A conference for orthopedic spine surgeons, neurosurgeons, neurologists, physical medicine and rehabilitation and pain management physicians, primary care physicians, physician assistants, residents, fellows, nurses, physical therapists and other health care providers interested in the most innovative technologies and the latest evidence-based clinical guidelines in the care of cranial and spinal disorders

SATURDAY, OCT. 20, 2012
OMNI INTERLOCKEN RESORT
BROOMFIELD, COLORADO
Implementing evidence-based medicine into clinical practice

The 9th Annual Symposium, Current Techniques in the Treatment of Cranial and Spinal Disorders, is facilitated by Boulder Neurosurgical & Spine Associates (BNA) and the Justin Parker Neurological Institute (JPNI). This live educational activity offers a series of innovative presentations regarding the latest advancements and treatment considerations in cranial, orthopedic and neurosurgical spine technology. Each year careful consideration goes into identifying the most significant subject matter and this year we are pleased to offer topics including stem cell research for brain and spinal cord injuries, advances in rehabilitation and exercise-based therapies, surgical options for epilepsy, stereotactic radiosurgery and cold radiofrequency for joint lumbar and thoracic pain.

JPNI is a scientific organization whose principle purpose is to conduct clinical research and improve clinical outcomes. The mission of JPNI is to advance scientific discoveries and innovative medical technologies into clinical practice by conducting clinical trials in order to implement best practices and disseminate to the medical community. JPNI also provides fellowship and internship opportunities to neurosurgical and orthopedic spine surgeons and students who are pursuing careers in medicine.

JPNI is a fully accredited 501(c)(3) nonprofit organization founded by BNA neurosurgeon, Dr. Alan Villavicencio, and Dr. John Parker and his family in dedication to the memory of their son and brother, Justin, who died from a severe traumatic brain injury.
CHAIRMAN OF THE BOARD

Alan Villavicencio, MD

Dr. Villavicencio graduated from Harvard Medical School in Boston, MA, in 1995 with honors and completed a neurosurgical residency at Duke University. He went on to complete a specialty orthopedic spine surgery fellowship at Cedars-Sinai Medical Center. He is one of only a handful of surgeons in the country with dual neurosurgery and orthopedic spine training.

Dr. Villavicencio is the founder and chairman of the board of the Justin Parker Neurological Institute (JPNI). Dr. Villavicencio has published more than 60 peer-reviewed articles and book chapters and presented hundreds of abstracts at national and international neurosurgical meetings. Dr. Villavicencio is the principal investigator for several ongoing U.S. Food and Drug Administration (FDA) Investigational Device Exemption (IDE) trials.

DISTINGUISHED VISITING PROFESSOR AND KEYNOTE

Stephen Davies, PhD

Dr. Davies studied for his undergraduate degree in biological sciences at the University of Sussex, UK and went on to study for his PhD in nervous system regeneration at the National Institute for Medical Research, Mill Hill, London, which was awarded by University College London in 1996. It was upon moving from London to Case Western Reserve University in Cleveland, OH, as a postdoctoral fellow, that he initiated a series of adult neuron to adult central nervous system (CNS) transplantation experiments that fundamentally changed the scientific community’s understanding of the role of scar tissue in preventing axon regeneration in the traumatically injured adult brain and spinal cord.

Dr. Davies is an internationally recognized research scientist who has devoted his scientific career to gaining a better understanding of why axon regeneration fails in the mammalian CNS and the development of new technologies for repairing the injured or diseased brain and spinal cord. His research has been featured by many international news agencies and magazines over the past few years, most recently by the noted futurist Michio Kaku in his latest book, Physics of the Future.
<table>
<thead>
<tr>
<th>TIME</th>
<th>SPEAKER</th>
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<th>CME</th>
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<tr>
<td>7:00-7:30am</td>
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<td>Continental Breakfast &amp; Exhibition</td>
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<tr>
<td>7:30-7:35am</td>
<td>Alan Villavicencio, MD</td>
<td>Introduction and Welcome</td>
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<td>Morning Session I</td>
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<tr>
<td>7:35-8:10am</td>
<td>Kara Beasley, DO</td>
<td>Vagal Nerve Stimulation and Other Surgical Options for Epilepsy: Science or Fiction?</td>
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<td>8:10-8:45am</td>
<td>Alexander Mason, MD</td>
<td>Stereotactic Radiosurgery: Current Treatment Strategies</td>
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<td>8:45-9:20am</td>
<td>E. Lee Nelson, MD</td>
<td>Management of Traumatic Brain Injury: A Guidelines Overview</td>
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<td>9:20-9:50am</td>
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<td>Coffee Break/Exhibition</td>
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<tr>
<td>9:50-10:25am</td>
<td>Alan Zacharias, MD</td>
<td>Acute Ischemic Stroke: Update and New Therapies</td>
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<td>10:25-11:00am</td>
<td>Alan Villavicencio, MD</td>
<td>Why Surgery Fails: Restoring Sagittal Balance</td>
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<td>11:00-11:35am</td>
<td>Sharad Rajpal, MD</td>
<td>Management of Spine Infections</td>
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<td>11:35am-12:05pm</td>
<td>Venu Akuthota, MD</td>
<td>Cold Radiofrequency for Joint Lumbar and Thoracic Pain</td>
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<td>12:05-1:05pm</td>
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<td>Morning Session II</td>
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<td>1:05-1:55pm</td>
<td>Stephen Davies, PhD</td>
<td>Keynote: New Technologies for SCI Repair</td>
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<td>1:55-2:40pm</td>
<td>Paul Mintken, PT, DPT, OCS, FAAMPT</td>
<td>Advances in Rehabilitation and Exercise-Based Therapies for the Operative and Non-operative Spine Patient</td>
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<td>Afternoon Session I</td>
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<td>3:10-3:45pm</td>
<td>Greg Arends, MD</td>
<td>Management of Low Back Pain</td>
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<td>3:45-4:20pm</td>
<td>Kenneth Pettine, MD</td>
<td>Artificial Discs: The Argument for Using Them</td>
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<tr>
<td>4:20-4:55pm</td>
<td>Alan Villavicencio, MD</td>
<td>Artificial Discs: The Argument for Not Using Them</td>
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<td>Afternoon Session II / Option A</td>
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<td>3:10-3:50pm</td>
<td>Kara Beasley, DO</td>
<td>New Frontiers in Functional Neurosurgery</td>
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<td>3:50-4:50pm</td>
<td>Kirk Finnis, PhD</td>
<td>Anatomy of the Basal Ganglia as it Relates to DBS Programming. Reimbursement Review.</td>
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<td>Conclusion</td>
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<td>Adjournment and Closing Remarks</td>
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<td>5:00-8:00</td>
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<td>Refreshments and Dinner (optional)</td>
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**REGISTER TODAY –**


303.938.5700
Course Description
This live educational activity will review and provide updates on the latest advances in the treatment of cranial and spinal neurosurgical and orthopedic spine clinical issues. Each session will provide an intensive, practical review from a panel of experts in the field – with emphasis on evidence-based approaches in the fields of neurosurgery and orthopedic spine technology. New this year, we will have a breakout session option for Afternoon Session II. Please check the agenda for more information.

Learning Objectives
Upon completion of this live activity, participants should be able to:
1. Apply an extended understanding of multidisciplinary care in treating patients with brain and spine conditions
2. Discuss the latest technological advancements and treatment therapies for cranial and spinal disorders
3. Describe several therapies for movement disorders including functional neurosurgery

Registration
The registration deadline is Friday, October 12, 2012 at 12 a.m. Registration will increase from $70 to $80 beginning Saturday, October 13, 2012. Register online at http://www.bnasurg.com/annual-symposium.php, or call 303.938.5700 if you do not have access to a computer. Mail registration checks to: Attn: Symposium 2012, 1155 Alpine Ave., Ste. 320, Boulder, CO 80304. The registration fee includes tuition, continental breakfast, lunch, afternoon snack and beverages, as well as educational materials including presentations and CV’s for all speakers in the form of a binder or CD. Dinner and cocktails is an additional $20. On-site registration is available, but not guaranteed. An email confirmation will be sent upon receipt of registration. If you do not receive an email confirmation, please contact Kathy at 303.938.5700.

Cancellation Policy
If you cancel your participation in this course, your registration fee, less a $25 administrative fee will be refunded when written notification is received by JPNI by Friday, October 12, 2012 at 5 p.m.

Accreditation/Designation
This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the AANS and JPNI. The AANS is accredited by ACCME to provide continuing medical education for physicians.
The AANS designates this live educational activity for a maximum of 7.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
All non-physician attendees will be provided with a certificate of attendance that they can submit to their accreditation boards.
Please return the Attendance Verification Form and your completed Evaluation Form to the registration tables prior to departure.

AANS Disclosure
Before the program, anyone in control of the educational content of this activity will disclose the existence of any financial interest and/or the relationship they or their significant other have with the manufacturer(s) of any commercial product(s) to be discussed during their presentation. Disclosures will be included in the final program.

Materials
• Check-in at the registration table the day of the symposium to obtain an agenda and to receive a binder or CD including all presentations, as well as doctor CV’s and AANS documentation.
• Attendance verification forms will be available at the registration table and must be completed and returned no later than Friday, October 26 to obtain CME certificates. Forms not returned the day of the event can be faxed to Kathy at 303.531.7083 or emailed to kathyb@bnasurg.com.
• Evaluation forms will be available for completion during the symposium and can be returned to the registration table. These are very important and utilized for future planning.
Venu Akuthota, MD  
Dr. Akuthota received his Medical Degree from Northeastern Ohio University College of Medicine, completed residency at Northwestern University/Rehabilitation Institute of Chicago and completed a fellowship in spine and sports medicine at Northwestern University/Rehabilitation Institute of Chicago. He is Vice Chair, Associate Professor, and Pain Fellowship Director of Physical Medicine and Rehabilitation at University of Colorado School of Medicine.

Greg Arends, MD  
Dr. Arends received his Medical Degree from the Wayne State University School of Medicine in Detroit, MI, and completed a residency in physical medicine and rehabilitation at the Rehabilitation Institute of Chicago and Northwestern University in Evanston, IL. He is a board certified and fellowship trained physician with expertise in the diagnosis and treatment of pain of spinal origin. He treats occupational and sports related injuries, joint, nerve, and musculoskeletal conditions.

Kara Beasley, DO  
Dr. Beasley obtained a dual degree in medicine from Midwestern University and a master's in biomedical ethics from Arizona College of Osteopathic Medicine. She went on to complete her residency in neurological surgery at Philadelphia College of Osteopathic Medicine, fellowships in stereotactic radiosurgery at Cooper University Hospital and functional neurosurgery at the Cleveland Clinic Foundation.

Kirk Finnis, PhD  
Dr. Finnis holds a PhD in Neuroscience from the University of Western Ontario (London, Canada), and is a leading expert in statistical anatomical mapping and 3D visualization of the brain. Dr. Finnis was previously COO and co-founder of Atamai Inc., a medical image visualization company, based in Calgary, AB. Since his introduction to DBS in 1998, Dr. Finnis has participated in thousands of DBS cases around the world.

Alexander Mason, MD  
Dr. Mason received his MD from Ohio State University College of Medicine and Public Health and completed his residency at the Cleveland Clinic Foundation with interests in complex and minimally invasive spine, neuro-oncology and surgical epilepsy. His fellowship was in cerebrovascular and skull base surgery at Emory University.

Paul Mintken, PT, DPT, OCS, FAAOMPT  
Dr. Mintken is an Associate Professor in the physical therapy program at the University of Colorado School of Medicine, where he is track coordinator for musculoskeletal content. He is fellowship trained in orthopaedic manual therapy, a board certified Orthopaedic Clinical Specialist and a Fellow in the American Academy of Orthopaedic and Manual Physical Therapists.

E. Lee Nelson, MD  
Dr. Nelson received his MD from Baylor College of Medicine and Texas Medical Center in Houston. He has extensive training in the treatment of spinal trauma from the Ben Taub General Hospital. Dr. Nelson also underwent training in the renowned M.D. Anderson Cancer Center in surgical and non-surgical management of spinal oncology.

Kenneth Pettine, MD  
Dr. Pettine is a board certified, fellowship trained spine surgeon. He received his Medical Degree from the University of Colorado School of Medicine in Denver. He completed his residency and master's in orthopedic surgery at the Mayo Clinic in Rochester, MN, and completed a spine fellowship at the Institute for Low Back Care in Minneapolis, MN.

Sharad Rajpal, MD  
Dr. Rajpal received his MD and neurosurgery training at the University of Wisconsin. He completed a combined orthopedic and neurological surgery spine fellowship at the nationally renowned Cleveland Clinic where he gained experience in the latest techniques in spinal oncology, minimal access surgery and complex spinal deformity.

Alan Zacharias, MD  
Dr. Zacharias received his MD from the University of Mississippi. His neurology residency was completed at the University of Virginia followed by a neuromuscular and EMG fellowship at Emory University, in Atlanta, GA. He has been in private practice since 2000. He practices neurology with special interest in neuromuscular diseases and EMG.
REGISTRATION IS EASY:
Go online:  www.bnasurg.com/annual-symposium.php
Call:  303.938.5700  if you don't have access to a computer
Mail your check to: Justin Parker Neurological Institute,
        Attn: Symposium 2012, 1155 Alpine Ave., Ste. 320, Boulder, CO 80304

Thank you to the following companies for having provided Educational Grants in support of this activity:
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