investigations:** When working with **experimental animals**, reference must be made to principles of laboratory animal care or similar regulations, and to approval by the local ethical committee.

9. **Clinical studies** must be designed, implemented and analyzed in a manner to meet current standards of randomized controlled trials.

10. **Analytical studies:** Key data on method validation must be provided and



should typically include information on specificity, linearity, limit of detection, limit of quantification, accuracy, precision, intermediate precision, and some robustness studies. Information on the purity of reference compounds, and on the methods used for the determination of purity must be given. Recoveries of extraction and sample pre-purification steps have to be indicated. Adequate statistical treatment of data is required.

L. Pieters

Two Impressions from GA's daily administration work



The GA executive council, the advisory board and some guests: many discussions during the last meeting in August 2007 during our Graz conference

and their Institutes of Pharmacognosy: International, Interesting and Cooperative

We introduce and present different institutes of Pharmacognosy/Pharmaceutical Biology, dealing with medicinal plant research with their special characteristics. In this Newsletter: **Austria.**

Austria, as one of the leading countries in medicinal plant research, holds three different academic places for Pharmaceutical Biology or as it is called in Austria Pharmacognosy: Vienna, Graz and Innsbruck. Have a look on the structures and activities of these fascinating and highly active groups. Additionally a national platform (HMPPA) for intensified networking was founded, combining the different expertise of all austrian academic institutions.



University of Innsbruck (Austria) Institute of Pharmacy / Pharmacognosy

Address: Innrain 52c, A-6020 Innsbruck, Austria

Homepage: www.uibk.ac.at/pharmazie/pharmakognosie/



Univ.-Professor Dr. Hermann Stuppner
Head of the Institute of Pharmacy, Pharmacist
Hermann.Stuppner@uibk.ac.at

Expertise: Scientific background as phytochemist and/or pharmaceutical biologist of more than 25 years. Outstanding expertise in the discovery of bioactive NPs applying classical pharmacognostic approaches as well as computational methods



PD Dr. Markus Ganzera
Pharmacist, Markus.Ganzera@uibk.ac.at

Expertise: Analysis of natural products by modern analytical techniques (e.g. HPLC, GC, CE, CEC, LC-MS, CE-MS), method development and validation for scientific and commercial applications, isolation and elucidation of secondary metabolites from plants, establishing enzyme assays for activity screening (elastase, CYP)



A. Univ.-Professor Dr. Judith Maria Rollinger
Pharmacist, Judith.Rollinger@uibk.ac.at

Expertise: Research on bioactive metabolites from plants with special emphasis on drug candidates acting against inflammation, pain and dementia. Applied methods: computer-assisted strategies (pharmacophore-based virtual screening, docking, neural networks) and classical pharmacognostic methods (bioguided fractionation, ethnopharmacology)



Ass. -Professor Dr. Sonja Sturm
Pharmacist, Sonja.Sturm@uibk.ac.at

Expertise: Research on bioactive natural products with analytical main focus; hyphenation of high performance methods (capillary electrophoresis, high performance liquid chromatography, gas-chromatography) with mass spectrometry and NMR spectroscopy; isolation and characterization of pharmacologically active plant constituents



Dr. Stefan Schwaiger
Pharmacist, Stefan.Schwaiger@uibk.ac.at

Expertise: Isolation and structure elucidation of secondary metabolites with special interest in plants with unknown toxic principals and/or use in the traditional medicine in combination with pharmacological profiling of plant extracts and pure secondary metabolites

**A.Univ.-Professor Dr. Christian Zidorn**

Pharmacist, Natural Products Chemist, Botanist Christian.H.Zidorn@uibk.ac.at

Expertise: Chemosystematics with a focus on Apiaceae and Asteraceae, chemical ecology focused on altitudinal variation in plant secondary metabolites, natural products analysis employing HPLC-DAD and HPLC-MS, structure elucidation (HRMS, NMR), geobotany focussing on alpine taxa.**Coworkers:**

PhD students: 7; Lecturers: Dr. Peter-Klaus Connert, Prof. Dr. Michael Popp, Dr. Elisabeth Nogler-Semenitz, Postdocs: Dr. Diana Antal, Dr. Bernhard Dickoré

Working areas:**Chemosystematics & Chemical ecology:** Chemosystematics research focuses on two major areas: chemical systematics of the tribe Lactuceae (Asteraceae family) and bioactives from the Apiaceae family with a major focus on species used as food plants.**Drug discovery from nature:** This area focuses on phytochemical and pharmacological investigations of natural materials applying various strategies using as rationale for the discovery of bioactive constituents: (i) ethno-pharmacological approach, (ii) computer-assisted approach (pharmacophore-based virtual screening, docking, neural networks), and (iii) random screening of untapped plants followed by bioassay-guided fractionation.**Analytcs:** Analysis and quality assessment of (medicinal) plants and Phyto-pharmaceuticals using hyphenated techniques, such as GC/MS, HPLC/MS, CE/MS and HPLC/SPE/NMR Analytcs.**5 publications, representing the working group:**Ganzer, M., Aberham, A., Stuppner, H. (2006): Development and validation of an HPLC/UV/MS method for the simultaneous determination of 18 preservatives in grapefruit seed extract, *J. Agric. Food Chem.* 54, 3768–3772Rollinger, J. M., Schuster, D., Baier, E., Ellmerer, E. P., Langer, T., Stuppner, H. (2006): Taspine: Bioactivity-guided isolation and molecular ligand-target insight of a potent acetylcholinesterase inhibitor from *Magnolia x soulangiana*. *J. Nat. Prod.* 69, 1341–1346Schmieder, A., Schwaiger, S., Csordas, A., Backovic, A., Messner, B., Wick, G., Stuppner, H., Bernhard, D. (2007): Isogentisin – A novel compound for the prevention of smoking-caused endothelial injury. *Atherosclerosis* 194(2), 317–325.S. Sturm, C. Seger, and H. Stuppner (2007) Analysis Of Central European *Corydalis* Species By Nonaqueous Capillary Electrophoresis – Electrospray Ion Trap Mass Spectrometry. *J. Chromatogr. A* 1159, 41–50Spitaler, R., Schlorhauser, P. D., Ellmerer, E. P., Merfort, I., Bortenschlager, S., Stuppner, H., Zidorn, C. (2006): Altitudinal variation of secondary metabolite profiles in flowering heads of *Arnica montana* cv. ARBO. *Phytochemistry* 67, 409–417.**The “speciality” or the unique selling proposition**

Research of the Pharmacognosy group is dedicated to the significance of natural products in respect to their chemosystematic and analytical impact, their bioactivity and effectiveness in health care products and their potential as drug candidates. Emphasis is on agents that control or inhibit inflammatory processes, dementia and cancer. Secondary metabolites responsible for biological effects are identified in the natural matrix. They are either isolated and purified in the search for new potential lead compounds, or characterized and standardized to ensure a safe and efficient application of herbal preparations. The variety of research interests in our group enables a broad and interdisciplinary access to various fields of plant science. The high number of international and national co-operations in various research areas related and complementary to our existing ones (e.g. pharmacology, molecular biology, chemometrics, and microbiology to botany) contributes to the groups' multidisciplinary research activities of high quality.

Running projectswww.uibk.ac.at/pharmazie/pharmakognosie/forschungsschwerpunkte**University of Graz, Department of Pharmacognosy****Name and address:**

Institute of Pharmaceutical Sciences, Department of Pharmacognosy, Universitätsplatz 4, A-8010 Graz, Austria tel +43-316-380-5525

Homepage:<http://www.kfunigraz.ac.at/phgwww/>**Staff:****Rudolf Bauer** Univ. Prof. Dr.

Pharmacist, Head of the Institute and of the Department

e-mail: rudolf.bauer@uni-graz.at**Expertise:** Quality control and standardization of herbal drugs and herbal medicinal products; activity guided isolation and structure elucidation of plant constituents; pharmacological screening of plant constituents with anti-inflammatory and immunomodulatory activity; search for compounds with inhibitory activity on cyclooxygenase-1/2 and 5-lipoxygenase; NFkB1 and COX2 gene expression; anti-cancer activity; phytochemical and pharmacological investigation of Echinacea species; phytochemical and pharmacological investigations and quality control of Chinese herbal drugs



Adelheid Brantner Ao.Univ. Prof. Mag. Dr.
Pharmacist; adelheid.brantner@uni-graz.at

Expertise: Research on medicinal plants used in the traditional medicine of Europe, Asia and Africa. Bioassay-guided isolation of active secondary metabolites from plants with special focus on anti-microbial, anti-oxidant, anti-inflammatory, anti-tumour activities and other age related diseases using (enzymatic) in vitro assays (AChE inhibition, elastase inhibition). Quality assurance regarding chemical and microbiological aspects. Standardisation of herbal medicinal products.



Franz Bucar Ao. Univ.-Professor Mag. Dr.
Pharmacist; franz.bucar@uni-graz.at

Expertise: Isolation of active plant constituents from medicinal plants of traditional medicines with special emphasis on antimycobacterial activity including resistance modulation; antioxidative activity and anti-inflammatory activity. Analysis of plant extracts and herbal medicinal products by hyphenated methods (GC-MS, LC-PDA-MS).

Further coworkers in the Department:

Dr. Wolfgang Schühly, Mag. Dr. Eva Wenzig, Mag. Dr. Karin Wölkart; 2 post docs, 10 PhD students

Working areas:

At the Department of Pharmacognosy, studies of plants used in European, American, African and Asian traditional medicine are conducted with the goals of identifying active constituents, discovering new lead compounds, and developing new herbal medicinal products.

Analysis and Quality Control

The safety of herbal medicinal products is an important part of the esteem of phytomedicine. Evaluation of cultivated medicinal plants as well as support in the process of standardization and quality control are offered by the Department. TLC, GC, GC-MS, HPLC and LC-MS are regularly used in analyses and quality control. Centres of interest are the development of monographs for the European Pharmacopoeia Commission and expertise in European regulatory affairs for herbal medicinal products such as the development of quality control methods for European and Chinese herbs.

Bioassay Guided Isolation

Main interests are in the field of plant constituents with anti-inflammatory, immunomodulatory, anti-oxidant, anti-cancer as well as antimicrobial /antimycobacterial activities. In-vitro assays for inhibition of leukotriene biosynthesis in human granulocytes by 5-LOX, inhibition of 12(S)-HETE formation by 12-LOX in human platelets, inhibition of prostaglandin biosynthesis by COX-1 and COX-2 enzymes, inhibition of NFkB gene expression in human fibroblasts as well as modulation of mycobacterial resistance, are established in our Department for the screening and testing of extracts and pure compounds.

Pharmacodynamic and Pharmacokinetic Studies with Echinacea

Designing and conducting biopharmaceutical and pharmacokinetic studies on bioactive constituents of herbal medicinal products is another new field of interest. Alkamides from Echinacea species have been investigated for their bioavailability and for their molecular mode of action.

8 publications, representing the working group:

Abebe Wube, A., Bucar, F., Gibbons, S., Asres, K. (2005) Sesquiterpenes from *Warburgia ugandensis* and their antimycobacterial activity. *Phytochemistry* 66, 2309–2315.
 Adams, M., Abebe Wube, A., Kunerth, O., Haslinger, E., Bucar, F., Bauer, R., Quinolone Alkaloids from *Evodia rutaecarpa*: A Potent new Group of Antimycobacterial Compounds. *Int. J. Antimicrob. Agents* 26(3), 262–264 (2005)
 Adams M, Wiedenmann M, Tittel G, Bauer R., HPLC-MS trace analysis of atropine in *Lycium barbarum* berries. *Phytochem Anal.* 17(5): 279–83 (2006)
 Brantner, AH, Asres, K, Chakraborty, A, Tokuda, H, Mou, XY, Mukainaka T, Nishino H, Stoyanova, S, Hamburger, M. Crown gall – a plant tumour with biological activities. *Phytother Res.* 2003; 17(4):385–90.
 Chakraborty A, Brantner AH. Study of alkaloids from *Adhatoda vasica* Nees on their antiinflammatory activity. *Phytother Res.* 2001; 15(6):532–4.
 Wölkart, K., Xu, W., Pei, Y., Makriyannis, A., Picone, R.P., Bauer, R., The endocannabinoid system as a target for alkamides from *Echinacea angustifolia* roots. *Planta Medica* 71, 701–705 (2005)
 Wölkart, K., Marth, Suter, A., Schoop, R., Raggam, R.B., Koidl, C., Kleinhappl, B., Bauer, R., Bioavailability and pharmacokinetic of *Echinacea purpurea* preparations and their interaction with the immune system. *Int J Clin Pharmacol Ther.* 44(9), 401–8 (2006)
 Wube, A. A., Wenzig, E.-M., Gibbons, S., Asres, K., Bauer, R., Bucar, F. (2007) Constituents of the stem bark of *Discopodium penninervium* and their LTB4, COX-1 and -2 inhibitory activities. *Phytochemistry*, in print.

The “speciality” or the unique selling proposition:

The Graz Department of Pharmacognosy owns a unique combination of expertises in the fields of Pharmacognosy, Pharmaceutical Biology, ranging from Ethnopharmacognosy, Phytochemistry to Molecular Pharmacology. The basic aims of the Department are i) the identification of new and pharmacologically active natural products, and ii) the assurance of the quality of herbal medicinal drugs. Special expertise exists with Chinese and other Asian herbal drugs.

Running projects:

The Department is participating in the 6th FW EU research project SAFEWASTES. The objective is to recover valuable compounds from plant derived waste materials for use in food and feed additives with significant health benefits for animals and human beings. <http://www.safewastes.info>



FWF funded research is conducted on the active constituents of *Hypericum* species. Research on antimycobacterial compounds is funded by Doc-Fforte 22076 (Austrian Academy of Sciences). Special expertise exists in investigations on medicinal plants from Traditional Chinese Medicine. The TCM Research Center Graz has been established.

University of Vienna, Department of Pharmacognosy

Name and address: University of Vienna, Department of Pharmacognosy, Faculty of Life Sciences
Althanstrasse 14, A-1090 Vienna, Austria

Homepage: <http://www.univie.ac.at/pharmakognosie/>

Staff: **Verena M. Dirsch**, Univ. Prof. Dr.; Head of Department
e-mail: verena.dirsch@univie.ac.at



Expertise

Scientific background as pharmaceutical biologist of more than 15 years, especially in the fields of phytochemistry/natural product chemistry (Ph.D and postdoc) and molecular pharmacology of natural products. Current interest lies in a) molecular mechanisms of natural products with an emphasis on vaso-protective compounds, and b) target-oriented identification of active natural products. Working area (see below): *Molecular Targets* group

Johann Jurenitsch, Univ. Prof. Mag. Dr.
on leave as Vice-rector of the University of Vienna



Brigitte Kopp, Univ. Prof. Mag. Dr. Dr. h. c.; Vice-Head of Department; President of Study Legislation of the University of Vienna
e-mail brigitte.kopp@univie.ac.at

Expertise

Scientific background as pharmacognosist and/or phytochemist of more than 30 years; research focussing on isolation, structure elucidation of natural compounds with immunoregulatory, antitumor, spasmolytic, choleric or anti-inflammatory activities as well as quality control of HMPs from Europe and outside. Plant biotechnology for the production of high quality medicinal plants and natural products. Working area (see below): *Phytochemistry, Ethnopharmacognosy and Plant Biotechnology* group



Sabine Glasl, ao. Univ. Prof. Mag. Dr.
e-mail sabine.glasl@univie.ac.at

Expertise

Experience in the field of phytochemistry and natural product chemistry. Research focuses on isolation, structure elucidation, analytics and quality assessment concerning medicinal plants of Europe, Latin America and Mongolia. Working area (see below): *Ethnopharmacognosy and Phytochemistry* group



Liselotte Krenn, ao. Univ. Prof. Mag. Dr.
e-mail liselotte.krenn@univie.ac.at

Expertise

Research focussed on bioactivity-guided isolation of natural compounds with histonedeacetylase-modulatory, acetylcholinesterase-inhibitory, estrogenic or anti-inflammatory activities as well as on phytochemical quality control of medicinal plants and herbal products and on the optimization of plant extracts for food supplements. Working area (see below): *Phytochemistry and Ethnopharmacognosy* group



Gottfried Reznicek, ao. Univ. Prof. Mag. Dr.
e-mail gottfried.reznicek@univie.ac.at

Expertise

Phytochemical analysis, isolation and structure elucidation of plant constituents; chemotaxonomy of medicinal plants; bioactivity-guided isolation of natural compounds with anti-inflammatory activities; analysis of plant allergens; constituents of red wine and their effects on the vascular system; metabolism of natural compounds; quality control of medicinal plants and herbal products. Working area (see below): *Phytochemistry* group



Johannes Saukel, ao. Univ. Prof. Mag. Dr.; Vice-Director of Pharmacy Study Programme
e-mail johannes.saukel@univie.ac.at

Expertise

Scientific background as biologist of more than 25 years, especially in the fields of anatomy, morphology, systematic and biostatistics of medicinal plants. Further interest in ethnopharmacognosy with regard to plants of traditional European medicine (Austria, Germany, northern Italy, Balkan region) and traditional medicine of the Kurds in Turkey.

Working areas: *Pharmacobotany* and *Ethnopharmacognosy* group



Christa Kletter, Ass. Prof. Mag. Dr.
e-mail christa.kletter@univie.ac.at

Expertise

Scientific background as pharmacist, additional studies in ethnology; research in ethnopharmacognosy focussing on quality control and traditional use with regard to plants of traditional Tibetan medicine, traditional Mongolian medicine, plant-derived aphrodisiacs of Brazil and the Caribbean islands; microscopy of medicinal plants; history of pharmacy with special interest in history of drugs and Austrian pharmacy; curator of the historic collections of the institute.

Working areas: *Ethnopharmacognosy* and *Pharmacobotany* group



Christoph Wawrosch, Ass. Prof. Mag. Dr.
e-mail christoph.wawrosch@univie.ac.at

Expertise

Long lasting activity in the field of plant biotechnology, with emphasis on in vitro-propagation of endangered medicinal plants, quality improvement, scale-up and automation of (liquid) micropropagation systems, and application of organ cultures for the in vitro-production of secondary metabolites. Working area (see below): *Plant Biotechnology* group

Further coworkers:

Dr. Elke Heiss, Mag. Dr. Sonja Prinz, Mag. Dr. Ingrid Werner
Graduate students: 19

Working areas:

Ethnopharmacognosy

The research focuses on interdisciplinary and intercultural studies on medicinal plants used in traditional medicine and includes in its methods a scientific Western approach and a traditional one.

Phytochemistry

In an effective search for new therapeutic agents the enormous structural diversity of secondary plant metabolites provides an indispensable resource.

Thus, the phytochemical approach in drug discovery comprises the isolation and characterisation of natural products to reveal bioactive compounds and lead structures. These may prompt the possible synthesis of improved derivatives used as drugs.

Our investigations focus on glycosides, phenolics, carbohydrates, alkaloids and terpenoids from different biological matrices.

The pure compounds are tested for their biological activity on the one hand, on the other hand they are essential for the development of analytical systems in order to assess the quality of crude drugs and herbal medicinal products (extracts, phytopharmaceuticals).

Molecular Targets

"Natural products can be viewed as a population of privileged structures selected by evolutionary pressures to interact with a wide variety of proteins and other biological targets for specific purposes, a view supported by the fact that natural products have become effective drugs in a wide variety of therapeutic indications" (Koehn FE and Carter GT. *Nat Rev Drug Discovery* 4:206–220, 2005)

Our research focus is to understand the molecular interaction of natural products with proteins/signaling molecules within cells.

Identification of biological targets will help to identify new pharmacological targets for drug discovery & development.

Pharmacobotany

Identity and purity of the starting material are prerequisites for safety and efficacy of herbal medicinal products. We need strict differential characters in morphology, anatomy and constituents in order to identify the correct plant source and exclude adulterations. We focus on basic research in systematics and taxonomy of medicinal plants, on the development and evaluation of differential characters between correct plant sources and related taxa and on systematic plant anatomy.

Plant Biotechnology

The principal interests of our group lie in basic and applied research on plant tissue culture of medicinal plants. We focus on plant production through micropropagation as well as on the production of secondary metabolites through organ and cell culture.

**8 publications,
representing the
working group:**

Trauner G, Khom S, Baburin I, Benedek B, Hering S, Kopp B. Modulation of GABA_A Receptors by Valerian Extracts is related to the Content of Valerenic Acid. *Planta Med*, in press, 2007.
Heiss EH, Schilder YDC, Dirsch VM. Chronic treatment with resveratrol induces redox stress- and ATM-dependent senescence in p53-positive cancer cells. *J Biol Chem*. 282:26759–66, 2007.
Pemp E, Reznicek G, Krenn L. Fast quantification of flavonoids in *Filipendulae ulmariae* flos by HPLC/ESI-MS using a non porous stationary phase. *J. Anal. Chem.* 62, 669–673, 2007.
Glasl S, Tsendayush D, Batchimeg U, Holec N, Wurm E, Kletter Ch, Gunbilig D, Daariimaa Kh, Narantuya S, Thalhammer Th. Choleric Effects of the Mongolian Medicinal Plant *Saussurea amara* in the Isolated Perfused Rat Liver. *Planta Med* 73: 59–66, 2007.
Werner I, Glasl S, Reznicek G. Infrared Spectroscopy as a Tool for Chemotaxonomic Investigations within the *Achillea millefolium* Group. *Chemistry & Biodiversity* 3, 27–33, 2006.
Guo Y P, Saukel J, Mittermayr R, Ehrendorfer F. AFLP analyses demonstrate genetic divergence, hybridization, and multiple polyploidization in the evolution of *Achillea* (*Asteraceae-Anthemideae*). *New Phytologist*, 166: 273–290, 2005.
Kongbangkerd A, Köpf A, Allacher P, Wawrosch Ch, Kopp B. Micropropagation of Squill (*Charybdis numidica*) through nodule culture. *Plant Cell Rep*, 23: 673–677, 2005.
Kletter Ch, Glasl S, Presser A, Werner I, Reznicek G, Narantuya S, Celtek S, Haslinger E, Jurenitsch J. Morphological, chemical and functional analysis of *Catuaba* preparations. *Planta Med* 70: 993–1000, 2004.

**The “speciality” or
the unique selling
proposition:**

The Vienna Department of Pharmacognosy shows a unique combination of expertises in the field of Pharmacognosy/Pharmaceutical Biology, ranging from Ethnopharmacognosy, Pharmacobotany and Phytochemistry to Molecular Pharmacology and non-recombinant Plant Biotechnology. By mutual application of methods from all these fields the fundamental aims of the Department i) the identification of new and pharmacologically active natural products, and ii) the assurance of the quality of herbal medicinal drugs are approached and provide new insights in the potential of herbal medicinal plants and their secondary metabolites.

Running projects:

<http://www.univie.ac.at/pharmakognosie/>



HMPPA

Herbal Medicinal Products Platform Austria

The Herbal Medicinal Products Platform Austria (HMPPA) represents a novel and unique national academic network with highest expertise in the fields of phytomedicine and natural products research.

The platform fosters research, knowledge-management, education, application and training in natural product research and phyto-pharmaceutical medicine. It addresses bottlenecks in R & D, encourages translational research, serves as a reference and advisory institution in all scientific research, development and product issues regarding herbal medicine and natural products.

It aims at a close collaboration between academia, government(s), the European Medicines Agency including its herbal medicinal products committee and the phyto-pharmaceutical industry to support the discovery and development of natural product based drug leads and herbal remedies.

The importance of natural products is increasing not only as a source of new drug leads in the field of drug discovery, but also in the area of basic research, such as in the expanding field of chemical biology. Thus, a national research network shall strive to accelerate the discovery and development process along a new concept especially designed for the screening, isolation and

identification of new natural lead-compounds from crude plant extracts.

Due to the increasing importance of traditional Chinese medicine in western countries, the platform is also involved in the establishment of a research cluster on TCM in Austria which shall result in a close scientific collaboration and scientific exchange between top scientists in China and Austria.

President: Prof. Dr. Hermann Stuppner;
Vice-President: Prof. Dr. Chlodwig Franz,
Prof. Dr. Brigitte Kopp; **Head for TCM affairs:** Prof. Dr. Rudolf Bauer



(Notices of Ph.D- and diploma theses to the editor are welcome any time!)

Ph.D.thesis (2006) Effects of *Salvia officinalis* in the liver: Relevance of glutathione levels. By: Cristovao F. Lima. Supervisor: Dr. Cristina Pereira-Wilson, Department of Biology, School of Sciences, University of Minho, Braga, Portugal.

PhD thesis (2007) Anxiolytic activity of *Apocynum venetum* L. and its proposed mechanism of action. By: Oliver Grundmann. Promotor: Prof. Dr. Veronika Butterweck, Department of Pharmaceutics, College of Pharmacy, University of Florida, Gainesville, USA

PhD thesis (2007) Xanthine oxidase inhibition and antioxidant activities of *Cynara scolymus* L. and its compounds. By: Sasi-porn Sarawek. Promotor: Prof. Dr. Veronika Butterweck, Department of Pharmaceutics, College of Pharmacy, University of Florida, Gainesville, USA

Ph.D. thesis (2007) Phytochemical characterisation of oily extracts from herbal drugs – efficiency and quality of the extraction. By Michael Heldmaier; Promotor: Prof. Dr. E. Stahl-Biskup, Institute of Pharmacy, University of Hamburg, Germany.

Diploma thesis (2007) Massenvermehrung von Sonnentau im TIS. By: Tatjana Dorfer; Promotor: Prof. B. Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Phytochemical analysis of phenolic compounds in different *Achillea* species. By: Noela Gjoncay; Promotor: Prof. B. Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Traditionelle Medizin in Nicaragua – Praktiken und Arzneimittel zweier Curadores aus den Bezirken El Sauce und San Lucas. By: Renate Hofer; Promotor: Prof. L. Krenn, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Untersuchung phenolischer Inhaltsstoffe in *Grindelia robusta*. By: Daniela Nadler; Promotor: Prof. L. Krenn, Department of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2007) FT-IR spectroscopy and chemometrics in the differentiation of *Peucedanum palustre* species in Finland. By: Susanne Wilflingseder; Promotor: Prof. B. Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Isolierung und Strukturklärung apolarer Inhalstoffe von *Metaxya rostrata*. By: Simone Metnitzer; Promotor: Prof. L. Krenn, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Die Organisation Cecalli – Ein Modell für die Integration volksmedizinischer Praktiken und pflanzlicher Heilmittel in die Gesundheitsvorsorge Nicaraguas. By Johanna Hehenberger; Promotor: Prof. L. Krenn, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Analyse von Pflanzenextrakten mittels HPLC. By: Robert Artner; Promotor: Prof. L. Krenn, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) A contribution for quality of *Aconitum* species in TCM and *Actaea racemosa* L. By: Judith Singhuber; Promotor: Prof. B. Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Master thesis (2007) Plants against obesity – A survey of ethnomedicinal uses and pharmacological and clinical studies. By: Julie Beyeler; Promotor: Prof. M. Hamburger, Institute of Pharmaceutical Biology, Basel

Master thesis (2007) Die Effekte von Naturstoffen auf die Produktion von reaktiven Sauerstoff-Spezies. By: Chantal Pfäffli; Promotor: Prof. Dr. M. Hamburger, Dr. P. Küenzi, Institute of Pharmaceutical Biology, Basel

Master thesis (2007) Natural products acting on targets implicated in Alzheimer's disease. By: Nassiba Khenissi; Promotor: Prof. Dr. Hamburger, Institute of Pharmaceutical Biology, Basel

Master thesis (2007) Antioxidantien: Molekulare Targets und therapeutische Relevanz. By: Andrea Walther; Promotors: Prof. Dr. M. Hamburger, Dr. O. Potterat, Institute of Pharmaceutical Biology, Basel

Master thesis (2007) PCR – based profiling of *Leuzea carthamoides* extract. By: Patricia Iseli; Promotors: Prof. Dr. M. Hamburger, Dr. P. Küenzi, Institute of Pharmaceutical Biology, Basel

Master thesis (2007) Qualitative and quantitative analysis of glucosinolates in woad (*Isatis tinctoria*, Brassicaceae). By: Kathrin Suter; Promotor: Prof. Dr. M. Hamburger, Institute of Pharmaceutical Biology, Basel

Master thesis (2007) Chemisches Profiling der Inhaltsstoffe aus Açaí – *Euterpe oleracea* Mart. By: Sandra Schurr; Promotors: Prof. Dr. M. Hamburger, Dr. O. Potterat, Institute of Pharmaceutical Biology, Basel

Master thesis (2007) Goji-Saft (*Lycium barbarum*) – ein traditionelles Produkt auf dem Vormarsch. Was steckt dahinter? Promotors: Prof. Dr. M. Hamburger, Dr. O. Potterat, Institute of Pharmaceutical Biology, Basel

Diploma thesis, 2007, Phytochemischer und biopharmazeutischer Vergleich von Ginkgo-Präparaten. By Elisabeth Feizlmayr, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Diploma thesis, 2007, Phytochemische Untersuchungen von *Drynaria propinqua* (Wall.) J. Sm. und *Magnolia grandiflora* L. By Stefan von Ehrenstein, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Diploma thesis, 2007, Chinesische Arzneidrogen der pharmakognostischen Sammlung des Instituts für Pharmazeutische Wissenschaften der Universität Graz. By Christine Grabner, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Diploma thesis, 2007, Phytochemische Untersuchungen von *Hypericum mutilum* L.. By Elfe Hammer, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Editorial remark

All contributions for the GA-Newsletter are welcome. Deadline for submission for the next edition is fixed to May 30st. 2008. 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