



Message from the President

Dear members,

the 53rd annual congress of GA held in Florence from August 21st - 25th 2005 has been very successful and one of the greatest GA ever had. We have to be very thankful to the organizers, Prof. Franco Vincieri assisted by Prof. Anna Rita Bilia. They have put together a very attractive scientific and social programme, and have set up a perfect organization, so that everybody felt very pleased. On behalf of GA, I want to thank them and their supporting team very much for their enthusiasm and for organizing this meeting so successfully. GA has supported 26 young scientists from 12 countries with travel grants, so that they could attend the congress. You can find a comprehensive report on that meeting in this Newsletter.

During the member's meeting in Florence, the BoD of GA has been newly elected. The detailed results of the elections are also published in this Newsletter. Prof. Blaschek and Dr. Kopp will support me as the new vice presidents. Dr. Seitz will continue as secretary and Dr. Christoffel has been elected as the new treasurer. I want to thank all colleagues from the previous ExC very much, in particular Prof. Wolfgang Kreis for acting as vice-president during the last four years and Dr. Abel for taking care of GA's finances during the last eight years so well. Both have done a great job and have supported GA in a very constructive manner. It has always been a pleasure to work with that team.

Also some very meritorious colleagues from the Advisory Board will not continue in their positions: Prof. Salvador Canigual, Prof. Beat Meier, Prof. Adolf Nahrstedt, Prof. Hans Scheffer, and Prof. Hilke Winterhoff. Several of them have served in the BoD for decades and therefore have influenced and formed GA to a great extent. We appreciate very much that Prof. Meier and Prof. Winterhoff will continue to act as chairpersons of the Permanent Committees. Prof. Adolf Nahrstedt is leaving the BoD of GA after 24 years, and has been Editor-in-Chief of *Planta Medica* for 12 years. Therefore he has been awarded with the honorary membership of GA in Florence (see report in this NL). Prof. Scheffer left the BoD after being a member for 18 years, and acting as vice-president for eight and as president of GA for four years. I want to take the chance to thank him and all other colleagues for all their time and the enthusiasm they have spent for GA.

As new members of the Advisory Board I want to welcome Prof. Vuorela and Prof. Bilia. I am look-

ing forward to the next BoD period and hope that we can serve and develop our Society in an optimum way. Thank you very much for your confidence.

In the last members meeting it was decided to raise the membership fees of GA. This was necessary after 10 years in order to keep our budget balanced in the next years. With 40 € regular and 20 € reduced fee, it is still a reasonable range and I hope that you can accept it.

For next year, I am planning a workshop with the BoD to discuss the future development of GA. We are involved again in the organisation of several symposia together with other societies and will organize workshops. GA will also actively contribute to the discussion on the European regulation of herbal medicinal products and global preservation issues of medicinal plants.

We will also intensify our collaboration with Thieme Verlag in order to promote our scientific journal *Planta Medica*. I hope that many of you will consider *Planta Medica* for the publication of your valuable results.

It only happened in recent weeks that I could negotiate with Willmar Schwabe Arzneimittel AG that they collaborate with GA in funding a new award for GA. The "Willmar Schwabe Award of the Society for Medicinal Plant Research" is dedicated to promote excellent pharmacological and clinical studies with herbal medicinal products and will be awarded every two years. Please find the details for application on the separate Flyer.

The next and 54th annual congress of GA will be held in Helsinki and will be organized by Prof. Hiltunen assisted by Prof. Vuorela. Detailed information is available from our homepage and from the second circular. I hope that many old and new members meet again at this very attractive event.

Finally I wish you a healthy, lucky and successful year 2006 and I am looking forward to seeing you in Helsinki

R. Bauer, President of GA

Egon-Stahl-Award

in Bronze und Silber

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

As a rule, the silver medal and an award of € 3.000 shall be awarded to scientists up to the age of about forty who have published outstanding scientific work during the years after their graduation. The bronze medal and an award of € 2.000 will be given to young scholars up to the age of about thirty whose thesis were of outstanding quality. The prize 2006 will be awarded during the 54th annual congress of GA in Helsinki, Finland.

Members of the Society for Medicinal Plant Research are invited to submit nominations for candidates, together with supporting data, to the President of GA, Prof. Dr. R. Bauer, Graz.

A nomination for the prize has to include a curriculum vitae incorporating the most important data on the candidate's scientific career, an index on his/her publications, and reprints of several of his/her more recent publications. All publications can be taken into consideration, including already published papers of the last six years.

All documents have to be submitted **in triplicate**. Deadline for submissions is **March 15th, 2006**.

R. Bauer



Call for help / General

information for members

In order to save time and money, as well as to get relevant information faster and more effectively delivered to all GA members, we need your e-mail addresses.

We urgently call all members to notify the GA secretary by a short message on the actual **e-mail address** if it has changed or not yet been submitted.

GA Secretary: Dr. Renate Seitz, Emmeringer Str. 11, D-82775 Emmering, Germany, Fax: +49 8141 613749, 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".

New GA members

since June 30th 2005

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 participation in the forthcoming GA-events.

Prof. Graham Lloyd Jones, Australia
Prof. Jürgen Zapp, Germany
Dr. Ivan Kolchenko, Russia
Dr. Przemyslaw M. Mrozikiewicz, Poland
Dr. Alina Mscisz, Poland
Prof. Marina Perfumi, Italy
Prof. Cosimo Pizza, Italy
Prof. Rita De Pasquale, Italy

Prof. Sonia Piacente, Italy
Dr. Alessandra Russo, Italy
Charlemagne Gnoula, Belgium
Kelly Winter, Australia
Sengabo Maggy Murebwayire, Belgium
Angela Perrone, Italy
Prof. De-an Guo, China
Manasi Ramesh Juvekar, India
Gen.Dir. Vladimir Tihonov, Russia
Dr. Oluwakemi Osunderu, Nigeria
Dr. Rokia Sanogo, Mali
Prof. Nadia Mulinacci, Italy
Glory Ajayi, Nigeria
Dr. Patience O. Osadebe, Nigeria
Dr. Esther Olutoyin Agbaje, Nigeria
Oladunjoye Olayemi Adebisi, Nigeria

Raffaele Landoli, Italy
Dr. Katarina Hostanska, Switzerland
Birgit Aderbauer, Germany
Dr. Emmanuel Acha Asongalem, Cameroon
Dr. Abdulkarim Agunu, Nigeria
Prof. Gabriela Mazzanti, Italy
Dr. Clarissa Gerhäuser, Germany
Dr. Heide Tullberg-Reinert, Switzerland
Prof. Vanderlan Bolzani, Brazil
Dr. Modupe Fisayo Asaolu, Nigeria
Dr. Francesco Epifano, Italy
Dr. Frank Conrad, Germany
Alexander Wenig, Germany
Dr. Alexander Kottas Heldenberg, Austria

Notes to all GA members



Note to all GA members

With this NL 2-2005 you receive an actualized membership list.

Members who wish to get a printed version of the new membership list may order it from the GA secretary

Dr. Renate Seitz
Emmeringer Str. 11
D-82275 Emmering

Fax: 0049 8141 613749 or

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



Deceased

members of 2005

(to our knowledge):

Prof. Dr. Ivano Morelli
Pisa
Italy, on Febr 25

Dr. F. Kaiser
Lampertheim
Germany, on June 17

Prof. Dr. E. Reinhard
Tübingen, Germany, on Sept 27
(see obituary)



Editorial remark

All contributions for the GA-Newsletter are welcome.

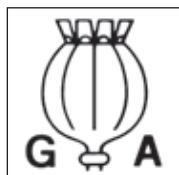
Deadline for submission for the next edition is fixed to May 31st 2006.

Please send all contributions by e-mail or disk to:

Prof. Dr. A. Hensel,
University of Münster, Institute for
Pharmaceutical Biology and
Phytochemistry,
Hittorfstrasse 56, D-48149 Münster,
Germany

Ahensel@uni-muenster.de





Minutes of the Members' Meeting 2005 in Florence, Italy

The annual Member's Meeting was held on 23 Aug 2005 in Florence, Italy. 135 persons attended the session. The president, Prof. Bauer, welcomed all participants.

1. Passing of the agenda

The agenda which had been sent out to all members with GA NL 1-2005 in July, was approved unanimously.

2. Approval of the minutes of the annual Members' Meeting held in Phoenix on 4. Aug. 2004

The minutes of the Members' Meeting in Phoenix, Az USA, in 2004 were published in the GA NL-2(Dec)/2004. They were accepted by the assembly unanimously with no remarks.

Prof. Bauer attended the Farewell symposium for Prof. Nahrstedt on Sat. 16 Oct, 2004, in Muenster and gave a laudatio (report in NL 2004-2 by Prof. Hensel);

GA was invited to attend and collaborate in a working group of BfN, IUCN and WWF/TRAFFIC in Vilm on 17-22 Nov. 2004, that works on "Development of standards & criteria for sustainable wild collection of medicinal plants". Prof. Ch. Franz attended as a representative of GA;

GA participated in the symposium "Fachtagung Arznei- und Gewürzpflanzen" in

The proceedings of the 3rd Mistletoe symposium in 2003 (a joint venture with GA and other societies) have been published by KVC Verlag Essen;

The Journal "Forsch Komplementärmedizin" (Research in Complementary Medicine) offered 50% reduction on subscription by GA members for the year 2006;

NL 2/04 and NL 1/05 were sent out by E-mail; the BoD decided to continue sending out the NL by e-mail and to work on an improvement of the layout.

Annual reports

3.1 Report of the President Prof. R. Bauer

Professor Dr. A. Baerheim Svendsen – President (1984-1988) and Vice-President (1988-1989) of GA and honorary member of the society since 1990 – passed away on 2 October 2004 at the age of 84 years (* 26-04-1920) in Oslo (obituary by Prof. Scheffer in NL 2004-2). The assembly commemorated Prof. Baerheim Svendsen by standing up in silence.

On the occasion of their birthdays the president sent congratulations to the honorary members Profs. Hänsel (5.1.2005, 85), Friedrich (15.2.2005, 85), Schilcher (21.2.2005, 75) and Nahrstedt (9.8.2005, 65).

Besides a steady contact by e-mail and phone the Executive Council (ExC) met twice in Vienna/Aduring the past year: on Sat 5 March 2005 and on Mon 18 July 2005.

The meetings of the BoD took place on 10 March 2005 in Düsseldorf and on 21 August 2005 in Florence.

Prof. Winterhoff and Prof. Alban were nominated as members of the German Kommission E; GA regularly received drafts from WHO e.g. on "Guidelines on the conservation of medicinal plants" and made comments as much as possible;



GA Members' Meeting 2005

Florence

Jena on 7-9 Sept 2004; Prof. Ch. Franz represented GA (210 participants; interesting lectures; report in Z. Arznei- & Gewürzpflanzen; Proceedings available via c.ormerod@dornburg.tll.de).

The Methodological Workshops offered by GA (by Prof. Reznicek and Prof. Laenger) had to be cancelled due to lacking interest;

GA supported the LOF-Symposium ("Biogenic drugs and central nervous system") on 7 Oct, 2004, in Utrecht organized by Prof. Beukelman in coorganisation with GA and other pharmaceutical disciplines;

GA participated in the organisation of the symposium Natural Products for Drug Discovery & Development Forum on 27-28 June, 2005, at the Imperial College London (reduced participation fees for members were offered);

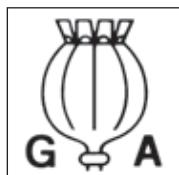
A new "Corporate Identity" design of GA was developed by Prof Kreis;

1500 new info flyers were printed, 900 were sent to Florence, 500 to the Vienna Botanical congress (flyers can be ordered from the secretary).

The homepage has been very well operated and regularly updated by Dr. Wawrosch, Vienna. The president thanked him officially. During the past summer it had 30.000 hits from ca. 3000 different domains indicating, that the internet is GA's major platform for distribution of information. Currently the modernisation of the layout of the GA homepage is under processing.

3.2 Reports of the Vice-Presidents

Prof. Kopp participated as GA delegate at the inauguration of the new HMPC at EMEA in London in Sept. 04; she is usu-



ally involved in the drafting process of GA statements, eg. for WHO, EMEA, etc., initiated and coorganized the 2 methodological workshops in Vienna in 2004;

Prof. Kreis represented GA at the 50th anniversary meeting of VdBiol and gave a welcome address.

He will be the future GA representative of the triannual mistletoe conference and met already the chair of the mistletoe working group, Dr. Scheer. He designed the Corporate Identity for GA (implemented already in paperware and info flyer) and prepared the presentation for the candidates of the GA elections.

3.3 Report of the Secretary

Members' statistics (15 Aug 2005) for 2005 (2004 in comparison): **Total Members: 1136** (1080) from 78 countries; Honorary Members: **12** (12); New Members: **81** (85); Cancellations: **19** (24); Deceased members: **3** (3); Exclusions: **4** (31) members who haven't paid for 3 or more years; Companies: **37** (36); Members from countries with reduced fees: **168** (149); Members with unknown addresses: **19** (15); Members without e-mail-address **274** (303).

We still need to ask for actual email addresses!

An actualized membership list is under preparation and will be sent out with the next NL.

Report of the Treasurer and report of the auditors

Dr. Abel presented the "Annual Cash Report 2004", the Budget Drafts for 2005 and already for 2006 and the Annual Statement 2004 of the Egon Stahl-Awards-Budget. The main aspects of the budget 2004 were support of young members by travel grants, relatively high travel costs (for Phoenix, USA) and support of GA congresses and workshops. The balance was unusually influenced by the late return (only in 2005) of the Barcelona profit.

By showing a graph of the budgets of the last 7 years she pointed out that the regular incomes of these years were quite stable, but to cover the expenses for the future years the budgets are not reliable at the moment. More and more the reserves have to be used and an increase of

the membership fees will be necessary (the last rise of the membership fees was decided in 1995).

3.4.1. Report of the auditors Profs. Stahl-Biskup and Schilcher

The cash auditors in person of Prof. Schilcher thanked the treasurer and her helpers for having done everything perfectly and transparently. According to their audit results they confirmed the necessity of rising the membership fees.

3.4.2. Discharge of the ExC

The ExC was discharged by the cash auditors and the audience.

Prof. Stahl-Biskup and Prof. Schilcher were approved to act as auditors for the next year.

3.4.3. Discussion and decision on new membership fees

The board of directors proposed as new fees: 40 Euro for regular members; 20 Euro for students and members of reduced countries; 250 Euro for supporting members (no change)

After a very short discussion the audience agreed unanimously. The new fees will be implemented from 2006 on. In 2005 prepaid (old) fees count as reduction (maximum for 3 years). In accordance with this decision the budget was accepted unanimously, too.

4. Report of the Editor-in-Chief of *Planta Medica*

Prof. Hamburger is assisted by Dr. Claudia Schärer as Editorial Assistant, the situation is not yet perfect. The e-Submission system was inaugurated on 23 Sept. 04, the last hardcopy manuscripts were published in the July 05 issue; electronic pre-publication on-line (eFirst) is available since Jul 05;

The number of submitted papers is rising in 2005 from 850 (2004) to over 1000, the number of publications remains constant (225/y). In 2004 the IF (1,7) fell back into the middle field of related journals, the total citation of *Planta Med.* in 2004 was 5990;

An analysis revealed, that GA members do not use the journal sufficiently! An electronic enquiry among GA members should enlighten the momentary situation.

Prof. Bauer thanked Prof. Hamburger and his predecessor, Prof. Nahrstedt, for their ambitious work. He reported that he had a meeting with Thieme Verlag (Dr. Kuhlmann) to discuss a closer cooperation of GA and Thieme.

5. Reports of the Permanent Committees

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

The title of the workshop 2005 was "Testing for Improvement of Learning and Memory". The speakers, Prof. Melzig, Berlin, and Dr. Vonhoff, Muenster, showed new in vitro and vivo test systems which enable to better judge new drugs for the treatment of Alzheimer disease and dementia.

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

The 2005-workshop's title was "Good Practices, Standards and Certifications of Starting Materials for HMPs". 3 speakers gave statements from the conservation, agricultural and industrial point of view (B. Petzolt/WWF, Dr. R. Iguera/EUROPAM and Dr. B. Steinhoff/AESGP resp.).

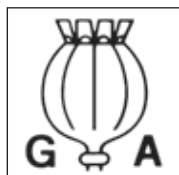
During the Int. Botanical Congress in July in Vienna he had hosted at his institute the successful side symposium "From Source to Shelf" SSCM (Sustainable Supply Chain Management) of MAPs (organized by D. Lange and K. Dürbeck, with 70 participants) on 21/22 July 05.

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

The Florence workshop with the title "The Practice of Dissolution Testing in Herbal Medicinal Products" with the pannelists Beat Meier, Werner Knoess, Hartwig Sievers and Anna-Rita Bilia was very successful. It was proposed to establish dissolution profiles where it is useful, e.g. when several formulations have to be compared. Participants agreed, that dissolution testing can not be declared as obligatory for the characterisation of herbal medicinal products. The analytical strategies - more holistic methods like analysing dissolution profiles by the unspecific UV/VIS-method against profiles with specific markers - has been discussed controversy.

d) Regulatory Affairs on HMPs (Report Prof. Vlietinck)

In the Florence workshop "How to implement the new legislation on HMPs" the



viewpoints of the European legislators and the national legislators were presented by Dr. K. Keller and Prof. V. Silano respectively, that of the pharmaceutical industry was given by Dr. L. Kabelitz. The workshop ended in a general discussion. Since September 2004 the HMPC has held 6 meetings in London during which two experts have been coopted as new members of the Committee viz. Prof. Pelkonen from Finland as toxicologist and Dr. Wissinger-Gräfenhahn als clinical pharmacologist.

Up till now draft monographs on Valerian root, Linseed, Isphaghula husk and seed and Psyllium seed have been elaborated. Pharmacovigilance concerns were expressed regarding Cimicifuga, essential oils containing camphor, cineol and menthol and coumarin containing plants.

Further, definitions have been given of herbal substances, herbal preparations and herbal medicinal products.

Finally, besides the draft community monographs also a list of herbal substances, preparations and combinations thereof for use in traditional herbal medicinal products is in preparation.

6. Election of the Board of Directors

Prof. Dr. E. Stahl-Biskup and Prof. Dr. H. Schilcher were accepted as returning officers.

The audience proposed 2 additional candidates for the advisory board (Dr. C. Erdelmeier, Dr. U. Koetter).

138 votes (135 attending members plus 3 additional authorizations of company members) elected for

President

Prof. Dr. Rudolf Bauer

(votes: 132 yes, 0 no, 5 abstentions, 1 invalid)

Vice-Presidents

Prof. Dr. Brigitte Kopp

(votes: 132 yes, 0 no, 6 abstentions)

Prof. Dr. Wolfgang Blaschek

(votes: 127 yes, 0 no, 11 abstentions)

Treasurer - Dr. Volker Christoffel

(votes: 134 yes, 0 no, 4 abstentions)

Secretary - Dr. Renate Seitz

(votes: 136 yes, 0 no, 1 abstentions, 1 invalid)

The Advisory Board

The following 8 candidates were elected:

Prof. Dr. Susanne Alban
Kiel-Germany (votes: 75)

Prof. Dr. Anna Rita Bilia
Florence-Italy (74)

Prof. Dr. Chlodwig Franz,
Vienna-Austria (69)

Prof. Dr. Matthias Hamburger
Bale-Switzerland (83)

Prof. Dr. Peter Houghton
London-UK (86)

Prof. Dr. Wolfgang Kreis
Erlangen-Germany (68)

Prof. Dr. A. J. Vlietinck
Antwerp Belgium (79)

Prof. Dr. Heikki Vuorela
Helsinki-Finland (66)

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

7. Future congresses, symposia and workshops

a) GA Annual Congresses

2004: The abstract book of the Phoenix Meeting is available at the GA Homepage.

2005: Prof. Bauer thanked Prof. Vincieri and Prof. Bilia for preparing the Florence meeting so successfully. During the opening session the GA honorary membership has been awarded to Prof. Dr. A. Nahrstedt, Muenster, the Egon-Stahl-Award in Gold to Prof. Dr. D. Gröger, Halle, and the ESA Silver to Dr. D. Tasdemir, Zurich.

The abstract book of Florence will be available at the GA homepage (members area).

2006: 54th congress in Helsinki, Finland: 29 Aug. 2 Sept. 2006 (first announcement together with NL 1-05), organized by Profs. Hiltunen and Vuorela

2007: 55th congress in Graz, Austria: 2-6 Sept. 2007, organized by Prof. Bauer

2008: 56th congress will be a joint meeting in Athens, organized by Prof. Skaltsounis from the Association Francaise pour l'enseignement et la Recherche en Pharmacognosie (AFERP), together with GA, the American Society of Pharmacognosy (ASP), the Phytochemical Society of Europe (PSE) and the Italian Society for Phytochemistry (SIF).

b) Joint Symposia and Workshops (more informations in the GA homepage)

2005

6-8 Oct, Berlin:

Phytotherapy joint meeting of GKPharm, GPhyt, GA, KFN (main organizer: Prof. Dr. V. Schulz)

2006

13-15 January, Basel, CH

(in planning): Birthday symposium in honour of GA Honorary member Dr. A. Hofmann, who will celebrate his 100th birthday on 11 Jan 06.

14-16 March, Accra, Ghana:

Global Summit On HIV/AIDS, Traditional Medicine & Indigenous Knowledge (a combination of March 2005 South Africa Traditional Medicine & Indigenous Knowledge Conference and the often postponed Senegal HIV/AIDS and Traditional Healing Conferences). (GA will be represented by Prof. Pieters from Antwerp, Belgium.)

30/31 March, Vienna: Workshop "Drug discovery from Nature" organized by Prof. Dirsch /Vienna.

26-28 April, London: Int. Symposium on Pharmacovigilance of Herbal Medicines, organized by the Royal Pharmaceutical Society of Great Britain in conjunction with the Uppsala Monitoring Centre, the International Society of Pharmacovigilance, the GA, the European Scientific Cooperative on Phytotherapy (ESCOMP), the School of Pharmacy, University of London and the Academy of Pharmaceutical Sciences.

30 Nov.-2 Dec., Mexico DF: Primer Congreso Iberoamericano de Fitoterapia (1st Iberoamerican Congress on Phytotherapy) organized by the group of Dr. Xavier Lozoya (from the IMSS, Instituto Mexicano del Seguro Social) and CYTED (Programa Iberoamericano de Ciencia y Tecnología para el Desarrollo).

Sept or Oct: GA (Prof. Bauer) will organize a workshop on "Innovations in Herbal Products", together with APV

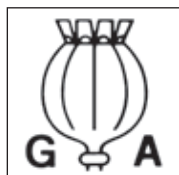
2007

8-10 Nov. 2007: 4th Mistletoe symposiums with Prof. Kreis as new GA representative

4. Miscellaneous

None

**Prof. Dr. R. Bauer, President,
Dr. R. Seitz, GA Secretary**



The year's congress of the Society for Medicinal Plant Research was a joint meeting with the Italian Society of Phytochemistry and was organised by Prof. F. F. Vincieri and took place in Florence at Palazzo dei Congressi and Palazzo degli Affari in the centre of Florence. Seven hundred participants from 70 countries participated in the meeting, 200 of them were students. The scientific program included nine plenary lectures, 53 short lectures, and five workshops. During the congress two poster sessions were scheduled and a total of 582 posters were presented, dealing with the various aspects of medicinal plant research. Poster awards were given to the authors of the selected posters during the Closing Ceremony on Wednesday afternoon.

Sunday in the afternoon a new event characterised the Congress: the workshop for Young Researchers. It was organised by Prof. Dr. A.R. Bilia, Florence, Italy, and Prof. Dr. A. Hensel, Münster, Germany. Co-chairs were Dr. A. Deters, Münster, Germany, Prof. Dr. M. Keusgen, Marburg, Germany and Prof. Dr. J.-L. Wolfender. Eight young scientists working in the field of Pharmacognosy and Analytical Phytochemistry were selected to present their work and discuss difficulties, problems and ambiguous results. The presentations were commented on by the panellists and the entire international audience. The workshop served as a forum for the participants to get in contact with other researchers, to become familiar with other approaches and future research topics, to share methodologies and knowledge of instruments, and to expand their own studies by acquiring ideas in a constructive and international atmosphere.

At the end of the workshop, two young researchers were selected and awarded: S. Dall'Acqua of the University of Padova and A. Riyazi of the University of Münster. The other young researchers presenting high-standard papers were A. Karioti (University of Athens), S. Kipke (University of Münster), F. Maltese (University of Perugia), N. Padilla Montañó (University of La Laguna), C. Pérez Reyes (University of La Laguna) and S. Schwaiger (University of Innsbruck). From the audience (about 150 people) a young researcher was also selected and awarded for her valuable involvement in the discussion.

The Congress was opened Monday with the presentation of awards and grants, beside the Egon Stahl prize in gold and silver: The silver medal was awarded to Dr. Deniz Tasdemir, Zurich, Switzerland, who reported her studies concerning new approaches toward an old disease: malaria. In particular, she reported her studies on the activity of some molecules in the inhibition of a specific enzyme of *Plasmodium falciparum*, the enoyl-ACP reductase (also known as FabI), one of the most crucial enzymes of type II fatty acid synthase (FAS-II), the main enzymatic unit for fatty acid biosynthesis in *Plasmodium*. She reported interesting data on the activity of some marine or plant extracts, as well as pure isolated compounds such as luteolin-7-O-glucoside, an iridodial derivative, several pyrrol alkaloids and furanoterpenes.

In the opening Lecture, Prof. Dr. R. Verpoorte, Leiden, Netherlands, reviewed the advances made in recent years with respect to metabolomics as a new opportunity for pharmacognosists. He pointed out how metabolomics aims at the chemical characterization of a phenotype by the qualitative and quantitative analysis of all metabolites present by using chromatographic methods, mass spectrometry or NMR. He reported the advantages and disadvantages of such methods and problems related to the use of chemometric methods such as multivariate and principle component analysis. He concluded by explaining that for medicinal plants metabolomics is an excellent tool in quality control but can also be very useful in studying the activity of medicinal plants.

Dr. E. Holmes, London, UK, stressed some issues of metabolomics, in particular the metabolite profiling of natural products and their metabolic consequences. These were described with particular emphasis on deconvolving biological complexity and minimising confounding biological and analytical "noise". Some examples were reported: chamomile, feverfew, *Artemisia annua* and other traditional Chinese medicine components.

The third lecture on Monday concerned Biopharmaceutical aspects of Herbal Medicinal Products (HMPs). It was presented by Prof. Dr. H. Derendorf, Gainesville, Florida, USA, who reported some studies concerning pharmacokinetics and drug interaction of HMPs. He underlined that it is necessary for the ra-

tional use of any drug to have a good understanding of the concentrations that will be achieved in the body after administration.

Of particular interest is the question of bioavailability to assess to what degree and how fast the therapeutic agent is absorbed. Knowledge of the bioavailability is essential for the correct *in vivo* interpretation of *in vitro* activities that are sometimes the basis of therapeutic claims.

Finally, he pointed out that HMPs can cause a number of drug interactions with other medications that may be of clinical significance and also reviewed some representative examples.

Two parallel workshop sessions took place on Monday. The first, "The Practice of Dissolution Testing in Herbal Medicinal Products", was organised and chaired by Prof. Dr. B. Meier, Switzerland. Panellists were Prof. Dr. A.R. Bilia, Florence, Italy, PD Dr. W. Knoess, Bonn, Germany, and Dr. H. Sievers, Vestenbergsgreuth, Germany. According to the current regulations dissolution testings are an essential part in the documentation of HMPs. In the conclusive remarks it was pointed out that the link between biopharmaceutical properties and the efficacy of herbal medicinal products is very complex. Therefore, dissolution characteristics of HMPs will be considered more an aspect of the product's quality rather than criteria for measuring bioavailability. The justification of the phytoequivalence of new products and new galenic forms compared with products of traditional and well established use is another tool for the application of dissolution profiles.

The other workshop, "Herbal drug preparations and rhinosinusitis: complex mixtures to manage a complex disease?", was organised and chaired by Dr. I. Szelenyia, Erlangen, Germany. Panellists were Dr. S. Maune, Kiel, Germany, Dr. A. Pahl, Erlangen, Germany and Dr. P. Stiernac, Stockholm, Sweden. The first part of the workshop was dedicated to the classification of rhinosinusitis, defining and describing the various stages of sinusitis ranging from acute to chronic and to the up-to-date standard therapies for each stage. The second part of the workshop was focused on the difficulties encountered when trying to pre-clinically model complex diseases such as



rhinosinusitis and to investigate molecular-biological and pharmacodynamic mechanisms of herbal drug preparations. The presentation continued with the analysis of those stages of rhinosinusitis during which herbal therapies are indicated as well as the advantages offered by the herbal drug preparations.

Two parallel sessions of short lectures took place on Monday afternoon. One was related to metabolomics, pointing out the possibility to use ion trap mass spectrometry, microflow LC/NMR, GC-MS and HPLC-DAD, and the other session was dedicated to biopharmaceutical aspects and pharmaceutical technology of HMPs reporting several examples including echinacea extract, silymarin, verbascoside and essential oils. Two other parallel sessions took place on Monday and were addressed to the use of pharmacological test systems in medicinal plant research and to the analytical approaches in the investigations of medicinal plants including hyphenated techniques.

A welcome ceremony took place Monday evening in the prestigious Salone dei Cinquecento in Palazzo Vecchio. Two lectures on the health benefits of wine were reported by Prof. Dr. M.A. Popp, Neumarkt, Germany, and Prof. Dr. H. Glossmann, Innsbruck, Austria. Lectures were followed by wine and oil testings in the Cortile di Michelozzo in Palazzo Vecchio.

The next day was devoted to Traditional Herbal Medicinal Products from non EU countries and Pharmacology of Natural Products.

Prof. Dr. R. Bauer, Graz, Austria opened the session with the lecture entitled "Scientific evaluation of traditional HMPs from non EU countries". He evidenced how in recent years, safety, efficacy and quality of such products have become important issues for health authorities and the public. He gave special emphasis to the evaluation of product safety and reported several examples of medicinal plants from Asia, Africa and South America, which have been scientifically evaluated and have successfully entered the European market, either as medicinal products or as dietary supplements, or which are still in development. During the same session Prof. Dr. D. Guo, Beijing, China, give a lecture entitled "TCM-based drug discovery and the main

issues in TCM modernization". TCM represents a rich resource for new drug discovery: there are 12,807 species of traditional Chinese medicines, among which 11,146 are derived from medicinal plants, 1581 are from animals and 80 from minerals. In the past 30 years, over 1200 TCMs have been phytochemically investigated by Chinese scientists, from which a number of bioactive principles have been developed into new drugs and launched into the market. Several typical new drugs derived from TCM resources are artemisinin (an antimalarial drug from *Artemisia annua*), schisandrin (an anti-hepatitis C drug from *Schisandra chinensis*) and indirubin (an anticancer drug from *Isatis tinctorius*). Prof. Guo reported the quality control issues of several commonly used traditional Chinese medicines including the roots of *Salvia miltiorrhiza* (Danshen), the skin secretion of *Bufo Bufo gargarzans* (Chansu), the roots of *Paeonia lactiflora* (Shaoyao), seeds of *Cuscuta chinensis* (Tusizi) and the heart wood of *Dalbergia odorifera* (Jiangxiang).

The session on Pharmacology of Natural Products was opened by Prof. G. Colombo, Cagliari, Italy, who gave a lecture entitled "Identification of miltirone as active ingredient of *Salvia miltiorrhiza* responsible for the reducing effect of root extracts on alcohol intake in rats". He reported that extracts from the roots of *Salvia miltiorrhiza*, a Chinese medicinal herb, reduced alcohol intake in selectively bred Sardinian alcohol-preferring (sP) rats. Miltirone was described as one of the possible active constituents because the effect of four different extracts of *Salvia miltiorrhiza* was positively and significantly correlated with their miltirone content.

Prof. Dr. H. Wagner, Munich, Germany, gave a talk on the pharmacological synergy effects of phytopreparations and their relevance for therapy. Many examples were reported: *Ginkgo biloba*, *Hypericum*, kava-kava, *Cannabis* and *Valeriana*, as well as with mixed extract combinations (including *Passiflora*/kava-kava, *Humulus lupulus*/ *Passiflora* and *Ginseng*/*Ginkgo*) and outstanding multiextract combinations on the drug market. The positive results of such investigations suggest that this new concept of multitarget therapy can be described as a multitarget therapy, in which each component of the drug mixture affects another pharmacological target, resulting in a multicausal treatment. This evident ther-

apeutic superiority and advantage give phytotherapy a new legitimation for the application of standardized mono-or multiextract combinations.

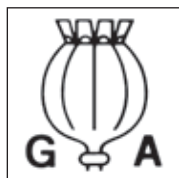
On Tuesday there was the workshop of Regulatory Affairs on HMPs which was organised and chaired by Prof. Dr. A.J. Vlietinck, Antwerp, Belgium. The title was "How to implement the new legislation on HMPs". Panellists were Prof. Dr. K. Keller, Bonn, Germany, Dr. V. Silano, Roma, Italia, and L. Kabelitz, Vestenbergsgreuth, Germany.

The widespread and increasing use worldwide of herbal medicinal products (HMPs) demands that appropriate regulatory actions be undertaken to regulate and harmonize the legal status of plant preparations throughout Europe. For this reason, the newly constituted committee on HMPs (HMPC) installed three drafting groups (ORGAM, Quality and Safety Efficacy). The most urgent tasks of this committee are the establishment of a list of traditional herbal substances and the drafting of community herbal monographs with well-established as well as traditional uses. Viewpoints from both the European (K. Keller) and the national authorities (V. Silano) as well as from the pharmaceutical industry (L. Kabelitz) were discussed.

Tuesday in the afternoon two parallel sessions of short lectures took place and they were related to traditional HMPs from non EU countries including plants from Africa, Asia, and South America. Sessions dedicated to systematic, cell cultures biosynthesis and physiology of medicinal plants also took place.

Wednesday was opened by the plenary lectures of Dr. C. Gerhauser, Heidelberg, Germany, and Prof. Dr. A. D. Kinghorn, Ohio USA dedicated to Botanical Health Products in the Prevention of Cancer and Cardiovascular Diseases.

Dr. C. Gerhauser spoke about the anti-angiogenesis as a mechanism in cancer prevention. Inhibition of angiogenesis, the formation of new blood vessels from pre-existing microvasculature, represents an innovative approach to cancer chemoprevention. A series of twelve chemopreventive lead compounds, belonging to the chemical classes of phloroglucinol derivatives, anthraquinones, isothiocyanates, flavanones, diterpenes, chalcones and bibenzyl deriv-



atives of lunularic acid have been tested in the labs of the German Cancer Research Center. Two chemopreventive compounds, xanthohumol (XN) from *Humulus lupulus* L. and sulforaphane (SFN), an isothiocyanate derived from Brassicaceae have been selected for more detailed investigation of their angiopreventive potential. Both compounds potently inhibited endothelial steps crucial for angiogenesis, including hypoxia-induced release of pro-angiogenic factors, endothelial cell proliferation, migration and differentiation. In addition, XN showed also *in vivo* efficacy in human MX-1 breast tumour xenografts implanted in dorsal skinfold chamber preparations in female severe combined immunodeficient mice.

Prof. Dr. A. D. Kinghorn reported on the potential cancer chemopreventive activity of some botanical dietary supplements. Cancer chemoprevention is an important strategy for managing and controlling cancer, and involves the use of synthetic or natural agents to inhibit, retard, or reverse the process of carcinogenesis, and recently, there has been an increasing interest in the use of certain botanical dietary supplements for "detoxification". He reported his studies concerning antioxidant and potential cancer chemopreventive activity of Noni (*Morinda citrifolia*), Mangosteen (*Garcinia mangostana*), and Sea Buckthorn (*Hippophae rhamnoides*).

Two parallel workshop sessions were scheduled on Wednesday. The first entitled "Good practices, standards and certifications of starting materials" was organised and chaired by Prof. Dr. Ch. Franz, Vienna, Austria. Panelists were Dr. B. Pätzold, Frankfurt, Germany, Dr. R. Iguera, Milano, Italy, Dr. B. Steinhoff, Bonn, Germany. Most of the plants used in traditional or modern medicines are collected from the wild, just a small portion is large scale or small-plot cultivated. The workshop dealt with several important topics: a sustainable wild collection; issues related to Guidelines for Good Agricultural with respect to Good Wild Crafting Practice for Medicinal and Aromatic Plants and problems related to the presentation of a complete documentation "from seeds to the final product" for obtaining marketing authorisation.

Prof. Dr. H. Winterhoff, Münster, Germany, organised and chaired the workshop on Biological and Pharmacological Activity of Natural Products entitled "Testing for improvement of learning and memory". Panelists were Prof. Dr. C. Vonhoff, Münster, Germany, and Prof. Dr. Melzig, Berlin, Germany. After a general introduction, the panellists described the test systems of Alzheimer's disease and animal models for testing learning behaviour and memory with specific application to HMPs. An important part of the talk dealt with the benefits and disadvantages of the diverse test systems.

Two parallel short lecture sessions were addressed in the morning: one related to botanical health products, their use in the prevention of cancer and cardiovascular diseases and the other to the use of pharmacological test systems in medicinal plant research. Antiangiogenic, antioxidant and apoptosis inducing constituents were presented within the first session while constituents with antibacterial, anticancer and immunomodulatory effects were reported in the other session.

The social dinner was held in the evening at the Villa Medicea (of the famous Medici family) at Artimino, a charming hill-top site not far from Florence.

The Congress concluded Thursday with two excursions: one to the Valtiberina region with a visit to Aboca, an Italian firm with a long tradition of cultivation, harvest, transformation and marketing of medicinal plants and the Aboca Museum near Sansepolcro, which offers an overview of medicinal herbs through a look at their past origins. Moreover the participants and accompanying persons enjoyed cultural and historical sites in Florence, Chianti and surrounding areas.

The Congress had a great success and was reviewed by press agencies (11 reports), newspapers (76 reports), radio-news (49 reports), television news (18 reports) and by 35 web-sites.

Franco Francesco Vincieri, Florence



On occasion of the Florence conference:
GA Excecutive Comitee, together with
Mr. Kofi Anan

From left to right: Prof. Bauer, Prof. Kopp,
Prof. Vincieni, Mr. Kofi Anan,
Mrs. Dr. Seitz, Prof. Blaschek, Prof. Kreis

Next GA Meeting

54th Annual Congress in Helsinki, Finland

The Scientific and Organizing Committees cordially invite you to participate in the International Congress and 54th Annual Meeting of the Society for Medicinal Plant Research.

The Congress will be held in Finland at the Main Building of the University of Helsinki from August 29th to September 2nd, 2006.
<http://www.ga2006.fi/>

SCIENTIFIC TOPICS

Main topics

1. **Drug Discovery from Natural Products**
2. **Recent Advances in Analysis of Secondary Metabolites**
3. **Genomics, Proteomics and Metabolomics in Medicinal Plant Research**
4. **Health Beneficial Effects of Plant Phenolics**
5. **Clinical Studies with Herbal Medicinal Products**

WORKSHOPS:

1. **Young Researcher Workshop at August 29th (A. Hensel);**
2. **Biological and Pharmacological Activity of Natural Products (H. Winterhoff);**
3. **Breeding and Cultivation of Medicinal Plants (C. Franz);**
4. **Manufacturing and Quality Control of Herbal Remedies (B. Meier);**
5. **Regulatory Affairs on Herbal Medicinal Products (A. J. Vlietinck)**

SECOND ANNOUNCEMENT: will be send out in January 2006.

CORRESPONDENCE:

Scientific aspects:

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Phone: +358-3-892 20307,
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www.GA2006.fi

Other Meetings

Amsterdam, The Netherlands, 21st February 2006:

“Challenges of Creating & Building Natural Product-Derived Compound Libraries: Will Natural Products represent the next generation of blockbuster drugs?”

Natural Products are re-emerging as a viable and effective source of drug leads for the pharmaceutical industry. Meanwhile, Compound Library creation, a critical milestone in the drug development process, presents intrinsic problems and challenges for Natural Products.

On 21st February 2006, IBC & T&F Events join forces to bring the pharmaceutical industry a timely Natural Products Focus Day entitled, “Challenges of Creating & Building Natural Product Compound Libraries”.

Forming part of the larger pharmaceutical 2nd Annual “Optimisation of High Quality Libraries” Event taking place in Amsterdam on 20-23rd February, this event addresses key scientific challenges associated with the creation and building of natural product-derived compound libraries, and questions which is the best philosophy and scientific method that should be used to create and build them.

A full conference agenda is available on www.tandfevents.com/npcompoundlibraries. To receive a PDF of the full conference agenda or for further information, please email your details, including Name, Company and Telephone number to tania.millen@tfinforma.com

Discounted rate available to GA Members!

Accra (Ghana), 14-16th March 2006:

“Global Summit On HIV/AIDS, Traditional Medicine & Indigenous Knowledge”

Alberca (Murcia), Spain, 28-31st March 2006:

“VI International Symposium on Artichoke, Cardoon and their wild relatives”

www.viajescajamurcia.com/artichoke

Vienna (Austria) 30-31st May 2006:

“Natural Products in Drug Discovery”

www.univie.ac.at/drug_discovery_from_nature/Flyer

London, UK
6-7th April 2006:

"Natural Products Active against Human Pathogens"

A two day meeting on this topic is being organised by the Academy of Pharmaceutical Scientists of Great Britain on April 6,7th 2006 at the Royal Botanic Gardens Kew in London. A range of international authorities have agreed to speak at this meeting which will be held at a beautiful time of year in one of the world's most famous botanical gardens. More details from peter.houghton@kcl.ac.uk

London, UK
26-28th April 2006:

"Pharmacovigilance symposium"

Presov, Slovak Republik,
7-10th June:

"International Symposium on Chamomile Research, Development and Production"

Dr. Ivan Salamon, Presov University,
email: salamon@fhpv.unipo.sk

Ankara, Turkey
13-16th June 2006, :

"8th International Symposium on Pharmaceutical Sciences"

The meeting agenda includes special lectures and posters on recent advances on the topics of basic and applied pharmaceutical sciences from all disciplines. For more information: www.pharmacy.ankara.edu.tr

Arlington, Virginia, U.S.A
5-9th August 2006:

The American Society of Pharmacognosy
– "47th annual meeting."

Mashad, Iran,
7-9th October 2006:

"2nd International Symposium on Saffron Biology and Technology"

Prof. Dr. A. Koocheki, University of Mashhad, www.Saffron-ir.um.ac.ir

Notes from the Society

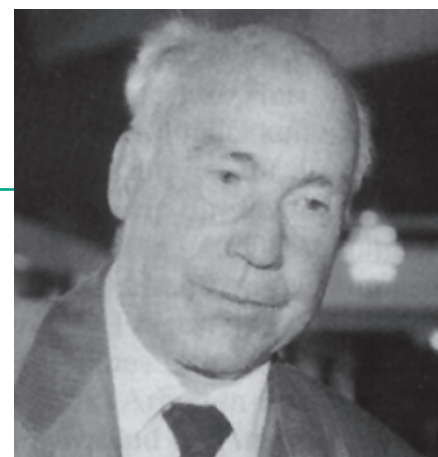
Obituary

On 27 September 2005, Professor Ernst Reinhard passed away in his domicile in Tübingen-Kressbach after a long period of ill health.

Prof. Reinhard, honorary member of the Society for Medicinal Plant Research (Gesellschaft für Arzneipflanzenforschung) since 1992 and editor of PLANTA MEDICA from 1978 to 1993, was born 21 August 1926 in Würzburg, the capital of Lower Frankonia (Germany), where he went to elementary and grammar school from 1933 to 1943. After military service and war captivity Ernst Reinhard studied natural sciences in his hometown. He was student and graduate assistant at the Institute of Botany and completed his first academic degree in 1953. He earned a doctorate (Dr. rer. nat.) with his thesis "Beobachtungen an in vitro kultivierten Geweben aus dem Vegetationskegel der Pisum-Wurzel" (Studies with in-vitro cultivated tissues excised from the vegetation cone of pea root). Until 1958, Ernst Reinhard was scientific assistant to Hans Burgeff and at the same time he studied pharmaceuticals in Würzburg. His first practical training as a pharmacist he received in a pharmacy in Kulmbach from 1958 to 1959. Thereafter, he joined Anton Lang's group at the California Institute of California. Anton Lang was a plant physiologist who profoundly influenced the field and also Ernst Reinhard's work. Back in Würzburg as a start Ernst Reinhard worked in a pharmacy but soon continued his academic career. In 1963, he habilitated and qualified as a professor with his work on changes of the contents of gibberellins in *Hyoscyamus niger*. ("Über die Veränderung des Gibberellingehaltes von *Hyoscyamus niger*"). In 1967 Ernst Reinhard moved to the University of Tübingen and started as an associate professor of Pharmacognosy. Later he became full professor and Head of the Chair of Pharmaceutical Biology. He was Dean of the Faculty of Chemistry and Pharmacy from 1980 to 1982. He refused several of-

fers to join other universities and stayed in Tübingen until his retirement in 1994. Professor Ernst Reinhard has been one of the pioneers in plant biotechnology. His scientific projects included the optimisation of alkaloid formation by *Catharanthus* and *Berberis* cell suspension cultures in large bioreactors, forskolin production in submerged *Coleus forskohlii* root cultures, as well as biosynthesis and biotransformation of cardiac glycosides in *Digitalis* cell and shoot cultures, to name just a few. His qualities as an academic instructor are reflected in about 50 PhD theses which emerged under his supervision. Professor Reinhard has also been an ambitious teacher and his lectures were highly accepted and attended by students, although taking place very early in the morning. Especially his ingenious remarks and reflections on the immune system and alternative medicines have been most exciting and comprehensive. Professor Reinhard has devoted himself to promoting "Pharmaceutical Biology" as a pharmaceutical discipline and in this way extended pharmacognosy to an emancipated and essential subject of the pharmacy curriculum. His famous textbook "Pharmazeutische Biologie", which was highly accepted already after its first release in 1977, is presently available in its 6th edition. Professor Reinhard has been editor of PLANTA MEDICA for 15 years and under his management PLANTA MEDICA has developed into one of the leading journals in the field and earned international reputation.

His professional prestige together with an obliging but dynamic personality has led him into a great number of functions. Ernst Reinhard has been president of the Society of Medicinal Plant Research (1974-1978), has served as a scientific counsellor to the Federal Chamber of Practising Pharmacists (Bundesapothekerkammer) and has been engaged in the work of the Commissions D (homeopathy) and E (phytotherapy) at the German



Prof. Dr. Ernst Reinhard (1926-2005)

Ministry of Health. Furthermore, Ernst Reinhard has been chairman of the committee on manufacturing rules of the German homeopathic pharmacopeia. Professor Reinhard was awarded the Flückiger medal (1983), the Lesmüller medal (1991), and the Bundesverdienstkreuz 1. Klasse (1993).

As a Professor Emeritus, Ernst Reinhard has still been active in research and in writing and editing his textbook. Moreover, he has been a counsellor to the University of Tübingen, his main concern being the design, construction and management of new research laboratories. Already at this time, however, he suffered from Parkinson's disease, and by and by his constitution impaired what made it impossible for him to travel. After the death of his beloved wife in 2003 he has lived a very secluded life, not by his own will but as a consequence of his complaints.

With Professor Ernst Reinhard we lost an eloquent teacher, a faithful friend and a nestor to all those who have been and still are concerned about the development of medicinal plant research, plant biotechnology and pharmaceutical biology in general. We wish his two daughters and further relatives strength for the time to come and assure them that the scientific community will commemorate Professor Reinhard as a strong personality with a real passion for Pharmaceutical Biology in its broadest sense.

W. Kreis and R. Bauer

Notes from the Society

Honorary member celebrated a “round” birthday in 2005

Prof. Dr. Max Wichtl was born in Vienna on October 6, 1925. There he also started his academic career with a Ph.D. in chemistry, a M.S. in pharmacy and his habilitation in pharmacognosy in 1951, 1956 and 1965, respectively, followed by years as assistant and associate professor in Pharmacognosy at the University of Vienna from 1956 on. In 1973 he was appointed Full Professor of Pharmacognosy at the German Philipps University of Marburg as Professor of Pharmacognosy and spent his main professional life up to his emigration in 1990 then in Germany. His scientific work originally emphasized cardiac glycosides, but soon included many other medicinal plants relevant at that time. From the beginning he was a promoter of the pharmaceutical and therapeutical quality of herbal medicinal products demonstrated by his lifelong engagement in the Austrian, German and European Pharmacopoeia Commissions and in his many books, among them e.g. the commentary to the German Pharmacopoeia. Worldwide famous in the field he became through his book “Teedrogen” as one of the early and comprehensive overviews of the scientific basis of all relevant and therapeutically used medicinal plants. The book has been translated into English, Italian and several other languages and is, in his 4th German, now largely extended edition “Teedrogen und

Phytopharmaka” (English title: Herbal Drugs and Herbal Medicinal Products) still the major reference book in the field. His many pharmacy and doctoral students always revered him as competent, profound and innovative teacher and supervisor. In addition he passed on his extensive knowledge of medicinal plants in lectures at postgraduate seminars and further education courses.

He joined GA already in the late Sixties and became soon an actively involved member of our society organizing the 29th annual congress of GA in Marburg in 1981 and a workshop on “Herbal Bile Therapeutics” in 1994. He served the society as a member of the Advisory Board from 1984 to 1987. From then on he acted as vice president up to 1997 and as president for the years 1990 to 1993. His numerous merits were recognized by several awards. In 1995 he was bestowed with the Honorary Membership of GA.

Prof. Wichtl is also famous for being a friend of the fine arts, in particular of classical music and opera, and he often could show his deep going knowledge in both, science and music, by combining it to sophisticated and amusing lectures or essays, e.g. about essential oils, scents and plants in the opera.

Not surprising that he and his wife moved back to Austria after his retirement, to a small town close to Vienna, the



Prof. Dr. Max Wichtl

city of music and arts, where he recently celebrated his 80th birthday.

GA wishes him health and vigour for the future to still enjoy many years with all his beloved activities and hopes to meet him and his wife in many future annual congresses of our society!

R. Bauer, GA President
R. Seitz, GA Secretary

Honorary Membership

for Prof. Dr. Dr. h. c. Adolf Nahrstedt, Münster, Germany

According to the Standing Rules of the Society for Medicinal Plant Research, the Board of Directors has the option to award the Honorary Membership to individuals who have rendered special service either to medicinal plant research and/or to our Society.

Based on an unanimous decision of the Board of Directors of GA the honorary membership has been awarded this year to Prof. Dr. Dr. h.c. *Adolf Nahrstedt*, University of Münster, Germany. The awarding ceremony took place on August 22nd 2005 during the opening ceremony of the 53rd Annual Meeting of GA held in Florence.

Prof. Bauer stressed in his introduction that Prof. *Nahrstedt* deserves the honorary membership not only because he dedicated all his life long efforts to medicinal plant research, but also because he has been an active GA member for more than 33 years, and Editor in Chief of *PLANTA MEDICA* during the last 12 years.

Adolf Nahrstedt was born in Northeim/Harz, Germany, on August 9th 1940. After

the high school he studied Pharmacy and subsequently Food Chemistry at the University of Freiburg, where he graduated in 1965 and 1968, respectively. Under the supervision of Prof. Dr. *R. Pohl*, he obtained his PhD in 1971 with a thesis on cyanogenic glycosides in *Prunus avium*.

In 1976 Dr. *Nahrstedt* achieved his habilitation in Pharmaceutical Biology with continued investigations on cyanogenic glycosides. Immediately afterwards he became Associated (C3) Professor at the University of Braunschweig. In 1985 he was visiting scientist at the University of California, Davis, in the lab of Prof. *E.E. Conn*. One year later he got the position as a full professor of Pharmaceutical Biology at the University of Münster, and became director of the Institute of Pharmaceutical Biology and Phytochemistry. He held this position until his retirement in October 2004.

The outstanding scientific work of Prof. *Nahrstedt* focuses on two major fields: One is the biochemistry and physiology of secondary metabolites in plants and

insects, such as cyanogenic glycosides, touching also aspects of environmental ecology. The other is the phytochemistry and pharmacology of traditionally used plants and herbal medicinal products. His contributions to the research on procyanidines in *Cistus spec.* and other plants as well as active principles of *Hypericum* and their bioavailability are just two highlights in that field, which should be mentioned.

His research activities resulted in about 200 publications in highly ranked journals. He has supervised 49 PhD-theses and promoted 2 habilitations. Prof. *Nahrstedt* is an enthusiastic academic teacher and supervisor. Even after his retirement he acts as Visiting Professor at the University of Mahasarakham in Thailand and the Ovidius University at Constanta, Romania.

His scientific achievements and his high international reputation resulted in nominations for the German Pharmacopoeia Commission and the Commission E. He also was member of the BoD of the Ger-

man Society of Phytotherapy from 1995 – 2004. Prof. Nahrstedt has been engaged in various administrative tasks at nearly all academic levels. He acted as Dean of the Faculty of Chemistry at the University of Münster from 1989 – 1991 and was member of the Founding Committee for Pharmacy at the University of Leipzig.

Within GA, Prof. Nahrstedt served the Society for 24 years as an always active member of the GA advisory board. The second, by far much more time consuming contribution to GA was his engagement for PLANTA MEDICA, the official journal of our Society. After 9 years as co-editor he became Editor-in-Chief of PLANTA MEDICA in 1993 and fulfilled this task up to October 2004. Now he is still acting as Senior Editor. In these 12 years he has processed ca. 7500 manuscripts. During this period the bimonthly published journal increased to a monthly edition. Under his editorship PLANTA MEDICA developed to the world-leading journal in the area of medicinal plant research.

Not surprising but rather consequently, he has already received many awards: In 1998 he both was rewarded the Honorary Membership of the European Academy of Natural Medicine and he received the Rudolf-Fritz-Weigl award of the Society of Phytotherapy. In 2004 he was honoured with the *Doctor honoris causa* by the Ovidius University of Constanta in Romania. GA is happy to add now the Honorary Membership of GA.

After reading the laudation, Prof. Bauer handed over the document belonging to the honorary membership of GA which reads as follows: "The Society for Medicinal Plant Research (Gesellschaft für Arzneipflanzenforschung) is awarding the Honorary Membership to Prof. Dr. Dr. h.c. Adolf Nahrstedt in appreciation of his outstanding achievements in medicinal plant research, as well as to acknowledge his continuous engagement for the goals of GA and his enormous efforts as Editor in Chief of PLANTA MEDICA. Florence, August 2005."

R. Bauer



Prof. Dr. Dr. h. c. Adolf Nahrstedt

From the Editor of Planta Medica

Why to publish in Planta Medica?

There is a long tradition that important national and international research societies have their own journals. In fact, scientific publishing started as initiatives of learned societies, to provide a medium for dissemination of scientific findings of their members, and as platforms for scientific discourse.

The purpose of the Society for Medicinal Plant Research is the advancement of research and science in the field of medicinal plants. The Society represents a scientific discipline that is classically known as Pharmacognosy and more loosely termed today as Pharmaceutical Biology. Planta Medica is the official organ of the Society for Medicinal Plant Research, and as such, a forum to actively promote the scientific aims of the Society and of its members by means of publishing manuscripts of high scientific quality and originality.

Planta Medica is recognized and appreciated internationally as a leading journal in the field. The annual increase in total cites by more than 10 % reflects the growing visibility.

Over the past year, we have taken a number of steps to modernize the journal and increase its attractiveness.

The **Editorial Board** has been enlarged and includes leading scientists in the field from all Continents.

New formats such as Editorials, Mini-reviews and Perspectives have been introduced.

An **Editorial Office** has been established in Basel to efficiently manage the ever increasing number of manuscripts. An electronic submission system has been implemented and the review process has been streamlined. It takes about 6-8 weeks to complete the review process, in many cases even much less.

Electronic pre-publication has been implemented in July 2005. The publications are referenced by **Pubmed** and fully citable thanks to their **Digital Object Identifier (DOI)**. I invite you to check the **eFirst** manuscripts on the Thieme site.

The option of **Supporting Information** has been implemented. This allows authors to publish high resolution colour illustrations free of charge and to disseminate scientific material that does not fit into the print publication.

New tools and assistance have been implemented. Automated download of contents is available. For prospective authors, a **Sample Manuscript** has been made available on the ScholarOne submission site (see "**Resources**"). This manuscript serves as a model for proper formatting and presentation of a manuscript. The **Guidelines** for Authors have been improved to better define the requirements of the journal.

The Editors and Thieme Publishers are working hard to accelerate the publication process. I am glad to announce that Planta Medica will publish **15 issues** in 2006. We strive to meet our goal of pub-

lishing within 6 months from submission.

The quality of a scientific journal essentially depends on the quality of the submitted manuscripts. As the official organ of the Society for Medicinal Plant Research, Planta Medica critically depends on the support of the members of GA. Therefore, whenever you prepare a manuscript for publication, consider whether it could be suitable for Planta Medica. I cordially invite you to submit your high quality papers to the journal.

Matthias Hamburger, PhD
Editor-in-Chief



Egon Stahl Award in Gold

for Prof. Dr. Detlef Gröger, Halle, Germany

The Egon Stahl Award in Gold is the highest scientific honor to be given by the Society for Medicinal Plant Research. It acknowledges the outstanding scientific lifetime work of a scientist in the field of Pharmaceutical Biology. The monetary award of 5000 Euro has been donated by Bionorica Arzneimittel.



During the opening ceremony of the 53rd Annual Meeting of GA, held in Florence, Italy, on August 22nd 2005, the Egon Stahl-Award in Gold was awarded for the third time since its inauguration. The president of GA, mentioned that the jury came to an unanimous decision out of several excellent nominations and announced, that the Egon Stahl Award in Gold 2005 has been awarded to Professor Dr. Detlef Gröger, University of Halle, Germany.

Professor Gröger was born in Zschortau, near Leipzig, in Germany, in 1929. After a practical training in a pharmacy in Delitsch, he studied pharmacy at the Martin-Luther-University in Halle and graduated as a pharmacist in 1954. Then he joined the group of Prof. Mothes at the Institute for Genetics and Plant Cultivation in Gatersleben for his doctoral studies and was awarded with the Ph.D. degree in 1957 for his research on ergot alkaloids. One year later, Dr. Gröger together with the research group of Prof. Mothes moved to Halle.

In 1961 Dr. Gröger spent a year as a post doctoral fellow in the Department of Pharmacognosy at the University of Seattle, in the research group of Professor Varro E. Tyler, where he developed the submerged culture for the fermentative production of alkaloids of the clavine type. Dr. Gröger became the second scientist in the world to succeed in the production of these commercially important lysergic acid derivatives in culture by fermentation of *Paspalum ergot*.

After his post doctoral period Dr. Gröger completed his habilitation in Halle in

1963, again on the subject of ergot alkaloids. In 1971, Dr. Gröger was appointed Professor by the Academy of Sciences, and from 1972 on he was teaching pharmaceutical biology at the Martin-Luther-University. In 1975 he was appointed Fachapotheker. After Prof. Tyler had moved to West Lafayette, Indiana, Dr. Gröger spent three more months in the USA as a visiting professor in 1979. In 1989 he was appointed Affiliate Professor of Medicinal Chemistry at the University of Washington, Seattle. Prof. Gröger has been working in Halle at the now called Leibnitz Institute of Plant Biochemistry until his retirement in 1994.

Prof. Gröger is well known for his pioneering research on alkaloids, especially on ergot alkaloids (131 of his 260 publications deal with that topic). He worked on the development of methods for the production of ergotalkaloids by fermentation in saprophytic culture, and the biosynthesis, enzymology and regulation of alkaloid formation in the ergot fungus. The extensive and incisive studies of Prof. Gröger have given us a comprehensive and detailed picture of the entire process of ergot alkaloid formation including the steric course of N-methylation. A major finding was also the incorporation of mevalonic acid into the ergoline ring system of clavine alkaloids, demonstrating the connection of the alkaloid and terpene biochemistry.

He has also intensively been working on acridone alkaloids. These investigations focus on biochemical and molecular biological aspects, culminating in the cloning of acridone synthase in collaboration with Prof. Matern. Other highlights of his research are the findings on the metabolism of oligopeptides and diketopiperazines and the biosynthesis of peptide alkaloids in *Claviceps purpurea*, and his work on the biosynthesis of mycotoxins, the ergochromens, from the ergot fungus. Besides he has worked on several other alkaloid groups, like harman, quinolizidine, spermidine, indole, and steroid alkaloids.

Reviewing his research activities it is apparent, that his research strategies have developed together with the up-coming new experimental methods of his discipline: he started his research in biosynthesis with radioactive precursor techniques, later he used cell culture methods, isolated and characterized enzymes and finally cloned them. So he perfectly fits to the motto of late Prof. Egon Stahl: *Every progress in methods is a progress in science.*

Prof. Gröger is an outstanding scientist who has influenced medicinal plant research a lot during his life by his studies

on biosynthesis and biotechnological production of medicinally important natural products (see also Editorial in *Planta Medica*). But he also needs to be acknowledged because of his personal courage and integrity, since he did most of his collaborative research with western countries during a politically difficult period in the former German Democratic Republic despite considerable personal risk and pressure.

He has been editor in chief of the *Journal of Basic Microbiology* and member of the editorial advisory board of the *Journal of Pharmaceutical Sciences*. He has been also member of several advisory committees and several scientific societies, including GA. His merits have previously been honored with the Hufeland Medal in Gold.

So it was just a consequence that the Society for Medicinal Plant Research selected him for the Egon Stahl Award in Gold for his outstanding scientific lifetime work.

After the laudatio, Prof. Bauer handed over the certificate and the gold medal. The cheque of 5000 Euro was delivered by Prof. Dr. Michael Popp, owner and CEO of Bionorica AG.



Prof. Dr. Detlef Gröger

The document reads as follows:

"The Society for Medicinal Plant Research (Gesellschaft für Arzneipflanzenforschung) has pleasure in dedicating the Egon-Stahl-Award 2005 with a gold medal to Prof. Dr. Detlef Gröger in recognition of his extraordinary life work in the area of pharmaceutical biology and natural products chemistry, in particular by his highly valuable contributions to the research on the biochemistry of secondary metabolism in plants and microorganisms. Florence, August 22nd, 2005".

R. Bauer

Egon Stahl Award 2005 in Silver

for Dr. Deniz Tasdemir, Zürich, Switzerland

On the occasion of his 60th birthday, our honorary member, late 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 Egon Stahl-Award with a silver medal shall be awarded to scientists who have published outstanding scientific work during the years after their graduation.

After a careful evaluation by the panel of judges it was decided that the Egon Stahl Award 2005 with a silver medal shall be awarded to Dr. *Deniz Tasdemir*, University of Zürich, Switzerland. The awarding ceremony took place during the opening ceremony of the 53rd Annual Meeting of our Society in Florence, Italy, on August 22nd 2005.

Dr. *Tasdemir* was born in Kars, Turkey, in 1965. She studied pharmacy at Hacettepe University in Ankara from 1982 – 1986, and graduated with highest honours. Subsequently she owned a pharmacy in Kars (Eastern Anatolia). In 1989 she came back to Hacettepe University and performed a master study at the Department of Pharmacognosy under the guidance of Prof. Dr. *Ihsan Calis* until 1992.



**Prof. Dr. Dr. h.c. Mult. Egon Stahl,
Donator of Egon-Stahl-Award
in silver/bronze**

In October 1992 she went to Zürich and started a doctoral study at the Department of Pharmacy, Division of Pharmacognosy and Phytochemistry, ETH Zürich, under the supervision of Prof. Dr. *Otto Sticher*. The PhD thesis, which was entitled "Phytochemical and biological investigations of Turkish *Leonurus* species, emphasizing on diterpenoids of *Leonurus persicus*" was finished in 1997 and was

awarded with the ETH-Zürich medal. During her doctoral work she has isolated as much as 45 secondary metabolites, of which 30 were new natural products.

Then she returned to Hacettepe University and became lecturer at the Department of Pharmacognosy. 1998 she was awarded with the Assistant Professor degree. In October 1998 she went to Salt Lake City, University of Utah, for 2,5 years postdoctoral studies in the group of Prof. Dr. *Chris M. Ireland*. There she specialized in marine natural products and isolated highly interesting compounds with potent cytotoxic activity. One of the most significant projects on *Xestospongia* sponges yielded rare pyridoacridine alkaloids with novel topoisomerase II-mediated antitumoral activity (*in vitro* and *in vivo*). Other projects dealt with the isolation of highly active inhibitors of protein kinases from other tropical sponges (*Stylissa* and *Rhabdastrella* sp.).

After a year of stay at her home University (Hacettepe) in Ankara, she returned to Zürich and became project leader at the Institute of Organic Chemistry at University of Zürich, working on natural product drug discovery from Turkish plants and marine organisms. Here she developed interest in malaria research, looking for new targets, e.g. in type II fatty acid biosynthesis in plasmodia, and for new active natural products against this severe disease. Based on her postdoctoral work she was also awarded with the Associate Professor degree of Hacettepe University, which is equivalent to habilitation, in March 2003.

Dr. *Tasdemir* has authored and co-authored about 40 papers during the last five years, which have been published in a wide range of highly ranked international journals, including *Planta Medica*. She has filed two patents, has already

written four book chapters, a review, and has given plenty of lectures. She has also been regularly attending GA and other meetings and presented her interesting results.

In summary, Dr. *Tasdemir* has already an amazing record of scientific activities and also scientific success. She has experience in various phytochemical, pharmacological and molecular biological methods and therefore represents a highly up-to-date approach in pharmacognosy. The panel of judges for the Egon Stahl Award decided unanimously that the postgraduate studies of Dr. *Tasdemir* are an excellent example of modern interdisciplinary medicinal plant research, covering the fields of pharmacognosy, pharmaceutical biology, and analytical phytochemistry, and therefore fully reflect the spirit of the Egon Stahl Award.

Prof. Bauer congratulated Dr. *Tasdemir* and presented her the silver medal, the document and the monetary prize of € 3000. The document reads as follows: "The Society for Medicinal Plant Research (Gesellschaft für Arzneipflanzenforschung) presents the Egon Stahl-Award 2005 with the silver medal to Prof. Dr. *Deniz Tasdemir* in recognition of her highly valuable contributions to pharmacognosy (pharmaceutical biology) and analytical phytochemistry, in particular by her outstanding phytochemical and pharmacological studies in the field of plant and marine natural products against malaria and cancer."

R. Bauer



Dr. Deniz Tasdemir



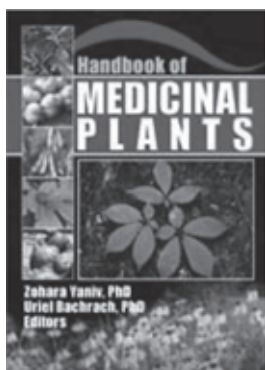
New Books and Journals

Fortschritte in der Misteltherapie Proceedings in Mistletoe Therapy

This is the proceeding volume from the 3rd. mistletoe symposium, held in November 2003. The book represents the status of knowledge in research and clinical practice around mistletoe: Part I deals with new aspects on pharmaceutical research of *Viscum album*, concerning biological aspects, phytochemistry, galenical properties and pharmacological details. Part II describes new preclinical aspects on immunology, cytotoxicity and *in vitro/in vivo* studies. The main part III presents five reviews on clinical therapy

with mistletoe beside many new and successful clinical studies and clinical experiences with *Viscum album* preparations. All chapters are written by the respective researchers and experts and present in a very clear lay out the actual status of mistletoe research. Language of the book is german.

Fortschritte in der Misteltherapie aktueller Stand der Forschung und klinische Anwendung. R. Scheer, R. Bauer, H. Becker, V. Fintelmann, FH. Kemper, H. Schülcher (eds.); KVC Verlag Essen, Karl und Veronica Carstens-Stiftung, Germany; ISBN 3-933351-49-9. 661 pages, 39 €.



Handbook of Medicinal Plants an update of herbal products research

The newly published book presents in 21 chapters an excellent overview on special topics of medicinal plant research. The different topics are written by expert in their field and represent the newest topics in the different areas. Main areas are Chinese medicinal plants (3 chapters), technologies in medicinal plant research, including biotechnology in crop improve-

ment, surveys on the latest developments in the medicinal applications (e.g. cancer therapy and prevention, prevention of coronary heart disease, anti-infects, CNS disorders, metabolic diseases, GUT-active herbal products).

Handbook of Medicinal Plants. Z. Yaniv, U. Bachrach (eds.); Food Products Press and The Haworth Medical Press, New York, London, Oxford; 2005; ISBN 1-56022-955-0. 485 pages, 59 \$.

Notes from the “neighbour” societies

International Society for Ethnopharmacology

We all know that many valuable drugs of today (e.g. galanthamine, taxol, vinca-alkaloids atropine, ephedrine, tubocurarine, digoxin, reserpine) came into use through the study of local and traditional knowledge. Today it is of even greater importance to document the indigenous knowledge and to contribute to the research about indigenous claims on therapeutics. Improved medications for use in primary health care are an important aspect of ethnopharmacological research. The International Society for Ethnopharmacology is actively involved in further developing this field, which is closely linked to many research interests of members of the GA.

The International Society for Ethnopharmacology is dedicated to interdisciplinary research on plants and other natural drugs uses as pharmaceuticals, as foods, or as toxins. Membership in the Society offers a multitude of benefits including: the option to subscribe to the Journal of Ethnopharmacology at a significantly reduced rate [currently (2005) £ 95. or £ 75, depending on the country of residence].

An electronic newsletter, which is distributed twice a year and includes news about all aspects of ethnopharmacology

Reduced inscription fees at conferences organized by the ISE

Access to a network of scholars dedicated to the multidisciplinary field of ethnopharmacology

For further details please visit the Society's webpage www.ethnopharmacology.org). For a free copy of the newsletter please email Dr. Barbara Frei-Haller bfrei-haller@bluewin.ch



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Recent thesis on medicinal plant research

(notices of PhD- and diploma thesis to the editor are welcome any time!)

Ph.D. thesis (2005) Tissue culture, phytochemical and biological studies of *Sphenocentrum jollyanum* Pierre and *Vernonia amygdalina* Del. By: Robert Victoria; Promotor: Assoc. Prof. J. O. Moody, Department of Pharmacognosy, University of Ibadan, Ibadan, Nigeria.

Ph.D. thesis (2005) Studies on traditional Chinese medicines used for age-related decline in CNS function. By: Yuhao Ren; Promotor: Prof. P. J. Houghton and Prof. R. C. Hider, Kings College London, University of London, UK.

Ph.D. thesis (2005) Studies on the antiprotozoal activity of some plant species. By: Ivie Anao; Promotor: Prof. P. J. Houghton and Prof. P. J. Hylands, Kings College London, University of London, UK.

Ph.D. thesis (2005) Studies on plants used in Botswana to treat infections. By: Daniel Motlhanka. By: D. Motlhanka-Brake; Promotor: Prof. P. J. Houghton, Kings College London, University of London, UK.

Ph.D. thesis (2005) Biotechnological approaches to the biologically active compounds of the Tai medicinal plants *Stemona tuberosa* Lour. and *Stemona curtisii* Hook f. (Stemonaceae). By: Nattaya Montri; Promotor: Univ. Prof. Dr. B. Kopp, Dept. of Pharmacognosy, University of Vienna, Austria.

Ph.D. thesis (2005) Saponine aus *Saponaria officinalis* (L.). By: Claudia Müller; Promotor: Univ. Prof. Dr. G. Reznicek, Dept. of Pharmacognosy, University of Vienna, Austria

Ph.D. thesis (2005) Analytik pharmazeutisch relevanter Flavonoide mittels PHLC/UV, PHLC/MS und HPLC/UV/MS. By: Enne Pemp; Promotor, Univ. Prof. Dr. L. Krenn, Dept. of Pharmacognosy, University of Vienna, Austria

Ph.D. thesis, 2005, Über phytochemische und pharmakologische Untersuchungen von *Echinacea angustifolia* DC. sowie klinische Studien und neue Erkenntnisse zu molekularen Wirkmechanismen. By: Karin Wölkart, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Ph.D. thesis, 2005, Investigations on the active principles of Chinese herbs with anti-inflammatory, antimycobacterial and anticancer activity. By: Michael Adams, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Diploma thesis, 2005, Phytochemische Untersuchungen von *Petasites albus*-Blättern. By: Andrea Gruber, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Diploma thesis, 2005, Pflanzliche Wirkstoffe mit Einfluss auf die induzierbare Stickstoff-monoxid-Synthase (iNOS). By: Doris Pfeifenberger, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Diploma thesis, 2005, Phytochemische Untersuchungen von *Salvia miltiorrhiza* BUNGE und *Tetradium daniellii* (Benn) T.G. HARTLEY. By: Sabine Ettl, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Diploma thesis, 2005, Marine sponges with anti-inflammatory activity-Inhibition of human neutrophil elastase. By: Meike Gstirner, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria) and Prof. Dr. L. Bohlin, Div. Pharmacognosy, University of Uppsala (Sweden).

Diploma thesis, 2005, Isolierung und Charakterisierung von Pseudohypericin und Hypericin aus *Hypericum perforatum*. By: Adelheid Knopper, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Diploma thesis, 2005, Literaturübersicht zum Potential pflanzlicher Arzneidrogen in der Anwendung bei Gicht. By: Claudia Löffler, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Diploma thesis, 2005, Screening of Chinese herbs for cholinesterase inhibition and antioxidant activity. By: Elisabeth Primtschitz, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria) and Prof. Dr. H. Vuorela, Div. Pharmacognosy, Dept. Pharmacy, University of Helsinki (Finland).

Diploma thesis, 2005, Vergleich der in China und in Österreich gemeinsam verwendeten Arzneipflanzen. By: Nicole Pansi, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Diploma thesis, 2005, Characterization of bioactive peptides from oat flakes. By: Roland Ungerböck, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria) and Prof. Dr. L. Bohlin, Div. Pharmacognosy, University of Uppsala (Sweden).

Diploma thesis, 2005, Phytochemisch-analytische Untersuchungen von *Leonurus japonicus* und *Salvia dolichantha*. By: Susanne Franziska Majeron, promotor: Prof. Dr. R. Bauer; Inst. Pharm. Sci., University of Graz (Austria).

Diploma thesis (2005) Charakterisierung der lokalanästhesierenden Verbindungen im chinesischen Gewürz *Zanthoxylum schinifolium* (Characterization of the tingling principles in the Chinese spice *Zanthoxylum schinifolium*). By: Vera Iseli; Promotor: Prof. Dr. Matthias Hamburger, Institute for Pharmaceutical Biology, University of Basle (Switzerland).

Diploma thesis (2005) Chemotaxonomische, analytische und biologische Untersuchungen eines neuen Rosmarinsäure-Glucosids (Chemotaxonomical, analytical and biological investigation of a new glucoside of rosmarinic acid). By: Mariana Gruber; Promotor: Prof. Dr. Matthias Hamburger, Institute for Pharmaceutical Biology, University of Basle (Switzerland).

Diploma thesis (2005) Noni-Fruit (*Morinda citrifolia*): Functional Food oder Geschäftemacher? (Noni fruit (*Morinda citrifolia*): functional food or commercial hype?). By: Diana Gopalsamy Naidu; Promotor: Prof. Dr. Matthias Hamburger, Institute for Pharmaceutical Biology, University of Basle (Switzerland).

Diploma thesis (2005) Noni fruit (*Morinda citrifolia*) ein phytochemisches Profil (Phytochemical profiling of noni fruit (*Morinda citrifolia*). By: Fiona Dieterle; Promotor: Prof. Dr. Matthias Hamburger, Institute for Pharmaceutical Biology, University of Basle (Switzerland).

Diploma thesis (2005) Development of methods for analysis of synthetic adulterants in herbal medicines by HPTLC. By: Seraina Caprez; Promotor: Prof. Dr. Matthias Hamburger, Institute for Pharmaceutical Biology, University of Basle (Switzerland).

Diploma thesis (2005) Quantifizierung der anti-inflammatorischen Triterpene in Nachtkerzensamen (Quantitative analysis of anti-inflammatory triterpenoids in evening primrose seeds). By: Michèle Zaugg; Promotor: Prof. Dr. Matthias Hamburger, Institute for Pharmaceutical Biology, University of Basle (Switzerland).

Diploma thesis (2005) Ist das Alkaloid Tryptanthrin möglicherweise auch eine endogene Verbindung? (Is the alkaloid tryptanthrin possibly also an endogenous compound?). By: Meret Lauterburg; Promotor: Prof. Dr. Matthias Hamburger, Institute for Pharmaceutical Biology, University of Basle (Switzerland).

Diploma thesis (2005) Development of an optimized HPTLC method for analysis of essential oils. By: Katherine Gessler; Promotor: Prof. Dr. Matthias Hamburger, Institute for Pharmaceutical Biology, University of Basle (Switzerland).

Diploma thesis (2005) Pressurized Liquid Extraction Entwicklung und Validierung von Extraktionsmethoden und Vergleich mit ausgewählten Monographien aus den Arzneibüchern (Pressurized Liquid Extraction development and validation of extraction methods and comparison with selected pharmacopoeia mono-

graphs). By: Carlos Basalo; Promotor: Prof. Dr. Matthias Hamburger, Institute for Pharmaceutical Biology, University of Basle (Switzerland).

Diploma thesis (2005) Arzneipflanzenforschung in Dokumenten. By: Hannes Böck; Promotor: Univ. Prof. Dr. W. Kubelka, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Analyse der Flavonoide in *Crataegus pentagyna* mittels Kapillarelektrophorese. By: Theresa Bradel; Promotor: Univ. Prof. Dr. B. Kopp, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Radikalfängerwirkung verschiedener Arten des *Achillea millefolium*-Aggregats. By: Pin-Yu Chen; Promotor: Univ. Prof. Dr. L. Krenn, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Optimierung von Temporärimmersions-Systemen zur *in vitro* Vermehrung ausgewählter Arzneipflanzen. By: Thomas Bernhard Fruhmant; Promotor: Univ. Prof. Dr. B. Kopp, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Further insights on the mechanism of activity of artemisinin. By: Katharina Gruber; Promotor: Univ. Prof. Dr. B. Kopp/Prof. Dr. A. Bilia, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Antimikrobielle Wirkstoffe aus marinen Mikroorganismen (Bakterien und Pilze) assoziiert mit marinen Bryozoen. By: Herwig Heindl; Promotor: Univ. Prof. Dr. B. Kopp, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Beitrag zur Chemotaxonomie der Gattungen *Urginea*, *Indurgia* und *Charybdis*. By: Anna Kastenhuber; Promotor: Univ. Prof. Dr. L. Krenn, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Arzneipflanzenforschung in Dokumenten (Sammlung Mitlacher). By: Doris Pieler; Promotor: Univ. Prof. Dr. W. Kubelka, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Untersuchungen an Rotklee und *Chelidonium herba*. By: Alexandra Ranner; Promotor: Univ. Prof. Dr. L. Krenn, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Chemische Untersuchungen der apolaren Inhaltsstoffe von *Metaxya rostrata*. By: Christina Riegler; Promotor: Univ. Prof. Dr. L. Krenn, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Verordnungen für Erzherzogin Leopoldina von Österreich. By: Helga Riha; Promotor: Univ. Prof. Dr. W. Kubelka, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) In vitro-Vermehrung von *Helichrysum italicum* und *Hypericum perforatum* im TI-System; Promotor: Univ. Prof. Dr. B. Kopp, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Einfluss von Wuchsstoffen auf die Mikrovermehrung von *Dioscorea*-Spezies; Promotor: Univ. Prof. Dr. B. Kopp, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Spray drying of emulsions for DANN vaccine delivery. By: Stefan Salomon; Promotor: Univ. Prof. Dr. B. Kopp, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Chemotaxonomische Untersuchungen an der Gattung *Achillea*. By: Barbara Schneider; Promotor: Univ. Prof. Dr. W. Kubelka, Dept. of Pharmacognosy, University of Vienna, Austria

Diploma thesis (2005) Kloostergärten in Bayern. By: Heidi Schmidt; Promotor: Univ. Prof. Dr. W. Kubelka, Dept. of Pharmacognosy, University of Vienna, Austria

