

**Joint Section on Disorders
of the Spine
and Peripheral Nerves**

and

**The American Association
of Neurological Surgeons**

11th Annual Meeting



*February 14–18, 1995
Pointe Hilton on South Mountain
Phoenix, Arizona*

PROGRAM SUMMARY

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The American Association of Neurological Surgeons is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

The American Association of Neurological Surgeons designates this continuing education for 20 credit hours in category 1 of the Physicians Recognition Award of the American Medical Association. An additional 9 credit hours are available for attendance at the Special Courses.

OFFICERS

Chairman:	Russell Travis, MD
Chairman Elect:	Arnold H. Menezes, MD
Secretary:	Stephen Papadopoulos, MD
Treasurer:	Peter Klara, MD, PhD
Immediate Past Chairman:	Edward Tarlov, MD
Members-at-Large:	Edward C. Benzel, MD Gary L. Rea, MD, PhD Nancy Epstein, MD

1995 ANNUAL MEETING COMMITTEE

Annual Meeting Chairman:	Richard Fessler, MD, PhD Gainesville, Florida												
Scientific Program Chairman:	Curtis Dickman, MD Phoenix, Arizona												
Scientific Program Co-Chairman:	David Cahill, MD Tampa, Florida												
Exhibit Chairman:	Mark N. Hadley, MD Birmingham, Alabama												
Scientific Program Committee:	<table> <tr> <td>Charles Branch, Jr., MD Winston-Salem, North Carolina</td> <td>Peter Klara, MD, PhD Norfolk, Virginia</td> </tr> <tr> <td>Paul Cooper, MD New York, New York</td> <td>John Knightly, MD San Diego, California</td> </tr> <tr> <td>Michael Fehlings, MD, PhD Toronto, Ontario, Canada</td> <td>John McGillicuddy, MD Ann Arbor, Michigan</td> </tr> <tr> <td>Regis Haid, Jr., MD Atlanta, Georgia</td> <td>Eugene Rossitch, Jr., MD Boston, Massachusetts</td> </tr> <tr> <td>H. Louis Harkey, MD Jackson, Mississippi</td> <td>Charles Stillerman, MD Los Angeles, California</td> </tr> <tr> <td>James Hollowell, MD Milwaukee, Wisconsin</td> <td>Vincent Traynelis, MD Iowa City, Iowa</td> </tr> </table>	Charles Branch, Jr., MD Winston-Salem, North Carolina	Peter Klara, MD, PhD Norfolk, Virginia	Paul Cooper, MD New York, New York	John Knightly, MD San Diego, California	Michael Fehlings, MD, PhD Toronto, Ontario, Canada	John McGillicuddy, MD Ann Arbor, Michigan	Regis Haid, Jr., MD Atlanta, Georgia	Eugene Rossitch, Jr., MD Boston, Massachusetts	H. Louis Harkey, MD Jackson, Mississippi	Charles Stillerman, MD Los Angeles, California	James Hollowell, MD Milwaukee, Wisconsin	Vincent Traynelis, MD Iowa City, Iowa
Charles Branch, Jr., MD Winston-Salem, North Carolina	Peter Klara, MD, PhD Norfolk, Virginia												
Paul Cooper, MD New York, New York	John Knightly, MD San Diego, California												
Michael Fehlings, MD, PhD Toronto, Ontario, Canada	John McGillicuddy, MD Ann Arbor, Michigan												
Regis Haid, Jr., MD Atlanta, Georgia	Eugene Rossitch, Jr., MD Boston, Massachusetts												
H. Louis Harkey, MD Jackson, Mississippi	Charles Stillerman, MD Los Angeles, California												
James Hollowell, MD Milwaukee, Wisconsin	Vincent Traynelis, MD Iowa City, Iowa												

PAST OFFICERS

1993

Chairman: Edward C. Tarlov, MD
Chairman-Elect: Russell Travis, MD
Secretary: Arnold H. Menezes, MD
Treasurer: Russell Travis, MD
Immediate Past Chairman: Volker K. H. Sonntag, MD
Members-at-Large: Edward Benzel, MD
Gary Rea, MD

1992

Chairman: Volker K. H. Sonntag, MD
Chairman-Elect: Edward Tarlov, MD
Secretary: Arnold H. Menezes, MD
Treasurer: Russell Travis, MD
Members-at-Large: Donald J. Prolo, MD
Melville P. Roberts, MD

1991

Chairman: Carole A. Miller, MD
Chairman-Elect: Volker K. H. Sonntag, MD
Secretary: Arnold H. Menezes, MD
Treasurer: Russell Travis, MD
Members-at-Large: Donald J. Prolo, MD
Melville P. Roberts, MD

1990

Chairman: Edward S. Connolly, MD
Chairman-Elect: Carole A. Miller, MD
Secretary: Volker K. H. Sonntag, MD
Treasurer: Russell Travis, MD
Members-at-Large: Arnold H. Menezes, MD
Donald J. Prolo, MD

1989

Chairman: Edward S. Connolly, MD
Chairman-Elect: Carole A. Miller, MD
Secretary: Volker K. H. Sonntag, MD
Treasurer: Russell Travis, MD
Members-at-Large: Arnold H. Menezes, MD
Donald J. Prolo, MD

1988

Chairman: Stewart B. Dunsker, MD
Secretary: Carole A. Miller, MD
Treasurer: Edward Tarlov, MD
Members-at-Large: Phanor L. Perot, Jr., MD
Volker K. H. Sonntag, MD

1987

Chairman: Stewart B. Dunsker, MD
Secretary: Carole A. Miller, MD
Treasurer: Edward Tarlov, MD
Members-at-Large: Phanor L. Perot, Jr., MD
Volker K. H. Sonntag, MD

1986

Chairman: George W. Sypert, MD
Secretary: Henry H. Schmidek, MD
Treasurer: Edward S. Connolly, MD
Member-at-Large: Carole A. Miller, MD

1985

Chairman: Russell W. Hardy, MD
Secretary: Henry H. Schmidek, MD
Treasurer: Edward S. Connolly, MD
Member-at-Large: George W. Sypert, MD

PREVIOUS MEETINGS

- 1985 – Greenlefe, Florida
- 1986 – San Diego, California
- 1987 – Boca Raton, Florida
- 1988 – Phoenix, Arizona
- 1989 – Cancun, Mexico
- 1990 – Captiva Island, Florida
- 1991 – Rancho Mirage, California
- 1992 – Miami, Florida
- 1993 – Tucson, Arizona
- 1994 – Fort Lauderdale, Florida

FUTURE MEETINGS

- 1996 – Orlando, Florida
- 1997 – Newport Beach, California
- 1998 – Rancho Mirage, California

PAST PROGRAM COMMITTEES

1985

Barth A. Green, MD
George W. Sybert, MD

1986

Randall W. Smith, MD
Philip R. Weinstein, MD
John F. Howe, MD
Stanley J. Goodman, MD
Barth A. Green, MD
Volker K. H. Sonntag, MD
Hector E. James, MD

1987

Volker K. H. Sonntag, MD
Robert S. Hood, MD
Joel N. Abromovitz, MD
Timothy Harrington, MD

1988

Melville P. Roberts, MD
Volker K. H. Sonntag, MD
Russell Travis, MD
Harold A. Wilkinson, MD
Richard Saunders, MD

1989

Arnold H. Menezes, MD
Carole A. Miller, MD
Russell Travis, MD
John C. Godersky, MD
Patrick W. Hitchon, MD

1990

Edward Tarlov, MD
Bennett Blumenkopf, MD
Paul D. Dernbach, MD
Nancy Epstein, MD

1991

Nancy Epstein, MD
Joy Arpin, MD
Lawrence Borges, MD
Emily Friedman, MD
Ben Benner, MD

1992

Gary Rea, MD
Bennett Blumenkopf, MD
Charles Branch, Jr., MD
David Cahill, MD
Richard Fessler, MD, PhD
Stephen Papadopoulos, MD

1993

Stephen Papadopoulos, MD
Charles Branch, Jr., MD
David Cahill, MD
Curtis Dickman, MD
Richard Fessler, MD, PhD
Regis Haid, Jr., MD
Robert J. Martin, MD
Gary Rea, MD
Moris Senegor, MD
John McGillicuddy, MD
Noel Perin, MD

1994

Richard Fessler, MD, PhD
David Cahill, MD
Curtis Dickman, MD
Peter Gianaris, MD
H. Louis Harkey, MD
Paul McCormick, MD
Russ Nockels, MD
Moris Senegor, MD
Vincent Traynelis, MD

MAYFIELD AWARD

1984

Mark N. Hadley, MD
Phoenix, AZ

1985

Ab Guha, MD
Toronto, Ontario

1986

No Award Presented

1987

John A. Feldenzer, MD
Ann Arbor, MI

1988

No Award Presented

1989

Richard K. Simpson, Jr., MD
Houston, TX

1990

R. John Hurlbert, MD, PhD
Toronto, Ontario

1991

Peter Gianaris, MD
Eau Claire, WI

1992

Rajiv Midha, MD
Toronto, Ontario

1993

Clinical Science
Gerald F. Tuite, MD
Ann Arbor, MI

Basic Science

Allan D.O. Levi, MD, PhD
Miami, FL

1994

Timothy C. Ryken, MD
Iowa City, IA

1995

Simcha J. Weller, MD
Boston, MA

JOINT SECTION ON DISORDERS OF THE SPINE AND PERIPHERAL NERVES FELLOWSHIP AWARD

1993

Ziya L. Gokaslan, MD
Houston, TX

1995

R. John Hurlbert, MD, PhD
Toronto, Ontario

1994

Christopher Shaffrey, MD
Charlottesville, VA

THE JOINT SECTION ON DISORDERS OF THE SPINE AND PERIPHERAL NERVES WOULD LIKE TO THANK THE FOLLOWING COMPANIES FOR CONTRIBUTING TO THE 1995 SPINE FELLOWSHIP AWARD:

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EXHIBITORS

The officers and membership of the Joint Section on Disorders of the Spine and Peripheral Nerves of the AANS/CNS appreciate the support of the following exhibitors for the 11th Annual Meeting:

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Booth 4

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Warsaw, IN 46580
(219) 372-7132

Booth 1

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Booth 21

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1170 Mark Avenue
Carpinteria, CA 93013
(800) 235-5713

Booth 8

Interpore International
181 Technology Drive
Irvine, CA 92718
(714) 453-3200

Booth 3

J.B. Lippincott Company
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Phoenix, AZ 85015
(602) 279-1088

Booth 38

Koros Surgical Instruments
610 Flinn Avenue
Moorpark, CA 93021
(805) 529-0825

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Fort Worth, TX 76111-4116
(800) 433-7639

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Orasoptic Research, Inc. **Booth 33**
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1800 Pyramid Place
Memphis, TN 38132
(901) 396-3133

Surgical Dynamics, Inc. **Booth 30**
2575 Stanwell Drive
Concord, CA 94520
(510) 602-5508

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22 South Washington Street
Park Ridge, IL 60068
(708) 692-2740

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Disclosure

Each paper presenter was responsible for querying the co-authors regarding the disclosure of their work. Paper authors whose presentations have a [†] by the title have indicated they or their co-authors (department) received something of value associated with the content of their presentation. The Joint Spine Section and the AANS does not intend this identification to decrease the value of their presentations or to imply bias. It is intended solely for information.

MEETING AGENDA

Physiology of Solid State

Dr. J. R. Van Wazer

Dr. J. R. Van Wazer

Dr. J. R. Van Wazer

Dr. J. R. Van Wazer

Dr. J. R. Van Wazer

Dr. J. R. Van Wazer

Meeting Agenda

Tuesday, February 14, 1995

4:00 PM - 6:30 PM	Registration
6:30 PM - 9:00 PM	Opening Reception

Wednesday, February 15, 1995

6:30 AM - 7:30 AM	Continental Breakfast
6:30 AM - 2:00 PM	Exhibits and Posters
7:15 AM - 7:25 AM	Joint Section Chairman's Welcome
7:25 AM - 7:30 AM	Scientific Program Chairman's Welcome
7:30 AM - 10:00 AM	SYMPOSIUM I Moderators: Curtis A. Dickman, MD Regis W. Haid, Jr., MD [†] INNOVATIONS IN SPINAL SURGERY
7:30 AM - 7:45 AM	Absorbable Spinal Implants Hansen Yuan, MD ^{†*}
7:45 AM - 8:00 AM	Frameless Stereotaxis for Spinal Surgery Iain Kalfas, MD [†]
8:00 AM - 8:15 AM	Anterior Thoracolumbar Instrumentation Thomas Zdeblick, MD ^{†**}
8:15 AM - 8:30 AM	Panel Discussion
8:30 AM - 8:45 AM	Pathophysiology of Spinal AVMs Robert F. Spetzler, MD

*Sponsored by an Educational Grant by Smith & Nephew Spine.
**Sponsored by an Educational Grant by Sofamor/Danek, Inc.

8:45 AM - 9:00 AM	Titanium Cages for Vertebral Body Reconstruction Jurgen Harms, MD*
9:00 AM - 9:15 AM	Artificial Disc Replacements Casey Lee, MD ^{†**}
9:15 AM - 9:30 AM	Panel Discussion
9:30 AM - 9:35 AM	Introduction to Chairman's Address Stewart Dunsker, MD
9:35 AM - 10:00 AM	Chairman's Address Russell Travis, MD
10:00 AM - 10:30 AM	Break — View Exhibits and Posters
10:30 AM - 1:00 PM	SYMPOSIUM II Moderators: Kevin Foley, MD [†] David Cahill, MD [†] ENDOSCOPIC SPINAL SURGERY
10:30 AM - 10:45 AM	Arthroscopic Microdiscectomy and Endoscopic Fusion Techniques Parviz Kambin, MD ^{†***}
10:45 AM - 11:00 AM	Endoscopic Microdiscectomy — Transforaminal Removal of Herniated Discs Hallett Matthews, MD ^{†****}
11:00 AM - 11:15 AM	Video Assisted Thoracoscopic Surgery (VATS): Approaches for Discectomy and Vertebrectomy John Regan, MD ^{†*****}
11:15 AM - 11:30 AM	Panel Discussion

*Sponsored by an Educational Grant by DePuy Motech.
**Sponsored by an Educational Grant by AME, Inc.
***Sponsored by an Educational Grant by Smith & Nephew Spine.
****Sponsored by an Educational Grant by Sofamor/Danek, Inc.
*****Sponsored by an Educational Grant by Ethicon Endo-Surgery.

11:30 AM - 1:00 PM

CONTRIBUTED PAPERS

MINIMALLY INVASIVE SPINAL SURGERY

1. 11:30 AM - 11:38 AM **Early Clinical Results of Laparoscopic Fusion of the L5-S1 Disc Space**
John J. Regan, MD†,
Richard D. Guyer, MD,
Paul C. McAfee, MD,
Ronald J. Aronoff, MD
2. 11:38 AM - 11:46 AM **A New and Superior Technique for Removal of Herniated Lumbar Disc: Endoscope and Nucleotome Combination**
David A. Ditsworth, MD†
3. 11:46 AM - 11:54 AM **Outpatient Microscopic Lumbar Discectomy Under Local Anesthesia**
Keith M. Maxwell, MD,
Christopher Newcomb, PA-C

11:54 AM - NOON

Discussion: Papers 1-3

TUMORS AND INFECTIONS

4. NOON - 12:08 PM **LINAC-Based Spinal Stereotactic Radiosurgery**
Allan J. Hamilton, MD†
5. 12:08 PM - 12:16 PM **Indications, Techniques, Results of Combined Anterior-Posterior Surgery for Spinal Tumors**
Narayan Sundaresan, MD†,
Ved Prakash Sachdev, MD,
Frank Moore, MD, John S. Shiau, MD,
Laura Hough, RN

6. 12:16 PM - 12:24 PM

Spinal Tuberculosis: A Diagnostic and Management Challenge

E. S. Nussbaum, MD,
G. Rockswold, MD, PhD,
T. Bergman, MD, L. Sebring, MD, PhD,
D. Erickson, MD, E. Seljeskog, MD, PhD

12:24 PM - 12:30 PM

Discussion: Papers 4-6

INNOVATIVE CONCEPTS

7. 12:30 PM - 12:38 PM **Stereotactic Guidance of Spinal Screw Placement: A Cadaver Study**
Kevin T. Foley, MD†,
Rick L. McKenzie, MD,
Maurice M. Smith, MD
8. 12:38 PM - 12:46 PM **Vertebral Body Replacement With Titanium Mesh Cages**
J. Patrick Johnson, MD,
Roland Torres, MD
9. 12:46 PM - 12:54 PM **The Tethered Cord Syndrome or Progressive Posttraumatic Myelomalacic Myelopathy (PPMM): A Significant Cause of Delayed Neurological Dysfunction**
Jose Arias, MD, Steve Falcone, MD,
Robert Quencer, MD,
Sherri Patchen, RN, MSN,
Heather Andrus, BS,
Barth A. Green, MD

12:54 PM - 1:00 PM

Discussion: Papers 7-9

1:00 PM - 2:00 PM

Lunch — for all registrants, spouses, children and company representatives.

2:00 PM - 5:00 PM

**Special Course* –
Consultant's Corner**

Location: Main Ballroom

Director: Stewart Dunsker, MD[†]

Faculty: Lawrence Borges,
Randall Chesnut, Paul McCormick,
Charles Stillerman

**Special Course* – Anterior
Thoracolumbar Instrumentation**

Location: Saguaro Room

Director: David Cahill, MD[†]

Faculty: Thomas Zdeblick[†], Robert Ho,
Fred Geisler, Jean-Jacques Abitbol

**Special Course* –
Spinal Endoscopy**

Location: Grand Canyon Room

Directors: Kevin Foley, MD[†]

Noel Perrin, MD

Faculty: Hallett Matthews[†],
Joseph Maroon, Thomas Zdeblick[†],
Maurice Smith

**Advance or on-site registration required;
admittance by ticket only.*

Thursday, February 16, 1995

6:30 AM - 7:30 AM

Continental Breakfast

6:30 AM - 2:00 PM

Exhibits and Posters

7:30 AM - 10:00 AM

SYMPOSIUM III

Moderators: H. Louis Harkey, MD
Vincent Traynelis, MD[†]

**ANATOMIC BASIS OF SURGERY
OF THE CRANIOVERTEBRAL
JUNCTION**

7:30 AM - 7:45 AM

**Embryology and Developmental
Anatomy of the Craniovertebral
Junction**

Arnold Menezes, MD

7:45 AM - 8:00 AM

**Microsurgical Anatomy of the
Region of the Foramen Magnum**

Richard Fessler, MD, PhD

8:00 AM - 8:15 AM

**Far Lateral Approach to the Foramen
Magnum and Upper Cervical Spine**

Robert F. Spetzler, MD

8:15 AM - 8:30 AM

Panel Discussion

8:30 AM - 8:45 AM

**High Cervical Retropharyngeal
Approach**

Dennis McDonnell, MD

8:45 AM - 9:00 AM

**Transoral and Extended Transoral
Exposures**

Volker K. H. Sonntag, MD[†]

9:00 AM - 9:15 AM

Transoral Screw Plate Fixation

Jurgen Harms, MD*

9:15 AM - 9:30 AM

Panel Discussion

*Sponsored by an Educational Grant by DePuy Motech.

- 9:30 AM - 9:35 AM **Joint Section Spine Fellowship Award Presentation**
Mark Hadley, MD
Recipient: R. John Hurlbert, MD, PhD
- 9:35 AM - 9:40 AM **Mayfield Award Presentation**
Mark Hadley, MD
Recipient: Simcha J. Weller, MD
- 9:40 AM - 9:55 AM **Mayfield Award Talk**
Expression of Neuronal Growth-Associated Protein GAP-43 Is Upregulated Following Experimental Spinal Cord Injury in the Rat and Is Augmented by Local Administration of Interleukin-6
Simcha J. Weller, MD, Bart Nuttin, MD, Christopher B. Dechet, BS, Larry I. Benowitz, PhD, Eugene Rossitch, Jr., MD
- 9:55 AM - 10:00 AM **Discussion**
-
- 10:00 AM - 10:30 AM **Break — View Exhibits and Posters**
-
- 10:30 AM - 1:00 PM **SYMPOSIUM IV: CONTRIBUTED PAPERS**
Moderators: Paul Cooper, MD
John Knightly, MD
BONE HEALING
10. 10:30 AM - 10:38 AM **Cigarette Smoking: Effect on Lumbosacral Arthrodesis**
Chaim Rogozinski, MD[†], Abraham Rogozinski, MD
11. 10:38 AM - 10:46 AM **The Use of Coral Bone Replacement and Augmentation in Spinal Surgery**
John S. Thalgott, MD, Mark B. Kabins, MD
- 10:46 AM - 10:50 AM **Discussion: Papers 10 and 11**

SURGICAL ANATOMY

12. 10:50 AM - 10:58 AM **Incidence of the Artery of Adamkiewicz by Spinal Angiography**
Mark S. Adams, MD, Jesse R. Rael, MD, Edward C. Benzel, MD, FACS, Anna Champlin, MD
13. 10:58 AM - 11:06 AM **How Important Is the Artery of Adamkiewicz?**
David W. Cahill, MD[†]
14. 11:06 AM - 11:14 AM **Surgical Anatomy of the Atlantoaxial Complex**
T. Glenn Pait, MD, Luis A. Borba, MD, Kenan I. Arnautovic, MD, Phillip V. McAllister, MD
15. 11:14 AM - 11:22 AM **Anatomy of the Thoracic Pedicle**
Bruce M. McCormack, MD, Edward C. Benzel, MD, FACS, Mark S. Adams, MD, Nevan G. Baldwin, MD, Frederick W. Rupp, MD
- 11:22 AM - 11:30 AM **Discussion: Papers 12-15**

SPINAL CORD INJURY AND REGENERATION

16. 11:30 AM - 11:38 AM **The Influence of Heregulins on Human Schwann Cell Proliferation**
Alan D. O. Levi, MD, Richard P. Bunge, Julie A. Lofgren, Leonie Meima, Franz Hefti, Karoly Nikolics, Mark X. Sliwowski
17. 11:38 AM - 11:46 AM **Blood Flow Changes and Blood Spinal Cord Barrier Integrity Following Subarachnoid Infusion of Endothelin I (ET-1)**
Richard M. Westmark, MD, N. Aihara, K. Fukuda, A. L. McKenzie, L. H. Pitts, L. J. Noble

11:46 AM - 11:50 AM

Discussion: Papers 16-17

INTRA-OPERATIVE MONITORING

18. 11:50 AM - 11:58 AM

Root Specific SSEPs Support Importance of Bone Decompression in Lumbar Disc Surgery

Gary N. Simonds, MD,
Pavi Castello, MD, Howard Place, MD,
Douglas Hemler, MD,
Steven Shannon, MD,
Tim Simmons, BS

19. 11:58 AM - 12:06 PM

The Use of EMG Measures To Protect Nerve Root Function During Surgery for Spinal Degeneration.

Jeffrey H. Owen, PhD, J. Kostuik, MD,
B. Barden, MD, Ken Wood, MD,
M. Hatley, RN, J. Skelly

20. 12:06 PM - 12:14 PM

Normal Variability of Intra-Operative Somatosensory Evoked Potentials

Jeffrey H. Owen, PhD,
Paul Sponseller, MD

21. 12:14 PM - 12:22 PM

Sensory Components of Cervical MEPS

Robert D. Rose, PhD

12:22 PM - 12:30 PM

Discussion: Papers 18-21

TREATMENT OF THORACIC AND LUMBAR SPINAL FRACTURES

22. 12:30 PM - 12:38 PM

Retrospective Analysis of Anterior Versus Posterior Surgical Treatment of Unstable Thoracolumbar Burst Fracture

Christopher I. Shaffrey, MD,
Olumide A. Danisa, MD,
Gwo-Jaw Wang, MD,
John A. Jane, MD, PhD,
Richard Whitehill, MD,
Thomas A. Szabo, PA-C,
Donald P. K. Chan, MD

23. 12:38 PM - 12:46 PM

A Comparison of Non-Operative and Operative Treatment of Thoroacolumbar Fractures

Philip Rafiy, MD,
Glenn R. Rechtine, MD,
Mark Hartman, MD,
Robert Alexander, MD, Lucy Love, MD,
Ann Marie Chrin, ARNP

24. 12:46 PM - 12:54 PM

Surgical Treatment of Low Lumbar Fractures

Paul M. Arnold, MD,
Wade M. Mueller, MD,
Sanford J. Larson, MD,
Dennis J. Maiman, MD, PhD

12:54 PM - 1:00 PM

Discussion: Papers 22-24

1:00 PM - 2:00 PM

Lunch — on your own

2:00 PM - 5:00 PM

Special Course* –

Spinal Biomechanics

Location: Grand Canyon Room

Director: Edward Benzel, MD

Faculty: Curtis Dickman, Eric Woodard,
Nevan Baldwin

Special Course* – Posterior

Thoracolumbar Instrumentation

Location: Saguaro Room

Directors: Regis Haid, Jr., MD[†]
Vincent Traynelis, MD[†]

Faculty: Patrick Johnson,
Randall Chesnut, Bruce McCormick,
Perry Ball, Michael Sturgill,
Joseph Alexander, Andrea Halliday,
Noel Perrin, James Hollowell,
Richard Berkman, Kevin Foley[†],
Charles Stillerman, Dennis Vollmer,
Regis Haid, Jr.[†], Lee Ansel,
Richard Tippetts, Iain Kalfas[†],
Phillip McAllister, Maurice Smith,
Keith Kuhlengel, Parley Madsen,
Brian Cuddy, William Krauss,
Russell Nockles, Gerald Rodts

**Advance or on-site registration is required for Special Courses; admittance will be by ticket only.*

5:00 PM - 7:00 PM

Wine and Cheese Reception With Exhibitors

Friday, February 17, 1995

6:30 AM - 7:30 AM

Continental Breakfast

6:30 AM - 2:00 PM

Exhibits and Posters

7:30 AM - 10:00 AM

SYMPOSIUM V

Moderators: Charles Tator, MD, PhD
Richard Fessler, MD, PhD

TREATMENT OF SPINAL CORD INJURIES

7:30 AM - 7:55 AM

Neuropharmacologic Management of Spinal Cord Injuries
Douglas Anderson, PhD*

7:55 AM - 8:00 AM

Discussion

8:00 AM - 8:25 AM

Spinal Cord Transplantation and Regeneration
Paul Reier, PhD*

8:25 AM - 8:30 AM

Discussion

8:30 AM - 8:45 AM

Review of Surgical Treatments for Spinal Cord Injuries
Michael Fehlings, MD, PhD

8:45 AM - 9:00 AM

Timing of Surgery in NASCIS II
Jack Wilberger, MD

9:00 AM - 9:15 AM

Acute Surgery for Spinal Cord Injuries
Stephen Papadopoulos, MD

9:15 AM - 9:30 AM

Panel Discussion

*Sponsored by an Educational Grant by the UpJohn Company.

9:30 AM - 10:00 AM

CONTRIBUTED PAPERS

SPINAL CORD INJURIES

25. 9:30 AM - 9:38 AM

Acute Medical and Surgical Treatment of Spinal Cord Injuries: A Prospective Study
Fernando Vale, MD,
Mark N. Hadley, MD,
Jennifer Burns, MD,
Annie Jackson, MD

26. 9:38 AM - 9:46 AM

Natural and Experimental Roles for Human Schwann Cells in Spinal Cord Injury
James D. Guest, MD,
Richard P. Bunge, MD

27. 9:46 AM - 9:54 AM

Acute Administration of GM-1 Ganglioside Antagonizes the Neuroprotective Effects of the 21-Aminosteroid, U-74389G, in Experimental Spinal Cord Surgery
Christopher B. Dechet, BS,
Simcha J. Weller, MD,
Larry I. Benowitz, PhD,
Eugene Rossitch, Jr., MD

9:54 AM - 10:00 AM

Discussion: Papers 25-27

10:00 AM - 10:30 AM

Break — View exhibits and posters

10:30 AM - 1:00 PM

SYMPOSIUM VI

Moderators: John McGillicuddy, MD
Mark Hadley, MD

CONTROVERSIES IN PERIPHERAL NERVE SURGERY

ULNAR NERVE ENTRAPMENT - TREATMENT WITH DECOMPRESSION VS. TRANSPOSITION

10:30 AM - 10:45 AM

Transposition Is the Preferred Treatment
James Campbell, MD

10:45 AM - 11:00 AM

Decompression Is the Preferred Treatment
Alan Belzberg, MD

11:00 AM - 11:07 AM

Discussion

CARPEL TUNNEL - TREATMENT WITH OPEN VS. CLOSED TECHNIQUES

11:07 AM - 11:22 AM

Endoscopic Surgery Is the Preferred Treatment
Bradford W. Edgerton, MD

11:22 AM - 11:37 AM

Open Surgery Is the Preferred Treatment
Alan Friedman, MD

11:37 AM - 11:45 AM

Discussion

11:45 AM - 12:15 PM

PANEL DISCUSSION Treatment of Peripheral Nerve Emergencies
David Kline, MD,
James Campbell, MD,
Alan Belzberg, MD,
Setti Rengachary, MD,
Alan Friedman, MD

12:15 PM - 1:00 PM

CONTRIBUTED PAPERS

PERIPHERAL NERVE SURGERY

28. 12:15 PM - 12:23 PM

Microsurgical Carpel Tunnel Release
Scott A. Shapiro, MD

29. 12:23 PM - 12:31 PM	Neonatal Brachial Plexus Injury Management Joel Feigenbaum, MD, Brad Edgerton, MD, Paul Kazimiroff, MD
30. 12:31 PM - 12:39 PM	Birth Related Brachial Plexus Injuries in Infants: Pediatric Neurosurgical Perspective John P. Laurent, MD, FACS
31. 12:39 PM - 12:47 PM	Magnetic Resonance Neurography in Evaluating and Treating Peripheral Nerve Problems M. Kliot, A. Filler, MD, PhD, A. Dailey, MD, C. Kuntz, MD, R. Goodkin, MD, G. McKhann, MD, J. Tsuruda
12:47 PM - 1:00 PM	Discussion: Papers 28-31
1:00 PM - 1:30 PM	Annual Business Meeting
2:00 PM - 5:00 PM	Special Course* – Entrapment Neuropathy Location: Grand Canyon Room Directors: John McGillicuddy, MD David Kline, MD Faculty: James Campbell, Setti Rengachary, Nicholas Barbaro, Eric Zager, Allan Friedman, Alan Belzberg
2:00 PM - 5:00 PM	Special Course* – Cervical Spine Instrumentation Location: Saguaro Room Directors: Stephen Papadopoulos, MD Charles Branch, Jr., MD Faculty: Volker Sonntag [†] , Iain Kalfas [†] , Richard Fessler, Regis Haid, Jr. [†] , Vincent Traynelis [†] , Curtis Dickman
6:30 PM - 11:00 PM	Annual Reception and Banquet

Saturday, February 18, 1994

6:30 AM - 7:30 AM	Continental Breakfast
6:30 AM - 11:00 AM	Exhibits and Posters
7:30 AM - 10:00 AM	SYMPOSIUM VII Moderators: Charles Stillerman, MD Peter Klara, MD, PhD TREATMENT OF DEGENERATIVE DISEASES OF THE LUMBAR SPINE
7:30 AM - 7:45 AM	The Prospective Study of Treatments for Low Back Pain Donlin Long, MD, PhD
7:45 AM - 8:00 AM	Comparisons of Chymopapain, Percutaneous Discectomy and Open Microdiscectomy Richard G. Fessler, MD, PhD
8:00 AM - 8:15 AM	Comparisons of Instrumented and Non-Instrumented Fusion for Degenerative Instability of the Lumbar Spine Paul McCormick, MD
8:15 AM - 8:30 AM	Chymopapain for Lumbar Disc Disease Young-Soo Kim, MD, DM, SC*
8:30 AM - 8:45 AM	Panel Discussion

*Sponsored by an Educational Grant by Boots Pharmaceutical.

8:45 AM - 10:00 AM

CONTRIBUTED PAPERS

DIAGNOSIS AND TREATMENT OF LUMBAR SPINAL DISORDERS

32. 8:45 AM - 8:53 AM

Measurement of Exercise Tolerance on the Treadmill in Patients With Symptomatic Lumbar Spinal Stenosis: A Useful Indicator of Functional Status and Surgical Outcome

H. Gordon Deen, MD,
Richard S. Zimmerman, MD,
Mark K. Lyons, MD,
Malcolm C. McPhee, MD,
Joseph Verheijde, MA, PT, MT,
Susan Lemens, PAC

33. 8:53 AM - 9:01 AM

A Comparison of Different Surgical Approaches in the Management of 170 Far Lateral Disc Herniations
Nancy E. Epstein, MD

34. 9:01 AM - 9:09 AM

Specificity of Diagnostic Nerve Blocks: A Prospective, Randomized Study of Sciatica Due to Lumbosacral Spine Disease
Richard B. North, MD,
David H. Kidd, MA,
Marianna Zahurak, MS

9:09 AM - 9:15 AM

Discussion: Papers 32-34

LUMBAR FIXATION AND FUSION

35. 9:23 AM - 9:31 AM

Pedicle Screw and Plate/Rod Fixation of the Thoracic and Lumbar Spine: Safety and Efficacy in 113 Patients

Charles L. Branch, Jr., MD,
Domagoj Coric, MD, Amy Graham, RN

36. 9:15 AM - 9:23 AM

Spinal Fusion Using an Unconstrained Pedicle Screw Instrumentation System: Clinical Outcome. A Two-Year Follow-Up Study

F. T. Wetzel, S. Trott, D. M. Lahey

37. 9:31 AM - 9:39 AM

Increasing Neuroforaminal Volume by Anterior Interbody Fusion in the Degenerative Lumbar Spine

D. Chen, L. A. Fay, P. S. Yuan, J. Lok,
W. T. Edwards, H. A. Yuan

9:39 AM - 9:45 AM

Discussion: Papers 35-37

9:45 AM - 10:30 AM

Break — View exhibits and posters

10:30 AM - 1:00 PM

SYMPOSIUM VIII

Moderators: Charles L. Branch, Jr., MD
Michael Fehlings, MD, PhD

CONTROVERSIES IN THE TREATMENT OF CERVICAL DISC DISEASE

10:30 AM - 10:45 AM

Posterior Cervical Discectomy
Charles Fager, MD

10:45 AM - 11:00 AM

Chymopapain for Cervical Disc Disease
F. Gomez-Castresana Bachiller, MD*

11:00 AM - 11:15 AM

Anterior Cervical Discectomy With Fusion
Thomas Ducker, MD

11:15 AM - 11:30 AM

Anterior Cervical Discectomy Without Fusion
Volker K. H. Sonntag, MD†

11:30 AM - 11:45 AM

PANEL DISCUSSION

*Sponsored by an Educational Grant by Boots Pharmaceutical.

11:45 AM - 1:00 PM

CONTRIBUTED PAPERS

CERVICAL FIXATION DEVICES: I

38. 11:45 AM - 11:53 AM **Biomechanical Evaluation of Two Unicortical Anterior Cervical Fixation Systems in a Cadaveric Model**

Paul D. Sawin, MD,
Vincent C. Traynelis, MD[†],
John D. Clausen, BS,
Franklin Dexter, MD, PhD,
Vijay K. Goel, PhD

39. 11:53 AM - 12:01 PM **Biomechanical Comparison of Titanium and Stainless Steel Caspar Plates**

Christopher G. Paramore, MD[†],
Anna G. U. Brantley, M.S.,
Curtis A. Dickman, MD,
Neil L. Crawford, MS,
Volker K. H. Sonntag, MD[†]

40. 12:01 PM - 12:09 PM **Anterior Cervical Interbody Fusion: Locked Versus Non-Locked Plating Systems**

Gary L. Lowery, MD, PhD[†],
Michael L. Swank, MD,
Richard F. McDonough, BS,
Alice T. Allen, MS, MA

- 12:09 PM - 12:25 PM **Discussion: Papers 38-40**

CERVICAL FIXATION DEVICES: II

41. 12:25 PM - 12:33 PM **Titanium Surgical Mesh in Cervical Spine Reconstruction: North American Experience**

Gary L. Lowery, MD, PhD[†],
Michael L. Swank, MD,
Richard F. McDonough, BS,
Marsh J. Ray, Alice T. Allen, MS, MA

42. 12:33 PM - 12:41 PM **Posterior Plates in the Management of Cervical Instability: Results in 76 Patients**

Joseph D. Stern, MD,
Stephen M. Papadopoulos, MD

43. 12:41 PM - 12:49 PM **Posterior Instrumentation of the Unstable Cervico-Thoracic Spine**

M. Sean Grady, MD,
Jens Chapman, MD,
Paul Anderson, MD,
Craig Pepin, MS, MD,
Bradford Henley, MD

12:49 PM - 1:00 PM

Discussion: Papers 41-43

1:00 PM

Meeting Adjourns