



WSSFN

World Society for Stereotactic and Functional Neurosurgery

NEWSLETTER

SUMMER 2012

LETTER FROM THE PRESIDENT



Dear Members,

The Interim Meeting of our Society took place successfully in Cape Town in the end of November 2011. This was the first meeting specialized in functional neurosurgery in the African continent. There were 224 attendees including 99 from Africa. Thirteen travel grants were awarded to young neurosurgeons from African countries. I believe this meeting stimulated many African doctors to start functional neurosurgery.

More good news is that it was decided that all the members of European Society for Stereotactic and Functional Neurosurgery will automatically be enrolled as members of the World Society. I hope this will strengthen our activities very much.

LETTER FROM THE VICE-PRESIDENT

Dear Members,

The year 2011 has been quite remarkable for WSSFN with regard to several aspects: achieving a wider international scope and outreach, securing the rising prestige of our journal Stereotactic and Functional Neurosurgery, and seeing a steep increase in membership by integrating the membership of the European Society of Stereotactic and Functional Neurosurgery (ESSFN) along with those of ASSFN under one umbrella.

Historically, the International Society of Research in Stereoccephalotomy was the major international society in our area of added competence throughout the 1960s (see Gildenberg and Krauss: History of the stereotactic societies. In Textbook of Stereotactic and Functional Neurosurgery, eds Lozano, Gildenberg, Tasker, 2009). In 1968, an American branch was established in Atlantic City, New Jersey. Shortly thereafter, in 1970, during the fifth International Symposium on Stereoccephalotomy which was hosted by Riechert and Mundinger in Freiburg, Germany, ESSFN was founded by Mundinger, Hitchcock, and others. At their sixth meeting in Tokyo, in 1973, the International Society of Research changed its name to WSSFN, and the American branch became the ASSFN. The split of the societies was made. The constitution and by-laws of ASSFN assured that each ASSFN member was also a member of WSSFN, but this was not foreseen for ESSFN. This meant also that ASSFN members as well as individual WSSFN members (those who were not ASSFN members) automatically were subscribed to the journal Stereotactic and Functional Neurosurgery, but not ESSFN members.

ASSFN along with WSSFN and ESSFN always had friendly relationships and all tried to coordinate their meetings in order to avoid

I am pleased to announce that the 16th quadrennial meeting of the World Society of Stereotactic and Functional Neurosurgery will be held in Tokyo, Japan from May 27-30, 2013. With the rapid developments in Stereotactic and Functional Neurosurgery, the meeting promises to be an important forum for the presentation of cutting edge research and for open and lively discussions and interactions among colleagues and friends. The meeting will be held at Hotel Nikko Tokyo in the bayside area of Tokyo. This is an outstanding facility which is modern yet exudes traditional Japanese charm. Please save the date, and I very much look forward to welcoming you to Tokyo.

Yours sincerely,
President, WSSFN
Takaomi Taira, MD, PhD

having congresses at the same time. From a personal note I should mention that I always wondered what could be done to bring the three organizations again closer together and thus ease international communication and strengthen their overall positions. When I became an ASSFN and WSSFN member in 1995 and an ESSFN member in 1997, I recognized this issue could only be tackled by looking at it from various angles and by approaching it from the different sides involved. Now, the goal has finally been achieved with the help from numerous friends from both sides of the Atlantic and beyond. The first step was to establish Stereotactic and Functional Neurosurgery as the official journal of ESSFN as well, and the second step was to ensure that WSSFN would welcome ESSFN to join.

Since January 2011, Stereotactic and Functional Neurosurgery is the official journal of WSSFN, ASSFN and ESSFN, and it has been decided meanwhile to continue this successful endeavour. Finally after long negotiations over several years, since January 2012, all ESSFN members are also members of WSSFN. A mutual agreement has been achieved upon the occasion of the last officers meeting of the WSSFN in Capetown, South Africa, in November 2011. This means a net increase of more than 270 members in WSSFN (not included those who were already individual WSSFN members before). Appropriate changes have been made to the constitution and by-laws of the societies.

The "new deal" certainly will open the possibility for other continental stereotactic and functional neurosurgical societies to join WSSFN as well. Interest has been expressed already by the Japanese society and the South-American society. We are looking forward to a bright and powerful future of international stereotactic and functional neurosurgery.

Joachim K. Krauss
Hannover, Germany
Vice President WSSFN

LETTER FROM THE EDITOR

Welcome to the summer edition of the newsletter. Our featured young functional neurosurgeon in this issue is Mojgan Hodaie, on page 2. We also discuss the ongoing efforts to grow the society through the outreach program, the most recent interim meeting, and an article on deep brain stimulation for antisocial behavior. We hope this update is helpful, and as always, we are dependent on the membership for suggestions as to what material should be included. Please send us your requests and submissions!

TABLE OF CONTENTS

Featured Neurosurgeon.....	2
WSSFN Ohye and Tsubokawa Awards.....	2
11th Biennial ISRS Congress	3
WSSFN Interim Meeting in Cape Town.....	3
Deep Brain Stimulation for Antisocial Behavior?.....	3
Membership report.....	4
WSSFN Outreach Program.....	4
Upcoming Events.....	4

patient care

teaching

research

Founded in 1961 as the International Society for Research in Stereoccephalotomy

FEATURED NEUROSURGEON:



MOJGAN HODAIIE, MD

Dr. Hodaie obtained her degree in medicine from Queen's University in 1996, graduating with the highest overall standing in her class. Subsequent to that, she pursued her residency training in neurosurgery at the University of Toronto. Her postdoctoral research fellowship involved the study of deep brain stimulation of the thalamus for the control of epilepsy, focusing on clinical aspects as well as the electrophysiology of the anterior thalamic nucleus. After obtaining her fellowship from the Royal College of Physicians and Surgeons of Canada as well as subspecialty training in stereotactic and functional neurosurgery at the University of Toronto, she started her position as neurosurgical faculty at the Toronto Western Hospital, Division of Neurosurgery in 2004.

Early on in her academic career Dr. Hodaie helped implement the Gamma Knife radiosurgery unit in Toronto, and has been an avid participant focusing on the role of radiosurgery in the treatment of functional neurosurgical conditions. She is currently the surgical co-director of the Joey and Toby Tanenbaum Family Gamma Knife Centre at the Toronto Western Hospital, where treatment of trigeminal neuralgia features as one of the most common indications. Her current practice in stereotactic and functional neurosurgery involves a wide spectrum of conditions, including deep brain stimulation for movement disorders, spinal cord stimulation, surgical treatment of trigeminal neuralgia and Gamma Knife radiosurgery. Additionally, Dr. Hodaie has had a strong role in the recent implementation of an adult Baclofen pump program in Toronto, in collaboration with the Toronto Rehabilitation Institute.

Dr. Hodaie has an active research lab that focuses primarily on structural MRI imaging in functional neurosurgery. She has published key papers in the area including methods of tractography of cranial nerve fibers as well as three-dimensional modeling of the cranial nerves surrounding acoustic neuromas. Most recently, her lab has published a novel method of diffusion tensor MR based imaging of the lesional signature of Gamma Knife radiosurgery in patients with trigeminal neuralgia. Other research projects in her laboratory include cortical thickness analysis of patients with surgical pain disorders, tumor volumetrics and three-dimensional analysis as applied to Gamma Knife radiosurgery as well as development of new models and techniques in tractographic analysis of fine white matter fibers.

Early in her academic career, Dr. Hodaie became interested and involved in a number of international educational activities in neurosciences as well as neurosurgery education. She has been an Affiliated Global Faculty (AGF) of BIHE online university and is currently the coordinator of the online masters program in neuroscience, the first of its kind. Most recently, she spearheaded the use of an online method of structured courses in neurosurgery, which have been implemented for the developing world. Her work has been of substantial interest that has resulted in partnership with the World Federation of Neurosurgical Societies (WFNS) as well as the Congress of Neurological Surgeons (CNS). Her interest in neurosurgical education prompted her to undertake several trips to Africa, including the Korle Bu medical center in Accra, Ghana. There she worked with the local neurosurgical team on the implementation of a stereotactic set-up, which permits them to biopsy deep lesions in awake patients and counts as the early phase in the development of a stereotactic and functional program. The series of stereotactic cases and the steps towards the establishment of a stereotactic program were presented as a poster at the interim meeting of the WSSFN in Cape Town by the Korle Bu group, where it was voted as the best poster award.

Currently Dr. Hodaie is an Associate Professor of the Department of Surgery of the University of Toronto and an Associate member

of the Institute of Medical Sciences at the Faculty of Medicine. Dr. Hodaie is active with a number of international organizations including the AANS International Outreach committee, the CNS International committee and the WFNS collaborative committee of international initiatives. She is also a member of the scientific committee of the upcoming World Society of Stereotactic and Functional Neurosurgeons meeting in Tokyo 2013 and member of the Board of Directors.

Dr. Hodaie's personal background reflects her international interests; born in Iran, she grew up in Spain and is now a proud Canadian citizen. In May of 2012 and in recognition of her research and educational activities, Dr. Hodaie received the prestigious Bernard Langer Surgeon Scientist award by the faculty of medicine at the University of Toronto.

WSSFN Ohye and Tsubokawa Awards

The WSSFN leadership is pleased to announce two awards in honor of deceased professors Ohye and Tsubokawa. The award is \$2,500 each. The awards will be bestowed during the WSSFN congress in 2013 in Tokyo.

WSSFN Ohye Award

The aim of the Ohye award is to promote and initialize basic or clinical research projects in the field of stereotactic and functional neurosurgery. The award can be used as a start-up spark both financially and ideologically to initialize a larger research project. The applicant must be a member of the WSSFN. There is no age limit. Applicants for the award should include a short proposal of the research project (limited to 500 words) and a current curriculum vitae.



WSSFN Tsubokawa Award

The aim of the Tsubokawa award is to recognize important publications which have been published by WSSFN members in the field of functional and stereotactic neurosurgery.



The manuscript must have been published within the period from 2010-2012 in a peer-reviewed journal, or it must be available at least online in PubMed. Manuscripts not yet online or published, that is those "in press" or "accepted" are not being considered.

The applicant must be a member of the WSSFN. There is no age limit. Applicants for the award should send a copy of the publication and a current curriculum vitae.

Submission deadline for the awards is January 31, 2013. Please submit manuscripts and documentation to ttaira@nij.twmu.ac.jp or krauss.joachim@mh-hannover.de.

Selections will be made by an independent committee which will be commissioned by the WSSFN leadership.

11th Biennial ISRS Congress

The 11th Biennial ISRS Congress will be held in Toronto, Canada, 16-20 June 2013. The aim is to bring together the ever growing society of professionals around the world dedicated to the field of Radiosurgery and Stereotactic Body Radiotherapy.

Do not miss this opportunity for productive networking, learning and interactions during this high level scientific event! www.isrscongress.org

WSSFN Interim Meeting in Cape Town

WSSFN would like to extend our sincere appreciation to Dr. Roger Melvill, WSSFN Continental VP, for his excellent leadership in organizing the Interim meeting and to all those involved in the development of the meeting particularly Dr. Graham Fieggen and Dr. Sally Rothemeyer, the speakers, and the organizing group. The success of the meeting was a reflection of the dedication of the group.

Representation at the meeting was diverse including the attendance of 224; a breakdown of some areas which were represented included 22 from Africa, 14 from Asia, 8 from North America, 8 from South America, 51 from Europe, 4 from the Middle East and 77 from South Africa. Also, excellent news is that the meeting will be profitable. It has been suggested that part of the surplus could go towards further education of neurosurgeons in Africa.

For the platform presentations, 19 were selected and 17 attended; for the posters, 85 were selected and 54 attended. There were 13 travel grants awarded. Dr. Krauss was provided 3000 Euros from a patient to be used for travel grants. There was also a grant of \$10,000 from Integra Foundation for travel grants.

Comments from the planning committee and attendees indicated that the program definitely met and exceeded the objectives. Speakers worked to understand the gap between high tech and what is really available in the developing countries. Over all the attendee's comments were extremely positive. Local issues were relevant and discussion was respectful and open. Comments were also made that it was appreciated when speakers had done their home work and tailored their talks to the audience. Speakers were not patronizing and gave their talk at an appropriate level being sensitive to language differences particularly in the discussion and debates, giving those who may have differences in language time to phrase their questions or comments.

The venue was noted as excellent and the social events well received. The group enjoyed both the gala dinner venue and the faculty dinner venue including the scenic ride. Feedback from the exhibitors was very positive which is always helpful particularly when we will be contacting them for future support. It was noted that the arrangement of providing exhibitors in an area with high visibility was appreciated.

Materials including program and other handouts were all excellent. Elekta had provided a memory stick with all the abstract presentations available to attendees as part of the registration materials. It was suggested that the abstracts be placed on the web site. Access to the abstracts can be found by going to the website at www.wssfn.org and linking through the Interim meeting banner that can be found at the top of the rotating pages. Thank you again to all who made this endeavor possible!

Deep Brain Stimulation for Antisocial Behavior?

Marwan Hariz, MD, PhD
Professor of Functional Neurosurgery
UCL Institute of Neurology
Queen Square London, U.K.

Email: m.hariz@ucl.ac.uk

In a recent article in *BRAIN* by Fumagalli and Priori entitled "Functional and clinical neuroanatomy of morality" (*Brain*. 2012 Feb 13. [Epub ahead of print]), the authors provide an extensive review of the literature pertaining to involvement of various parts of the brain in cognitive and behavioural events, in both health and diseases. Then the authors write: "subcortical involvement in abnormal moral

behaviour might advance research on the therapeutic effects of deep brain stimulation in psychopathy and violent behaviour." The authors then suggest that "For instance, apart from treating aggression, deep brain stimulation might be used in other forms of pathological antisocial behaviour or violence (including sexual assaulters and paedophiles)".

So for these neuro"scientists", antisocial behaviors it a disease that would qualify for possible surgical treatment with DBS? I wonder whether dissidents in the former Soviet Union like Soljenytsine or Sakharov would have qualified for DBS?

The fact that prominent scientists today explicitly suggest the hypothetical use of deep brain stimulation as a potential surgical treatment of antisocial behaviour is fundamentally and scientifically unsound, unethical, and reminiscent of the dark ages of old era DBS. There is no need for surgical "treatment" guidelines as far as "shaping individual morality" with DBS is concerned, because in the opinion of this author, it is out of question to ever use DBS for such an "indication", no matter what functional imaging of subcortical circuitries shows. The simplistic assumption that "moral abnormality" can be reduced to malfunctioning circuitry and localised to various brain regions, and therefore would be amenable to diagnosis and treatment, including potentially by DBS, provokes in fact a strong sense of déjà vu: Delgado, a neurophysiologist and scientist from Yale published in 1969 a book entitled "Physical Control of the Mind: Toward a Psychocivilized Society", arguing the use of DBS for that purpose (Delgado, 1969). Psychiatrist Robert Heath from Tulane University in New Orleans used extensively DBS to influence behaviour, including for such purposes as inducing heterosexual behaviour in a homosexual man

**WSSFN
Quadrennial
Meeting**

May 27-30, 2013
Hotel Nikko Tokyo
Tokyo, Japan

Jointly sponsored by the:
American Association of Neurological Surgeons (AANS)

in collaboration with the:
Japan Brain Foundation and the
Tokyo Convention & Visitors Bureau

American Association of Neurological Surgeons
Jointly Sponsored by AANS

日本脳神経財団

CVB
Tokyo Convention & Visitors Bureau

www.wssfn.org
<http://www2.convention.co.jp/wssfn2013>

(Moan and Heath 1972). The practice of old times DBS, especially that of Tulane, was reviewed in a paper in the Journal of the History of the Neurosciences in 2000, entitled "The Tulane Electrical Brain Stimulation Program. A historical case study in medical ethics" and the author concluded: "The central conclusion of the present review is that the Tulane electrical brain stimulation experiments had neither a scientific nor a clinical justification...The conclusion is that these experiments were dubious and precarious by yesterday's standards" (Baumeister 2000).

Clinicians are still struggling today to improve the safety and efficacy of DBS for established neurological indications such as Parkinson's and dystonia. Besides, DBS is still in its very early infancy as an investigational surgical technique for treatment of refractory real psychiatric illnesses such as OCD and depression. While it is nice and very informative that "scientists" propose an alleged "subcortical involvement in abnormal moral behaviour", their jump from there to suggesting DBS for "pathological antisocial behaviour" is a jump in an abyss. Neurosurgeons beg to abstain from that jump.

References

1. Baumeister AA: The Tulane Electrical Brain Stimulation Program. A historical case study in medical ethics. J Hist Neurosci 2000;9:262-278.
2. Delgado JMR: Physical Control of the Mind: Towards a Psychocivilized Society. New York, Harper and Row, 1969.
3. Moan CE, Heath RG: Septal stimulation for the initiation of heterosexual behavior in a homosexual male. J Behav Ther & Exp Psychiat 1972; 3:23-30.

DISCLOSURE: Two Letters to the Editor of BRAIN, commenting on the above-mentioned paper were rejected.

Membership Report

Jason M. Schwalb, MD

On January 1, 2012, the membership of the WSSFN increased significantly thanks to the logical development of extending membership to the WSSFN to members of the European Society for Stereotactic and Functional Neurosurgery (ESSFN). The following numbers may be slightly inflated by members who belong to the ESSFN and are already members of the WSSFN or ASSFN.

With the addition of the ESSFN members, membership applications from European countries will be directed through the ESSFN secretariat, as we have done for applications from the US and

	ASSFN	WSSFN	ESSFN	Total
Active Members	244	96	276	616
Lifetime Members	45			45
Honorary Members	6	7		13
Associate - Non-neurosurgeon	13	1	6	20
Resident/Fellow Members	38	8	44	90
Outreach Program		27		27
				811

Canada through the ASSFN. We look forward to developing similar relationships with other Stereotactic and Functional Neurosurgical Societies around the world.

There are currently 27 WSSFN members from developing countries who have been offered a one year complimentary membership to WSSFN as part of our successful Outreach program and we would like to add more! Countries are classified as "developing" according to World Bank listings of low and low to middle income countries.

Karger has generously donated online subscriptions to the journal, *Stereotactic and Functional Neurosurgery*, for Outreach members.

As always, membership includes print and online subscriptions to the Stereotactic and Functional Neurosurgery and reduced registration fees for WSSFN meetings. Membership applications can be obtained via the wssfn.org website. Any questions regarding the application process can be directed to the WSSFN Administrator, Melody Dian at mdian@centurytel.net or Ashley Hamm AANS Section Membership Coordinator at aeh@aans.org.

WSSFN Outreach Program

There are still opportunities available for WSSFN membership through the Outreach Program. This program, organized by Dr. Jason Schwalb in conjunction with Karger Publications, provides a one year complimentary membership in WSSFN including a one year online subscription to the journal Stereotactic and Functional Neurosurgery for neurosurgeons in countries categorized as low-income or low-middle-income by the World Bank (<http://data.worldbank.org/about/country-classifications/country-and-lending-groups>).

The intent is to encourage neurosurgeons that might otherwise be unable to join the society to participate and teach their colleagues about the challenges of performing Functional Neurosurgery in the developing world, while taking advantage of WSSFN benefits. To date, 27 neurosurgeons have taken advantage of this opportunity.

We hope that you will reach out to those who might benefit from this opportunity and provide them with information on this program. Further information on how to apply can be found on the web site at www.wssfn.org. WSSFN administrator Melody Dian, mdian@centurytel.net can also provide assistance.

Upcoming Events:

American Society for Stereotactic and Functional Neurosurgery
6/3-6/6, 2012
San Francisco, California
www.assfn.org

European Society for Stereotactic and Function Neurosurgery
9/26-9/29, 2012
Cascais, Lisbon, Portugal

World Society for Stereotactic and Functional Neurosurgery Quadrennial Meeting
5/27-5/30, 2013
Tokyo, Japan
www.wssfn.org
www2.convention.co.jp/wssfn2013

Some Things to Note:

Visit our completely redesigned new website at www.wssfn.org

The screenshot shows the WSSFN website with a navigation bar including links for HOME, ABOUT, MEMBERS, RESEARCH, HISTORY, LINKS, and CONTACT. The main content area is titled "WSSFN Membership Outreach Program" and includes a paragraph about providing educational opportunities to neurosurgeons in the developing world. It mentions a pilot program of complimentary first-year membership for neurosurgeons applying from developing countries, as determined by World Bank criteria. It also notes that Karger is providing complimentary on-line subscriptions to Stereotactic & Functional Neurosurgery for this period. A link to "Become a Member" is visible.

A Message from the President on the 50th Anniversary of Our Society

Dear Colleagues and Friends,

Welcome to the newly revised WSSFN website. I hope that you will find it both interesting and more efficient to use. Our thanks go out to Dr. Joseph Neimat who has led the effort in making the website revisions possible along with all those who assisted him.

Our Society was founded in 1961 as the International Society for Research in Stereotactophany. I hope that our new project "The

We organized the WSSFN Psychosurgery Forum in Shanghai in March 2011 and reformed the Committee of Neurosurgery for Psychiatric Disorders. Dr. Bart Nuttin was appointed as its chairman. He is now organizing a critical review of the literatures in this field. We emphasize that "Neurosurgery for Psychiatric Disorders should internationally move forward in a responsible manner in order



WSSFN Leadership

President

Takaomi Taira, MD, PhD, Tokyo, Japan

Vice-President

Joachim K. Krauss, MD, Hannover, Germany

Secretary-Treasurer

Michael Schulder, MD, Manhasset, NY

Vice-Secretary-Treasurer

Jin Woo Chang, MD, PhD, Seoul, Korea

Historian

Philip L. Gildenberg, MD, PhD, Houston, TX

Current Board of Directors

Youssef Comair, MD, Beirut, Lebanon
Rees Cosgrove, MD, Providence, RI
Terry Coyne, MD, Queensland, Australia
Jairo Espinoza, MD, Bogota, Columbia
Marwan Hariz, MD, PhD, London, UK
Mojgan Hodaie, MD, Toronto, ON
Christopher R. Honey, MD, D.Phil, Vancouver, BC
Bart Nuttin, MD, PhD, Leuven, Belgium
Fabian Piedimonte, MD, Buenos Aires, Argentina
Jean Regis, MD, Marseille, France
Roberto Spiegelmann, MD, Tel Hashomer, Israel
Bomin Sun, MD, Shanghai, China
Hiroki Toda, MD, PhD, Osaka, Japan
Osvaldo Vilela Filho, MD, PhD, Brazil

Jürgen Voges, MD, Magdeburg, Germany

Past President

Andres Lozano, MD, PhD, Toronto ON

Continental Vice Presidents

North America

Douglas Kondziolka, MD, Pittsburgh, PA

Central & South America

Francisco Velasco, MD, Mexico, DF

Europe

Giovanni Broggi, MD, Milano, Italy

Asia/Australia

Yoichi Katayama, MD, PhD, Tokyo, Japan

Africa/Near Middle East

Roger Melvill, MD, Cape Town, South Africa

Honorary Members

Dr. Sindou, France
Dr. Tsubokawa, Japan
Dr. Gildenberg, USA
Dr. Nashold, USA
Dr. Ohye, Japan
Dr. Siegfried, Switzerland
Dr. Tasker, Canada

International Workshop on
Functional Neurosurgery: Movement Disorders, Pain, Psychiatric illness, Ethics
Queen Square, London, UK, October 11-12, 2012
<http://www.ucl.ac.uk/ion/departments/sobell/Research/UFN/Workshop2012>



List of speakers and topics

I. Physiology, Imaging

John Rothwell: *Does DBS have long-term effects on function that persist when stimulation is stopped?*
Yves Agid: *The subconscious man: the role of the basal ganglia*
Richard Frackowiak: *Functional neurosurgery and neuroimaging*

II. Basic Science, Physiology, Horizons

Hagai Bergman: *Closed loop stimulation of basal ganglia*
Peter Brown: *Novel approaches to functional stimulation in patients with movement disorders*
Alim-Louis Benabid: *Beyond DBS for functional brain disorders*

III. Movement disorders

Pierre Pollak: *Very long term effects of STN DBS*
Paul Krack: *Behavioural effects of STN DBS*
Elena Moro: *PPN DBS: Hype or hope?*
Jean Regis: *Gamma knife thalamotomy for tremor*

V. History

Andrew Lees: *Historical remarks on neurosurgery and neurology at Queen Square*
Ann Scott: *William Richard Gowers 1845-1915. Exploring the Victorian Brain*
Book Launch: *Biography of William Richard Gowers*

V. Dystonia, Pain, Ethics

Ludvic Zrinzo: *STN DBS for cluster headache*
Tipu Aziz: *DBS for Chronic pain*
Takaomi Taira: *Ablative surgery for dystonia*
Paul Ford: *Clinical ethics of ablation vs. DBS in psychiatric illness*
Emily Bell: *Research & guidance informing ethical & social challenges in DBS*

VI. OCD, Tourette

Luc Mallet: *STN DBS for OCD & GPi DBS for Gilles de la Tourette: Long term results*
Benjamin Greenberg: *DBS and ventral capsule lesions for OCD*
Bart Nuttin: *Targeting and long-term effect of DBS for OCD*

VII. OCD, Depression

Keith Matthews: *DBS vs. ablation in OCD and Depression*
Rees Cosgrove: *Ablative surgery for OCD*
Volker Coenen: *DBS of medial forebrain bundle for depression*

VIII. Depression, Cognition

Andres Lozano: *DBS of subgenual cingulum for Depression; long-term results*
Andres Lozano: *DBS for Alzheimer's disease; An update*
Richard Frackowiak: *Closing remarks*

Contact address:

Ms Linda Taib, Prof Marwan Hariz,
Dr Patricia Limousin
Emails: L.taib@ucl.ac.uk
M.hariz@ucl.ac.uk
P.limousin@ucl.ac.uk
Phone: +44 20 7419 1860
Address: Unit of Functional Neurosurgery
Box 146, 33 Queen Square
London, WC1N 3BG, UK

Editor in Chief

Erich Richter, MD United States

Assitant Editor

Nestor Tomycz, MD United States

Layout Editor Bethany Jones

Regional Editors

Hiroki Toda, MD, PhD Japan, Asia Pacific
Paresh Doshi, MD India

Have feedback or news to share? Contact us!

Administrator Melody Dian mdian@centurytel.net