

Chairman's Message

Joint Endovascular Standards

By Issam Awad, MD, MSc, FACS

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Cerebrovascular Funding Opportunities Notification



Issam A. Awad, MD, MSc, FACS

Please join me in congratulating and thanking Dr. John Corley Van Gilder for his wise stewardship of the ACGME approval of the Joint Radiology and Neurosurgery Neuroendovascular Training Standards at the latest ACGME meeting this week. This approval was thought to be all but unlikely until very recently, and this was truly "Mission Impossible" with many landmines of political maneuvering by numerous parties.

The latest hurdle had been a request by the American Academy of Neurology (AAN) to delay the process until Neurology was fully included in the joint standards. The AANS, CNS and the AANS/CNS Cerebrovascular Section had supported the full integration of Neurology as per prior commitments, and the CV Section Executive Council recently expressed support for the potential delay of ACGME process, if necessary, to accomplish Neurology integration (per your recent vote). As the process finally unfolded, the Radiology and Neurosurgery RRCs reached agreement with the Neurology RRC to go forth now with the Joint Radiology/Neurosurgery standards, and the former agreed officially to support the proposed Neurology track of endovascular training through the ACGME process. The Neurology RRC unanimously agreed to these assurances (despite some disagreement on tactics with the AAN), and, in

fact, all parties now have a firm commitment to get their tracks approved by ACGME. This would not hold up approval of the fully mature standards which Radiology and Neurosurgery had negotiated, and Neurology is now assured that it would not be excluded.

There will be pundits who will question various facets of this process and how it unfolded, and others who will want to question and revise what was agreed to in many years of ongoing discussions. Perhaps some aspects of the Standards will need to be improved and there will be a process to do this.

Neurosurgery has achieved the highest recognition of an endovascular training pathway for our future generations, insured by ACGME approval. Radiology has gained new allies, and Neurology is very gracious in recognizing our wholehearted and ongoing support of their integration in neuroendovascular training. Past CV Section Chairman Steve Giannotta carefully represented Section perspectives through this difficult process, and we are grateful and proud of his leadership.

Now we proceed to implementation, and it is hoped that training programs will rise to the challenge imposed by ACGME standards without compromising ongoing training opportunities for neurosurgeons. We also remain committed to insure that RRC and ACGME commitments to our Neurology colleagues are honored in a timely fashion.

Issam Awad, MD, MSc, FACS, is Chairman, AANS/CNS Section on Cerebrovascular Surgery.

Cerebrovascular Section Highlights at the 2000 CNS Annual Meeting

Saturday, September 23

All-day Practical Course 8:00 AM–5:00 PM

PC02 Treatment of Carotid Disease: Evaluation, Medical-Endovascular- and Surgical-Management Techniques
Directors: *Joshua Bederson, B. Gregory Thompson*
Faculty: *M. Christopher Wallace, Robert J. Dempsey, J. Max Findlay, Robert E. Harbaugh, Wesley A. King, Christopher M. Loftus, Oscar Benavente, B. Gregory Thompson Jr., Robert H. Rosenwasser*

PC08 Posterior Circulation Aneurysms
Course Director: *Thomas A. Kopitnik, Jr.*
Faculty: *Duke S. Samson, Jonathan White, Zeena Dorai, Debra Steele, Jacques J. Morcos, Arthur L. Day*

Afternoon Practical Course 1:00–5:00 PM

PC13 Microsurgical Dissection Techniques
Director: *John D. Day*
Faculty: *Michael L. Levy, Christian Matula, Robert E. Harbaugh*

PC20 Anterior Circulation Aneurysms
Course Directors: *Christopher S. Ogilvy, Fady T. Charbel*
Faculty: *Jacques J. Morcos, Winfield S. Fisher, III, Christopher Putman*

Sunday, September 24

All-day Practical Course 8:00 AM–5:00 PM

PC21 Microvascular Reconstruction
This course to be held off-site at the University of Texas.
Course Directors: *Philip E. Stieg, David W. Newell, Dennis G. Vollmer*
Faculty: *Richard G. Ellenbogen, Joel D. MacDonald*

Morning Practical Course 8:00 AM–NOON

PC 32 Endovascular Techniques in Stroke
Course Director: *Lee R. Guterman*
Faculty: *Richard D. Fessler, Adnor Qureshi, Andrew J. Ringer, Stanley H. Kim*

Afternoon Practical Course 1:00–5:00 PM

PC37 Technological Advances: Programmable Devices in Practice
Course Director: *Joseph R. Madsen*
Faculty: *Jeffrey W. Campbell, Rodolfo Hakim, Thorkild V. Norregard*

PC38 Intracranial Endoscopy
Course Directors: *David F. Jimenez, Paul Grabb*
Faculty: *Kerry R. Crone, Charles Teo, Michael Gaab, John G. Frazee, Wesley A. King*

PC39 Lateral Skull Base Approaches
Directors: *Donald C. Wright, Sunil J. Patel*
Faculty: *Brian Holmes, Duc H. Doung, Christopher Bogae, Tom Ellis, Sean O'Malley*

PC43 Critical Care Acute Stroke/Neurovascular
Course Directors: *Joshua B. Bederson, Issam A. Awad, Alex B. Valadka*
Faculty: *Warren B. Selman, Christopher S. Ogilvy, Thomas T. Leipzig, Robert H. Rosenwasser, Joseph M. Zambraski, Veronica Chiang*

Monday, September 25

Luncheon Seminars 12:30–2:00 PM

M012/M012R Anterior Circulation Aneurysms: Options and Approaches
Moderator: *H. Hunt Batjer*
Faculty: *Robert F. Spetzler, Michael T. Lawton, Michael B. Horowitz, Yuichiro Tanaka, Joel D. MacDonald*

M013/M013R Poor-Grade Aneurysm Patients: Surgical and ICU Management
Moderator: *Joshua B. Bederson*
Faculty: *Thomas A. Kopitnik, Jr., Neil A. Martin, Jacques J. Morcos, J. Max Findlay, Nobuo Hashimoto*

M024/M024R Case Management: Unruptured Aneurysms
Moderator: *David G. Piepgras*
Faculty: *Marc Mayberg, Frank Culicchia, Edward W. Mee, Yoko Kato, Michael Horowitz*

M025/M025R Publishing Scientific Articles in Neurosurgery
No CME credits awarded for this seminar.
Moderator: *Michael L.J. Apuzzo*
Faculty: *Peter McL. Black, Philip E. Stieg, Christopher M. Loftus, Daniel Sullivan, Edward R. Laws, Jr.*

Pharmacia-Upjohn Resident Fellowship Award Winner

Grace Gonzalez, MD, PhD, of the George Washington University Medical Center, has been named the 2000 recipient of the Pharmacia-Upjohn Resident Fellowship Award in Cerebrovascular Disease for her investigation entitled "Determination of the Regional Effects of Propofol, Thiopental, and Etomidate on NMDA-stimulated Catecholamine Release in Ischemic Conditions."

Special Course I/Sections
Section on Cerebrovascular Surgery I
Unruptured Intracranial Aneurysms

2:00 PM–5:30 PM

Learning Objectives: Participants will be able to discuss factors associated with deciding whether or not to treat an aneurysm with surgery. The participant will be able to discuss new developments in the field of treatment of cerebrovascular disease.

Moderators: Christopher S. Ogilvy, B. Gregory Thompson
2:00–2:20 The Argument for No Treatment – David G. Piegras
2:20–2:50 Charles Drake Lecture: The Argument for Surgical Treatment:
The Risks and Efficacy – Robert F. Spetzler
The Drake Award; Introduction – Issam A. Awad
2:50–3:30 Oral Posters
3:30–4:00 Refreshments with Exhibitors
4:00–5:30 Open Papers
4:00–4:09 Galbraith Award
Moderators: Bob Carter, Robert Rosenwasser

Tuesday September 26

Luncheon Seminars

12:30–2:00 PM

T28/T28R Intracerebral Hematoma: Treatment Options and Controversies

Moderator: *R. Loch Macdonald*
Faculty: *B. Gregory Thompson, Jr., Murat Gunel, Mario Zuccarello, Austin Colohan, Kiyoshi Kuroda*

T39/T39R Cerebral Aneurysm Surgery: Complication Avoidance and Management

Moderator: *Winfield S. Fisher III*
Faculty: *Arnold B. Vardiman, Christopher C. Getch, C. Michael Cawley, Hirotoshi Sano*

T40/T40R Multimodality Management of AVMs

Moderator: *Philip E. Stieg*
Faculty: *Evandro de Oliveira, Shigeru Miyachi, Michael T. Lawton, Masaaki Yamamoto, David Levy*

T41/T41R Vascular Augmentation Techniques for Cerebral Ischemia

Moderator: *Howard Yonas*
Faculty: *Fernando G. Diaz, David W. Newell, Kiyohiro Hokin, Craig A. Van Der Veer, J. Max Findlay*

T42/T42R Case Management: Carotid Disease

Moderator: *Christopher M. Loftus*
Faculty: *Mark H. Camel, Shunro Endo, Robert E. Harbaugh, Robert H. Rosenwasser, A. John Popp*

Special Course II/Sections

Endovascular Neurosurgery:
State of the Art

2:00 PM–5:15 PM

Learning Objectives: Following this course, participants will be able to describe the new developments within the practice of endovascular neurosurgery. Participants will be able to discuss the applications of endovascular procedures for arteriosclerotic disease, aneurysms, and vascular malformations.

Course Directors: Christopher S. Ogilvy, Neil A. Martin
2:00–2:15 Radiology – Cameron G. McDougall
2:15–2:45 Devices – Stanley L. Barnwell, PhD
2:45–3:00 Training – Robert H. Rosenwasser
3:00–3:30 Stents: Extra and Intracranial – Lee R. Guterman
3:30–4:00 Refreshments with Exhibitors
4:00–4:15 Biology of the Blood Vessel and Future Applications – Giuseppe Lanzino
4:15–4:35 Aneurysms – Robert H. Rosenwasser
4:35–4:55 AVMs – Michael B. Horowitz
4:55–5:15 Pitfalls – Jacques Dion

Wednesday, September 27

Luncheon Seminars

12:30–2:00 PM

W67/W67R Posterior Circulation Aneurysms

Moderator: *Steven L. Giannotta*
Faculty: *Duke S. Samson, Jeffrey E. Thomas, Matt Vapalabti, Michael B. Horowitz, H. Hunt Batjer*

W70/W70R Management of Acute Cerebral Ischemia

Moderator: *Howard Yonas*
Faculty: *John G. Frazee, Yoshiaki Shiokawa, Lee R. Guterman, Peter Le Roux, Iver Langmoen, Howard Yonas*

Special Course III/Sections

Occlusive Cerebrovascular Disease

2:00 PM–5:30 PM

Learning Objective: Participants will be able to describe the various treatment modalities for carotid and intracranial ischemic disease. Participants will be able to list the risks and benefits of surgical and endovascular therapies. Participants will be able to discuss new developments in the field of treatment of cerebrovascular disease.

Moderators: Winfield S. Fisher, III, Joshua B. Bederson
2:00–2:10 Carotid Angioplasty and Stenting – L. N. Hopkins, III
2:10–2:20 Carotid Endarterectomy – Christopher M. Loftus
2:20–2:30 Endarterectomy and Stenting Outcome Studies – Robert E. Harbaugh
2:30–2:40 Angioplasty vs. Surgery Trials – Marc Mayberg
2:40–2:50 Intracranial Angioplasty and Stenting – Stanley L. Barnwell
2:50–3:30 Oral Posters
3:30–4:00 Refreshments with Exhibitors
4:00–5:30 Open Papers
Moderators: Jacques Morcos, Michael T. Lawton

Educating Neurosurgeons of the Future

By Christopher M. Loftus, MD, FACS

This is the final segment of Dr. Loftus' article. The first segment was published in the last issue of Cerebrovascular News.

At the resident level we need to ask several basic questions. (I'm really going to ask more questions than I am going to provide answers.) First, can graduates of neurosurgical training programs continue to practice major cerebrovascular surgery as part of a general neurosurgical practice? I think that in the future we are going to move away from this. Clearly, technological advantages dictate that major cases are moving more toward large medical centers. We have evidence from several states to support our intuitive feeling that high-risk and high-skill cerebrovascular cases are better treated in high-volume centers. If we look at any medical field where interventional techniques are developed, we can see that more general practitioners move away from the high technology areas. One example of this is cardiology. No longer do internists treat cardiac patients on any major scale. For that matter, cardiologists themselves have polarized into noninvasive and invasive types because of the daily practice and specific expertise needed to insure low complication rates with invasive procedures. My prediction is that, ultimately, cerebrovascular surgery will move in this direction.

Should residents train in endovascular, as well as open cerebrovascular surgery? I can only tell you that if I had the opportunity to do it, I would. Will they be able to practice both in the future? I would predict that even those trained in both techniques will ultimately gravitate towards one or the other, as major centers increase in prominence and case volume is adequate to support very streamlined and focused specialists.

Furthermore, we should ask the question: Do young neurosurgeons need to do research? We have program directors who say that research is superfluous, too expensive, or simply no longer relevant. I would respond to this by saying that we should not be so foolish as to think that we have already achieved the pinnacle of knowledge. Blind, undirected research often takes pathways that we cannot predict, but major discoveries come from serendipitous observation. Without neurosurgeons involved in research, this is less likely to occur. Can our trainees or academic faculty compete with funding for PhDs? I think, considering the amount of people we have in the field, we do remarkably well, like many other things we do. The keys to success in funding competition are a naturally higher level of motivation and our baseline selection for high intellectual capacity.

Are cerebrovascular fellowships needed?

Many ask if cerebrovascular fellowships are needed. I feel that the answer is absolutely yes. It is clear to me that cerebrovascular surgical expertise and progress is not developed by general neurosurgeons, but in highly specialized cerebrovascular, clinical and research centers. I think that we will only move further in this direction and that fellowships are a natural extension of our training process.

We face a difficult issue, as we advance technically, in how we train established practitioners to adopt new techniques. At the present time we can offer a practicing neurosurgeon professional development courses at meetings or through the AANS, a visit to a specialized center to look on with one of us while we do complex cerebrovascular cases, or industry-sponsored retreats, these being mostly directed at the introduction of new technology. Whereas this type of educational structure is adequate for "refreshment," none of these strategies can provide nor insure competence in a new and previously unlearned skill. We really have no good way to educate a neurosurgeon in a new complex task nor to measure their competence in same. I would offer then to those who follow me the challenge of developing a new mechanism to send the practicing neurosurgeon "back to school."

To my mind this means that we identify training centers where neurosurgeons go for a period of three to six months, and get a physical hands-on experience with large numbers of patients. We need to find a way to make this economically feasible. I would recommend that we develop a loan/repayment program so that neurosurgeons seeking further training have a way to maintain at least some percentage of their lost income. This can be sponsored by the parent organizations or may well be sponsored by industry with potentially a deeper pocket. I think we need to develop a certification process that recognizes and grandfather in the value of prior experience as well as the successful completion of a well-organized training process such as the one suggested. This certification will most likely involve endorsement and a certificate from the JSCVS itself. The likelihood of accreditation of a program or of ABNS endorsement and recognition of the individual for this sort of update type training seems remote to me.

Certifying competence

Let me move on to my next major topic; how do we insure and certify competence within our specialty? What have we done so far? Your Joint Section Executive Council has written a core curriculum in cerebrovascular surgery which serves as part of the nuclear core curriculum developed for all residency training programs. This is a tremendous advance and represents an enormous amount of work on the parts of Drs. Batjer and Awad. These same individuals have prepared fellowship standards for open surgical cerebrovascular fellowships. The JSCVS/ASITN as a working group has prepared endovascular fellowship standards that crossed both disciplines which applied to trainees from either parent group. There is, at the present time, no fellowship certification of individuals nor of fellowship training programs. We simply have a registry at the present time but I would assure you that this is changing rapidly under the auspices of the Society of Neurological Surgeons.

It is my feeling that endovascular training and subspecialization should be open to all qualified and interested neuroradiologists and neurosurgeons. As I mentioned, our two societies have developed standards that have been endorsed by everyone who is in a position

to understand the future of this field — the ASNR, the ASITN, and the JSCVS. Our ability to have these standards approved by the Radiology Residency Review Committee and, thus ultimately, by the ACGME is limited at the present time by a major turf battle that involves surgery, neurology, and general radiology. I predict that there will be quite some time before these problems are resolved, although I do think it's a goal worthy of pursuing.

Where do we stand now? First, we are responding to our primary need — to serve our patients well. Interested fellows are being well trained by both neurosurgical and neuroradiology specialists. Our standards documents have been submitted to the Society of Neurological Surgeons for a de facto certification process within neurosurgery itself. This action has the complete approval of our ASITN colleagues.

Subspecialty certification

Subspecialty certification in cerebrovascular surgery mirrors that of neurosurgery as a whole. I would hold forth to you that all the major research and clinical progress in cerebrovascular surgery is made by neurosurgeons who limit their practice in large part to cerebrovascular disease. For validation of this we need only to look at the example of our endovascular colleagues. I would suggest that essentially every major technical or educational advance in endovascular treatment is made by the individuals reading this newsletter, those being individuals who limit their practice almost exclusively to endovascular strategies. The same caveat applies to the leadership of the JSCVS, which consists of individuals who limit their practice in large part to cerebrovascular diseases. My advice regarding subspecialty certification is that we embrace the development and option of standards because, ultimately, it is trained and certified individuals who would do the most to advance our field. I would predict that universal subspecialty certification in neurosurgery will occur and that cerebrovascular may be one of the forerunners of this, but it is my estimation that at least 10 to 20 years will have to pass before subspecialty certification is completely instituted. Regarding recertification, there has been no material thought given to subspecialty recertification in any neurosurgical discipline, but I would predict that, like many other specialties, a time-limited certificate will be what ultimately develops when subspecialty certification becomes a fact.

Finally, let me move on to my last topic—the future growth of the JSCVS and of the subspecialty of cerebrovascular surgery as a whole. I emphasize most strongly that the JSCVS needs to grow from a special interest group into the central clearinghouse for management of all cerebrovascular affairs! This includes education, clinical practice, research, and socioeconomic affairs. We have made wonderful progress in the 13 years that I have been associated with the JSCVS. This is in large part due to the bold step we took in instituting and developing an annual meeting, which has now developed into the premier cerebrovascular meeting in the world. The dividends from this have enabled us to fund our educational mission with ventures into areas previously not possible because of the limited resources.

“I would predict that universal subspecialty certification in neurosurgery will occur and that cerebrovascular may be one of the forerunners of this...”

The next step

What is the next step? All the revenue and expense of the JSCVS is tied up in the annual meeting. Excess funds from this support our educational mission, as I mentioned. The challenge of stewardship for the future, in my mind, involves the immediate institution of two new projects. The first would be that of a comprehensive cerebrovascular disease textbook. I propose, not a surgical textbook, but rather, a cerebrovascular disease treatment textbook, the subtle difference being that endovascular strategies are interwoven throughout. I believe our ASITN partners should have a major role in the planning and production of the book, and the mission statement should represent the state-of-the-art treatment of cerebrovascular disorders.

I would also propose that we begin a strategic plan to develop a new peer-reviewed independently published journal entitled *Cerebrovascular Therapy*. The journal would represent one voice for world cerebrovascular therapy. Unlike the book, which is revenue neutral or potentially profitable, there is risk involved with the institution of a journal.

Nonetheless, I feel strongly that our society should be the major international force for cerebrovascular surgery. We have taken several steps toward this. A combined meeting with the Japanese in Hawaii in 2001 is a wonderful first step toward achieving this goal. Our international cooperation program under the leadership of Dr. Bederson and his attempts to remove the barriers to world membership in our society is another major step. The institution of a journal enfolding CV and endovascular treatment is, to my thinking, an idea that we need to investigate, pursue, and make a firm commitment to within the next several years.

Regarding the future of our specialty we might ask where is our ASITN partnership going? I see two potential paths we can follow. The first, which I would encourage, is the path of continued collaboration. This means that we continue, as we planned, with our combined meeting and strength in our cooperation. It means that we continue our cooperation in the development of training programs and of training program standards. It means that we move further in developing strategies to remove the economic decisions from patient treatment whether by coding strategies or collaboration on E&M coding issues. The other potential path is that of rivalry and paranoia with stonewalling on training and the pursuit of hidden agendas by both groups. This is not an avenue that I think we want to travel.

If we really want to look at radical ideas for the future we might ask the question that has been asked on several occasions in quiet leadership forums in the past. Should we merge our two societies as one? I would suggest to you that the answer to this question, at the present time, is no. A merger is too cumbersome under our current bylaw structure; our current arrangement is satisfactory and thrives well on mutual trust and respect. Likewise there is an advantage to having leadership paths in both societies, and this allows more individuals to achieve recognition for their leadership potential and for their assump-

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CV Program Set for CNS Meeting

By Robert Friedlander, MD

San Antonio, Texas, is a very special city for the Joint Section of Cerebrovascular Surgery. The first Joint Section meeting was held in this city in 1996. Since then, our section has grown from a membership of 370 to a strong 615. Reflecting this significant growth, this year's CNS meeting in San Antonio will offer a spectacular program in cerebrovascular surgery. The meeting will take place from September 23-28, 2000. On September 23 and 24, there will be several practical courses on neurovascular disease. The courses will cover a variety of topics including the treatment of carotid disease, posterior and anterior circulation aneurysms, endovascular techniques in stroke, skull base approaches, and the critical care of acute stroke. A didactic and hands-on course on the technical aspects and indications for microvascular reconstruction will be offered on Sunday, September 24.

Undoubtedly one of the meeting highlights this year will be the second annual Charles Drake Lecture, to be delivered by Dr. Robert Spetzler. On the afternoon of Monday, September 25, in a controversial session, Dr. Spetzler will discuss the "Argument for the Surgical Treatment of Unruptured Intracranial Aneurysms: The Risks and Efficacy." Counterpoints to this discussion will be provided by Dr. David Piepgras. Dr. Piepgras' lecture is entitled "The Argument for No Treatment of Unruptured Intracranial Aneurysms." This promises to be a lively and insightful discussion

on the present state-of-the-art treatment and decision making analysis for unruptured aneurysms. This will be followed by a set of open paper presentations including the Galbraith Award. This year's awardee is Dr. Gordon Tang, from Emory University, who will present results on the use of intraoperative angiography in the treatment of aneurysms.

On Tuesday, September 26, there will be a special course titled "Endovascular Neurosurgery: State of the Art." This session will discuss the latest developments in the endovascular treatment of cerebrovascular disease. Dr. Robert Rossenwasser will discuss the controversial issues regarding training in endovascular neurosurgery. The second scientific session will take place Wednesday, September 27. The focus of that session will be the treatment of occlusive cerebrovascular disease. This session will include a discussion of the role of carotid angioplasty and stenting versus endarterectomy by Dr. Nick Hopkins and Dr. Christopher Loftus. Dr. Robert Harbaugh and Dr. Marc Mayberg will discuss outcome studies and trials in the treatment of carotid disease. As you can see, all the controversies in cerebrovascular surgery will be resolved during this meeting. Don't miss it.

Robert M. Friedlander, MD, is Assistant Professor of Neurosurgery, Brigham and Women's Hospital, Harvard Medical School, Co-director of Cerebrovascular Surgery.

Educating Neurosurgeons of the Future (continued from page 5)

tion of leadership responsibility. I would point out to you as an example of a failed merger — the Society for Neurosurgical Anesthesia and Critical Care which, as you may or may not know, began as a combined neurosurgical/anesthesia society with presidents alternating between the two groups on an annual basis. This has become essentially a purely anesthesia society at the present time, and the original mission has been lost in the details. I recommend then that our societies stay separate, but that they continue with our combined projects with the possibility held out that in the future our combined mission may cause us to form a closer organizational structure.

Further radical ideas regarding the future of the JSCVS would raise the question of whether or not our own JSCVS should continue to remain a "joint section" under the auspices of the AANS and CNS. There is no question that our ability to partner with outside groups and, to same extent, to make progress is limited by the joint section shell under which we operate. Should we thus consider migration of our group into an independent professional society? Or should we seek some type of hybrid where we have reporting responsibilities to our parent organizations, but an independent financial and bylaws structure?

Certainly membership categories, publications, and closer bonds with our endovascular colleagues would be facilitated by an independent cerebrovascular society. I would emphasize to you that within neurosurgery, there is no precedent for the migration of a joint section

to an independent body, and this would be truly groundbreaking and "out-of-box" thinking for us. I offer this idea to our upcoming leaders as a strategy to be considered in long-range planning.

Let me conclude then with my own ideas about our future. Our specialty is changing dramatically and it changes very rapidly. I think that with proper visionary strategy and proper long-range planning, we are empowered to take control of our specialty and guide our own destiny. The outside forces that act upon us are not so great as we sometimes perceive with the possible exception of that generated by the cardiologists in carotid artery treatment. If we examine our future for elements of failure I would suggest to you that our major potential failure point would be a falling out between the ASITN and the JSCVS. I would urge both societies to bend over backwards to be certain that this doesn't happen. In the last decade we have reinvented our society and its mission with the institution of an annual meeting and the generation of sufficient funds to raise our educational profile. I issue the challenge to our new leadership to take control of and to guide the destiny of world cerebrovascular neurosurgery through the forums that we have established in this wonderful meeting and the cooperation that we've achieved between our two societies and with our Japanese colleagues.

Christopher M. Loftus, MD, FACS, is Past Chairman, AANS/CNS Section on Cerebrovascular Surgery.

2000 Bayer Fellowship Program Awards \$50,000 for Research in Ischemic Neuronal Protection or Outcomes

**Congratulations to the Recipients of \$25,000 Bayer Fellowships for
Research in Neuronal Protection or Outcomes**



Peter A. Rasmussen, MD
Assistant Staff, Department of Neurosurgery
Cleveland Clinic Foundation

Fellowship Project: **Evacuation of intracerebral hematomas in an animal model of hemorrhagic stroke**

Bob S. Carter, MD, PhD
Instructor in Neurosurgery
Harvard Medical School
Massachusetts General Hospital



Fellowship Project: **An investigation of stem cell and gene based therapies for stroke**

**The two fellowship recipients were chosen by an independent
Fellowship Selection Committee**

Fellowship Selection Committee

Steven L. Giannotta, MD, Committee Chair
LAC/USC Medical Center

Arthur Day, MD
University of Florida

Marc R. Mayberg, MD
Cleveland Clinic Foundation

Warren R. Selman, MD
University Hospitals of Cleveland

Linda L. Sternau, MD
Mount Sinai Medical Center, Miami Beach

Christopher Wallace, MD
The Toronto Hospital

Fellowship Opportunities in 2001

For more information, contact the Bayer Research
Fellowship Coordinator by phone (201-612-8919)
or fax (201-612-8920).

All research fellowships are provided by
Bayer Corporation, Pharmaceutical Division,
and cosponsored by the Joint Section on
Cerebrovascular Surgery of the AANS and CNS.

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with great care.

Application for Membership



AANS/CNS Section on Cerebrovascular Surgery

(Applications also may be submitted electronically in part, please see <http://www.neurosurgery.org>)

I. Biographical Material

Name: _____

Home Address: _____

Office Address: _____

Business Phone: _____ Fax: _____

E-mail Address: _____

II. Category of Membership Requested

Active Candidate International* Adjunct/Associate

*Please see instructions on eligibility criteria on the reverse side of this form.

III. Formal Neurosurgical Training

Name/location of training program: _____

Date of completion or expected date of completion: _____/_____/_____

Date of American Board of Neurological Surgery certification: _____/_____/_____

Date of fellowship in Royal College of Surgeons (Neurosurgery) of Canada: _____/_____/_____

Are you a member of:

The American Association of Neurological Surgeons? Yes No

Congress of Neurological Surgeons? Yes No

IV. References

Please provide letters of reference from two members of the AANS/CNS Section on Cerebrovascular Surgery highlighting your activity/involvement in cerebrovascular surgery. Indicate below (name and address) from those whom these references will be received:

*International applicants should follow specific instructions for reference letters on the reverse side.

1) _____

2) _____

V. Curriculum Vitae

Please enclose a current Curriculum Vitae with your completed application.

Describe your current interest and activities in cerebrovascular surgery (unless clearly evident in your Curriculum Vitae).

VI. Membership Fee(s)

Please enclose a check in the amount of \$50 made payable to the AANS/CNS Section on Cerebrovascular Surgery. If you are applying for International membership and you are not a member of the AANS or CNS, please submit a separate check in the amount of \$35 made payable to the CNS.

Once your required materials are received, your application will be reviewed by the Membership Committee and forwarded to the Executive Committee for consideration and approval before final voting/approval by members of the Section.

Signature of Applicant _____

Please return the completed application with your membership fee of \$50 to:
AANS/CNS Section on Cerebrovascular Surgery
Dept. 77-2418
Chicago, Illinois 60678-2418

Minutes of the Executive Council Meeting

By Philip E. Stieg Jr., MD, PhD

The following are excerpts from the Minutes of the Executive Council Meeting held on February 8, 2000, at the New Orleans Hilton Riverside Hotel.

The meeting was called to order by Section Chairman, Christopher Loftus at 6:30 AM. Members in attendance included: Drs. Issam Awad, Hunt Batjer, Joshua Bederson, Robert Dempsey, Winfield Fisher, Steven Giannotta, Robert Harbaugh, Randall Higashida, Marc Mayberg, Jacques Morcos, Christopher Ogilvy, Robert Rosenwasser, Philip Stieg, Greg Thompson, and Harry Van Loveren. In addition, Barbara Morrison from the AANS office and Kathleen Hammer from Warren Selman's office were present. Dr. Philip Stieg was asked to substitute for Dr. Selman in preparing the minutes of this meeting. Dr. Awad introduced a resolution, which was unanimously approved, commending Dr. Selman on his excellent preparations for this meeting and wishing him a speedy recovery.

Treasurer's Report

The Council felt that the group was financially very well positioned. In addition, the meeting in New Orleans has proven to be extremely successful and continued financial strength is expected. The section extended its appreciation to Dr. Harbaugh for his continued efforts as Treasurer and in fund-raising for the current section meeting.

Neurovascular Training Standards

Dr. Nick Hopkins was not present for his report, however, the document titled, "Program Requirements for Residency, Education in Neuro Endovascular Surgery/Interventional Radiology" was reviewed by the Council and again discussed. The Executive Council was informed that this document was no longer being taken down the path of the ACGME at the present time, but entrusted for oversight by the Senior Society. The group was made aware of Neurology's intention to seek training in pathways possibly through linkage with Cardiology. A draft has been reviewed by Dr. Randall Higashida. It was felt that the Joint Section and the ASITN need to extend conversations to the American Academy of Neurology so that a uniform training document could be designed. The Council was also notified that Vascular Surgery is including Stent training in their fellowships. The specific role of the ACGME remains indeterminate at the present time.

Residency Curriculum

The section extended appreciation to Drs. Awad and Batjer for their role in providing the Cerebrovascular Section with the Residency Curriculum. The document has been completed and we are awaiting ultimate publication and distribution.

Committee Reports

SCVS/ASITN, 2000 New Orleans

The group's heartfelt appreciation was extended to Dr. Warren Selman who could not be present at this meeting. It was the feeling

of all present that this meeting was superb and well wishes were extended to Dr. Selman through his assistant Kathleen Hammer.

The Executive Council was also unclear who the representative to the ASITN Executive Board was. We, therefore, asked Dr. Randall Higashida to clarify this issue. In the interim, we asked that Dr. Robert Rosenwasser be able to attend their Executive Committee meeting scheduled for this evening.

AANS 2000

Dr. Winfield Fisher provided a report indicating that the Donaghy Lecture will be given by Dr. Arthur Day, speaking on paraclinoidal aneurysms. In addition, there will be eight abstracts. There will be a special symposium on Bypass Procedures. Dr. David Piegras will speak on "The Use of Bypass for Treatment of Giant Aneurysms." Dr. R. Michael Scott will discuss "The Treatment of MoyaMoya Disease," and Dr. Neil Martin will provide a technical lecture.

CV/ASITN/JSSS 2001

This report was provided by Dr. Joshua Bederson. Dr. Bederson has proposed two special courses including Cerebrovascular Critical Care and another on Carotid Occlusive Disease. The abstract deadline will be July 10, 2000. Thus far, there has been 100% interest via verbal commitments from the exhibitors. Dr. Bederson is also beginning discussions on possible golf and tennis competitions as fund-raisers.

Membership Committee

The report was provided by Dr. Joshua Bederson. Currently, there are 560 members in the Joint Section. A census and statistical summary of the CV section members based on region, race, gender, age and years out of residency is available. There was considerable discussion about the creation of a computer database system to ease communication. Further discussion involved growth and, in particular, the topics of rate, total size and criteria for membership. This was to be discussed in further detail at the Long-Range Planning Committee. The specific advantages of membership to the Joint Section were also discussed and included decreased registration fees for the meeting and receipt of the newsletter.

Newsletter

The report was provided by Dr. Gregory Thompson. He brought up the topic of cost and potential funding for the newsletter. There was discussion regarding editorial control, should the group decide to publish its newsletter through *Neurosurgery News*. For now, the Executive Committee wished to maintain a separate newsletter, in addition to duplicating it in *Neurosurgery News*. Discussion about the staff costs at the AANS office in regard to production of the newsletter occurred and will be reviewed in greater detail at the next meeting. Further discussion about a Web-based format for the newsletter was also reviewed.

continued on page 10

VM Guidelines

Dr. Christopher Ogilvy indicated that the guidelines were in the hands of Dr. George Hademenos from the American Heart Association. Dr. Ogilvy is meeting with Dr. Hademenos during the present meeting. More specific information will be delivered at the AANS meeting in San Francisco.

Unruptured Aneurysms Guidelines

Dr. Joshua Bederson indicated that the group is in final discussions regarding the document. The paper is going to be handed to the external reviewers shortly.

Skull-Base Committee

Dr. Harry Van Loveren asked for a mandate from the group. He was informed that it was his responsibility to integrate with the Annual Meeting Chairmen for each of the meetings to make sure that skull-base concepts were incorporated into the program. He was also asked to integrate skull-base concepts and activities into the newsletter. Dr. Issam Awad will send a letter to Dr. Van Loveren specifically outlining the activities he is being asked to direct.

Outcomes Committee

Dr. Harbaugh provided a brief report. He indicated that the group needs to decide what it wants to do with the aneurysm data. He indicated that the Carotid Online Study was going quite well.

Intersociety Commission Report

Dr. Christopher Loftus informed us of his nomination of Dr. Neil Martin to the ICAVL Board of Directors. Dr. Martin will serve as the Joint Section's representative to the group responsible for accrediting vascular laboratories. In addition, Dr. Loftus has nominated Dr. Julian Bales as our representative to the MRI Commission. Financial support for this commission has not been finalized.

CPT Coding Update

Dr. Robert Harbaugh indicated that the cardiologists have requested a CPT code for carotid stenting which has apparently been supported by the ASITN. This has not been supported by the Joint Section on Cerebrovascular Surgery, as it is felt the technique is still experimental. The AMA-CPT Coding Advisory Board is meeting next week. Dr. Harbaugh also indicated that the RVU evaluations are coming up in one year, and data is being collected at this meeting regarding issues pertinent to that review. There are also discussions going on with Radiology to share a CPT coding for interventional cases. Regarding the coding of complex aneurysms, it has been proposed that two new codes be used rather than increasing the RVU for the current codes. The group also emphasized the need to increase the use of ICU-CPT coding mechanisms. Dr. Gregory Thompson indicated that he would start including a CPT coding section in the newsletter to increase the section's awareness on this topic. Dr. Harbaugh indicated that the Rasch analysis

methodology, which has been used to evaluate spinal operations, may be expanded and used for cerebrovascular disorders as well and result in improved relative evaluation of the physician's work.

Neurovascular Task Force

Dr. Marc Mayberg indicated that there are two people still in training and four fellowships have been funded for the current year. Funding for the next year has been secured, however, further resources will be needed thereafter. The AANS apparently will discontinue funding after this year. However, they are considering a loan pool with a scheduled repayment program. There was continued discussion on the funding process regarding the achievement of the desired goals which was to provide funding to programs that could not otherwise train endovascular neurosurgeons. Dr. Hunt Batjer indicated that CNS funding for the fellowship is ongoing. Dr. Robert Rosenwasser also indicated that industry will continue to be supportive. The group discussed a general funds flow which included acquisition of funds transferred to the Selection Committee under the direction of Dr. Marc Mayberg. His group would then be responsible for fund distribution.

American Stroke Association

There was considerable discussion about the Joint Section's interaction with the American Stroke Association. This will be reviewed further at the Strategic Planning Committee meeting. Next year's meeting in Hawaii will not be held in conjunction with the International Stroke Association meeting, however, the JSCVS/ASITN meeting will occur in conjunction with the American Stroke Association meeting in San Antonio in 2002. Mechanisms for increasing neurology's attendance to our meeting were discussed. In addition, our activities with the Stroke Council were also reviewed. Currently, there are two Chairs on the council reserved for neurosurgeons, and these are currently held by Drs. Nick Hopkins and Issam Awad. Dr. Marc Mayberg has also been involved as Program Committee Chair. Further neurosurgical involvement in the Stroke Council was discussed.

Brain Attack Coalition

Dr. Marc Mayberg is a member of this coalition. He indicated that this group is attempting to be the spokesperson for stroke and is currently organizing stroke center guidelines. In addition, Dr. George Hademenos from the American Heart Association has written a review article on the recent advances of stroke. This has currently been submitted for publication.

Basic References in CV Surgery

Dr. Jacques Morcos indicated that this project, under the direction of Dr. Robert Wilkins, is no longer in existence and will not be published. Dr. Morcos was asked to prepare a proposal for collating pertinent publications in cerebrovascular surgery.

continued on next page

Proposed Changes to the Rules and Regulations

Current Bylaws

Article IV, Section I, Page 4

The Officers of the Section shall be a Chairman, Chairman-Elect, a Secretary, and a Treasurer. The Chairman and Chairman-Elect shall serve a term of ~~two~~ years. The Secretary and Treasurer are elected for staggered ~~two-year~~ terms.

Article V, Section I, Page 4

Chairman. It shall be the duty of the Chairman to preside at all meetings of the Section to see that the rules are properly enforced in all affairs of the Section. The Chairman shall be the Chairman of the Executive Council and ex-officio member of all Committees of the Section. The Chairman shall assume office ~~until the end~~ of the annual meeting of The American Association of Neurological Surgeons ~~two years later~~. In the event of vacancy in any office it shall be the privilege of the Chairman, with concurrence of the Executive Council, to appoint an interim officer.

Proposed Amendments

Article IV, Section 1, Page 4

The Officers of the Section shall be a Chairman, Chairman-Elect, a Secretary, and a Treasurer. The Chairman and Chairman-Elect shall serve a term of one year. The Secretary and Treasurer are elected for staggered two-year terms.

Article V, Section 1, Page 4

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Minutes (continued from previous page)

Basic Science

Dr. Robert Dempsey provided a document reviewing cerebrovascular funding opportunities. Dr. Dempsey has provided a proposal for providing online information to neurosurgeons regarding funding sources. He will contact Dr. Joel McDonald regarding possible publication on the Web within **NEUROSURGERY://ON-CALL**[®]. We will vote on this at the April meeting in San Francisco.

Old Business

1. Dr. Loftus indicated that the Flannery Survey has been removed.
2. Prourokinase/Urokinase Working Group: Dr. Buddy Conners is providing a consensus statement for a thrombolysis registry. The Joint Section wants to make sure that it is included in this statement in a formal way.
3. Pharmacia/Upjohn Cerebrovascular Fellowship: Dr. Awad indicated that this is currently in place. The company has committed \$15,000 to our project. Calls for applications will be distributed shortly.
4. ABNS Primary Exam Questions for CV Surgery: The names of Drs. Loftus, Batjer and Awad have been sent to Dr. Dennis Spencer for assistance with Board questions. We were also informed that the group will need to provide questions for recertification examinations.

New Business

1. PDP Committee: Dr. Gregory Thompson was nominated as our representative.
2. ASNR/Russell Proposal for ENS Credentialing: Dr. Eric Russell is the head of the ASNR and has proposed accrediting endovascular neurosurgical programs. It is the understanding of

the Joint Section's Executive Committee that the ASNR will accept the senior society as the overseer of this credentialing process. If that does not work, a rump board from the ASNR, ASITN, JSCVS could then be assembled for the credentialing process. Again, Dr. Steven Giannotta discussed the RRC's position on this, as well as recent expressions of interest by neurologists to become involved in the educational process for endovascular neurosurgery.

Galbraith Resident Research Award Winner

The AANS/CNS Galbraith Resident Research Award in Cerebrovascular Surgery for the year 2000 has been awarded to Dr. Gordon Tang, MD, from Emory University. Dr. Tang will present his paper "Prospective Use of Intraoperative Angiography in 520 Consecutive Aneurysms" at the CNS Meeting in San Antonio.

New Officers Elected

The slate of nominees for officers and members-at-large of the Executive Council of the Section on Cerebrovascular Surgery of the AANS/CNS are:

- H. Hunt Batjer for Chairman-Elect (2000-2001)
- Marc Mayberg for Treasurer (2000-2002)
- Joshua Bederson for Member-at-Large of the Executive Council (2000-2003)

Notes from the Editor

By B. Gregory Thompson, MD

A number of new developments are currently taking place through the dauntless efforts of members of the Joint Section on Cerebrovascular Surgery.

With a mandate from Section Chairman Issam A. Awad, MD, and under the able aegis of Robert Harbaugh, MD, a task force on communications and technology was established early this year to explore new and better ways to communicate with, inform and serve the CV Section membership. The task force also was charged with finding more accessible ways to explore, engage and assess new technologies in the face of increasingly rapid development of an e-technology world.

One very prompt and palpable result of this task force is *The Circle of Willis (COW)*, the CV Section's new electronic newsletter. This new CV Section endeavor will feature news, reviews, and reminders from the world of Cerebrovascular Surgery. Harold Pikus, MD, is the *COW* editor, and with a talented editorial staff, plans to offer articles on funding, summary abstracts and reviews of recent publications, and features on novel technologies and new medications. *COW* will also include articles on billing and coding, and a timetable of meetings and abstract deadline reminders. Dr. Pikus can be reached at <mailto:hpikus@gte.net>

The first-ever joint meeting of the Section on Cerebrovascular Surgery and the ASITN with the Japanese Society for Cerebrovascular Surgery is under final preparations for its February 9-12, 2001, meeting in Hawaii at the Big Island Hilton Waikaloa Village resort. Program Chairman Joshua Bederson, MD, has arranged an outstanding scientific program featuring two Special

Courses (Carotid Endarterectomy and Critical Care), and separate Scientific Symposia on AVMs, Aneurysms, and Cerebral Ischemia. Enrollment and hotel reservations are limited so be certain to register early.

Grace Gonzalez, MD, PhD, of the George Washington University Medical Center, has been named the 2000 recipient of the Pharmacia-Upjohn Resident Fellowship in Cerebrovascular Disease. Dr. Gonzalez will receive \$15,000 to continue her investigation entitled "Determination of the Regional Effects of Propofol, Thiopental, and Etomidate on NMDA-stimulated Catecholamine Release in Ischemic Conditions."

Peter A. Rasmussen, MD, of the Cleveland Clinic, and Bob S. Carter MD, PhD, of Harvard Medical School, have been selected as the 2000 recipients of the Bayer Cerebrovascular Research Fellowships in Neuronal Protection. Dr. Rasmussen's research has focused on "Evacuation of Intracerebral Hematomas in an Animal Model of Hemorrhagic Stroke." Dr. Carter's project is "An Investigation of Stem Cell and Gene-based Therapies for Stroke." Each investigator will receive \$25,000 to support his research work.

The AANS/CNS Galbraith Resident Research Award in Cerebrovascular Surgery for the year 2000 has been awarded to Dr. Gordon Tang, MD, from Emory University. Dr. Tang will present his paper "Prospective Use of Intraoperative Angiography in 520 Consecutive Aneurysms" at the CNS Meeting in San Antonio.

B. Gregory Thompson, MD, is Editor, AANS/CNS Section on Cerebrovascular Surgery.

Joint CV Section and ASITN meeting set for Hawaii

The fourth annual meeting of the AANS/CNS Section on Cerebrovascular Surgery and the American Society of Interventional and Therapeutic Neuroradiology (ASITN) along with the Japanese Society of Surgery for Cerebral Stroke and the Japanese Society of Intravascular Neurosurgery will be held on February 9-12, 2001, on the Big Island of Hawaii.

The meeting will take place at the Hilton Waikaloa Village, a destination in itself.

Meeting highlights

Obtain up to 27.5 hours in category 1 credit toward the AMA Physician's Recognition Award and view the latest technical exhibits and 100 posters. More than 400 scientific presentations and 20 state-of-the-

art luncheon seminars with over 75 speakers will be part of the program. There will be 36 oral paper presentations. Two "How I Do It" sessions featuring "Management of Unruptured Aneurysms" and "Management of Arteriovenous Malformations" will be introduced.

Two special courses will be offered on Friday, February 9. Special Course 1 is entitled "Critical Care of Neurosurgical and Endovascular Patients." Special Course 2 is entitled "Extracranial Carotid Reconstruction: Endarterectomy, Angioplasty and Stenting."

A preliminary program brochure will be sent to all members of the AANS/CNS Section on Cerebrovascular Surgery.

All this and more in the beautiful setting of Hawaii.



The Coding Corner...

This article marks a new addition to the CV Newsletter. “The Coding Corner” will be a regular feature, designed to answer Frequently Asked Questions (FAQ) regarding Billing and Coding. Members are encouraged to submit their questions to the editor at greghom@umich.edu. A recognized expert from the AANS’ Coding Hotline Service contracted through Physician Reimbursement Services will offer ethical coding support provided by certified coders.

Have you ever received a claim denial? Do you know if these denials are correct? AANS Hotline specialists can help you get paid. They will verify the codes and help you maneuver through the system. A crackdown on Medicare fraud, which began in 1993, continues to escalate. President Clinton has dedicated \$20 million toward fraud investigation in 2001. Heavy fines along with criminal charges stress the impact of “coding and billing mistakes.” There is simply no room for error in the coding and billing processes. In today’s world of medicine, correct coding means more than reimbursement — it translates into a protective assurance against claims of fraud and abuse

FAQ: “How does the approach for surgery get charged when done by another surgeon?”

Answer: The approach is charged with either a -62 or -80 modifier on the main procedure and the modifier that is to be used will need to be agreed upon by both surgeons and the rules for those modifiers followed.

Watch for more information in the next “Coding Corner.”

Coding questions are handled quickly and efficiently by calling the AANS Coding Hotline toll-free number, 800-972-9298. Hotline consulting services are measured in Consultation Units and can be purchased individually or in money saving packages so have your credit card at hand for quick processing. You will also be asked to provide the physician’s AANS membership number.

Outpatient Consults

By M. Ray Painter, MD, FACS

Under the new rules almost all patients referred by another physician should legitimately be charged as a consult if the documentation and communication is appropriate. The rules are as follows:

Criteria for Consult (UPDATED)

- A consultation is distinguished from a visit as long as a physician whose opinion or advice regarding evaluation and/or management of a specific problem is requested by another physician or other appropriate source.
- A request for a consultation from an **appropriate source** and the **need** for consultation must be documented in the patient’s medical records.
- After the consultation is provided, the consulting physician must prepare a **written report** of their findings, which is provided to the referring physician.

The major change is the virtual elimination of the concern for referral for treatment. The new rules specifically state that a consult should be charged regardless of treatment initiated, unless a transfer of care occurs. A transfer of care occurs when a referring physician

transfers the responsibility of the **patient’s complete care** to the receiving physician at the **time of the referral** and the receiving physician **documents approval of care in advance**.

In summary, a physician may start treatment, conduct a diagnostic test, or schedule therapeutic services, and still charge a consult if...

- the patient is referred by a physician or other appropriate source
- the consulting physician documents in the record the source of the consult and the need for the consult
- the consulting physician sends a written report to the referring physician

The lone and infrequent exception is if transfer of care occurs at the time of the referral and the receiving physician documents approval of care in advance.

The other change that will be good news to many of you is that HCFA has made it clear that a physician in a group practice can request a consult from another physician in the same practice as long as all criteria for consult are met. There is no specialty limitation.

AANS/CNS Section on Cerebrovascular Surgery

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Cerebrovascular Funding Opportunities Notification

By Robert J. Dempsey, MD

This fall the AANS/CNS Section on Cerebrovascular Surgery will begin offering an Internet-based service that will allow investigators to be notified automatically of funding opportunities for research pertaining to stroke, aneurysms, AVMs, carotid surgery, and vessel imaging. This service will be created and maintained by the University of Wisconsin-Madison, Department of Neurological Surgery.

The major portion of the service will be a Web site – powered by an underlying database – that will allow interested cerebrovascular surgeons to be notified of funding opportunities within their specific areas of interest. This part of the service will be similar to funding databases provided by the Community of Science (<http://fundingopps2.cos.com>) and the Illinois Researcher Information Service (<http://www.library.uiuc.edu/iris/>).

Through an online forum, users of the service will generate a profile including contact information and choose from a list of predefined categories and keywords of particular interest to cerebrovascular surgeons. Once submitted a list of funding opportunities matching the specified keyword will be displayed via the user's Web browser and – if requested – be sent to the user via email. Further the user's profile will be stored in the database so the user can be notified automatically via the Web site and/or electronic mail as new opportunities are incorporated into the database. Users will be able to modify their profiles at any time through an individual, password-protected account.

Focusing the queries on those areas that will likely be of highest interest – particularly science and technology funding – streamlines the search

process and allows for the inclusion of greater detail. Utilization of individual user accounts will allow a member to tailor their home page to suit their needs at a minute level. The service will also incorporate information regarding major program deadlines for prominent federal and private granting institutions and links to funding bulletins, newsletters, and other funding databases. Future possibilities include an online bulletin board for discussion via the Web site and a general mailing list of funding opportunities and other science and technology information available to all subscribers on request.

This service is currently under development with the intention of bringing it online for beta testing on September 1, 2000. During the beta testing stage, access will be provided to approximately one dozen volunteers who will test the service and provide feedback regarding its utility. If you would like to volunteer as a beta tester, please contact Daryn Belden at webmaster@neurosurg.wisc.edu. Your comments will be instrumental in finalizing the service's design.

When beta testing has been completed, notification will be made through this newsletter. At that time, slated for November 1, 2000, interested parties will be able to create an account either by logging into the service or contacting the service administrator. Further details will be provided as the project progresses at http://www.neurosurg.wisc.edu/funding_service/progress/.

Robert J. Dempsey, MD, is Chairman, Scientific Committee, AANS/CNS Section on Cerebrovascular Surgery.