



EFSUMB Newsletter

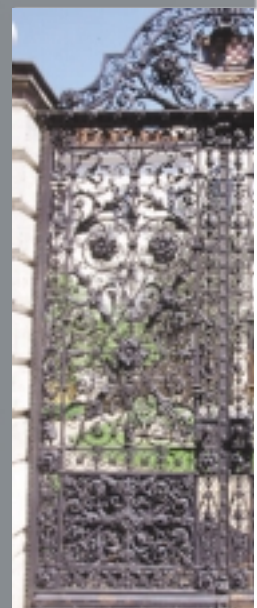
Volume 17

Issue 1

September 2003

16TH CONGRESS OF THE EUROPEAN FEDERATION OF SOCIETIES FOR ULTRASOUND

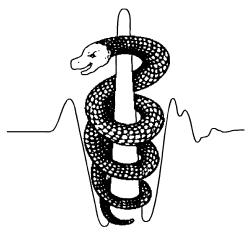
IN MEDICINE AND BIOLOGY AND SCIENTIFIC
CONGRESS OF THE CROATIAN SOCIETY AND BIOLOGY



WWW.EUROSON2004.COM

EJU TO BE RELAUNCHED, SEE PRESIDENT REPORT PAGE 3

EUROSON 2004



EFUMB

EUROPEAN FEDERATION OF SOCIETIES FOR ULTRASOUND IN MEDICINE AND BIOLOGY

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EFUMB NEWSLETTER

Editor:	D W Pilling (UK)
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SECRETARIAT

General Secretary: Gianna Stanford,
Carpenters Court, 4a Lewes Road,
Bromley, Kent BR1 2RN, UK
Tel: +44 (0)20 8402 8973
Fax: +44 (0)20 8402 9344
Email: efsumb@efsumb.org

Website: <http://www.efsumb.org>

ISSN 1012-8220

Printed by S&Z Print AG, Brig-Glis, Switzerland

EFUMB NEWSLETTER EDITORIAL

The Euroson congress in Copenhagen was a great success both scientifically and socially. You will read much about the meetings of the various committees elsewhere in the Newsletter. My appeal to the readers of the Newsletter for contributions has obviously fallen on deaf ears but still would be very welcome. As you will see in the Publications Committee Report the Newsletter may well change in the near future but its aim will always be the same to communicate with the members of the Federation. Communication is a two way thing and whilst producing this Editors report I feel somewhat isolated. Reviewing Newsletters of other organisations shows a great variation in reader contributions but it would be nice to think that some response from the readership was possible if only to tell me to save time and paper by not writing long editorials!



Hardly is one Euroson Meeting over than we are considering the next one. Zagreb as a city has much to offer but many have not had the opportunity to visit before (this does not include the editor who has been there on a previous occasion in 1988 and is looking forward very much to returning). The Scientific Meeting promises to be as successful as other recent Euroson Meetings but with its own special flavour. It would be nice to see even more people at that meeting to show ultrasound is thriving in Europe at the moment.

As you will see in the President' column we have made considerable progress with relaunching the European Journal of Ultrasound title as a sub-title to *Ultraschall in der Medizin*. The contract will be signed soon when final details are complete. Amongst the changes which will develop is an increase in the English language papers in the Journal which should help to increase the already impressive impact factor. There will also be changes to the Newsletter of which more next time.

David W Pilling
Editor EFSUMB Newsletter

REPORT FROM THE PRESIDENT



Medical doctors are trained in natural sciences which explains their preference for quantifiable and measurable data. The vitality of any society, such as EFSUMB, however, is not really measurable although all sorts of activities are going on within EFSUMB.

EUROSON Congress

The annual congress is the most important indicator of the activity and vitality of any society. Therefore, EFSUMB gives high priority to the organization of upcoming EUROSON congresses. EUROSON 2003 in Copenhagen was organized in conjunction with the first joint Scandinavian Meeting. The Congress was a real success, both from a scientific and a social point of view. The diligent work of the

local organizing committee under the presidency of Michael Bachmann Nilsen as well as the large number of participants should guarantee a positive financial outcome as well. On behalf of EFSUMB I would like to express our gratitude to the organizers.

In the meantime the preparation for the 16th EUROSON Congress 2004 is getting up to speed. The Congress will be organized in conjunction with the Croatian Society and will be held June 5–8, 2004 in Zagreb, the capital city of the Republic of Croatia. More than 50 invited speakers will give a summary of the actual state of the art in ultrasonography and researchers from all over Europe will present the newest results of their brilliant work as free communications. Scientists are invited to submit abstracts. In addition, the national societies are invited to select their best young investigators for the Young Investigator Award Session 2004. For further information see bylaw 4 at www.efsumb.org.

The newly established EUROSON committee will do everything to maintain the expert knowledge in congress organization and to guarantee or even to improve the quality of future EUROSON congresses.

Toulouse, October 8–10, 2003

An additional highlight awaits EFSUMB: In cooperation with the International Union of Angiology we are involved in the organization of the Congress «Vascular Medicine» to be held in Toulouse, October 8–10, 2003. Five symposia on quality control in vascular duplex scanning (carotid, renal, mesenteric, peripheral arterial and peripheral venous) are planned. For further information on this Congress please visit www.medvasc-2003.com. This will be a sequel to the basic work performed by the Education and Professional Standards Committee (Minimal training requirements for the practice of medical Ultrasound in Europe, EFSUMB Newsletter, 16:2, 2003)

Working Groups and Committees

The successful realization of any activity within the Federation requires some resources. Changing economic conditions demand better utilization of diminishing resources. This holds true both for EFSUMB and the healthcare industry and necessitates a closer cooperation between these two keyplayers. The aim of our Industrial Board therefore is exchange of information and improved communication. As a result we expect a productive relationship on selected topics of common interest. This should parallel the activities of the Safety Committee (ECMUS) and of the Education and Professional Standards Committee. Both, the Safety Committee and the Education and Professional Standards Committee have been organizing scientific sessions in former EUROSON congresses and will organize further sessions in future meetings. Some of their work has been supported by funds from industry. Another important factor that guarantees the coherence of a society/federation is the link between the board and the individual members or the national societies respectively. The Publication Committee is responsible for this interaction. Their main task is the popular biannual Newsletter and the frequently visited WebPage.

Journal

Mergers are common happenings in the business world. For once we are looking forward to a merger within the world of science. Possible developments of our scientific journal «European Journal of Ultrasound» have been discussed for quite some time. After a thorough analysis of the actual situation, the Board of Directors of EFSUMB decided to enter into negotiations with Thieme, Publisher of «Ultraschall in der Medizin» (UIM). UIM is the Official Scientific journal of the three ultrasound societies from Germany, Austria and Switzerland. UIM has grown into a strong widely accepted journal with an impact factor of 1.1. The Journal appears bimonthly with more than 10'000 copies circulated per issue. The large distribution and the positive development of the Journal during the last couple of years needs to be seen in the context of a successful cooperation between the three societies and the Journal. More than 50 % of the EFSUMB members are already subscribers of UIM. Thieme offers a favorable price for annual membership subscription which is in the range of 1/10 of a regular rate. EFSUMB and UIM are in the process of finalizing an agreement and we expect the contract to be signed within the next couple of weeks. With this agreement UIM would become the official scientific Journal of EFSUMB, the subtitle of the Journal would be «European Journal of Ultrasound». In addition the EFSUMB Newsletter would be implemented into the Journal. Further information will be available soon and will be sent directly to the members of EFSUMB.

Finally we would like to note the continuously increasing number of EFSUMB members (> 16'000) which could be considered as an indicator of its vital activity.

Kurt Jäger
President EFSUMB

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REPORT FROM THE HONORARY SECRETARY



The Board of Directors (BoD) meeting is the annual administrative highlight of the EFSUMB activities, and it is a truly European event.

All the member societies are invited to send one representative as a delegate to perform the elections of the Executive Bureau (ExB) and the committee members at the intervals given in our constitution.

Moreover, the delegates of the BoD meeting are responsible for accepting or rejecting changes to the bylaws and the reports given by the President, the Treasurer, the committees' chairpersons and the Honorary Secretary.

These democratic procedures were performed in Copenhagen again in a concise and friendly atmosphere during a meeting that lasted four hours.

Our president, Kurt Jäger from Switzerland, chaired the session in a thoroughly professional way, and, whilst ready to listen to all the different points of view was able to moderate the discussions on all the different topics reported upon, evaluated by and decided on by the BoD members.

This was no small task and some work is left still to be done. After careful presentations and short open evaluation, two bylaws were changed according to our needs: the bylaw no 2 for the European Committee on Ultrasound Safety (ECMUS) activities, and the bylaw no 7 on regulations for the organisation of an ultrasound teaching course of the EUROSON school.

The main item left to be considered in the near future is a framework developed by the President concerning the composition and range of responsibility of the EUROSON Congress Committee. This new committee will make our future congresses (to be held in Geneva on 25–28 September 2005, in Bologna on 3–6 October 2006, and in Leipzig, Germany in 2007) easier to plan and to manage for the local organizers and for the ExB.

The reports of the Treasurer and of the EFSUMB committees are elsewhere in this newsletter. It was a pleasure and a privilege to participate in the administration of the top European group of ultrasound societies.

Lucas Greiner
Honorary Secretary EFSUMB

REPORT FROM THE PUBLICATIONS COMMITTEE

The Committee which was newly appointed following the EUROSON Meeting in Warsaw has not had the opportunity to meet formally but has had a very lively exchange of e-mails and telephone conversations. The two important issues which have been discussed have involved the title of the European Journal of Ultrasound and the future appearance of the Newsletter.

These discussions are ongoing but the decision has been made to pursue discussions with Thieme on a proposal to incorporate the title 'European Journal of Ultrasound' in 'Ultraschall in der Medizin'. This will have great benefits for those publishing their articles within the Journal which already has an impressive impact factor. Articles in English will be encouraged by the Journal and it is hoped that an increase in the diversity of ultrasound articles will increase the number of subscribers to the Journal from members of the Federation.

The Newsletter continues to be the most important means by which the Federation keeps all its members informed. This is expensive to produce and methods of encouraging sponsorship are being explored. The alternative of producing the Newsletter only in electronic

form has been rejected although it is likely that the Newsletter will be available on the web-site for those who wish to peruse it in this format. A paper version of the Newsletter will continue and the possibility of its incorporation within 'Ultraschall in der Medizin' as well as in separate paper form for non subscribers to the Journal is being considered.

The Publications committee is also responsible for the web-site and a number of options for updating the web-site are being considered. Within the next few months you should see a considerable change in the look of the web-site including development of new links. Members are encouraged to communicate with us about good and bad features so that we can improve this other important means of communication.

So as you can see the Publications Committee may not have met but has been very busy in its deliberations and will continue over the coming months to develop the EJU, the Newsletter and the web-site.

D W Pilling
Chairman Publication Committee

REPORT FROM THE HONORARY TREASURER



For the third year in a row the profit and loss account shows a surplus. In 2002 the profit was £ 22,920. Together with the surplus from the years 2001 and 2000 this balances the previous deficit. Thus our federation has regained its economical strength.

In 2002 a surplus has raised from the Euroson Congress in Edinburgh and from Euroson Schools held in Romania, Germany and in the UK. Furthermore very generous sponsorship of the newsletter has been received from Bracco.

In the budget for 2004 we will miss the sponsorship of the newsletter. The expenditure in general has been raised by 3% to meet inflation. The budget for 2004 as well as for 2003 is balanced.

Our single highest expenditure is the newsletter. It will in the future be necessary to find alternative sponsorship or reduce the printing and mailing cost of the newsletter.

On this page you will find the end of the year accounts for 2002, the budget for 2004 and an updated membership status.

Niels Juul
Honorary Treasurer EFSUMB

EFSUMB Trading and profit and loss account Year ended 31 December 2002 in Esterling

INCOME

Subscriptions	80,229
Newsletter sponsorship	11,300
Euroson School/Congresses	11,530
Deposit account interest	£618
Reimbursements	9,903
	113,580.00

EXPENDITURE

Subscription WFUMB	
Publishing and mailing	14,376
costs of Newsletter	27,373
Prizes	1,322
Meeting and Travelling	
expenses of all committees	25,227
WFUMB Bid	1,014
Wages	13,451
Printing, postage and stationery	793
Auditors remuneration	1,069
Loss on exchange	-2013
Office services	6,725
Bank charges	406
Depreciation: Plant and machinery	68
Fixtures and fitting	176
Computer equipment	673
	90,660
Excess of income over expenditure	22,920

EFSUMB BUDGET FOR THE YEAR 2004 (IN POUNDS STERLING)

INCOME

Membership fee (16184)	88,679.00
EUROSON SCHOOLS	1,000.00
EUROSON CONGRESS	2,000.00
Newsletter	0.00
Bank deposit interests	400.00
TOTAL INCOME	92,079.00

EXPENDITURE

WFUMB (16184 x \$1.50 per member)	15,090.00
Newsletter	28,194.00
Meetings, Executive Bureau	10,000.00
Meetings, Committees	12,500.00
Prizes etc	676.00
Wages	15,199.00
Printing, postage, stationery	816.00
Accountants	1,101.00
Office expenses	6,926.00
Bank charges	418.00
Depreciation	944.00
TOTAL EXPENDITURE	91,864.00
BALANCE	215.00

number of members in database on 30 June 2003

Country	
AUSTRIA	813
BELGIUM	211
BULGARIA	75
CROATIA	67
CZECH REP	45
DENMARK	332
FINLAND	270
FRANCE	361
GERMANY	5857
GREECE	100
HUNGARY	45
ISRAEL	101
ITALY	1884
NETHERLANDS	47
NORWAY	245
POLAND	1200
PORTUGAL	63
ROMANIA	247
RUSSIA	68
SLOVAK REP	40
SLOVENIA	108
SPAIN	177
SWEDEN	97
SWITZERLAND	2321
UK	2248
TOTAL	17031

EDUCATION AND PROFESSIONAL STANDARDS COMMITTEE



Following the approval of the «minimum training requirements for the practice of medical ultrasound in Europe» document by the EFSUMB Executive Bureau, the Educational & Professional Standards Committee met again in Copenhagen on Wednesday 30 April 2003. Following publication of guidelines for amniocentesis and CVS, the Committee considered three further sets of guidelines on Complications of Interventional Ultrasound within the Abdomen,

Ultrasound-guided Breast Biopsy and Paediatric Interventional Procedures. Further work is needed on these guidelines but it is hoped that the Complications of Interventional Ultrasound Guidance could be published in the near future.

Each EFSUMB member Society had been asked to submit syllabi from national specialty groups for ultra-

sound training. These had been considered by the Committee and it was agreed that either members of the Committee, or others approached by the Chair of the Committee, would be asked to draw up syllabi for Obstetrics, Gynaecology, Angiology/Neurology, Gastroenterology, Urology and Radiology. These would initially be focussed on level 1 training, but with suggestions for what might be included in level 2 and 3 as well. These would then be circulated to two or three other Member Societies prior to further consideration at the next meeting of the Educational & Professional Standards Committee, to be held in London in December 2003. It was felt that a syllabus for cardiac ultrasound was probably unnecessary as this was well coordinated across Europe, but further investigation into this would be carried out by the Secretary of the Committee.

Dr David RM Lindsell
Secretary
EFSUMB Education & Professional
Standards Committee

«OPHTHALMIC ULTRASOUND IN CHILDREN: ITS USEFULNESS FOR APPROPRIATE THERAPEUTIC MANAGEMENT»

**THE FOLLOWING ARTICLE IS BASED ON THE THERESE PLANIOL LECTURE
AT EUROSOM 2003 ON 28 APRIL 2003**

Dr Olivier Berges, Service d'Imagerie Médicale, Unité Ultrasons, Paris, France

Most of the recent improvements in Ophthalmic Ultrasound have allowed a much better evaluation of both ocular and orbital disorders.

The information obtained has significantly improved patient management and surgery, particularly in the case of congenital cataract, congenital glaucoma, retinoblastoma, pseudogliomas and other vitreo-retinal dysplasias.

For the evaluation of ocular problems, examinations should be performed under general anesthesia.

This greatly improves the precision of functional information given by Color Doppler Imaging, especial-

ly in the case of congenital glaucoma, as well as the resolution for small morphologic details provided by very high transmission frequency transducers, in the case of malformations of the anterior segment of the eye.

For orbital problems, the role and place of Ultrasound versus CT and/or MRI is now well established, particularly in the case of benign lesions such as dermoid cysts and capillary hemangiomas, but also for orbital cellulitis.

In all these instances simple sedation is usually sufficient to get the appropriate information.

REPORT FROM THE 15TH EUROPEAN CONGRESS OF ULTRASOUND – EUROSON 2003 FIRST JOINT SCANDINAVIAN MEETING – 27–30 APRIL 2003 – COPENHAGEN



I am sure everyone who has tried organizing courses or congresses will know it is difficult to be objective when someone asks for your opinion on the congress, but I will try my best in this short report on EUROSON 2003. As a matter of fact it appears as if everything about the

congress went well and the local organizing committee is very happy with the result.

Let me try to summarize and to give some key figures in a few sentences. EUROSON 2003 took place in the Copenhagen Congress Centre just outside Copenhagen. The congress venue was very suitable for the scientific sessions and the exhibition. The 7 pre-congress courses and workshops were attended by a total of 320 participants. The opening ceremony was followed by Professor Hans Henrik Holm Lectures by 4 international experts. The following 3 days had 3 parallel scientific sessions, 4 if you include poster sessions and satellite symposia. Approximately 800 took part in the scientific programme of the congress. It will take some months before we have a total overview of the economy of the congress, but we expect a small surplus.

The organizers especially wish to thank everyone who contributed to the scientific level of the congress: the invited speakers and all the participants with free communications. Also we are grateful to the companies for their sponsorships.

The congress could not have been made possible without the combined efforts of so many friends and colleagues, too numerous to mention, from the Denmark, Sweden, Norway and Finland, as well as from Europe and the rest of the world. I hope we will find the opportunity to organize another international ultrasound congress together in the future. Also, I am pleased that EFSUMB has accepted a Hans Henrik Holm Lecture to be included in the coming EUROSON congresses; the Lecture will be sponsored by the Danish Society of Diagnostic Ultrasound.

Those of you who attended the social programme will know the meaning of the words: «Copenhagen is a wonderful place». Next year I am sure we will all be saying «Zagreb is a wonderful place», all my best to the organizers of the next EUROSON meeting, I am sure you will prepare a wonderful congress for us in 2004.

Committee.

Michael Bachmann Nielsen
Congress President EUROSON 2003
President Danish Society of Diagnostic Ultrasound

REPORT OF THE INDUSTRIAL BOARD

First of all, I would like to thank the ultrasound industrial members for electing me as the Industry representative to the EFSUMB board during our last meeting in EUROSON Congress in Copenhagen on 29th April 2003.

The EFSUMB Industrial Board was officially formed to improve our communications, support and co-operation with the Board of Directors of EFSUMB on matters of mutual interest in:

- Standardization
- Education
- Euroson Schools
- Euroson Congresses
- Safety
- Guidelines

During the industry meeting, we all agreed that EFSUMB would continue to lead on all these matters but with the participation and support of the Industrial Board. We confirmed that the COCIR organization should be the official manufacturers representative organization for communications. However, in order to gain better understanding between the industry and EFSUMB, an industry representative should participate as an observer at the EFSUMB board meetings.

Our first collaboration took place at the EUROSON Congress in Copenhagen with the special IT Session covering the impact of the latest developments in Information Technology on Ultrasound. This session was very well received by the attendees and the industry and is a good example of how we can collaborate in future meetings. There were also good discussions on the need for practical guidelines in various fields like Contrast Agent Imaging. A proposal was accepted for a meeting on Contrast Agents to be organized in the near future. The industry members welcomed the open and free discussion opportunity provided by the Board of Directors of EFSUMB during the meeting and look forward to this new level of co-operation and communication going forward.

I invite all the industrial partners to contact me with any suggestions or comments relating to our collaboration opportunities with EFSUMB. In particular, I look forward to input from the industry members regarding the industrial participation and support of the next 16th EUROSON Congress to be held in Zagreb, Croatia June 2004.

Carlos Faustmann
Industrial Board Representative to EFSUMB

YOUNG INVESTIGATORS AWARD 2003

This award was shared equally between:

Dr. Bernhard Rosengarten, Germany, and Dr Carolyn Troeger Switzerland



Dr Carolyn Troeger Curriculum vitae: Born on December 26, 1971 in Rostock (Germany). After graduation from school, studied medicine at Rostock University and Brown University Providence, R.I. (USA). Since 1998 has been working at the University Women's Hospital in Basel (Switzerland), including 2 years of research in the laboratory for Prenatal Medicine (W. Holzgreve/S. Hahn).

Quality management in the nuchal translucency measurement in residents by Carolyn Troeger, Brigitte Frey Tirri, Sevgi Tercanli, Monika Schiesser, Roberto Lopez and Wolfgang Holzgreve

The measurement of the nuchal translucency (NT) in the 1st trimester (crown rump length: 45–84 mm) is a very robust method to assess the risk of fetal chromosomal and non-chromosomal defects. However, training of this kind of measurement is an issue not only among experienced sonographers, but also ObGyn residents, since all NT measurements should fulfill the strict quality criteria. Otherwise false-positive results would lead to unnecessary intervention. In a low-risk population, 50% of all NT measurements should be above the median and 5% above the 95 th centile. According to these quality criteria our group evaluated the learning curves of 14 residents between 1997 and 2000 (3064 low-risk and referred cases; mean 112 scans per resident). From our investigations it is obvious that for residents at least 50 scans are needed to meet quality criteria, but optimally 80 to 100 scans should be advised until NT measurement is standardized. However, even after this training period the quality of NT measurement varies. Only during and after supervision values are normally distributed. Therefore, an audit report is important even after the training period.

This work whilst presented for the Young Investigators Award by the first author was the work of a group within the department.



Bernhard Rosengarten works in the department of Neurology at the Justus-Liebig University at Giessen, Germany.

Dynamic evaluation of functional transcranial Doppler curves: a new approach to measure endothelial dysfunction by Bernhard Rosengarten and M Kaps.

His scientific interests concern the field of Neurosonology and especially the mathematical evaluation of functional transcranial Doppler curves. An evaluation approach stemming from system theory was established allowing the identification of the main dynamic aspects of the so-called neurovascular coupling mechanism. The mechanism adapts cerebral blood flow in accordance to the underlying cortical activity in a fast, reproducible and fine tuned manner. Performing visual stimulation and inducing activity changes in the visual cortex the evoked flow velocity changes in the posterior cerebral artery can be measured with transcranial Doppler. The appearance of the evoked flow velocity curves reflects the integrity of the coupling mechanism. Performing standardized visual stimulation the influence of vascular risk factors on regulative properties of the vessels can be investigated on the stage of endothelial dysfunction. The endothelial dysfunction is assumed to be reversible and is the earliest step in the cascade of progressive arteriosclerosis. The clinical application of the method is easy as studies such as in adolescents with type 1 Diabetes or children with migraine or tension-type headache demonstrated. Compared to former evaluation methods the new approach is more detailed and also more sensitive, increasing further the feasibility of the method.

OBITUARY

Kenneth J W Taylor, MD, PhD, FACP, Professor of Radiology and Surgery, Obstetrics and Gynecology, Pioneer of Diagnostic Ultrasound Imaging



Kenneth J W Taylor MD, PhD, FACP, Professor of Radiology and Surgery, Obstetrics and Gynecology at Yale University School of Medicine, died in New Haven, CT, USA, on 15 February 2003, aged 63.

He was born in the United Kingdom, but had pursued research into clinical applications of diagnostic ultrasound at Yale University School of Medicine since 1975. He was

appointed a tenured Professor of Radiology in 1979. His background in diverse surgical specialties during his early medical postgraduate training, a period spent as lecturer in Clinical Anatomy at Guy's Hospital, London, and a PhD from the University of London in the field of bio-effects of ultrasound, uniquely suited him to his subsequent career path at Yale University School of Medicine.

Dr Taylor collaborated with D A Carpenter, an engineer from Dr George Kossoff's Australian ultrasound research group, exploring the use of diagnostic «gray-scale» ultrasound in patients with cancer, treated at the Royal Marsden Hospital, and also worked with Professor C R Hill, a renowned UK physicist. His clinical work on the role of ultrasound in the diagnosis of hepatobiliary disease formed the basis for his MD thesis, awarded by the University of London in 1975.

He was the author of numerous books on diagnostic ultrasound, including the ground-breaking «Atlas of Ultrasonography» (1978). His books were widely published in the USA, South America, Europe and Asia. He published over 200 scientific papers, and received grant support from the American Cancer Society and the National Institutes of Health for his work on the detection of tumour vascularity by Doppler ultrasound, in addition to numerous projects funded by pharmaceutical and ultrasound equipment companies. He chaired the editorial committee of the Clinics in Diagnostic Ultrasound series 1978–1994. He was also at the forefront of research in the clinical uses of Doppler ultrasound, collaborating with physicists Professor P N T Wells and Dr P N Burns both in research and in the publication in 1988 of the successful textbook «Clinical Applications of Doppler

Ultrasound», which was republished as a second edition in 1995.

His many research interests included evaluation of the role of ultrasound in ovarian cancer screening and detection of vascularity in tumours using Doppler ultrasound. His visionary interests in promoting the use of ultrasound in the diagnosis of abdominal and pelvic disease also stimulated a training programme for diagnostic technologists and postgraduate medical specialists which produced several hundred graduates who now practice in the USA, Europe, South America, Japan and the Caribbean. Teaching was his major love, both during the day-to-day practice of ultrasound, and in lectures and conferences. He lectured worldwide and engendered great enthusiasm for the use of ultrasound, which continues to be widely used despite the introduction of other techniques such as computed tomography and magnetic resonance imaging, because of its versatility, safety and relatively low cost. He was a Fellow of the American Institute of Ultrasound in Medicine since 1975 and a Fellow of the American College of Physicians since 1981.

Dr Taylor's colleague, Dr Mort Burrell, Professor of Diagnostic Radiology at Yale University School of Medicine, observed «He was courageous. He never faltered under the criticism of those who did not see things as clearly as he. He was outspoken and blunt when he perceived that the interests and safety of patients were not being protected. He did not choose the safe path of going along when he perceived wrong. He was a visionary who did not limit himself to safe and pat observations. His goal was to advance his specialty and he became acknowledged as a towering presence on the academic landscape.»

Ken Taylor loved life, his work and his family, dearly. He is survived by Caroline, his wife of 27 years, a son, Andrew, a daughter, Sally-Anne, from a previous marriage, her two children, Laurie and Rosie, and two sisters. Hazel and Gill, of England. He will be sadly missed by his family, the Yale community and by his colleagues and friends throughout the world.

**P N T Wells DSc FEng
Senior Research Fellow and Emeritus Professor
of Physics and Engineering in Medicine
University of Bristol, Bristol, United Kingdom**



Croatian Society for Ultrasound in Medicine

European Federation of Societies for Ultrasound in Medicine and Biology



EUROSON

Highlights

General US (gastroenterology, nephro-urology, breast, head and neck, pediatrics), Gynaecology and Obstetrics, Musculoskeletal US, Vascular US, Surgical and Interventional US (endoluminal, intra-operative US, laparoscopic US and tissue ablation) New Technology and Physics (contrast agents, harmonics, 3D, B-flow, bioeffects and safety, and others), Sonography, Veterinary US, Miscellaneous

Pre-congress events

Thomas Jefferson University - Recent advances in ultrasound, Contrast agents in ultrasound, IBUS course, Doppler of Arterial and venous circulation, Ultrasonography and endoscopy in cholestasis, Gynaecological Ultrasound and human reproduction, New developments in ultrasound assessment of pelvic mass, Ultrasound in perinatology, Ultrasound in veterinary medicine, Endoscopic ultrasound, US course

Program

Plenary sessions:

Breast ultrasound, General Abdomen, Neck and Thyroid gland, Pediatric US, Doppler Periphery, Ultrasound in perinatology, Interventional and intra-operative ultrasound, Ultrasound in cardiology, Musculoskeletal ultrasound, Orthopedics and sport injuries, Carotid arteries and TCD, TCD and contrast doppler in neurology, Ultrasound in gynaecology and human reproduction, Physics of ultrasound, Ultrasound in veterinary medicine, Ultrasound of thorax, Urogenital ultrasound, Ultrasound in Ophthalmology, Ultrasound in emergency, Safety of Ultrasound, Young investigators session

Teaching sessions:

Contrast agents and breast color doppler, GI ultrasound, Ultrasound of childrens hips, Parathyroid gland and ultrasound, Renal doppler, RF ablation, 4D echocardiography, Ultrasound in Veterinary medicine

Workshops:

Locomotive system, Needle biopsys, Carotid arteries, Mammotome biopsy, Thermoablation RF, Vein Doppler, TCD Doppler, 4D Doppler

Lunch symposiums, Poster sessions, Meeting with the Professor session

Invited speakers

J.R.T.C. Roelandt - V.Mitkov - N.Drinković - I.Čikeš - S. Ernst - B. Goldberg - L. Greiner - C. Dietrich - M. Juul - B. Limberg - D. Nürnberg - H.P. Weskott - A. Bunk - Meckler - Benhof - I. Sporea - W.Jakubowski - I. Lukač - E. Zerem - M. Duvnjak - T. Helemberger - D. Giatini - L. Bolondi - D. Amy - M. Teboul - W. Svenson - B.Salvadori - I. Drinković - D. Francescatti - L. Derchi - C. Martinoli - S. Castellani - B. Brkljačić - V. Demarin - S. Podobnik - E. Halpern - L. Needleman - K. Jäger - D.H. Evans - L. Boromo - L. Nazarin - J. Vrdoljak - G. Harmat - A. Vargha - Z. Harkany - E. Mertz - J.B. Hackeloer - D. Jurković - V. Vlaisavljević - M. Podobnik - Z. Sretenović - A. Kurjak - S. Kupešić - P. Wells - B. Phillips - B. Breyer - L. Chitty - D. Pilling - L. Bonomo - M.Teboul - R. Otto - M. Claudon - M.B. Nielsen - C. Weismann - G.M. Reutern - N.M. Bornstein - A. Alexandrov - K. Niederkorn

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ON 2004

Important dates

Deadline for abstract submission

29 February 2004

Deadline for low registration fee

29 February 2004

***Deadline for low registration fee
for presenting authors***

10 April 2004

***Deadline for registration for
pre-congress courses and workshops***

10 May 2004

Congress dates

5-8 June 2004

Congress Dinner

7 June 2004

Registration and abstract submission available at our web page.

DO NOT FORGET TO REGISTER.

n2004.com

REPORT FROM EUROSON SCHOOL INTERVENTIONAL ULTRASOUND CONSTANTA-ROMANIA – 17-18 MAY 2003

Constanta in Romania is a beautiful town. It was the place for a remarkable EUROSON School organized and directed by SRUMB, SRIM, and the Faculty of Medicine in Constanta from... May 17th-18th, 2003.

Accompanied by an industrial exhibition displaying ultrasound equipment both of high and of low end quality, the lectures covered all fields of interventional ultrasonography in a both comprehensive and detailed manner. The contributions -two days of intensive teaching and learning – were highlighted by the following topics and authors. There were more than 130 participants.

Elisabetta Buscarini from Italy, reported on the recent status of ultrasound guided interventional local therapy of liver metastatic disease; Ioan Sporea from Romania gave an overview on ultrasound guided biopsy in diffuse hepatopathies; Lucas Greiner, from Germany held an introductory lecture on indications, non-indications, techniques and requirements for interventional ultrasonography; recent advances in interventional ultrasonography in musculoskeletal disease was reported by Zbyszek Cyrny from Poland, showing a promising and easy-to-handle new field of very precise local application of anti-inflammatory substances. Pentti Lohela from Finland lectured on gallbladder drainage and interventions in pancreatic disease.

Niels Juul from Denmark considered the interventional possibilities for kidney problems, and Julia Weinshtein from Israel gave a report on breast biopsy.

The conference was enriched to a great extent by the intense learning and teaching atmosphere generated by multiple questions of the audience and a lively interaction between teachers and listeners. A beautiful banquet evening at the Black Sea strand rounded up the overall impression of a fruitful two days in Romania, which is developing a good tradition of EUROSON Schools.

Lucas Greiner
EFSUMB Honorary Secretary



The photo shows from left: Ioan Sporea (Romania), Organizer; Zbyszek Cyrny (Poland); Niels Juul (Denmark); Elisabetta Buscarini (Italy), and Petre Mircea, President SRUMB.



FORTHCOMING EUROSON SCHOOLS

EUROSON SCHOOL ON 3D ULTRASOUND IMAGING April 7-9, 2004 – London, UK

For further details and registration forms please contact: **Secretariat:** HITEC (Hammersmith Hospital), Du Cane Road. London W12 0HS, UK. Tel: +44 (0)20 8383 1610 E-Mail: hitec@hhnt.org

EUROSON SCHOOL BREAST COURSE

September 25-26, 2004 – Craiova, Romania

For further details and registration forms please contact: Prof Radu Bedea, Secretary SRUMB, Departamentul de ultrasonografie, clinica Medicala III, str. Croitorilor 19-21, 3400 Cluj-Napoca, Romania, Email: badea@mail.dntcj.ro

EUROSON SCHOOL on ADVANCED BREAST IMAGING IBUS Advanced Breast Imaging Seminar Riga Latvia – 17-18 September, 2004

To obtain preliminary information about the «IBUS – Advance Breast Imaging Seminar» send an e-mail to the IBUS Secretariat at info@ibus.org or visit the IBUS homepage at <http://www.ibus.org>.

BMUS/EFSUMB BID FOR WFUMB 2009

Introduction

In August 1999, Peter Wells wrote to the President of BMUS, pointing out that the 2009 WFUMB Congress could be in Europe and BMUS/EFSUMB might wish to consider making a bid for this. BMUS Council considered the proposition and considered possible venues, eventually selecting Edinburgh as the BMUS nomination. Paul Allan and Jane Bates then presented the BMUS proposal to the EFSUMB Board of Directors meeting, which took place during the WFUMB 2000 in Florence during May. This bid was successful and we proceeded with a formal bid from EFSUMB to WFUMB to hold the 2009 meeting in Edinburgh.

Development of the Bid

We received great help and advice from Ellen Colingsworth and her colleagues at the Edinburgh Convention Bureau (ECB), members of staff from the Edinburgh International Convention Centre (EICC) and the Edinburgh Principal Hoteliers Association (EPHA). After discussion, it was decided to hold the meeting in the week following the International Festival as we were informed that this was a relatively fallow time for hotel occupancy, and the draw of the Festival would be an attraction for delegates.

In order to accommodate a Congress with between 2000–4000 delegates, proposals were made to hold the meeting in the EICC and also use rooms in the Sheraton Hotel. The Usher Hall was selected to hold large plenary sessions. However it was recognised that attendances at WFUMB Congresses were usually in the region of 1500–2000, except for three occasions when the meeting was held in the USA, when numbers were 3000–5000. It was therefore felt that the Edinburgh facilities would be more than adequate for the likely size of the meeting, although there was some initial concern over the space for the technical exhibition.

During the development of the bid proposal the programmes and budgets from preceding WFUMB Congresses in Copenhagen (1991), Sapporo (1994) and Florence (2000) were reviewed so that an estimate of the financial implications and shape of the scientific programme could be made. Attention was also paid to the relevant byelaws pertaining to organisation of the meeting.

The WFUMB Executive accepted an invitation to visit Edinburgh during the EUROSON meeting in December 2001. This gave them the opportunity to see the EICC; the ECB, together with several Edinburgh hotels, provided a tour of the City with dinner at the Balmoral hotel. Sydney arranged for the WFUMB Executive to hold their February 2003 meeting in Sydney and took the opportunity to show them the facilities and sights at that time.

Presentations of the Bid Proposal

The WFUMB byelaws indicate that the decision on the Congress location is made six years before the Congress date. In the event however, we were asked to make an initial presentation to the WFUMB Administrative Council in Nashville in March 2002. To this end, Paul Allan (local organiser), Ellen Colingsworth (Edinburgh Convention Bureau), David Pilling (President of BMUS) and Jane Bates (President Elect) went to Nashville, where we were given 20 minutes at the

end of a long day's Council meeting to present our case along with Sydney, Australia. Delegates from ASUM had previously made a presentation to the Council the previous year in Orlando, an opportunity not afforded to the EFSUMB bid.

Review of the proceedings in Nashville and the ASUM bid document suggested that the decision would not be straightforward, and factors other than suitability of the Congress facilities and the ability of the host Society to hold a successful meeting would also be important. There was some discussion as to whether it was worth continuing to invest time and effort in the bid proposal but it was felt that if we were going to make a bid we should make the best possible effort to succeed and we therefore made a big effort to submit a bid which would be competitive with Sydney.

Subsequent Development of Bid Proposal

Following review of the presentations in Nashville it was agreed to review our bid proposal in order to highlight the amount of sponsorship on offer, and the capacity of the conference facilities to hold the meeting. In addition, in Spring 2003, the decision to proceed with extending the exhibition space at EICC was confirmed, and a «fly through» video of the new arrangements was made available. A completely new bid document and presentation were produced in order to emphasise the advantages of bringing the Congress to Edinburgh, the ability of BMUS/EFSUMB to manage a successful Congress, and the financial aspects of the proposal, including sponsorship/subsidies which amounted to \$99,000.

Montreal Presentation

We were invited to make our formal bid proposal at the end of the Council meeting held in Montreal just before the 2003 WFUMB Congress. The same team (PLA, EC, DP, JB) attended to make the presentation. This seemed to go satisfactorily, the only questions relating to the availability of hotel rooms during the end of the Festival and immediately thereafter. After a short period for discussion we were called back to be told that Sydney had been awarded the Congress.

Reflections on the Experience

Discussion with several members of the Council raised the following points:

1. There was a clear preference to go to Sydney when the vote was taken.
2. Sydney had put together a highly professional bid based on the Sydney Convention Bureau's previous experience of attracting Congresses (and the Olympics) to the city. Their bid included subsidised places for registrants from poorer countries and this was very attractive to the Council. In the end, the overall package on offer from Sydney was considerably more attractive to the Council than ours. This more than outweighed the relative disadvantage of holding two Congresses in the same segment of the globe in 2006 and 2009.
3. The impression was that Sydney was a strong favourite even before the presentations, and we would have had to have had a stupendous argument in our bid in order to turn this around.

The Future

It was suggested that we resubmit our bid for 2012 but careful consideration will need to be given to this proposal.

1. An EFSUMB bid might have some sympathy in the light of our failure for 2009 but it will be a new Executive and Council in 2006 when the decision is made.
2. The selection process will have to start again from the beginning. Should BMUS decide to make a bid then a location will need to be chosen and proposed to EFSUMB. EFSUMB may also receive bids from other European Societies and a preferred candidate will need to be selected so that a formal proposal can be presented in Seoul in 2006 (and possibly any other meetings that WFUMB Council may suggest)
3. In terms of financial expenditure, there have been significant costs incurred by both BMUS and the ECB. In addition EFSUMB paid for David Pilling's expenses for Nashville and Montreal. Had we been successful, these could have been set against the budget for the meeting and the benefits to Edinburgh from delegate expenditure. As we were unsuccessful, these costs will now have to be found from our existing budgets. There is also

a significant time factor for those involved in development of the bid.

4. It would be useful if the bid process could be restricted to the basic proposals in the byelaws, with written proposals being circulated as appropriate, but only a single bid presentation being required, as this would have reduced our costs significantly.
5. We may want to consider whether the kudos from holding the Congress is worth the time, money and effort involved in bidding and organisation, especially as the number of delegates over and above our normal number may be only 5–800, or so.

Conclusion

After all the time, effort and hope expended in developing our bid for WFUMB 2009 in Edinburgh, it is disappointing to fail. However, I think that we as individuals, as a Society and a Convention Bureau have learnt a lot from this process. We have also made new friends and had a fairly enjoyable time along the way.

P L Allan D Pilling J Bates (on behalf of BMUS)
June 2003

10TH WFUMB CONGRESS, MONTREAL – SOME PERSONAL REFLECTIONS

The 10th Congress of the World Federation for Ultrasound in Medicine and Biology was held in Montreal, Canada between the 1st and 4th June this year. It was my first visit to Montreal, and therefore I did not know quite what to expect. My trip started rather well when I (apparently together with several other WFUMB delegates) was upgraded to Club Class by British Airways, which meant that I arrived in Montreal in good shape and good spirits. On arrival the weather was rather disappointing particularly since we had left the UK in glorious sunshine (a fairly rare event I might say), but everything went very smoothly during my transfer by taxi to one of the hotels recommended by the conference organisers. That smooth transfer set the pattern for the rest of the meeting, with an excellent shuttle bus service running between the major hotels and the conference centre at very frequent intervals (although most hotels seemed to be within easy walking distance of the conference centre, and there is also an excellent metro system with an exit in the conference complex).

The conference proper started on the Sunday with various opening festivities including an excellent keynote address by Timothy Johnson on «Medicine and the Media», which although reflecting on issues in the USA, was extremely thought provoking. Following the more serious business we were treated to entertainment by the 'cappella' group Malaika, one of whom informed us that there are only two seasons in Canada - Winter and July, which given the then current weather struck a particular chord. Finally we were treated to some excellent refreshments in the Exhibition Hall which gave us a first opportunity to view the many stands.

The main scientific sessions were held from Monday to Wednesday. The conference venue (the Palais des Congrès des Montréal) proved to be an excellent venue, and easily accommodated the 8-10 parallel sessions occurring at any one time. My one gripe was in terms of the lack of centralised AV facilities which meant that every presenter had to use their own lap-top for their presentation – I, as usual, turned up with my presentation on a CD only to be told there were no facilities to deal with this, and the most helpful suggestion they could make was that I could go out and hire a lap-top. Fortunately the President of EFSUMB came to my rescue and lent me his! The programme itself was excellent, I was never at a loss to find a session I wanted to attend, and on many occasions was torn between more than one. Unfortunately slightly erratic time-keeping meant that it was difficult to move from one session to a parallel one in a planned way. It would be inappropriate for me to comment on all the sessions I attended, but two particularly stick in my mind. The first was a session on the History of Medical Ultrasound that was chaired by Peter Wells, and was fascinating both because of the talks, but also because of the extraordinary number of true pioneers of Me-

dical Ultrasound who were in the audience. Much of the content of this session, together with many historical reviews reprinted from Ultrasound in Medicine and Biology, and other historical material has been collected together by WFUMB and is available on a CD. The second session I would mention was that on telemedicine, which I felt represented the other end of the historical spectrum in that it very much related to the future of diagnostic ultrasound.

Whilst not attending the scientific sessions there was much to see in the technical exhibition, and the thing that particularly struck me was not in terms of representation from the major companies, but was how many small stands were there from relatively minor concerns. It did make me wonder whether there was something we could do to encourage attendance by many more small firms at Euroson meetings.

The biggest sadness of the meeting was of course the failure of EFSUMB to win the competition to hold the 2009 WFUMB meeting in Edinburgh, Scotland. I know there will be reports elsewhere in this newsletter of this, and therefore I will just report on the tremendous sense of disappointment shared by the BMUS team who had put so much time, effort (and indeed money) into trying to bring the WFUMB meeting to Europe. Without a doubt they did a tremendous job on behalf of EFSUMB, and we are very grateful to them.

I could not end these personal reflections without commenting on the city of Montreal. It proved to be an excellent venue for a meeting. To me it seemed to combine some of the best aspects of Europe and North America, the restaurants in particular were excellent, but the strongest impression I gained was of how friendly the inhabitants are, and how people were prepared to go out of their way to help someone who was obviously a tourist. One area where their help was to no avail however, was in locating a good source of Canadian wine in the city itself, and therefore I had to wait until returning to the airport to buy my fix of Niagara Peninsular wine!

In summary Montreal was excellent venue, the quality of the scientific sessions extremely high and the organisation generally very good. I thoroughly enjoyed the meeting, learnt a lot, met many old friends, and hopefully gained a few new ones. There were many concerns before the meeting that there might be problems related to the SARS outbreaks (particularly in Toronto), and although this undoubtedly did reduce attendance, the meeting was, I thought, highly successful, and despite our disappointment over the failure of the Edinburgh bid, one I will look back on with fondness.

David H Evans – EFSUMB President-Elect.

EUROPEAN COMMITTEE OF MEDICAL ULTRASOUND SAFETY (ECMUS)

This document is the 2003 revision of the EFSUMB Clinical Safety Statement. A Safety Statement has been published by EFSUMB annually since 1994. The text is deliberately brief, and gives a concise overview of safety in the use of diagnostic ultrasound. The 2003 Statement is only the third revision of the Statement, the previous revisions being those published in 1998 and 2002. The new text has only been slightly modified from the 2002 Statement. The revision of the text reflects changes in technology and practice, characterising our rapidly developing modality. The ECMUS group plans a new revision in 2004.

CLINICAL SAFETY STATEMENT FOR DIAGNOSTIC ULTRASOUND

Diagnostic ultrasound has been widely used in clinical medicine for many years with no proven deleterious effects. However, as the use of ultrasound increases, with the introduction of new techniques, with a broadening of the medical indications for ultrasound examinations, and with increased exposure, continuous vigilance is essential to ensure its continued safe use.

A broad range of ultrasound exposure is used in the different diagnostic modalities currently available. Doppler imaging and measurement techniques may use higher exposures than those used in B- and M-modes, with pulsed Doppler techniques having the potential for the highest levels.

The recommendations contained in this statement assume that commercial ultrasound equipment conforming to international safety standards is being used, and that it is used prudently, by competent personnel who are trained in safety matters.

B- and M-modes

Based on scientific evidence of ultrasound induced biological effects to date, there is no reason to withhold B- or M-mode scanning for any clinical application, including the routine clinical scanning of every woman during pregnancy. Some techniques, such as tissue harmonic imaging and coded excitation, may use higher exposures than conventional imaging. The user is advised to monitor the TI and MI values on the screen and to avoid unnecessarily high values and prolonged exposure times. Scanning for 3D imaging does not introduce any additional safety considerations.

Doppler modes (Colour Flow, Power Doppler Imaging and Spectral Pulsed Doppler)

Exposures used in these Doppler modes are commonly higher than for B- and M-modes. The highest powers, and therefore the greatest potential for thermal effects, occur in Spectral Pulsed Doppler mode at high settings of the output power and scale controls and

in Doppler imaging modes when using narrow or deep colour boxes.

The informed use of Doppler ultrasound is not contra-indicated. However, at maximum machine output settings, significant thermal effects at bone surfaces cannot be excluded. The user is advised to monitor the TI and MI values on the screen, and to act prudently to limit these, and exposure times, when scanning sensitive structures and regions of bone and gas.

Doppler for fetal heart monitoring (CTG)

The power levels used for fetal heart monitoring (CTG) are sufficiently low that the use of this modality is not contra-indicated, on safety grounds, even when it is to be used for extended periods.

Gas-filled contrast agents

Particular safety considerations are associated with the use of gas-filled contrast agents. High values of Mechanical Index should be used only when required for a particular clinical study.

Ultrasound exposure during pregnancy

The embryonic period is known to be particularly sensitive to any external influences. Until further scientific information is available, investigations should be carried out with careful control of output levels and exposure times.

With increasing mineralisation of the fetal bone as the fetus develops the possibility of heating fetal bone increases. The user should prudently limit exposure of critical structures such as the fetal skull or spine, particularly during Doppler studies.

Safety considerations for other organs

Particular care should be taken to reduce the risk of heating during investigations of the eye. Extra care is also appropriate when carrying out neonatal cardiac and cranial investigations.

Copenhagen 2003.

ECMUS LITERATURE REVIEWS

Deane C, Lees C. Doppler obstetric ultrasound: a graphical display of temporal changes in safety indices. *Ultrasound Obstet Gynecol* 2000; 15: 418–23.

The responsibility for the safe use of ultrasound remains with the operators of ultrasound devices. Users require clear boundaries within which to operate, and guidelines from official bodies are often difficult to use in clinical settings. The safety display indices on the screen are of some help, but the duration of the scan is rarely, if ever, recorded. This paper suggests how temporal changes in safety indices might be displayed in order to monitor exposures.

The method is quite simple, but on the other hand it is laborious, and therefore difficult to use in a clinical setting. The authors analysed video tape recordings of fetal scans performed with an Acuson Aspen ultrasound scanner with a 3 MHz curvilinear array between 24 and 34 weeks of gestation. They analysed the duration of each mode used, the thermal and mechanical indices displayed, overall elapsed time including non-scanning time, and specific site of investigation within the examination.

Representative results from individual scans were presented in the paper. The display charts showed the duration and frequency of use of B-mode, colour and pulsed wave Doppler and the duration of non-scanning time. Beneath were the corresponding displays of the mechanical index (MI) and thermal index (TI). The displayed charts allow a rapid «at a glance» assessment of the duration of the scan and the TI and MI values throughout.

This paper deserves highlighting, not because it is of great scientific value or gives new insight into the problems of medical ultrasound safety, but because it proposes a means for helping the clinician to understand the exposure profile of an individual patient. Producing display charts would be of value for operators undergoing training in Doppler applications. It would also identify poor practice where there is prolonged exposure at high output levels.

A useful development of this idea would be if exposure information could be incorporated into the software of ultrasound scanners. A display chart could then be presented on the screen (or printed out) after each scanning session. This would serve two purposes: to maintain a record of an individual patient's exposure to ultrasound and to allow the operator to assess the effect of machine settings and scanning technique on the TIs and MIs.

Wible JH, Galen KP, Wojdyla JK, Hughes MS, Klivanov AL, Brandenburger GH. Microbubbles induce renal hemorrhage when exposed to diagnostic ultrasound in anaesthetised rats. *Ultrasound Med Biol.* 2002 Nov–Dec; 28 (11–12): 1535–46.

Diagnostic ultrasound has been shown to activate echo contrast agents: the diameter of the micron-sized bubbles can expand several fold, and their collapse can cause petechial haemorrhage by rupturing the wall of a capillary. ECMUS literature reports 1,2 addressed this topic recently. The obvious question as to how widespread echo contrast induced petechial haemorrhage might be in the body has not been examined, and quantitative data on this topic have not been

available. The recent study by Wible et al. provides some progress in this direction.

The authors used a Sonos 5500 clinical ultrasound imaging system from Hewlett Packard with phased-array transducers. The peak positive and negative pressures at a range of 1.5 cm were measured and are tabulated for the three frequencies (1.8 MHz, 4 MHz, and 6 MHz), and the four displayed Mechanical Index values (MI 0.4, MI 0.8, MI 1.2, MI 1.6) used in the study. The highest peak positive pressure of 2.4 MPa, with an associated peak negative pressure of 2.5 MPa, was for a frequency of 1.8 MHz and a displayed MI of 1.6. In this large study, the authors quantified haemorrhage in the kidney in 300 Sprague-Dawley rats. All experiments were conducted according to a standardised protocol. Each rat was injected via arterial catheter with 4x10⁷ microbubbles/kg and one kidney, randomly chosen left or right, was exposed for 5 minutes to continual imaging sweeps at a frame rate of 30 Hz. After a 30-minute pause the same number of microbubbles was injected again, and the contralateral kidney was exposed for 5 minutes, this time to intermittent imaging sweeps at a 1 Hz frame rate. The experiment was then terminated and the kidneys were fixed. Haemorrhage at the renal surface was scored in a blinded manner by two observers. In addition, the kidneys were sectioned, and the area of the external renal surface that was morphologically altered was quantified by image analysis.

The authors looked at the effects of six factors altogether. The first three were frequency, MI and of frame rate, as mentioned above.

The fourth factor was microbubble type. Three preparations of microbubbles were employed which differed in their chemical composition. All three were filled with perfluorocarbon gas.

The fifth factor was insonation time, to determine when a pathological change first appeared.

The sixth factor was microbubble dose in relation to the lesion extent.

The major findings of the study were petechial and continuous haemorrhage at the outer renal surface and bleeding into proximal tubules. Damage to vascular walls was not a prominent observation.

The following results were obtained for these six factors:

1. MI had a strong influence on renal lesions. Lesions appeared first at MI 0.8 and increased strongly at higher MI. At MI 1.6, up to 40% of the renal surface area was haemorrhagic.
2. Frequency had a clear influence. At 1.8 MHz, 40% of the renal surface area was haemorrhagic. There was no haemorrhage at 6 MHz.
3. Frame rate had a clear influence. Intermittent sound sweeps at 1 Hz caused significantly more damage than continual sweeps at 30 Hz. 40% of the renal surface was damaged for intermittent sweeps at 1 Hz compared to less than 5% for continual sweeps at 30 Hz.

ECMUS LITERATURE REVIEWS

1. The type of microbubble preparation had no influence. All three preparations produced similar lesions.
2. Insonation time: the first lesions appeared after 15 seconds and were fully present after one minute.
3. Lower doses (fewer microbubbles injected) caused less tissue damage.

Comment

This is a landmark study. It is the first study where tissue damage from an echo contrast agent has been quantified by image analysis. The extent of haemorrhage was clearly larger than in reports previously reviewed by ECMUS. It is of a type very similar to the petechial haemorrhage seen at the renal surface after shock wave application for litho-

tripsy. The effects were produced with the target organs only 1 cm from the transducer, and one cannot conclude that similar changes occur during ultrasound exposures involving microbubbles in humans.

References

1. ECMUS Literature review, EFSUMB Newsletter 2001: Direct in vivo visualisation of intravascular destruction of microbubbles by ultrasound and its local effects on tissue. Skyba DM, Price RJ, Linka AZ et al. Circulation 1998; 98: 290–293.
2. ECMUS Literature review, EFSUMB Newsletter January 2003: Miller DL and Quddus J. Diagnostic ultrasound activation of contrast agent gas bodies induces capillary rupture in mice. Proc Nat Acad Sci 200; 97: 10179–84.

MSC IN MEDICAL ULTRASOUND FULL-TIME/PART-TIME

(specialising in echocardiography, general ultrasound, physics or vascular ultrasound) – Imperial College School of Medicine – Hammersmith Campus



Applications are invited for a full-time one year, or part-time two year course in diagnostic medical ultrasound, specialising in echocardiography, general ultrasound, obstetrics and gynaecology*, physics or vascular ultrasound, and leading to the University of London MSc degree in Medical Ultrasound. The course will commence in October 2004, and will provide clinicians and medical scientists with intensive training in both the theoretical basis of the subject and the required scanning and diagnostic skills. The faculty will include many internationally recognised experts in medical ultrasound.

The aim of the course is to provide a solid basis in the subject for a range of careers in medical ultrasound including research, investigative services or teaching.

The course comprises lectures, seminars, practical demonstrations and training and includes a research project, which will be designed to allow the student to make an original contribution in the chosen area of research. Current research studies are in the uses of contrast agents, three and four-

dimensional imaging and image and signal processing.

The course will be suitable for applicants with first degree or equivalent in medicine, biological, engineering or physical science or other appropriate subject. Previous experience in medical ultrasound would be an advantage.

(* subject to approval)

Informal enquiries to Mr. K. Humphries (Tel. +44 (0)20 8383 2210; email: k.humphries@ic.ac.uk), Professor D. Cosgrove (d.cosgrove@ic.ac.uk) (general ultrasound), Dr. P. Nihoyannopoulos (petros@ic.ac.uk) (echocardiography) or Dr. M. Aslam (maslam@hhnt.org) (vascular ultrasound) are welcomed. Applications for admission to the course should be made as soon as possible.

Application packs and further details are available from:

Imperial College of Science, Technology & Medicine, Registry, South Kensington Campus, Level 3, Sherfield Building, Exhibition Road, London, SW7 2AZ, Tel: +44 (0)207 594 8089, Fax: +44 (0)207 594 8004, Email: pgmedreg@ic.ac.uk

DIARY DATES

October 8–10, 2003

Vascular Medicine 2003 – 15th congress of the European Chapter, the French Society of Vascular Medicine, the European Federation of Societies of Ultrasound in Medicine and Biology. Contact: Europa Organisation, 5, rue Saint-Pantaléon – BP 844, 31015 Toulouse cedex 6 (France), Tél.: +33 5 34 45 26 45, Fax: +33 5 34 45 26 46 (or 47), E-mail: europa@europa-organisation.com, www.medvasc-2003.com

October 2003

Medical Ultrasound Awareness Month. This is a collaborative effort of the AIUM, ASE, SDMS and DSVU. The goal of Medical Awareness Month is to increase the public's knowledge about medical ultrasound. For more information on this or a free Medical Ultrasound Awareness Month information kit, please contact any of the following sponsoring organisations. American Institute of Ultrasound in Medicine (AIUM) Tel: 301 498 4100 Website: www.aium.org American Society of Echocardiography (ASE) Tel: 919 861 5574 Website: www.asecho.org Society of Diagnostic Medical Sonography (SDMS) Tel: 214 473 8057 Website: www.sdms.org, Society for Vascular Ultrasound (SVU) Tel: 00 1 301 459 7550 Website: www.svunet.org

October 1–3, 2003

The 5th British Musculoskeletal Ultrasound Course, Weetwood Hall, Leeds, Contact: Mrs Gill Bliss, Course Secretary, MRI Dep., B Floor, Clarendon Wing, Leeds General Infirmary, Great George Street, Leeds, LS1 3EX. Tel: 00 44 113 3923768, Fax: 00 44 113 3928241, Email: gillian.bliss@leedsth.nhs.uk

October 4, 2003

BMUS Study Day «Getting the Best out of Your Scanner», Bristol Royal Infirmary. Contact Mrs E Brown, BMUS office, 36 Portland Place, London W1B 1LS. Tel: 00 44 (0)20 7636 3714, Fax: 00 44 (0) 20 7323 2175 Email: secretariat@bmus.org

November 6, 2003

BMUS Study Day An Introduction to Current Practice in Cardiac Ultrasound, British Institute of Radiology, London. Contact: Mrs E Brown, BMUS office, 36 Portland Place, London W1B 1LS. Tel: 00 44 (0)20 7636 3714 Fax: 00 44 (0) 20 7323 2175 Email: secretariat@bmus.org

November 30 – December 5, 2003

89th Annual Meeting of the Radiological Society of North America, (RSNA) at Chicago, USA. Contact: Steven T Drew, Executive Director, 820 Jorie Boulevard, Oak Brook, IL 60523-2251, USA. Tel: 00 1 630 571 2670, Fax: 00 1 630 571 7837

December 10 – 12, 2003

35th BMUS Annual Scientific Meeting and Exhibition, Harrogate. Contact: Mrs E Brown, BMUS office, 36 Portland Place, London W1B 1LS. Tel: 00 44 (0)20 7636 3714 Fax: 00 44 (0) 20 7323 2175 Email: secretariat@bmus.org

March 20, 2004

Special Workshop – «Ultrasound and Breast Cancer: current status and future trends». A workshop presented by the International Breast Ultrasound School (IBUS) in partnership with the 4th European Breast Cancer Conference. CCH Congress Centrum Hamburg. Contact: IBUS at info@ibus.org

June 5, 2004

IBUS – International Breast Ultrasound Seminar. A lecture and workshop programme in conjunction with EUROSON 2004, Zagreb, Croatia. Contact: IBUS at info@ibus.org

June 6–9, 2004

EUROSON 2004, 16th EFSUMB Congress, Zagreb, Croatia in conjunction with CSUMB. Contact: HKO Lascinska cesta 94, HR – 10000 Zagreb, Tel: 00 385 1 236 0052 / 00385 1 2347661, Fax: 00 385 1 234 76 63, Email: congress@hko.hr, Website: http://www.euroson2004.com

June 14–16, 2004

XIX European Congress of Perinatal Medicine, Athens, Greece. Contact: C&C International S.A., 16 Paradissou Str., 151 25 Athens, Greece. Tel: 00 30 210 688 9100, Fax: 00 30 210 684 4777, Email: perinatal2004@cnc.gr, Website: www.cnc.gr

October 6–10, 2004

Ultraschall 2004 – Dreiländertreffen – Hannover Congress Centrum, D-30175 Hannover. Contact: CPO HANSE SERVICE, Hanse & Co GmbH, Zum Ehrenhain 34, D-22885 Barsbüttel, Tel: 00 (0)40 670 88 20, Fax: 00 (0)40 670 32 83, Email: hamburg@cpo-hanser.de

December 8–10, 2004

36th BMUS Annual Scientific Meeting and Exhibition, Manchester International Convention Centre. Contact: Mrs E Brown, BMUS office, 36 Portland Place, London W1B 1LS. Tel: 00 44 (0)20 7636 3714, Fax: 00 44 (0) 20 7323 2175 Email: secretariat@bmus.org

June 26–29, 2005

EUROSON 2005, 17th EFSUMB Congress: Palexpo, Geneva, Switzerland, in conjunction with the Dreiländertreffen at the Palexpo Geneva. Contact: Scientific Secretariat: Prof François Terrier, Radiologie Hôpital Cantonal Universitaire Genève 1211, Genève 14, Switzerland, Tel: 00 41 22 3727001, Fax: 00 41 223 727047, Email: francois.terrier@hcuge.ch

VASCULAR MEDICINE 2003

15th European Chapter Congress of the International Union of Angiology
OCTOBER 8–10, 2003 TOULOUSE, FRANCE

EFSUMB SESSIONS Organized by the European Federation of Societies of Ultrasounds in Medicine & Biology

QUALITY CONTROL OF ULTRASOUND IN VASCULAR PATHOLOGY: «PERIPHERAL VEINS»

Chairperson: JAEGER K. (Basel, Switzerland)

- COLERIDGE SMITH P. (London, United Kingdom)
- Deep venous system: criteria for disease classification, diagnostic accuracy
CARPENTIER P. (Grenoble, France)
- Superficial venous system: criteria for disease classification, diagnostic accuracy.
JAEGER K. (Basel, Switzerland)
- Clinical impact of these findings, complementary information gained from other imaging modalities.
COLERIDGE SMITH P. (London, United Kingdom)

QUALITY CONTROL OF ULTRASOUND IN VASCULAR PATHOLOGY: «CEREBROVASCULAR»

Chairperson: DEANE C. (London, United Kingdom)

- Cerebrovascular ultrasound: problems and solutions in ultrasound measurement of carotid disease.
DEANE C. (London, United Kingdom)
- Study of the acute stage of stroke by transcranial Doppler.
DE BRAY J.M. (Angers, France)
- New and future techniques: how can we identify the at-risk patient for early and effective therapies?
DROSTE D.W. (Luxembourg, Luxembourg)
- Ultrasonic plaque characterisation: its value on risk assessment for cardio-vascular events and stroke.
NICOLAIDES A. (Nicosia, Cyprus)
- Plaque echostructure and clinical events.
FERNANDES e FERNANDES J. (Lisboa, Portugal)

QUALITY CONTROL OF ULTRASOUND IN VASCULAR PATHOLOGY: «RENAL ARTERIES»

Chairperson: CLAUDON M. (Nancy, France)

- JOFFRE F. (Toulouse, France), PLOUIN P.F. (Paris, France)
- Echographic criterias for the classification and

grading of stenoses.

CLAUDON M. (Nancy, France)

- Doppler ultrasonography of renal artery in hypertensive patients: clinical and therapeutic considerations.
CHAMONTIN B., AMAR J., GUITTARD J., BOUHANICK B., BATTISTON T., HANNOUN J., SALVADOR M. (Toulouse, France)
- Alternative techniques, complementary information gained from other imaging modalities, future developments.
HERBORN C.U. (Essen, Germany)

QUALITY CONTROL OF ULTRASOUND IN VASCULAR PATHOLOGY: «VISCERAL ARTERIES AND VEINS»

Chairperson: BOLONDI L. (Bologna, Italy)

- Portal venous system, hepatic and splenic arteries in portal hypertension.
GAIANI S. BOLONDI L. (Bologne, Italy)
- Mesenteric ischemia.
DANSE E. (Brussels, Belgium)
- Clinical impact of ultrasound exams and alternative techniques.
BOLONDI L. (Bologne, Italy)

QUALITY CONTROL OF ULTRASOUND IN VASCULAR PATHOLOGY: «PERIPHERAL ARTERIES»

Chairperson: HOFFMANN U. (Munich, Germany)

- Grading of peripheral arterial stenoses: reliability and diagnostic accuracy of duplex scanning.
UBBINK D.T. (Amsterdam, Netherlands)
- Impact of duplex scanning on the management of patients with peripheral arterial disease.
HOFFMANN U. (Munich, Germany)
- Duplex scanning in the age of magnetic resonance and CT angiography: what information do we need for decision making in peripheral arterial disease?
BILECEN D. (Basel, Switzerland)

FOR FURTHER INFORMATION PLEASE VISIT:
www.medvasc-2003.com

Vascular Medicine 2003



15th EUROPEAN CHAPTER CONGRESS
of the INTERNATIONAL UNION of ANGIOLOGY

CONGRÈS NATIONAL
de la SOCIÉTÉ FRANÇAISE de MÉDECINE VASCULAIRE

With the participation of the
EUROPEAN FEDERATION of the SOCIETIES
of ULTRASOUND in MEDICINE & BIOLOGY



October 8-10 2003

Toulouse, France, Centre de Congrès Pierre Baudis

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Deadline for abstracts submission: April 30th, 2003

Congress website:
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Scientific information / Informations scientifiques

Pr. BOCCALON H. / Dr. LÉGER Ph.
CHU Rangueil, Service de Médecine Vasculaire
1, avenue Jean-Poulhès, TSA 50032, 31059 Toulouse cedex 9 - France
Tel: +33 5 61 32 24 38 - Fax: +33 5 61 32 26 34 - e-mail: cgvasc@chu-toulouse.fr

General information / Informations générales

EUROPA ORGANISATION
5, rue Saint-Pantaléon - BP 844
31015 Toulouse cedex 6 - France
Tel: +33 5 34 45 26 45 - Fax: +33 5 34 45 26 46/47 - e-mail: europa@europa-organisation.com