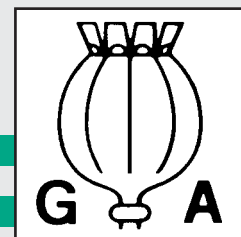


Society for Medicinal Plant Research Gesellschaft für Arzneipflanzenforschung e.V.



Message from the President



Dear members,

during the member's meeting in Graz, I was elected as the new president of GA. It is an honour to serve GA as first female president for the next two years. I want to thank the former president, Prof. Bauer, for his tireless work and for the success which GA gathered in his presidency. In the meantime the new board has become active and is managing the business of GA steadily. I hope that we can serve and develop our Society in an optimum way, thank you very much for your confidence.

The next and 56th annual meeting of GA is coming closer, it will be held as a joint meeting with the Association Francaise pour l'Enseignement et la Recherche en Pharmacognosie (AFERP), the American Society of Pharmacognosy (ASP), the Phytochemical Society of Europe (PSE) and the Italian Society for Phytochemistry (SIF) in Athens, Greece, from August 3–8, 2008. It has been organized by the Association Francaise pour l'Enseignement et la Recherche en Pharmacognosie (AFERP), namely by Prof. Leandros Skaltsounis & Prof. Joel Boustie, and I want to thank them already very much for all their efforts and enthusiasm. These joint meetings are organized every five years. Due to the international importance of medicinal plant research, such global networking is extremely necessary and fruitful. 26 distinguished scientists have accepted to give plenary lectures. In total, more than 1300 abstracts have been submitted for oral or poster presentations. So we are expecting an intensive exchange of information and an inspiring programme. I am convinced that it will become a global summit of medicinal plant research, and I am looking forward to meeting colleagues there from all parts of the world.

The ca.1300 abstracts of the presentations will be again published in *Planta Medica*, the official organ of our Society. We are very pleased about this development and I want to thank the publisher,

Thieme Verlag Stuttgart, and Dr. Kuhlmann, very much that they made this possible and for the good collaboration. As you have been informed, a low rate online access to *Planta Medica* articles for members of GA is available; I hope that this service will intensively be used and that more members will consider *Planta Medica* for the publication of their valuable results.

Besides our annual congress, GA is again co-organizing several other symposia on medicinal plant research during this year:

Feb.14–16, Phytopharmaka und Phytotherapie 2008 – Forschung und Praxis, GPhyt-Meeting, Berlin/Germany.

Feb.18–21, 5. Fachtagung Arznei- und Gewürzpflanzen, Bernburg/Germany.

April 12–16, 7th Annual Oxford International Conference on the Science of Botanicals & American Society of Pharmacognosy 4th Interim Meeting, University of Mississippi / USA.

April 24–25, Plants systems biology and medicinal plants, Leiden/Netherlands.

July 2–4, Symposium Phytopharm 2008, St. Petersburg/Russia.

Oct. 10–12, 2nd Shanghai International Conference on Traditional Chinese Medicine and Natural Medicines (SICTCM II), Shanghai/China.

Nov. 9–14, WOCMAP – 4th World Congress on Medicinal and Aromatic Plants, Cape Town, South Africa.

I hope that you can attend some of these meetings as well. I am very pleased that these meetings are so well accepted and that GA has developed to a globally leading society in this field and become a platform for an exchange of knowledge and ideas between scientists worldwide. So we hope to meet your demands and make GA even more attractive. We will try to intensify this exchange, and also the exchange between young and experienced scientists in future meetings and workshops. Since last year, also a high number of colleagues have joined our Society which I welcome as new and active members of the GA family.

So I am looking forward to seeing many of you in Athens, where we will also organise our next member's meeting. I am cordially inviting all members, especially our new and young members, to attend this meeting.

Cordially,

Brigitte Kopp
GA President

NEWSLETTER

Invitation to the GA Members' Meeting 2008

The 56th Annual meeting of our Society is a joint meeting with AFERP, ASP, PSE & SIF which will take place in Athens, Greece, from August 3–8, 2008. During this meeting in Athens a regular GA Members' Meeting will be held. It is scheduled for **Tuesday, 5 August 2008**, 6.45 p.m. – 8.15 p.m.

Location: GA section of the divided Ballroom (the general congress venue) at Athenaeum Intercontinental Hotel, 89-93 Syngrou Avenue, 11745 Athens, Greece.


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

Preliminary Agenda

1. Approval of the agenda
2. Approval of the minutes of the Members' Meeting held in Graz on 4 Sept 2007 (published in GA Newsletter 2-2007)
3. Annual reports
 - 3.1 Report of the President
 - 3.2 Reports of the Vice-Presidents
 - 3.3 Report of the Secretary
 - 3.4 Report of the Treasurer and report of the auditors
 - 3.5 Discharge of the ExC
4. Report of the Editor-in-Chief of Planta Medica
5. Reports of the Permanent Committees
6. New name of the Society
 - 6.1 Outcome of the opinion poll among all members' according the new name of the Society
 - 6.2 Final voting for the elected version "Society for Medicinal Plant and Natural Products Research – Gesellschaft für Arzneipflanzen- und Naturstoff-Forschung (GA)"
7. Future congresses, symposia and workshops
8. Miscellaneous

On behalf of the Executive Council
Prof. Dr. Brigitte Kopp, GA President

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)

Dr. Dr. h. c. Albert Hofmann
(Honorary member and
GA member since 1977)
died on 29 April 2008

The Society will keep
commemoration of
Dr. Dr. h. c. Hofmann and offers its
sincere condolences.
(see also page 4)

**Editorial remark**

All contributions for the
GA-Newsletter are welcome.

Deadline for submission is fixed
to November 30th 2008.

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

GA gets modern!

A New Data Base for GA-Management

Not only scientifically GA is always up-to-date. Also the members' and society's management was modernized recently.

The handling of a new member in general hasn't changed – yet! – very much. A membership application will be handled by the secretary, then signed by the president and filed at the treasurer's office, to where the membership fees have to be paid.

From its foundation in 1953 to 1978 the society grew gradually to 400 members, the Germans dominating. Then with international presidents and a growing reputation of GA the number of international members increased rapidly ending in an almost unmatched height of 1350 members in 1994. In these early times each member was filed in a record card collected in a nice wooden box. For 14 years – the absolute record – Dr. Mechler from Tuebingen was the society's secretary, knowing each of "his" members by face and names by heart.

In 1994 a computer freak took over: Dr. Bruno Frank, suggesting and starting immediately the foundation of an electronic membership database. A great step and a lot of work transferring almost 1400 handwritten cards into the electronic system. But: Suddenly it was very easy to recognize who had paid or not, whose address is still working or not. The number of members dropped drastically to almost 850 active members in the mid of 1990ies.

But the worldwide interest in the Society for Medicinal Plant Research overcame this "cleaning action" quickly. One of many reasons surely are the interesting annual congresses in international metropolises or a generous support system for young researchers. Additionally, since 2008 GA offers a reduced subscription of *Planta Medica* online version for members only – quite well accepted by many of them. In 2008 we finally reached again the markstone of 1350 members from 89 (!) countries. The



Renate Seitz (GA-secretary) and Anett Lahse (Treasureres assistant) at the secretary desk during the 2007 GA-conference in Graz, Austria

coming joint meeting with our sister societies in Athens convinced 90 new members to apply.

Up to now the secretariat and the treasurer's office worked with 2 individual and different working data bases. Everything had to be double checked, inquired, compared, but the risk of mistakes and overlookings was great. But limited! Thanks to a perfect collaboration with another record holding team, former treasurer Dr. G. Abel and her assistant, Mrs. M. Schaefer (12 years).

In Febr. 2008 a new system was installed with synchronous access for the GA treasurer and the secretary. Everything now can be viewed at one glance from both offices (personal data, reduced membership fee,

payment, *Planta Med* online subscription etc.), a real great facilitation. This time the transfer could be handled mostly automatically by the database provider Gruen. Still we are in the changing phase. More innovations will be implemented gradually (e.g. a nice membership card).

But as an indispensable consequence again a big razzia is planned after the Athens congress. In Athens everyone has a good and last chance to clarify his membership, to actualize his address or to pay cash for his "forgotten" fees! Mrs. Anett Lahse, the treasurer's assistant, will expect you in our special "GA cash desk"!

*Your GA-secretary
Renate Seitz*

Some Data from the Membership Data Base

With our new membership data base it seems exciting to figure out all kinds of new statistics and we take the opportunity to congratulate and acknowledge long lasting memberships:

For **50** and more years of individual membership in GA we congratulate Mrs. **Erna Popp**, Nürnberg, Germany (since 1953), and Honorary Member, Prof. Dr. **Rudolf Hänsel**, Munich, Germany (1956).

153 members hold their membership since 25 or more years, we thank all for their constancy and interest!

Since **50** and more years GA is supported by the phytopharmaceutical companies, having the official status of so called "supporting members":

Madaus GmbH, Köln, Germany (since 1955), **Steiner & Co.**, Berlin, Germany

(1956), **Walther Schönenberger Extracts**, Magstadt, Germany (1956), **Müller Goepfingen**, Göppingen, Germany (1958).

We thank all our "long-term" members and the supporting members for their support and loyalty over all the years!

90 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!

Dimitriy Kruglov, Russia; **Wendy Pearson**, Canada; **Godfred Boateng**, Ghana; **Chinwe Ezekwesili**, Nigeria; **Katarzyna Sykłowska-Baranek**, Poland; **Anita Aberham**, Austria; **Wilfried Dimpfel**, Germany; **Klaus Teichmann**, Austria; **Lisa Baumgartner**, Austria; **Mohamed Ashour**, Germany; **Petra Pfisterer**, Austria; **Valerio Pieri**, Austria; **Moumita Gangopadhyay**, India; **Prasenjit Manna**, India; **Veronica Okochi**, Nigeria; **Josephine Nebedum**, Nigeria; **Hamid Sodaeizadeh**, Belgium; **Filis Kazazi**, The Netherlands; **Anusak Siri-katitham**, Thailand; **Usman Bala Shamaki**, Nigeria; **Oluwasseyi Aboyade**, South Africa; **Dana Hager**, Germany; **Raju Gautam**, India; **Pharkphoom Panichayu-**

pakranant, Thailand; **Mario Dell-Agli**, Italy; **Justyna Gronadska**, Poland; **Anna Smiechowska**, Poland; **Grazyna Romanik**, Poland; **Anita Piasek**, Poland; **Anita Skrzypczak**, Poland; **Kenn Foubert**, Belgium; **Nikolaus Sucher**, Australia; **Robert Fürst**, Germany; **Mehmet Engin Celep**, Turkey; **Irem Atay**, Turkey; **Marco Filipe**, Portugal; **Oliver Alexander Radtke**, Germany; **Chatchai Wattanapiromsakul**, Thailand; **Doris Lechner**, Austria; **Kemal Noysang**, **Kennedy Dohjinga**, Cameroon; **Jonville**, **Marie-Caroline**, Belgium; **Rajeshwar Valte**, India; **Barry Bleske**, USA; **Huige Li**, **Oliver Werz**, Germany; **Francesca Toselli**, Australia; **Alain Dongmo**, Germany; **Teresa Docimo**, Italy; **Nebojsa Menkovic**, Serbia; **Vanja Djordjevic**, Serbia; **Sofija Jankovic**, Serbia; **Goran Markovic**, Serbia; **Dusanka Runjaic-Antic**, Serbia; **Waraporn Nuengchamnong**, Thailand; **Nitra Nuengchamnong**, Thailand; **Kanokwan Jarukamjorn**, Thailand;

Marcio Fronza, Germany; **Srisomporn Preeprame**, Thailand; **Sang Un Park**, Korea; **Ismet Tahirovic**, **Pranee Nandhasri**, Thailand; **Piyanuch Rojsanga**, Thailand; **Pintusorn Hansakul**, Thailand; **Treetip Ratanavalachai**, Thailand; **Sumon Thitirol**, Thailand; **Yaroslav Havlik**, Czech Republic; **Mikael Egebjerg Pedersen**, Denmark; **Dora Rédei**, Hungary; **Judit Hohmann**, Hungary; **Zsuzsanna Hajd**, Hungary; **Peter Akah**, Nigeria; **Thanaporn Annuaikit**, Thailand; **Dinesh Uchil**, India; **Alija Uzunovic**, Bosnia & Herzegovina; **Aida Sepcanin**, Bosnia & Herzegovina; **Yuvadee Manakasem**, Thailand; **Amira Copra-Janicijevic**, **Wolfgang Stöggel**, Austria; **Darab Yazdani**, Iran; **Pakanit Kupittayanant**, Thailand; **Sajeere Kupittayanant**, Thailand; **Sanjay Kasture**, India; **Veena Kasture**, India; **Ameya Kasture**, India; **Sabine Rode**, Germany; **Venkatesh Murugan**, India; **Ziatan Rimpapa**, Bosnia & Herzegovina.

Obituary: Dr. Dr. h. c. mult. Albert Hofmann

Albert Hofmann, 102, Swiss chemist, father of LSD, honorary member of ASP and GA and Dr. h.c. mult. (ETH Zurich, Free University of Berlin, Royal Institute of Technology in Stockholm), died April 29, 2008 – four months after his beloved wife Anita – at his home in Burg, a village near Basel, Switzerland.

Hofmann was born in Baden, a spa and industrial town near Zurich, on January 11, 1906. After a commercial apprenticeship he studied chemistry at the University of Zurich under the direction of Professor Paul Karrer, a future Nobel laureate. His doctoral thesis dealt with the structure elucidation of chitin, the cellulose-like structural material found in numerous classes of animals, such as insects and crustaceans. After completing his PhD thesis he joined Sandoz in Basel in 1929 as he had a vivid interest in this company's research program – isolation and synthesis of the active principles from medicinal plants for the development of plant-based medicines. He worked in the pharmaceutical/chemical research laboratories of Sandoz until his retirement in 1971, first as a coworker of Prof. Arthur Stoll, later as a group leader and finally – for the last 15 years of his career – as head of the natural products department. His initial research at Sandoz involved the structural elucidation of cardiac glycosides from squill (*Scilla maritima*) and ergot (Secale cornutum from *Claviceps purpurea*) alkaloids. In the course of his research, he produced a number of highly successful pharmaceutical products, including Hydergine® (dihydroergotamine), Methergine® (methylergometrine) and Dihydroergot® (dihydroergotamine). In 1938,

while working on the synthesis of ergot alkaloids, he isolated lysergic acid and synthesized a series of lysergic acid derivatives, including lysergic acid diethylamide (LSD). In 1943, Albert Hofmann detected its psychotropic activity in a self-experiment conducted on April 19. His bicycle ride home from the laboratory on that day has passed into drug lore as the first LSD trip. Subsequently he became world-renowned as the father of LSD. The discovery of LSD opened the door to psychopharmacology, and paved the way for the understanding of the biochemistry of the neurotransmitters serotonin and dopamine during the following decades. Later he isolated other psychoactive compounds such as psilocybin and psilocin from the Mexican sacred mushroom *Psilocybe mexicana* and identified the active constituents of "Ololiuqui" (*Rivea corymbosa*, a Mexican vine), which are closely related to LSD. Thanks to Dr. Hofmann's contribution in the area of medicinal chemistry, Sandoz not only enjoyed long-term commercial success but was also held in high esteem by scientists in pharmaceutical and medical circles.

After its discovery, LSD was viewed as a wonder drug with the potential to treat psychological problems including schizophrenia. Under the name of Delyside® it was studied clinically for ten years and showed great promise as a pharmacological aid in psychoanalysis. However, LSD not only elicited great interest among psychiatrists but also became the preferred drug of hippie and other subcultures, and found expression in the fine arts and in the music. The partially uncontrolled consumption led to a global ban of LSD in the sixties, even



Albert Hofmann on September 29, 2005 (shortly before his 100th birthday) at his home in Burg, near Basel; picture taken by Rudolf Brenneisen

of its use for therapeutic and scientific purposes. According to Dr. Hofmann this decision was politically motivated rather than scientifically.

Albert Hofmann is the author of more than hundred scientific papers and several books. The legendary story of the LSD discovery and the initial experiments in humans are vividly recounted by Hofmann in his book "LSD – mein Sorgenkind" (1979) which was translated into English as "LSD – My Problem Child" (1980). LSD was surely the most sensational of all compounds ever synthesized in Basel, and the most powerful psychotropic substance known. Since his retirement from professional life, he has devoted himself increasingly to

philosophical reflections on the experience of nature, publishing a collection of essays "Einsichten – Ausblicke" (published in English as "Insight – Outlook") as well as an illustrated volume entitled "Lob des Schauens" ("In Praise of Contemplation"). His fundamental credo is published in "Insight – Outlook": "I believe that the significance of the natural sciences in the evolution of human society does not lie primarily in the fact that they provided the basis for the development of modern technologies and industries that have radically changed our lives and our planet, but rather in the fact that they can open people's eyes to the wonder of creation and to the unity of all life on earth, of which humanity is a part. If this knowledge fully entered public conscious-

ness, it could form the basis of a new spirituality and help to resolve our current spiritual, social and environmental problems". 2007 Hofmann was elected by the readers of the English newspaper "Guardian" as one of the "world's top 10 living geniuses". In celebration of Albert Hofmann's 100th birthday (January 11, 2006) a book of a special kind "Grenzgänge" ("Exploring the frontiers") have been written by his friends to pay tribute to the scientist and man. Dr. Hofmann was not only a scientist with a philosophical bent; he had also remained until the end of his life a cheerful and good-humored man. Everyone was impressed by his phenomenal knowledge not only of chemistry and physics but also of literature, music and arts in general. He enjoyed long

restorative walks in the woods around his beautiful house in the countryside, read books of baroque literature in the original and corresponded with friends and colleagues around the world. Albert Hofmann was always convinced that only physicians should handle LSD and other psychedelic drugs. He was deeply disappointed by the worldwide ban of LSD also in therapy and research in the sixties. So it is not surprising that he judged the approval in 2007 of an LSD study in Switzerland, the first trial in the past 35 years, as a fulfillment of a dream.

*Otto Sticher, Prof. em. ETH Zürich
Prof. B. Kopp, President GA*

Retirement of Prof. Dr. Peter Houghton

Professor Houghton, London, is planning to retire from academic work on December 31st 2008. For many years he has been member of the advisory board of GA and nearly all scientists, visiting our annual conferences know him very well as an extremely active and friendly colleague, always keen to help with lots of scientific expertise. Prof. Houghton has been Professor in Pharmacognosy in the Department of Pharmacy at Kings College London since 1999, having worked in the department since 1972. He is a Fellow of the Royal Pharmaceutical Society of Great Britain and is also a Fellow of the Royal Society of Chemistry. He has published over 250 research papers and reviews on many topics connected with the chemistry and biological activity of plants and their constituents. He has supervised over 20 PhD students with many links to different countries, especially Ghana and South Africa. His manifold research areas include substances from plants of potential use in

treating CNS degenerative disease, cancer and for wound healing. Professor Houghton is a member of several national and international committees dealing with regulatory and scientific aspects of naturally-derived drugs and medicines. He is immediate past President of the International Society of Ethnopharmacology and the first British member of the Board of the Society for Medicinal Plant Research. Also many scientific journals highly appreciate his work, especially the *Journal of Ethnopharmacology*, where he functions as the editor, and *Pharmaceutical Biology*, for which he serves as assistant editor. It is typical for Prof. Houghton that after his formal retirement he will still be active: On the one side he has set up a consultancy for pharmacognostical questions, on the other side he will be ordained as Deacon in the Church of England and working with his parish church in Balham, southwest London. The Society thanks Peter very much for his continuous and valuable help over all the



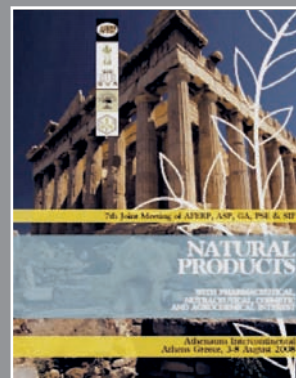
years and wishes him the best for his future activities.

Andreas Hensel, Brigitte Kopp (president)

Next Annual GA Meeting

7th Joint Meeting of GA, AFERP, PSI, ASP and SIF

Athens, Greece
August 3–8th, 2008



The latest news for the 7th joint meeting of GA, AFERP, PSI, ASP and SIF

Dear colleagues

We are almost in the final stage of preparation of the joint meeting. We have received in total more than 1350 abstracts from 90 countries. Most of them will be published in the abstract book of *Planta Medica*. The rest will be published in the abstract book of the joint meeting.

There is a great interest for participation from academics as well as from companies relative to the scientific fields of our meeting. There are more than 25 companies that participate with an exhibition booth in the joint meeting and many others that will participate by oral and poster presentations.

Thirty well distinguished scientists will cover with oral presentations the nine main topics of the meeting which are:

- ▶ Drug discovery from natural sources
- ▶ New sources of bioactive natural products: from biodiversity to chemodiversity
- ▶ Cell cycle regulation and natural products
- ▶ Biosynthesis and biomimetic synthesis of natural products
- ▶ Natural products with cosmetic, agrochemical and veterinary interest
- ▶ Bioavailability and quality of herbal drugs
- ▶ Health improvement through dietary phytochemicals
- ▶ Modern approaches to traditional medicines

- ▶ New trends in extraction, separation processes and structure elucidation

Due to the great interest for participation the programme of the meeting is built, in order scientists the maximum benefit, to acquire with short oral presentation that will be mainly in parallel sessions.

We do believe that the 7th joint meeting is going to be a unique scientific event thus we expect all of you this summer in Athens, Greece.

*The chairman,
Prof. Leandros A. Skaltsounis*

Sunday August 3rd 2008

Time	Activity	Place
12.00 – 21.00	Registration	Intercontinental
13.00 – 17.00	WS Regulatory affairs	University
19.00 – 22.00	Welcome party	

Monday August 4th (Place: Intercontinental)

8.30 – 9.10	Opening ceremony	AFERP, ASP, GA, PSE, SIF
9.10 – 10.30	Opening lectures	
10.30 – 11.00	Coffee break	
11.00 – 13.00	Awards	GA & PSE
13.00 – 14.30	Lunch	
14.30 – 16.30	Awards	ASP & AFERP
16.30 – 17.00	Coffee break	
17.00 – 19.30	Parallel sessions	
	– Drug discovery	
	– Modern approaches to traditional medicine	
	– Pharmacology	
20.30 – 23.00	Social event	

Wednesday August 6th

8.30 – 10.30	Lectures	
	– New sources of bioactive natural products: from biodiversity to chemodiversity	
10.30 – 11.00	Coffee break	
11.00 – 13.00	Lectures	
	– Health improvement thought dietary phytochemicals	
	– Modern approaches to traditional medicine	
13.00 – 14.30	Lunch	
14.30 – 16.30	Parallel sessions	
	– New trends in extraction, separation processes and structure elucidation	
	– Synthesis of natural products	
	– Workshop: Innovation by cooperation	
16.30 – 17.00	Coffee break	
17.00 – 19.30	Parallel sessions	
	– Bioavailability and quality of herbal drugs	
	– Biosynthesis and biomimetic synthesis of natural products	
	– Pharmacology	
19.30 – 21.00	Association meetings	ASP

Tuesday August 5th

8.30 – 10.30	Lectures Marine Natural Products	
10.30 – 11.00	Coffee break	
11.00 – 13.00	Lectures New sources of bioactive natural products	
13.00 – 14.30	Lunch	
14.30 – 16.45	Parallel sessions – Natural products with Agrochemical and cosmetic interest – Cosmetics – Pharmacology – Analysis and Structure determination	
16.45 – 17.15	Coffee break	
17.15 – 18.45	Poster session 1	
18.45 – 20.15	Association meetings	GA/AFERP/SIF

Thursday August 7th

8.30 – 10.30	Lectures – Pharmacology – New sources of bioactive natural products – Health improvement through dietary phytochemicals
10.45 – 11.15	Coffee break
11.15 – 13.15	Lectures – Drug discovery from natural sources
13.15 – 14.45	Lunch
14.45 – 16.15	Poster session 2
16.15 – 18.15	Lectures – Biosynthesis and biomimetic synthesis of natural products
18.15 – 18.45	Concluding remarks
20.15	Congress dinner

Other Meetings

St. Petersburg, Russia

July 2–4, 2008;
12th International Congress
„PhytoPharm 2008“
www.adaptogen.ru/phyto2008.html

Salamanca, Spain

July 8–11, 2008; “XXIVth International
Conference on Polyphenols”
www.polyphenols2008.com

Cork, Ireland

Aug 24–27, 2008;
“Agricultural Biotechnology International
Conference (ABIC 2008)”
www.abic.ca/abic2008/html/program.html

Jena, Germany

Aug 27–29, 2008;
“International Conference on LC-NMR
and Related Techniques: Challenge in
Biological Systems”
<http://lcmr.ice.mpg.de/main/home.htm>

Quedlinburg, Germany

Sept 7–10, 2008;
“39th International Symposium on
Essential Oils (ISEO 2008)”
www.gdch.de/iseo2008

São Paulo, Brazil

Sep 16–19, 2008; “20th Symposium
of Brazilian Medicinal Plants and 10th
International Congress of
Ethnopharmacology”

Ash-Shoubak, Jordan

Oct 15–16, 2008; “Symposium on
Medicinal Plants, Their Cultivation and
Aspects of Use”
www.ismp.bau.edu.jo

Sari, Iran

Oct 28–31, 2008; “International Congress
on Traditional and Complementary
Medicine (ICTCM)”
www.icm.ir

Sharm El Sheikh, Egypt

Oct 31–Nov 5, 2008;
“1st Euro-Mediterranean Conference on
Marine Natural Products (EMCMNP-I)”
www.emcmnp.org

Cape Town, South Africa

Nov 9–14, 2008; “WOCMAP IV – 4th World
Congress on Medicinal and Aromatic
Plants – Using Plants to benefit People.”

Punjab, India

Nov 16–20, 2008;
“International Conference on New
Developments in Drug Discovery from
Natural Products and Traditional Medicine”

Meeting Reports

GA's Permanent Committee Breeding and Cultivation acts as co-convenor of a meeting on aspects of agricultural production of herbal drugs 2008 in Bernburg, Germany

The German Professional Committee for Medicinal, Spice and Aromatic Plants (DFA) represents the growers of medicinal and aromatic plants in Germany. In a distance of three or four years, it holds the "Conference on Medicinal and Spice Plants" where the latest research findings relating to agricultural production of herbal drugs are presented. In 2008, this meeting has been organised as joint meeting together with the annually arranged "Winter seminar for questions on medicinal and aromatic plant production" which presents in the first line statements and experiences from a practical point of view (Joint Meeting 18th Bernburg Winterseminar and 5th Conference on Medicinal and Spice Plants, 18–21 February 2008 in Bernburg, Germany). Already in 2004, the GA's Permanent Committee Breeding and Cultivation under direction of Prof. Dr. Chlodwig Franz participated as a co-convenor in the fourth Conference of DFA to intensify the scientific exchange between the pharmaceutical biology and the fields of science being tangent to the agricultural production of herbal drugs. In 2008 together with GA, also the Society for Plant Breeding and the German Phytomedical Society acted as co-convenor. The Regional Center of Agriculture, Forestry and Horticulture of the federal state Saxony-Anhalt involved intensively in tests of plant protection products for medicinal and aromatic plants hosted the conference. The scientific committee under the direction of the GA member PD Dr. F. Pank guaranteed a high scientific level of the conference by the broad expertise of its members in different scientific disciplines related to agricultural herb production. The

motto of the conference was "Quality, profitability and sustainability". The competitiveness of this very special branch of plant production presupposes the production of high quality herbal drugs with cost-efficient and environment saving methods. This challenging task needs the elaboration of innovative solutions and approaches by research and development. The 28 lectures and 66 posters conveyed valuable research findings, experiences and suggestions to meet the present challenges by sharpened competition in the era of globalisation, continuously rising energy costs, the competition for agricultural medicinal plant production by escalated prizes of

other agricultural products and the increasing regimentation of the primary production within the scope of more and more sophisticated quality management systems. The conference conveyed important impulses for future activities in research and production to the 250 delegates from research, economy and administration. The book of abstracts written in German language can be downloaded from

http://www.sachsenanhalt.de/LPSA/fileadmin/Elementbibliothek/Bibliothek_Politik_und_Verwaltung/Bibliothek_LLFG/dokumente/Acker_und_Pflanzenbau/Arznei_und_Gewuerzpflanzen/Tagungsband2.pdf.



Petra Wernicke, Ms Minister for agriculture and environment Saxony-Anhalt and PD Dr. F. Pank, head of the scientific committee under discussion

7th Annual Oxford International Conference on the Science of Botanicals & American Society of Pharmacognosy 4th Interim Meeting, April 12–16, 2008, University of Mississippi, USA

For the first time GA (Gesellschaft für Arzneipflanzenforschung) was invited to participate as co-organizer and co-sponsor in the US annual conference series on the Science of Botanicals. It was the 7th and this time very international, but still familiar conference with 275 participants from all over the world. It was organized by the National Center for Natural Products Research (NCNPR) within the School of Pharmacy at The University of Mississippi and chaired by Prof. Dr. Ikhlas Khan, NCNPR, and dealt with Quality and Safety Issues Related to

Botanicals. The conference was supported by a cooperative agreement between the NCNPR and the Center for Food Safety and Applied Nutrition (CFSAN) of the U.S. Food and Drug Administration (FDA). Further co-sponsors were the Shanghai Institute of Materia Medica/CAS, China, and the Indian Council of Scientific and Industrial Research (CSIR-India). The conference was held at the new Oxford Conference Center in Oxford/Mississippi.

GA was represented by president Prof. Dr. Brigitte Kopp, Vienna. She emphasized in her welcome address the necessity of a regular and steady international scientific interchange, as despite many modern methods such as combinatorial chemistry, still about 50 % of all small molecules in the past decade are derived from the Natural

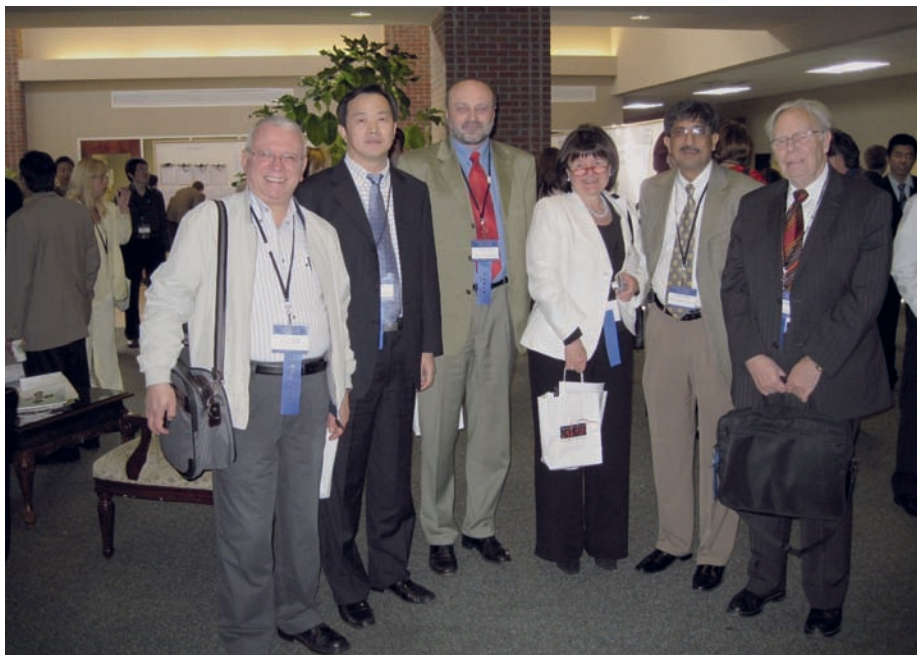
Product field. This shows that NPs are important and effective sources for new drugs or leads. In her plenary lecture she presented "New Results from Wellknown Herbal Medicinal Products".

Further GA plenary or keynote speakers (most of them also ASP members) were Prof. KHC Baser, Anadolu University, Turkey (Essential Oils – The case of Oregano oil and Carvacrol), Prof. Veronika Butterweck, Gainesville, Florida (Anxiolytic Activity of *Apocynum venetum* L. and its proposed mechanism of action), Prof. Dean Guo, Shanghai (TCM: From Experience towards Evidence-Based Medicine), Prof. Douglas Kinghorn, Ohio State University (Search for Bioactive Constituents of Botanical Dietary Supplements), Prof. Adolf Nahrstedt, Muenster (Pharmacokinetic Synergy of Con-

stituents in Herbal Medicinal Products), Prof. Johannes Nowak, Vienna, (Authentication of Plant Materials and Products by DNA) and Prof. Hildebert Wagner, Munich, (Synergy Research: A new Approach to Evaluating and Rationalizing the Efficacy of Multiherbal Drug Combinations). Interesting were the two different approaches to "synergy research". While H. Wagner illuminated the synergistic increased efficacy of multiherbal drug combinations on a pharmacologically based effect, A. Nahrstedt explained or rather derived synergy from a pharmacokinetic viewpoint.

The main topics of the conference were: Perspectives on Modern Approaches to Pharmacognosy, Impact of Natural Products on Tropical diseases, Botanical raw materials – issues of sourcing/supply and quality, Active Principles of Medicinal Plants, Analytical Approaches and Challenges for Quality Assessment of Botanicals, Global Approaches to Botanicals, Neuropharmacology of Botanicals, Pharmacology, Pharmacokinetics and Interactions of Botanicals, Critical Issues with Botanicals, Antitumor Natural Products – Cytotoxins vs targeted Agents and Regulatory Issues for Botanicals – Quality, Research cGMPs. They were covered in 48 lectures (plenary, keynote and short lectures) and in 144 posters. The abstracts of the conference were published in *Planta Medica* 74: 305–375 (2008).

Tours to the astounding perfectly equipped National Center of Natural Product Re-



GA at the Oxford meeting: H. Baser, Turkey; De-an Guo, China; H. Novak, Austria; B. Kopp, Austria; I. Khan, USA; H. Wagner, Germany (from left to right)

search on the Oxford University Campus and the Medicinal Plant Garden were offered as well as a social tour to the "Blues and Elvis city" Memphis.

Many thanks for this great, informative and interesting international "Get together" (= sym-

posium) and the overwhelming hospitality of the organizers and their charming helping team!

Renate Seitz

GA symposium April 24–25, 2008, Leiden "Plants systems biology and medicinal plants"

A 2-days symposium highlighting various aspects of plant systems biology was held in the Naturalis Museum in Leiden on April 24–25, 2008. It was co-organized by Prof. Dr. Rob Verpoorte, Prof. Dr. Hans Scheffer from Leiden, and Prof. Dr. Brigitte Kopp, President of the Society for Medicinal Plant Research (GA).

More than 100 scientists attended this well-organized, exciting symposium presenting in 11 plenary lectures, 9 short lectures and 24 posters many facets of system biology and system biology approaches tried to address phytochemical issues previously not fully understood or solved in much depth. Actually, systems biology is a revolutionizing science. It means a different approach to study biological systems, i.e. studying them in a more holistic way. In complex organisms such as plants this offers many new opportunities and many challenges. 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. When studying the effect of medicinal plants in living systems (cells, animals or humans), systems biology will be of great value.

Metabolomics and metabolite profiling are also important tools for quality improvement and control of medicinal plants and medicinal plant products.

In her welcome address GA President Brigitte Kopp also stressed that systems biology is a complex, interdisciplinary pursuit. Experts in the fields of metabolomics and metabolite profiling presented a state-of-the-art picture of systems biology and its application in very different areas of plant and plant/human biology. Rob Verpoorte (University, Leiden, NL) gave the key lecture on "Systems biology, the future of Medicine and Personal Health", where he already raised important questions on science in general and how they can be addressed by systems biology approaches. A whole set of lectures was dedicated to Ginseng and recent progress related to quality control, metabolite profiling, evaluation and identification of Ginseng in commercial products was presented by Mei Wang (SU Biomedicine, Zeist, NL), Rob van der Heijden (University, Leiden, NL) and Wen-Te Chang (University, Taichung, Taiwan). In the afternoon of the first symposium day Alisdair Fernie (MPI of Molecular Plant Physiology, Golm, Germany) demonstrated how flux profiling can help in elucidating, modeling and predicting biosynthetic routes and their regulation. Elaine Holmes (Imperial College, London, UK) summarized her ex-

perience in metabolomic applications in plant systems biology. The second day started with a lecture focusing on the potential and limitations of NMR-based metabolomics in plant science (Young Hae Choi, University, Leiden, NL). The exciting contribution of Alain Goossens (VIB, Gent, Belgium) introduced to transcriptomics and jasmonates, a potent combination to unravel the regulation of plant secondary metabolism. Kirsi-Marja Oksman-Caldentey (VTT, Espoo, Finland) finished the morning session of presentations by invited experts with her vision of plant cells as efficient factories to produce high-value secondary metabolites. The accompanying short lectures presented special aspects or facets of metabolite profiling, potential application of systems biology and other aspects related loosely or more closely to the topic of the symposium. The same holds for the interesting posters displayed during the meeting.

The symposium finished with presentations by Ana Cristina Figueiredo (University, Lissabon, Portugal) and Raimo Hiltunen (University, Helsinki, Finland). Their presentations were related in one way or the other to the work of Hans Scheffer, who received his M.S. in Pharmacy and Ph.D. at Leiden University. In 1984 he became Associate Professor of Pharmacognosy at the Leiden/Amsterdam Center of Drug Research later on Professor of Medicinal and

Aromatic Plant Sciences at the Agricultural University of Wageningen 1985. His friendship with Raimo Hiltunen was established during Hans Scheffer's postdoctoral fellowship at the University of Helsinki in 1982/83. The relationship with Cristina Figueiredo, on the other hand, was established in Leiden, where Cristina Figueiredo was supervised and advised by Hans Scheffer during various phases of her academic career.

At the end of the meeting Hans Scheffer took over the lectern to thank his relatives, friends and companions for sharing so many memorable moments with him. He also acknowledged the excellent and detailed overview the participants of the symposium gave on the emerging and steadily expanding area of plant systems biology. This symposium was also organized on the occasion of the retirement of Hans Scheffer, former President of the GA (1998–

2001) in 2007. Brigitte Kopp already announced in her welcome address that Hans Scheffer will be awarded the honorary membership of the GA during the forthcoming Annual Congress of the Society for Medicinal Plant Research in Athens.

Prof. Wolfgang Kreis, Erlangen

“Herbal Medicinal Products and Phytotherapy – Research and Practice” 6th Joint Congress 14 to 16 February 2008 in Berlin

The 6th joint meeting of the German *Gesellschaft für Phytotherapie*, *Gesellschaft für Arzneipflanzenforschung/Society for Medicinal Plant Research*, *Deutsche Gesellschaft für Klinische Pharmakologie und Therapie* and *Komitee Forschung Naturmedizin* took place from 14 to 16 February 2008 in the *Kaiserin-Friedrich-Stiftung für Ärztliche Fortbildung* in Berlin. Once again the call for contributions to the scientific programme resulted in a big response from numerous colleagues. 45 lectures, 36 posters and 232 registered participants brought forth an ambitious scientific programme as well as a fully booked venue. The presence of 11 representatives of national and European health authorities as well as of 15 participants from scientific and other journals was highly appreciated.

The audience was welcomed by Professor Dr Brigitte Kopp, president of the *Society for Medicinal Plant Research*, Professor Dr Dr mult. Fritz H. Kemper, president of the German *Gesellschaft für Phytotherapie* and by Professor Dr Volker Schulz who was organising the congress. The introductory remarks unanimously emphasized the commitment of phytotherapy to scientific research in particular expressing gratitude to all those who had actively contributed to the programme by lectures or posters. In a touching farewell speech during this congress, Professor Fritz H. Kemper said goodbye after his 16-years presidency of the German *Gesellschaft für Phytotherapie*.

In the past the Berlin Congress on Phytotherapy was developed from four different roots. Since 2001 and now for the 6th time, the meeting was performed as a joint congress in order to increase synergies. Nonetheless each of these associations is at first committed to the interests of its members which may change over the years. Two associations, the *Deutsche Gesellschaft für Klinische Pharmakologie und Therapie* and the *Komitee Forschung Naturmedizin* were represented this time by few members only. In contrast, the congress was well accepted by members of two friends from the European neighbourhood, the *Schweizer Medizinische Gesellschaft für Phytotherapie* and the *Österrei-*



The board of the Society of Phytotherapy

chische Gesellschaft für Phytotherapie. These changes among the participants will be taken into due account when the next meeting is organized which will probably take place from 10 to 12 September 2009. The presentation of new results from research and recent findings from all domains of phytotherapy were the core of the scientific programme of this congress which mainly focused on therapeutic applications in humans. Special emphasis of lectures and posters was put on the use of herbal medicinal products for respiratory tract disorders, cognitive and affective disorders of the central nervous system, circulatory disorders as well as the use in gastroenterology, oncology, dermatology, rheumatology and gynaecology.

Pharmapolitical issues were raised by two discussion panels. The *Forum pharmaceuticum*, organised and chaired by Dr Frauke Gaedcke, picked up a controversial development from the viewpoint of the products used entitled „Pharmacopoeia monographs for extracts – bane or boon?“ Items resulting from practical experience such as cultivation of medicinal plants and manufacturing methods as well as marketing authori-

zation and distribution of herbal medicinal products were vigorously discussed together with the audience. Various examples demonstrated which chain reactions can be caused by apparently slight modifications within the specifications of extracts. The *Forum politicum*, „Phytotherapy – more than a bridge between complementary and orthodox medicine“ was moderated by Professor Kemper and Dr Eberwein. According to recent figures, the German health authority BfArM made a positive assessment of approximately 2400 herbal medicinal products developed in the German market. Unlike these positive developments, the changes in the market situation were less appreciated. The measures of the GMG (law on modernization in the healthcare system) of April 2004 which resulted in exemption of non-prescription bound medicinal products from reimbursement by statutory health insurances, gave rise to the option to prescribe herbal medicinal products in exceptional cases only. For this reason many general practitioners lack support with regard to their patients' treatment with herbal medicinal products. On the pharmacists, there is less impact at

present which may result in different viewpoints and opinions. Furthermore, the non-academic area plays an increasing role. This forum has contributed to the communication of different viewpoints of physicians, pharmacists and consumers who thus may learn from each others experiences.

During the congress the annual members meeting of the *German Society for Phytotherapy* took place. One of the main items of the agenda also being of general interest was the election of the new board for 2008 to 2010. Professor Kemper who guided the election proposed a board of 7 (instead of 9) persons which was agreed by the mem-

bers meeting. 13 candidates stood for election. The highest quota were received (in alphabetical order) by Dr Bernd Eberwein, Dr Frauke Gaedcke, Dr Werner Knöss, Professor Dr Karin Kraft, Professor Dr Volker Schulz, Dr Barbara Steinhoff and Professor Dr Hilke Winterhoff. The newly elected board appointed Professor Dr Karin Kraft and Dr Bernd Eberwein vice-chairpersons and Professor Dr Volker Schulz chairman of the society; Dr Bernd Eberwein continued to be treasurer of the society.

The cheerful social event in the „Berliner-Kiez Restaurant & Theaterclub Umspannwerk Ost“ was a good opportunity for the

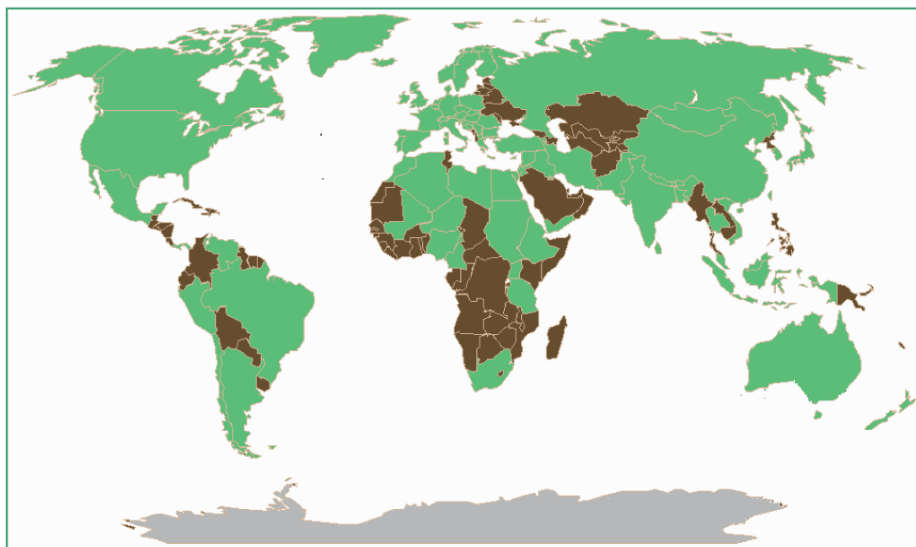
members of the new board to introduce themselves to all participants of the congress. Two celebrations were even more important: Professor Dr Heinz Schilcher, one of the founder members of the society, was appointed honorary member with applause of the audience, and Professor Dr Fritz H. Kemper, who directed the fate of the society for 16 years, was awarded honorary chairman of the society with standing ovations of all participants.

B. Steinhoff and V. Schulz

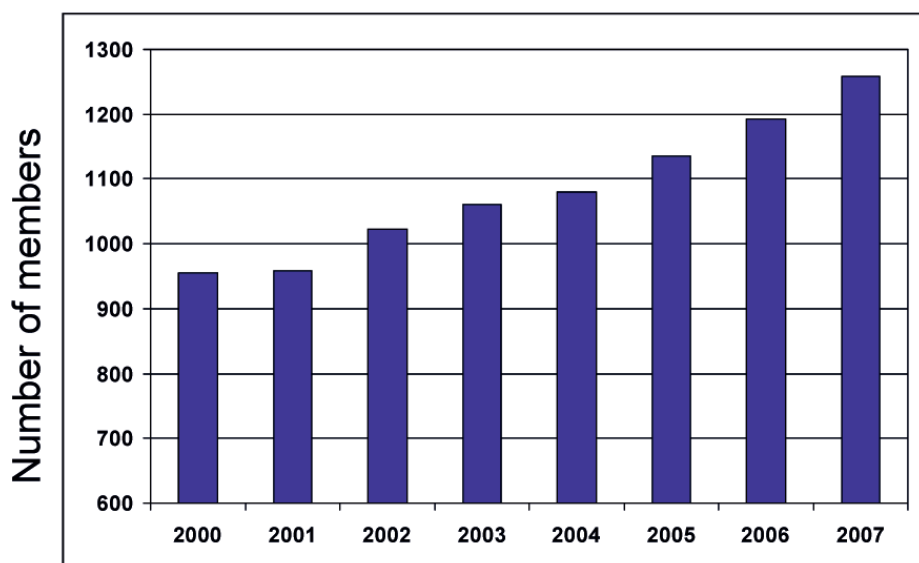
GA worldwide

and their Institutes of Pharmacognosy: International, Interesting and Cooperative

GA is showing a steadily increasing activity all over the world. The following map highlights the provenience of our more than 1.300 members coming from more than 85 countries worldwide. All green-marked countries are GA-countries.



Memberships are steadily increasing over the years, indicating that GA seems to be a valuable platform for medicinal research scientists. The following graph indicates the development of memberships over the last years.



Address: Faculty of Pharmacy, University of Athens, Panepistimioupolis, Athens 15771, Greece

Homepage: www.pharm.uoa.gr

Head of institution: **Prof. Leandros A. Skaltsounis**
skaltsounis@pharm.uoa.gr



Working area: Isolation and identification of bioactive compounds from plants, marine organisms, and fungi.
Semi synthesis of natural products, derivatization and in silico studies.
Scale up extraction and isolation procedures (50 lt to 1000 lt).
Chemical ecology studies
Analysis and isolation of secondary metabolites in food.

2 publications, representing the institution: "Maintenance of pluripotency in human and mouse embryonic stem cells through activation of Wnt signalling by a pharmacological GSK-3-specific inhibitor." *Nature Med.*, 2004, 10, 55–63.
3',7-halogeno indirubins, a new class of cell death – inducing agents" *J. Med. Chem.*, 2006, 49, 4638–4649.

Coworkers: 13 Academic staff members, 26 PhD, 9 Postdocs and 3 technicians

The "speciality" or the unique selling proposition of institution: Development of CDK's / GSK3 inhibitors
Development of SERMS (Selective Estrogen Receptor Modulators)
Research and development of PPAR ligands (obesity, antidiabetics)
Isolation and exploitation of bioactive compounds from agricultural wastes

Running projects with industrial partners? Pierre-Fabre (France), Janssen Pharmaceutica (Belgium), Intra-Cellular Therapies (USA), Lavipharm (Greece & USA), Servier (France), Hitex (France), Frutarom (Switzerland), Elpen (Greece), Korres Natural Products (Greece).

News on regulatory affairs



What's on top of European Medicines Agency EMEA concerning Herbal Medicinal Products?

Herbal Medicinal Products – Regulatory Developments in Europe

By: Dr. Barbara Steinhoff; *German Medicines Manufacturers Association (BAH)*; *Co-chairperson of the ESCOP Scientific Committee*; Ubierstr. 71–73; D-53173 Bonn; Mail: steinhoff@bah-bonn.de

Herbal Medicinal Products – New Regulatory Developments in Europe

The Directive on traditional herbal medicinal products (2004/24/EC, now part of Directive 2001/83/EC, Art. 16a–16i) provides a new category for herbal medicinal products. It comprises products with low indication claims which do not require intervention of a medical practitioner, with defined

dosage levels and methods of administration as well as proven pharmaceutical quality and safety. Their efficacy is plausible on the basis of long-standing tradition and experience. Thus, in addition to the already existing category of products with a "well-established medicinal use" which may prove their safety and efficacy based on bibliographic data, the Directive offers an alternative approach for products with a long-term marketing experience but without a scientific proof of efficacy.

Registration of traditional herbal medicinal products

After implementation of the Directive into national legal systems of most of the EU Member States, there is not yet much experience available. So far only few registrations for traditionally used herbal medicinal products have been granted, 11 of them in

the United Kingdom, e.g. for Devil's Claw, Feverfew, Black Cohosh, Saw Palmetto, Valerian, Horse Chestnut and St. John's Wort. In Germany, 5 registrations have been granted, and many applications will follow in the near future because in this country, the 31 December 2008 was set as the deadline to apply for new registrations of the existing § 109a marketing authorisations for traditional herbal medicinal products.

The Committee on Herbal Medicinal Products

The new Committee on Herbal Medicinal Products (HMPC) which meets 6 times per year under the chairmanship of Dr. Konstantin Keller, Germany, is in charge of preparing guidance documents in the field of quality, safety and efficacy of herbal medicinal products and of establishing Community herbal monographs in the area of

the “well-established medicinal use” and for traditional herbal medicinal preparations, respectively. Furthermore the group prepares a list of herbal substances, preparations and combinations thereof, which will be eligible for a simplified registration procedure as traditional herbal medicinal products.

Community herbal monographs

During the past few months a large number of further Community herbal monographs were prepared in the HMPC Working Party on Community monographs and Community list (MLWP) and then finally adopted by the HMPC:

- Community Herbal Monograph on *Pimpinella anisum* L., fructus (EMA/HMPC/137423/2006)
- Community Herbal Monograph on *Pimpinella anisum* L., aetheroleum (EMA/HMPC/263273/2006)
- Community Herbal Monograph on *Calendula officinalis* L., flos (EMA/HMPC/179281/2007)
- Community Herbal Monograph on *Echinacea purpurea* (L.) Moench, herba recens (EMA/HMPC/104945/2006)
- Community Herbal Monograph on *Foeniculum vulgare* Miller subsp. *vulgare* var. *vulgare*, fructus (EMA/HMPC/137428/2006 Corrigendum)
- Community Herbal Monograph on *Foeniculum vulgare* Miller subsp. *vulgare* var. *vulgare*, aetheroleum (EMA/HMPC/263292/2006)
- Community Herbal Monograph on *Foeniculum vulgare* Miller subsp. *vulgare* var. *dulce* (Miller) Thellung, fructus (EMA/HMPC/263293/2006 Corrigendum)
- Community Herbal Monograph on *Melissa officinalis* L., folium (EMA/HMPC/5341/2007)
- Community Herbal Monograph on *Mentha x piperita* L., aetheroleum (EMA/HMPC/349466/2006)
- Community Herbal Monograph on *Passiflora incarnata* L., herba (EMA/HMPC/230962/2006)
- Community Herbal Monograph on *Primula veris* L., *Primula elatior* (L.) Hill, flos (EMA/HMPC/64684/2007)
- Community Herbal Monograph on *Primula veris* L., *Primula elatior* (L.) Hill, radix (EMA/HMPC/143370/2006)
- Community Herbal Monograph on *Rheum palmatum* L.; *Rheum officinale* Baillon, radix (EMA/HMPC/189624/2007)
- Community Herbal Monograph on *Rhamnus purshianus* D.C., cortex (EMA/HMPC/513579/2006)
- Community Herbal Monograph on *Thymus vulgaris* L.; *Thymus zygis* L., herba (EMA/HMPC/234113/2006)

Scientific and herbal industry associations in principle welcome the preparation of these monographs because they can pro-

vide harmonised scientific assessment criteria for herbal medicinal products. However, in many cases comments had been submitted suggesting amendments on individual chapters of the drafts, e.g. the dosage recommendation for the use in children in the *Foeniculum* monographs or the indication and posology for thyme liquid extract DAB (*Thymus vulgaris*).

Draft community herbal monographs and entries to the list

Upon recommendation of the Working Party on Community Monographs and Community List (MLWP) which is chaired by Dr. Heribert Pittner, Austria, the HMPC released the following draft monographs for a 3-months consultation with interested parties:

- Draft Community Herbal Monograph on *Avena sativa* L., fructus (EMA/HMPC/260098/2007)
- Draft Community Herbal Monograph on *Avena sativa* L., herba (EMA/HMPC/260098/2007)
- Draft Community Herbal Monograph on *Equisetum arvense* L., herba (EMA/HMPC/394897/2007)
- Draft Community Herbal Monograph on *Harpagophytum procumbens* D.C.; *Harpagophytum zeyheri* Decne (EMA/HMPC/476255/2007)
- Draft Community Herbal Monograph on *Melilotus officinalis* (L.) LAM (EMA/HMPC/476396/2007)
- Draft Community Herbal Monograph on *Ruscus aculeatus* L., rhizoma (EMA/HMPC/372915/2007)
- Draft Community Herbal Monograph on *Sambucus nigra* L., flos (EMA/HMPC/283842/2007)
- Draft Community Herbal Monograph on *Solidago virgaurea* L., herba (EMA/HMPC/434192/2007)
- Draft Community Herbal Monograph on *Urtica dioica* L.; *Urtica urens* L., herba (EMA/HMPC/366106/2007)
- Draft Community Herbal Monograph on *Verbascum* sp., flos (EMA/HMPC/395238/2007)

The comments submitted mainly referred to the “well-established medicinal use” of preparations of *Ruscus aculeatus*, *Solidago virgaurea* and *Urtica* (herb) for which several studies supporting clinical efficacy exist but which had not been taken into consideration. Also in case of the recently discussed draft on *Harpagophytum* which only includes “traditional” indications thus neglecting a large number on clinical studies performed with *Harpagophytum* extracts, detailed comments were submitted. All these comments are discussed in the MLWP and HMPC prior to final adoption of a monograph. The comments submitted as well as the HMPC’s assessment reports are published on the EMA Website on a regular basis (www.emea.europa.eu).

For the following new HMPC projects, rapporteurs from the group were appointed:

Achilleae millefolii flos, Agni casti fructus, Agrimoniae herba, Agropyri repentis rhizoma, Allii sativi bulbosus, Arnicae flos, Capsellae bursa-pastoris herba, Cardui mariae fructus, Cucurbitae semen, Eucalypti aetheroleum, Eucalypti folium, Filipendulae ulmariae herba, Foenugraeci semen, Fragariae folium, Gentianae radix, Ginkgo folium, Ginseng radix, Hederae helices folium, Juglandis folium, Juniperi fructus, Levistici radix, Marubii herba, Mate folium, Matricariae aetheroleum, Matricariae flos, Millefolii herba, Myrrha, Myrtilli fructus, Oleae folium, Orthosiphonis folium, Plantaginis lanceolatae folium, Quercus cortex, Rosmarini folium, Serenoae repentis fructus, Solanum dulcamara, Taraxaci folium, Taraxaci radix cum herba, Viola tricoloris herba, Vitis viniferae folium and combinations of Primula and Thyme as well as of Valerian and Hops.

Current overviews of the status of the HMPC assessment work can be found on the EMA Website, indicating for which projects a rapporteur has been assigned, a draft is under discussion or published, the assessment is close to finalisation or a final opinion has been adopted. In this context, it is important to mention that interested parties should take the opportunity to comment on the drafts in case they do not agree with the contents, e.g. with regard to indications, dosage recommendations or risk information.

Guidance documents on quality

A new “Guideline on quality of combination herbal medicinal products/traditional herbal medicinal products” (EMA/HMPC/ 2148 69/2006) addresses some approaches for identification and quantitative determination of herbal substances/preparations in combination herbal medicinal products. It takes into account the complex composition of the herbal medicinal product and the difficulties to demonstrate compliance with the existing EU guidelines on quality.

A draft “Reflection paper on markers (marker substances) used for quantitative and qualitative analysis of herbal medicinal products and traditional medicinal products” (EMA/HMPC/253629/2007) was released for public consultation until 15 April 2008. It describes issues related to markers which are intended for quantitative and qualitative analytical control of herbal medicinal products and provides possible criteria for the selection of markers. The paper may contribute to an appropriate quality standard for herbal medicinal products taking into account their complex nature as well as their analytical particularities.

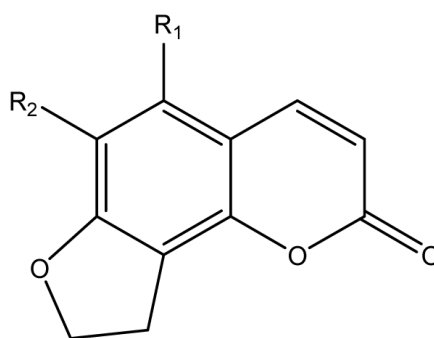
Guidance documents on safety and efficacy

After publication of the “Guideline on non-clinical documentation for herbal products in applications for marketing authorisation (bibliographical and mixed applications) and in applications for simplified registra-

tion" (EMA/HMPC/32116/2005), a draft "Guideline on the assessment of genotoxic constituents in herbal substances/preparations" (EMA/HMPC/1046 81/2007) was published for public consultation. This document is intended to provide guidance on the practical interpretation and implementation of genotoxicity testing, hazard identification and risk assessment of herbal medicinal products. The new document can be regarded as a pragmatic approach to address the issue of genotoxicity testing describing a stepwise approach according to the requirements of the ICH guidelines. However, the comments submitted emphasized that the need to perform testing should be restricted to an appropriate extent, and additional non-clinical testing should be demanded only in case published literature is not available or insufficient and if there is reasonable suspicion for safety concerns.

Safety evaluation of herbal medicinal products

A former "Draft reflection paper on the risk associated with furocoumarins contained in preparations of *Angelica archangelica* L." (EMA/HMPC/317913/2006) came to the conclusion that only a daily intake of total furocoumarins in herbal medicinal preparations equal or below 15 µg would be acceptable. Comments submitted on this draft stated e.g. that extrapolating data from psoriasis therapy using highly dosed isolated substances to all kinds of herbal preparations made from the genus *Angelica* did not seem appropriate. The final ver-



sion published in November 2007 included a more detailed risk assessment approach

which also referred to dietary consumption. It came to the conclusion that a daily intake of 1.5 mg furocoumarins was regarded safe, however, a recommendation was added to exclude children and pregnant women from the use of *Angelica* preparations.

All respective drafts released for public consultation as well as the finalised documents can be found on the EMA website (www.emea.europa.eu).

ESCOMP – The European Scientific Cooperative on Phytotherapy

ESCOMP, the European Scientific Cooperative on Phytotherapy, has continued working on the supplement to the book published in September 2003 (to be ordered from the book trade or from the ESCOP Secretariat www.escop.com). The addendum of approximately 30 monographs will contain revisions e.g. on Devil's claw, Eleutherococcus, Valerian and Echinacea as well as approximately 25 new monographs e.g. on Milkthistle, Capsicum, Pumpkin seed and Hawthorn berries. Furthermore it will include many monographs on medicinal plants with indications supported by few or no clinical data. The latter ones might provide useful information on the safety data for products whose efficacy is plausible on the basis of long-standing tradition and experience.

New Books

Bioactive Natural Products

Detection and isolation of bioactive natural products. NMR spectroscopy: strategies for structure determination. Quantitative NMR of bioactive natural products. Development and application of LC-NMR techniques to the identification of bioactive natural products. Determination of the absolute configuration of bioactive natural products using exciton chirality circular dichroism. Separation of enantiomeric mixtures of alkaloids and their biological evaluation. UV dereplication of natural products extracts. LCMS in natural product research. Application of High-Speed Counter-Current Chromatography to the isolation of bioactive natural products. Biosensing approach in natural products research. Anticancer drug discovery and development from natural products. Sourcing natural products from endophytic microbes. Isolation of bioactive natural products from Myxobacteria. Naturally-occurring glycosidase inhibitors. Bioassay-directed isolation and identification of anti-aflatoxic constituents of walnuts. Bioactive peptides in hen eggs. Biological fingerprinting: strategy for

screening of bioactive compounds in TCM. Antimalarial compounds from traditionally-used medicinal plants. Germination stimulant in smoke: isolation and identification. Plant-associated toxins: Bioactivity-guided isolation, ELISA and LCMS detection.

"Bioactive Natural Products", 2007, S. M. Colegate and G. R. J. Molyneux, ISBN 08 49372585, 109,- Pounds

Duke's Handbook of Medicinal Plants of Latin America

The greatest diversity of plants in the world occurs in tropical Latin America, which is home to nearly 100,000 of the world's 300,000 known species. Despite this diversity, Latin American flora remains the least investigated. As interest in medicinal plants continues to develop, Duke's Handbook of Medicinal Plants of America provides complete coverage of nearly 500 of the most promising Latin American medicinal leads. This comprehensive guide addresses safety, efficacy, and suitability. After a brief introduction, each entry contains scientific



and colloquial names, synonyms, illustrations, notes, biological activities, medicinal indications, dosages, potential hazards, extracts.

Key Features: Presents family line, synonyms, notes, common names, activities, indications, dosages, downside, natural history, and extracts; Covers nearly 500 of the most promising Latin American medicinal plants; Includes over 100 illustrations.

"Duke's Handbook of Medicinal Plants of Latin America", 2008, James A. Duke, ISBN 1420043161, 63 Pounds

Thin Layer Chromatography in Phytochemistry

Thin layer chromatography (TLC) is increasingly used in the fields of plant chemistry, biochemistry, and molecular biology.

Advantages such as speed, versatility, and low cost make it one of the leading techniques used for locating and analyzing bioactive components in plants. TLC in Phytochemistry is the first source devoted to supplying state-of-the-art information on TLC as it applies to the separation, identification, quantification, and isolation of medicinal plant components. Renowned scientists working with laboratories around the world demonstrate the applicability of TLC to a remarkable diversity of fields including plant genetics, drug discovery, nutraceuticals, and toxicology. Elucidates the role of plant materials in the pharmaceutical industry... Part I provides a practical review of techniques, relevant materials, and the particular demands for using TLC in phytochemical applications. The text explains how to determine the biological activity of metabolites and assess the effectiveness of herbal medicines and nutritional supplements. Part II concentrates on TLC methods used to analyze specific plant-based metabolite classes such as carbohydrates, proteins, alkaloids, flavonoids, terpenes, etc. Organized by compound type, each chapter discusses key topics such as sample preparation, plate development, zone detection, densitometry, and biodetection. Demonstrates practical methods that can be applied to a wide range of disciplines. From identification to commercial scale production and quality control.

Key Features: Underscores the advantages of using TLC for locating and ana-

lyzing bioactive compounds from plant sources; Explains the benefits of using TLC over more expensive and complex chromatographic techniques; Reviews the techniques, materials, instrumentation, and procedures specific to the analysis and isolation of each compound class; Discusses methods for online derivatization, detection, identification, and quantification.

"Thin Layer Chromatography in Phytochemistry", 2008, Monika Waksmundzka-Hajnos, Joseph Sherma, Teresa Kowalska, ISBN 1420046772, 97,- Pounds

Arzneipflanzen entdecken

Everyone interested in Medicinal plants knows the dried herbal material. But in many cases the habitus of the respective fresh plants is not very commonly known. This book represents a publication on the most common medicinal plants used in Europe concerning the morphological details of the fresh plants, the medicinal use according Commission E and ESCOP monographs and many historical and practical details on the plants. High impact color photos highlight the flowering plants and the typical morphological details. The book comprises a quick reference manager with interesting text and pictures. It has to be noted that the book bases and describes plants from the Medicinal Plant Garden of the University of Münster, one of



the largest institution of this kind in Germany.

„Arzneipflanzen entdecken“ 2008, A. Hensel, T. J. Schmidt, R. Engelshowe, Krüger L. ISBN 978-3-00-023921-2, 238 color pages, german language, Eigenverlag. Order by mail or postage to: University of Münster, Institut für Pharmazeutische Biologie und Phytochemie, Hittorfstr. 56, D-48149 Münster. e-mail: ahensel@uni-muenster.de Price 10,00 Euro plus shipping.

Recent thesis on Medicinal Plant Research



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

Ph.D. thesis (2008) Isolierung und Charakterisierung von Proanthocyanidinen aus *Rumex acetosa* L. und *Myrothamnus flabellifolia* Welw., sowie Testung auf adhäsionsbeeinflussende Eigenschaften gegenüber uropathogenen *E. coli*. By: Jennifer Bicker; Promotor: Prof. Dr. Andreas Hensel, Institut für Pharmazeutische Biologie und Phytochemie, Westfälische Wilhelms-Universität Münster, Germany.

Ph.D. thesis (2008) Monomerisierung des oligomeren Fluoreszenzproteins AsGFP 499 aus *Anemonia sulcata* und Entwicklung zellulärer Assaysysteme zur Untersuchung der Translokation und Transkription des nukleären Transkriptionsfaktors NFATc1. By: Aynur Tasdemir; Promotor: Prof. Dr. Thomas J. Schmidt, Institut für Pharmazeutische Biologie und Phytochemie, Westfälische Wilhelms-Universität Münster, Germany.

Ph.D. thesis (2008). Interactions of Echinacea Liquid preparations and selected constituents with the cytochrome P450 enzyme system. By Maryam Modarai; Supervisors: Prof. Michael Heinrich, Prof. An-

dreas Kortenkamp, The School of Pharmacy, University of London, UK.

Ph.D. thesis (2008) Health from Herbs? – Antioxidant Studies on Selected Lamiaceae Herbs *in vitro* and in Humans. By Anna Nurmi; Supervisors: Prof. Raimo Hiltunen, Dr. Tarja Nurmi, Prof. Matti J. Tikkanen, Adjunct Prof. Sari Voutilainen; Opponent: Adjunct Prof. Marina Heinonen, Faculty of Pharmacy, University of Helsinki, Finland.

Ph.D. thesis (2008) Studies on the molecular mechanism of indirubin-3'-monoxime regarding its antiproliferative effect in vascular smooth muscle cells. By: Andrea Schwaiberger; Promotor: Univ.-Prof. Dr. V.M. Dirsch, University of Vienna, Austria.

Ph.D. thesis (2008) Resveratrol and endothelial cell senescence. By: Yvonne Schilder; Promotor: Univ.-Prof. Dr. V.M. Dirsch, University of Vienna, Austria.

Ph.D. thesis (2008) *In vitro*-Kultivierung, Steroid-Quantifizierung und DNA-Fingerprinting von Yam (*Dioscorea* sp.) Kulturen. By: Oliver Vendl; Promotor: Prof. B.

Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Ph.D. thesis (2008) Wissenschaftliche Reflexionen über traditionelle Arzneimittel in Österreich. By: Siegrun Gerlach; Promotor: Prof. W. Kubelka, Department of Pharmacognosy, University of Vienna, Austria.

Ph.D. thesis (2008) Phytochemical and biochemometric evaluation of the Alaskan anti-TB ethnobotanical *Oplopanax horridus*. By: Taichi Inui. Promotor: Guido F. Pauli, Graduate Program in Pharmacognosy, University of Illinois at Chicago, Chicago, IL (U.S.A.).

Ph.D. thesis (2007) Traditional medicinal use and biological activities of some plant extracts of African *Combretum* Loeffl., *Terminalia* L. and *Pteleopsis* Engl. species (Combretaceae). By Pia Fyhrquist; Supervisors: Prof. Carl-Adam Haeggström, Prof. Raimo Hiltunen and Prof. Pia Vuorela; Opponent Prof. Jacobus Eloff (University of Pretoria, South Africa), Faculty of Biosciences and Faculty of Pharmacy, University of Helsinki, Finland.



Ph.D. thesis (2007). Pharmacovigilance of Traditional Chinese herbal medicine. By Lida Teng; Supervisors: Dr. Joanna Barnes, Dr. Catherine Duggan, Prof. Simon Gibbons, the School of Pharmacy, University of London, UK.

Ph.D. thesis (2007): In vitro Untersuchungen zur Wirkung von Phytopharmaka auf die Kontraktilität des Mäuse-Ileums: Mögliche Bedeutung für die Therapie des Reizdarmsyndroms. By: Daniela Hage-lauer. Promotor: Prof. Dr. Helmut Heinle, Institute for Physiology, University of Tübingen, Germany.

Ph.D. thesis (2007) Molekularbiologische und biochemische Untersuchungen zur Biosynthese der Phenalinolactone aus *Streptomyces* species Tü6071. By: Hans-Jörg Schnell; Promotor: Prof. Dr. Andreas Bechthold, Pharmazeutische Biologie und Biotechnologie, Universität Freiburg.

Ph.D. thesis (2007) Wirkung von Thymian als Futterzusatz beim Broiler. By: Mag. Alexander Haselmeyer; Promotor: Prof. Dr. J. Zentek and Prof. Dr. R. Chizzola, Veterinärmedizinische Universität Wien, Austria.

Ph.D. thesis (2006) Gene der Cardenolide-Biosynthese aus *Digitalis*- und *Isoplexis*-Spezies. By: Vanessa Herl; Promotor: Prof. Dr. W. Kreis and Dr. F. Müller-Uri; Institute of Pharmaceutical Biology, University of Erlangen-Nürnberg, Germany.

Diploma thesis (2008) Phytochemischer Vergleich von Dekokten und alkoholischen Tinkturen chinesischer Arzneidrogen. By Doris Peinhopf; Promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz, Austria.

Diploma thesis (2008) Antioxidant and Immune Modulating Effect of *Achillea millefolium* L. s.l. (Yarrow) in Pharmacological Assays. By: Anna-Maria Baldia; Promotor: Prof. B. Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2008) In vitro Vermehrung von *Drosera rotundifolia* über temporären Immersion. By: Isabel Boul-Wischenau; Promotor: Prof. B. Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2008) Polare phenolische Inhaltsstoffe in *Dryopteris filix mas* und *Dryopteris dilatata*. By: Gerold Vogler; Promotor: Prof. L. Krenn, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2008) HPLC Analytik von phenolischen Sekundärstoffen in *Drosera*-Arten. By: Jacqueline Strohbach; Promotor: Prof. L. Krenn, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2008) Versuche zur Isolierung und Charakterisierung von Alkaloiden aus *Chiazospermum erectum* BERNH. By: Cornelia Rammer; Promotor: Ao. Univ.-Prof. Sabine Glasl, University of Vienna, Austria.

Diploma thesis (2008) Isolierung polarer Flavonoide aus der mongolischen Arzneipflanze *Dianthus versicolor* FISCH. By: Tina Radovic; Promotor: Ao. Univ.-Prof. Sabine Glasl, University of Vienna, Austria.

Diploma thesis (2007) Inhaltsstoffe aus *Larrea tridentata* (Sessé et Moc. ex DC.) Coville. By: Sebastian Rzeppa; Promotor: Prof. Dr. Thomas J. Schmidt, Institut für Pharmazeutische Biologie und Phytochemie, Westfälische Wilhelms-Universität Münster, Germany.

Diploma thesis (2007) Contribution to the analysis and quality control of Peru Balsam. By: Verena Mammerler; Promotors: Salvador Canigueral, University Barcelona, and Prof. B. Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) *Dryopteris filix-mas* – phytochemische und pharmakologische Untersuchung. By: Marlies Sommergruber; Promotor: Prof. G. Reznicek, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Screening von Extrakten des Wurmfarns (*Dryopteris filix-mas*) auf antiphlogistische Aktivität. By: Martina Tremesberger; Promotor: Prof. G. Reznicek, Department of Pharmacognosy, University of Vienna, Austria.

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

Diploma thesis (2007) REM-ESEM Untersuchungen an ausgewählten Arzneipflanzen. By: Marion Kalbacher; Promotor: Prof. R. Länger, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Analyse der Flavonoide in Vertretern des *Achillea millefolium* Aggregats mittels Kapillarelektrophorese. By: Barbara Loidl; Promotor: Prof. B. Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Evaluation of water solubility of kava kava extract and the main kavalactones in the presence of beta-cyclodextrin. By: Christine Maria Hartlieb; Promotors: Anna Rita Bilia, University of Firenze and Prof. B. Kopp, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Vergleich rasterelektronenmikroskopischer Untersuchungen anhand des *Achillea*-Formenkreises. By: Iris Simone Fegerl; Promotor: Prof. R. Länger, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Keltisch-germanische Heilpflanzen in der Südtiroler Volksmedizin aus naturwissenschaftlicher Sicht. By: Arnold Achmüller; Promotor: Prof. R.

Länger, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Zusammenfassung der Ergebnisse über Volksmedizinische Rezepte verschiedener Regionen Österreichs. By: Mirdesa Bajric; Promotor: Prof. J. Saukel, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Phenolische Inhaltsstoffe in *Grindelia robusta* NUTT. By: Katja Steyrlleuthner; Promotor: Prof. L. Krenn, Department of Pharmacognosy, University of Vienna, Austria.

Diploma thesis (2007) Semiquantitative Erfassung von Allergenen in Asteraceen. By: Nadja Stille; Promotor: Prof. G. Reznicek, Department of Pharmacognosy, University of Vienna, Austria.

Diploma-thesis (2008) Chemische Qualitätsprüfung von verschiedenen Perubalsamen. By: Elke Zimmermann; Promotor: Prof. L. K. Zitterl-Eglseer, Veterinärmedizinische Universität Wien, Austria.

Diploma-thesis (2008) Einsatz von Kräutern, Tonmineralien und Mikroorganismen zur Prophylaxe des Absetzdurchfalles. By: Barbara Vielhaber; Promotor: Dr. W. Hagmüller, Dr. I. Hahn, Prof. Dr. Ch. Franz, Veterinärmedizinische Universität Wien, Austria.

Diploma-thesis (2008) Phytotherapie beim Verdauungstrakt des Pferdes einst und jetzt – Alte Indikationen neu bewertet. By: Viola Liebisch; Promotor: Prof. Dr. K. Zitterl-Eglseer, Veterinärmedizinische Universität Wien, Austria.

Diploma-thesis (2008) Dermatologische Verträglichkeit von verschiedenen Perubalsamen und Reinstoffen an Hunden mit Hilfe des Patch Tests. By: Christa Maria Mascherbauer; Promotor: Prof. Dr. K. Zitterl-Eglseer, Veterinärmedizinische Universität Wien, Austria.

Diploma thesis (2007) Analytik von ausgewählten Arzneipflanzen der traditionellen mongolischen Medizin unter besonderer Berücksichtigung von Alkaloiden. By: Ilka Schoenian; Promotor: Ao. Univ.-Prof. Sabine Glasl, University of Vienna, Austria.

Editorial remark

All contributions for the GA-Newsletter are welcome. Deadline for submission for the next edition is fixed to November 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