**Programbook & Syllabus**

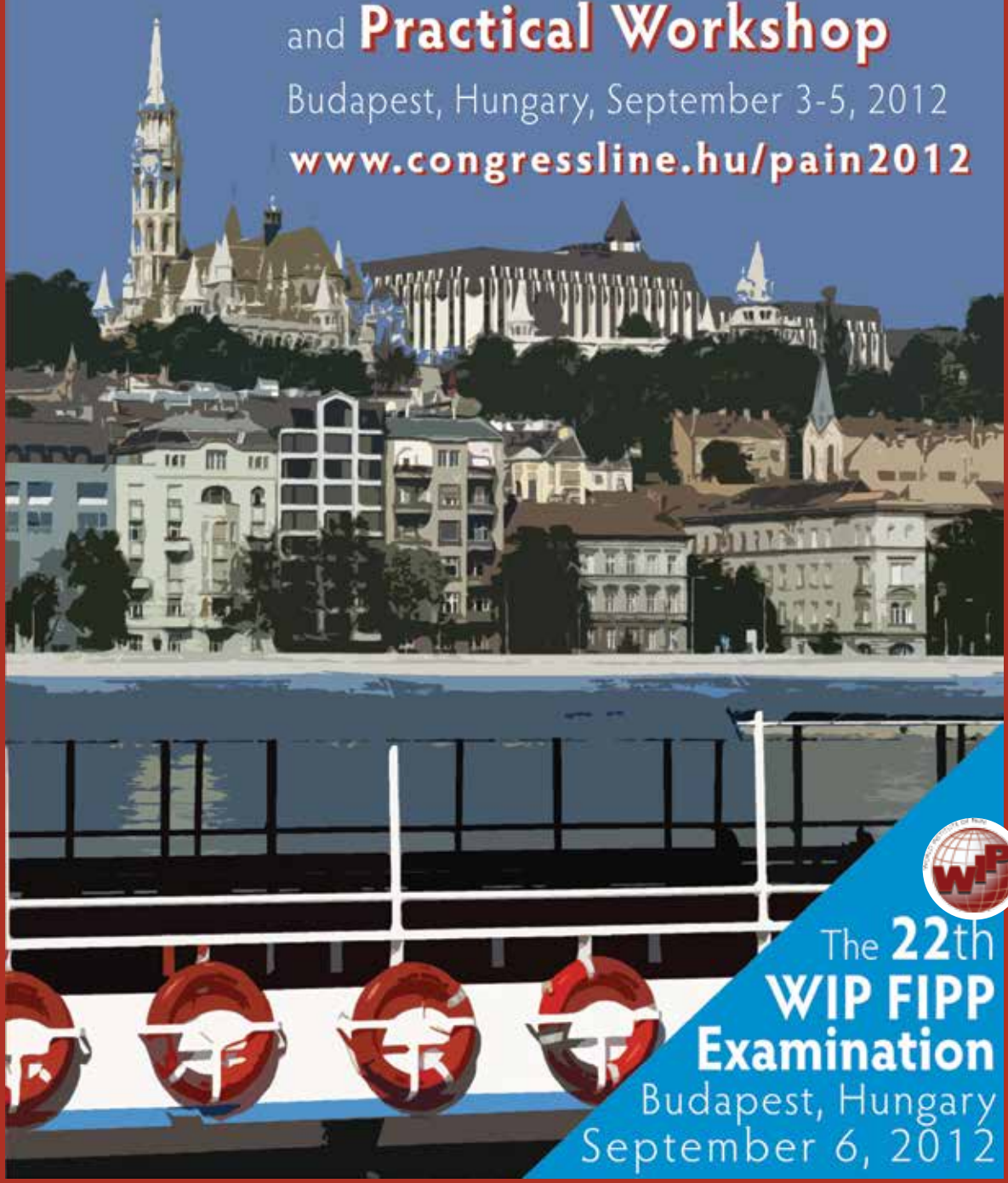
The **17th** Annual Advanced

# Pain Conference

and **Practical Workshop**

Budapest, Hungary, September 3-5, 2012

**www.congressline.hu/pain2012**



The **22th**
**WIP FIPP Examination**
Budapest, Hungary
September 6, 2012

# Content



# GREETINGS

## Dear Colleagues and Friends,

This last year was a very traumatic time when the World Institute of Pain had to cancel the World Congress in Seoul, Korea. It was going to be one of the best but circumstances of international events and nuclear concerns over the unknown extent of the earthquake-related nuclear disaster in Japan raised concern over the issues of travel. It certainly is our hope and determination to keep the possibility of going back to Seoul very much alive. However, one problem led to looking for rapid solutions and through the leadership of the president, Ricardo Ruiz-Lopez, and the local arrangement chairman, Ira Fox, the replacement site turned out to be a remarkable triumph for our WIP membership, cohesiveness and the important task of continuing to learn, teach and listen for ways to improve taking care of our patients. Through the hard work of all involved, a potential major loss in wasted time and finances was converted into a major victory largely due to leadership of Dr. Richard Rauck, chairman of the Scientific Program Committee, and other key people, Jose Rodriguez, Maarten van Kleef, Sang Chul Lee, James Rathmell and Tony Yaksh.

I am happy to report that the Fellow in Interventional Pain Practice (FIPP) has continued to flourish and grown. We are now 702 strong.

The stories we hear from our growing number of Fellows indicate the amazing growth of knowledge, confidence and respect that is given by our medical communities and patients alike. The WIP website makes the list of FIPPs names readily available, especially to patients that wish to be reassured about the qualifications of physicians. The Examination Board has in the person of Miles Day a true leader for quality, evaluation of knowledge and confirming all the above through the awarding of the FIPP.

The 17th Annual Advanced Interventional Pain Conference and Practical Workshop September 3-5, 2012, in Budapest is going to be a new excitement for those that have the FIPP or the ones that are purely expanding their knowledge base. New information is coming all the time. New evidence through prospective randomized studies and multi-center studies confirms the effectiveness of interventional pain procedures. This year has also been the time of maximum awareness of the large mortality from prescription narcotic medications. Also, the relevance of monitoring has resulted in reduced mortality and diversion; therefore, the topic is included in the Scientific Program.

Dr. James Heavner is again heavily involved in the Scientific Program, planning and organization. The local arrangements chairman, Dr. Edit Racz, is the motor behind the success of the Budapest Conference. Our sponsors deserve our maximum "thank you" as we must work together to bring out the knowledge and information for the safety and efficacy of the techniques and equipment used. New and exciting developmentsare coming to us and our patients from neuromodulation. In order to bring the participants up on the most recent information, we are including a new program where



the major sponsors and participants in the field of Neuromodulation will be given an opportunity to present technical information directly to the audience.

We have always been extremely conscious of budgetary considerations and concerns; however, our days are so busy working that the social interaction at the dinners has become an important aspect of meeting old friends and making new friends and contacts. One example of such activity is when through the magic of the internet, a doctor can contact a doctor that he knows to be expert and ask for advice about a patient's severe pain problem and several months later, the feed back comes that the patient has done extremely well as a result of that communication with a friendship formed in Budapest.

The Budapest Conference is also the site for the meetings of the WIP Executive Board and the WIP Foundation. Prithvi Raj, the president of the Foundation is forever busily pushing for outreach activities to improve the treatment of patients suffering from intractable pain with Serdar Erdine, our immediate past president, as well as the WIP Board, ably assisting him. I am mentioning this because we can all play a role in matching serious need with unappreciated potentially available resources. We can all join in helping our friends and colleagues to better take care of suffering pain patients. For the first time, at the World Congress in Miami, we had industrial contributors to the Foundation. We must look for sponsors and contributors, financial and otherwise, to help to solve the forever need.

I fully expect that the quality of our Scientific Program and the desire to learn, teach and share information among ourselves will produce another successful Budapest Advanced Interventional Pain Conference program as well as expand our growing numbers of FIPPs worldwide.

Budapest is still vivacious, beautiful and is waiting for you to come back again. See you there!

With best personal wishes to all of you,

**Gabor B. Racz,** MD, FIPP
Director Budapest Conference
Past President World Institute of Pain
Co-Director Texas Tech University Health Sciences Center, Lubbock, Texas

**Ricardo Ruiz-Lopez,** MD, FIPP
President World Institute of Pain
Director Traramiento del Dolor
Clinica del Dolor de Barcelona

# WIP Council

## President WIP

**Ricardo Ruiz-López**, MD, FIPP

## Executive Board

**Ricardo Ruiz-López,** MD, FIPP, Founder and President – Spain
**Richard Rauck**, MD, FIPP, President Elect – USA
**Serdar Erdine**, MD, FIPP, Founder and Past President - Turkey
**Gabor B. Racz**, MD, FIPP, Founder and Past President – USA
**P. Prithvi Raj**, MD, FIPP, Founder and Past President – USA
**Charles A. Gauci**, MD, FRCA, FIPP, FFPMRCA, Honorary Secretary – UK
**Kris C.P. Vissers,** MD, PhD, FIPP, Honorary Treasurer – The Netherlands
**Craig T. Hartrick,** MD, DABPM, FIPP, Editor-in-Chief, Pain Practice – USA
**Miles R. Day,** MD, DABA, FIPP, Chair, Board of Examination - USA
**Ira B. Fox,** MD, FIPP, Chair, Advisory Board – USA
**José R. Rodríguez Hernandez,** MD, FIPP, Chair, Board of Sections – Puerto Rico
**Dianne Willard,** Executive Officer – USA

## Section Chairs

**Diego Beltrutti,** MD, FIPP – Italy
**Meir Bennun,** MD, FIPP – Israel
**Teresa Bovaira,** MD, FIPP - Iberian
**Frantz J. Colimón,** MD, FIPP – Colombia
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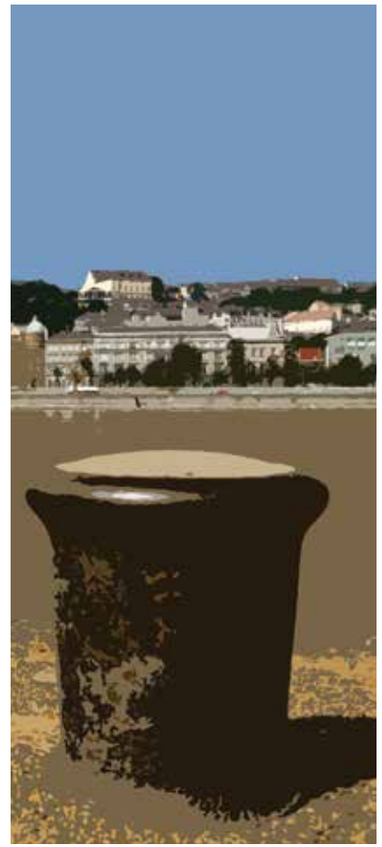
**Gautam Das, MD,** FIPP - India
**Neels de Villiers,** MD, FRCA, FIPP – Africa
**Magdi Ramzi Iskander,** MD, FFARCS, FIPP – Middle East
**Edvin Koshi,** MD, FRCA, FIPP – Canada
**Sang Chul Lee,** MD, PhD, FIPP – Korea-Japan-China
**Martin Marianowicz,** MD, FIPP – Central-Eastern Europe
**Philippe Mavrocordatos,** MD, FIPP – Switzerland
**Patrick R. McGowan,** MBChB, FRCA, FIPP, FFPMRCA – UK
**Charles Amaral de Oliveira,** MD, FIPP – Latin America
**Nuri Süleyman Özyalçın,** MD, FIPP - Turkey
**Mahdi Panah Khahi,** MD, FIPP - Iran
**Edit Racz,** MD, FIPP - Hungary
**José R. Rodríguez Hernández,** MD, FIPP – Puerto Rico
**Andrea M. Trescot,** MD, DABIPP, FIPP – USA
**Athina Vadalouca,** MD, PhD, FIPP – Mediterranean
**Jan Van Zundert,** MD, PhD, FIPP - Benelux
**Alex Sow Nam Yeo,** MD, PhD, FIPP – SE Asia





# WIP Examination Board

Chair: **Miles R. Day,** MD, FIPP, DABA
Co-Chair: **Maarten van Kleef,** MD, PhD, FIPP
Liaison to WIP: **Serdar Erdine,** MD, FIPP
**James E. Heavner,** DVM, PhD, FIPP (Hon)
Directors:
**Charles Amaral de Oliveira,** MD FIPP
**Neels de Villiers,** MD, FIPP
**Sang Chul Lee,** MD, PhD, FIPP
**Patrick R. McGowan,** MBChB, FRCA, FIPP, FFPMRCA
**Vikram Patel,** MD, FIPP
**Alex Sow Nam Yeo,** MD, FIPP
**Jan Van Zundert,** MD PhD, FIPP

## Conference Organizers

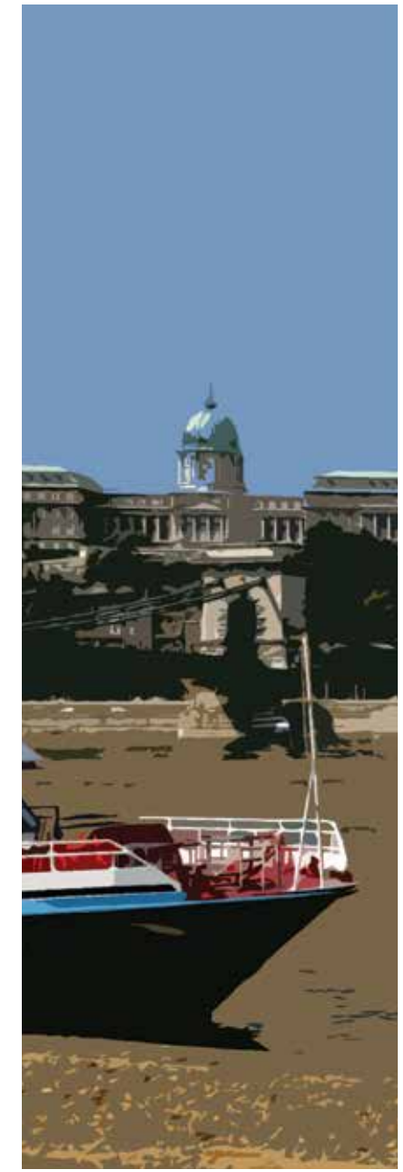
Program Director: **Gabor B. Racz,** MD, FIPP
Co-Director: **James E. Heavner,** DVM, PhD, FIPP (Hon)

## Local Arrangement Committee

Chair: **Edit Racz,** MD, FIPP
**Agnes Stogicza,** MD, FIPP
**Lorand Eross,** MD PhD, FIPP

## Faculty

**Mert Akbas,** MD, FIPP
**Adnan A. Al-Kaisy,** MB ChB, FFRCA, FPMRCA, FIPP
**Ray M. Baker,** MD, FIPP
**Hemmo Boscher,** MD, FIPP
**Cosimo Bruni,** MD
**Aaron Calodney,** MD, FIPP
**Kenneth B. Chapman,** MD, FIPP
**Eric Cosman, Jr.,** PhD (Cosman Medical, Inc.)
**Miles Day, MD,** FIPP, DABA
**Serdar Erdine,** MD, FIPP
**Lorand Eross,** MD, FIPP
**Ludger Gerdesmeyer,** MD, PhD, FIPP
**James E. Heavner,** DVM, PhD, FIPP(HON)
**Rafael Justiz,** MD, MS, FIPP, DABIPP
**Chan Hong Park,** MD, PhD, FIPP
**Edit Racz,** MD, FIPP
**Gabor B. Racz,** MD, FIPP
**Prithvi Raj,** MD, FIPP
**Richard Rauck,** MD, FIPP
**Ken Reed,** MD
**Ricardo Ruiz-López,** MD, FIPP
**Peter Staats,** MD, FIPP
**Andrea Trescot,** MD, FIPP
**Jan Peter Warnke,** MD
**Chris Wells,** MB, ChB, LRCP, MRCS, LMCC, FRCA, FIPP



# Acknowledgements

The 17th Annual Advanced Pain Conference and Practical Workshop gratefully acknowledge the following companies for their support of this event:

# Exhibitors and Sponsors Profiles

## Medtronic International Trading Sarl

**Route de Molliau 31, 1131 Tolochenaz, Switzerland**

**www.medtronic.com**

We're committed to Innovating for life by pushing the boundaries of medical technology and changing the way the world treats chronic disease. To do that, we're thinking beyond products and beyond the status quo - to continually find more ways to help people live better, longer.

## Boston Scientific

**25155 Rye Canyon Loop Valencia, CA 91355 661.949.4000**

**www.controlyourpain.com**

Boston Scientific's Precision Plus™ SCS System powered by SmoothWave™ Technology blends sophistication and simplicity to deliver life-changing therapy for chronic pain patients. Investing in innovative products, clinical initiatives, and world-class service, Boston Scientific is committed to Making life smoother™ for physicians, patients, and the Neuromodulation community.

## Epimed International Inc.

**Crossroads Business Park 141 Sal Landrio Drive Johnstown, NY 12095 USA**

**www.epimedpain.com**

Epimed will be featuring products designed for chronic and acute pain management techniques. We will display the Expanded Line of Racz® Spring Guide Epidural Catheters; RX™, R.K.™, and FIC Epidural Introducer Needles; R-F™ Line of Radiofrequency Products; Coudé™ & Straight Blunt Nerve Block Needles and Mini Trays. Also being shown are Radiation Safety Products and Anatomical Models.

## Halozyme Therapeutics Inc.

**11388 Sorrento Valley Rd., San Diego, CA 92121**

**www.halozyme.com**

Halozyme Therapeutics is a biopharmaceutical company dedicated to developing and commercializing innovative products that target the extracellular matrix, an area external to the cell that provides structural support in tissues and orchestrates many important biological activities, including cell migration, signaling and survival.

## Ziehm Imaging

**Ziehm Imaging GmbH Donaustrasse 31 90451 Nuernberg, Germany**

**www.ziehm.com**

Ziehm Imaging specializes in the development, manufacturing and worldwide marketing of mobile X-ray-based imaging solutions. The company has been a market leader in Germany and other European countries for many years. Today, Ziehm Imaging is a global systems provider, employing over 300 people worldwide. Building on competence and creativity, a continuous dialogue and close cooperation with partners, Ziehm Imaging is elevating the boundaries of mobile X-ray imaging and has become a global trendsetter in interventional imaging. Ziehm Imaging has received several awards for its groundbreaking technologies, including the iF design award 2011 and Frost & Sullivan award 2006, 2007, 2009 and 2011. For more information, please visit: www.ziehm.com.

## CoMedical – Cosman Medical

**Gieterijstraat 46, Ridderkerk 2984 AB, The Netherlands**

**www.comedical.eu, www.cosmanmedical.com**

CoMedical and Cosman Service Centre is based in Ridderkerk nearby Rotterdam and is a specialized medical company that focuses on development and distribution of Radiofrequency equipment as well specific catheters and needles for the minimal invasive treatment of Chronic Pain and publishing books for pain management. We have an interactive relationship with anesthesiologists, neurosurgeons, pain managers, research and industry. We are exclusive distributor for Cosman Medical, Oakworks and Epimed in the Benelux. We are the publisher of the 3rd Edition of Manual of RF Techniques of Dr. Charels A. Gauci MD. FRCA. FIPP. FFPMRCA. Since the eightees Enrico Cohen founder and CEO of CoMedical is involved in minimal invasive surgery and specialized on pain management. Since many years he cooperate with Cosman medical (Radionics) now he is also Vice President Sales for Cosman Medical in EAME. CoMedical Team can provide products, training and service for you, your staff and equipment. Since 2012 we also have a sales deparment for the UK. Susan Rhodes is Sales Director UK for Cosman Medical over 15 years experience in pain management.

# General Information

## Dates & Venue
The 17th Annual Advanced Interventional Pain Conference & Practical Workshop
**3-5 September, 2012**

## Conference Site
**Kempinski Hotel Corvinus Budapest – Regina Ball Room**
H-1051 Budapest, Erzsébet tér 7-8.

## Practical Workshop
**Semmelweis University Labs**
H-1091 Budapest, Üllői út 93.
Daily bus transfers are provided within the venues.

## The 22nd WIP FIPP Examination
**6 September, 2012**
**Venue:** Semmelweis University Labs, H-1091 Budapest, Üllői út 93. (Bus transfer is provided.)

## Conference Website
www.congressline.hu/pain2012

## Language
English

## CME Credits
18 credits were granted by the European Accreditation Council for Continuing Medical Education (EACCME).

## Opening Hours of the Registration Desk at Hotel Kempinski

| | |
|---|---|
| **Sunday, 2 September** | 14.00 – 19.30 |
| **Monday, 3 September** | 07.00 – 13.30 |
| **Tuesday, 4 September** | 07.30 – 13.30 |
| **Wednesday, 5 September** | 07.30 – 13.30 |

## FIPP Exam Registration at Kempinski Hotel

| | |
|---|---|
| **Wednesday, 5 September** | 16.00 –19.00 |

## Registration Fee
(Regular Fees after 15 July, 2012)

| | |
|---|---|
| **Pain Conference & Practical Workshop** | 1600 Euro |
| **Pain Conference** | 1150 Euro |
| **Accompanying person fee** | 350 Euro |
| **FIPP Exam registration fee** | 2500 USD |

## Internet
Free of charge Wi-Fi service available at the venue.



## Meals
Coffee breaks, lunches, welcome cocktail and award ceremony dinner are included in the registration fee.

## Commercial Exhibition
The exhibition will be opened from Monday, 3 September until 5 September at the Kempinski Hotel foyer. Delegates will have the opportunity to meet representatives of pharmaceutical and diagnostic equipment companies at their stands to discuss new developments and receive up-to-date product information.

## Hotels
**Kempinski Hotel Covinus Budapest******* (Conference venue)
H-1051 Budapest, Erzsébet tér 7-8.
**www.kempinski-budapest.com**
**Hotel Central Basilica*****
H-1051 Budapest, Hercegprímás u. 8.
**www.hotelcentral-basilica.hu**

# Official Social Events

## Faculty Dinner (only for Faculty Members)
**Sunday, 2 September, 2012,** 19.00-21.00
Noir et l'or café & lounge (1075 Budapest, Király u. 17.)
**Dress Code:** business casual
**Meeting point:** Kempinski Hotel lobby at 18.30

## Welcome Cocktail (for all registered guests)
**Monday, 3 September, 2012,** 20.00-22.00
Kempinski Hotel, Regina Ball Room
**Programme:** Csillagszemű Dance Ensemble, Sara Hoffer Trio
**Dress Code:** Business casual

## Award Ceremony Dinner (for all registered guests)
**Tuesday, 4 September, 2012,** 20.00-23.00
**Gundel Restaurant,** Queen Elizabeth Ballroom (1146 Budapest, Gundel Karoly krt 4.)
**Programme:** Award Ceremony and Monarchia String Quartet
**Dress Code:** formal
**Meeting point**: Kempinski Hotel lobby at 19.30 (Bus transfer is provided.)

## Sightseeing Tour in Budapest
**Monday, 3 September, 2012,** 09.30-13.00
**Price:** 25 Euro, person Including in the accompanying person fee.
An approximately 4-hour long sightseeing tour, which shows the most attractive features of the capital.
Transportation by bus, with English speaking guide, refreshment and all entrance fees are included.
**Meeting point:** Kempinski Hotel lobby at 9.15

# Useful Information

## How to get to the Conference Venue?

To reach the Conference Venue there are several means of transport:
**Metro station "Deák Ferenc Square"** station of **Metro line 1, 2, 3.**
(Pre-purchased tickets or passes needed before getting on.)
**From the airport to the conference venue use the Airport Minibus Service,**
fixed rates for passengers
One way: 3200 HUF = cca 12 Euro, Return ticket: 4990 HUF = cca 18 Euro
Tel: +36 1 296 8555 **www.airportshuttle.hu** or use the **PAIN2012 Official Taxi Company:**
**City Taxi** +36 1- 211-1111 (Rate: 4800 HUF = cca 25-28 Euro)..

## Climate

The climate of Budapest is continental. In September usually nice warm weather can be expected with a max. temperature of 20-25°C, while the lowest temperature during the night ranging between 15-20 °C. Nevertheless some rainy days can be expected.

## Insurance

The registration fees do not include provision for the insurance of participants against personal accidents, illness, cancellation, theft, property loss or damage. Participants are advised to take adequate personal travel insurance.

## Currency

The Forint (HUF), the official national currency, is convertible. The exchange rates applied in Budapest banks, official exchange offices and hotels may vary. All the major credit cards are accepted in Hungary in places displaying the emblem at the entrance.
**Exchange rate:** 1 Euro = 280 HUF, 1 USD = 223 HUF in August, 2012

## Credit Cards

In general, VISA, EC/MC and American Express credit cards are accepted in most restaurants, cafés, shops and petrol stations.

## Stores and Shopping

The opening hours of Budapest stores are generally 10.00-18.00 on weekdays and 10.00-13.00 on Saturday. The shopping centers are open from 10.00-21.00 from Monday to Saturday and from 10.00-18.00 on Sunday.

## Electricity

The voltage in Hungary is 230V, 50 Hz AC.

## Parking

If you drive a personal or rented car, always try to park at a guarded parking lot and do not leave any valuables in the car. Please note, that Budapest is divided into paying areas, with one parking meter in each street. The maximum parking time duration is 2 hours, tariffs may vary.

# Detailed Program

## MONDAY, 3 September, 2012 Regina Ball Room

**07:40** Opening Remarks
**Gabor B. Racz**, MD, FIPP, Program Director
**Ricardo Ruiz-López**, MD, FIPP, President of WIP
**Edit Racz**, MD, FIPP, Chair Local Committee

Moderator: **Serdar Erdine,** MD, FIPP

**08:00** Accessing the Epidural Space
**Gabor B. Racz,** MD, FIPP

**08:30** Current Approaches to Treating Joint Pain with Biological Agents and Drugs
**Cosimo Bruni,** MD

**09:00** Current Status of Intrathecal Drug Delivery – Drugs and Pumps
**Richard Rauck,** MD, FIPP

**09:30** Spinal Canal Endoscopy 2012
**James E. Heavner,** DVM, PhD, FIPP(Hon)

**10:00** Arachnoiditis, Thecaloscopy and Torlov Cysts
**Jan Peter Warnke,** MD

**10:30** Coffee Break

Moderator: **Prithvi Raj,** MD, FIPP

**11:00** Vertebral Body Stabilization Techniques
**Rafael Justiz,** MD, MS, FIPP, DABIPP

**11:30** Urine Drug Screening Impact on Care
**Richard Rauck,** MD. FIPP

**12:00** RF - New Ideas
**Ricardo Ruiz-López,** MD, FIPP

**12:30** Treatment Options for Sacroiliac Pain
**Aaron Calodney,** MD, FIPP

**13:00** Lunch

**13:30** Transport to University
Labs Afternoon workshops



## TUESDAY, 4 September, 2012 Regina Ball Room

Moderator: **Mert Akbas**, MD, FIPP

**08:00** Update on Epidural Adhesiolysis Studies
**Ludger Gerdesmeyer,** MD, PhD, FIPP

**08:30** Specific vs non Specific Spinal Pain
**Gabor B. Racz,** MD, FIPP

**09:00** Controversies in the diagnosis of painful lumbar disc degeneration
**Ray M. Baker,** MD, FIPP

**09:30** High Frequency Spinal Cord Stimulation in the Management of Axial Back Pain
**Adnan A. Al-Kaisy,** MB ChB, FFRCA, FPMRCA, FIPP

**10:00** RF Physics, Safety and Applications
**Eric Cosman, Jr.,** PhD (Cosman Medical, Inc.)

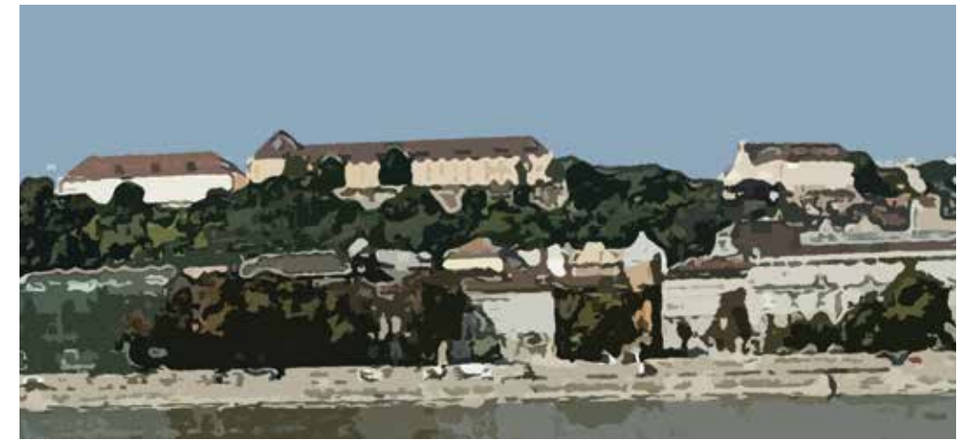
**10:30** Coffee Break

**11:00** Technical Round Table - Medical Company Forum

Moderators: **Gabor B. Racz,** MD, FIPP and **Ricardo Ruiz-López,** MD, FIPP

**13:00** Lunch

**13:30** Transport to University
Labs Afternoon workshops



## WEDNESDAY, 5 September, 2012 Regina Ball Room

Moderator: **Ken B. Chapman,** MD, FIPP

**07:30** **MILD Procedure**
**Peter Staats**, MD, FIPP

**08:00** **Neuromodulation for Migraine**
**Ken Reed,** MD

**08:30** **Common Low Back Pain and Lateral Recess Stenosis**
**Hemmo Bosscher,** MD, FIPP

**09:00** **Neuropathic Pain: What's New?**
**Andrea Trescot,** MD, FIPP

**09:30** **Botulinun Toxin, Properties and Use in Pain Medicine**
**Chris Wells,** MB, ChB, LRCP, MRCS, LMCC, FRCA, FIPP

**10:00** **Neurosurgical Approaches to Chronic Pain Management**
**Lorand Eross,** MD, PhD, FIPP

**10:30** Coffee Break

**11:00** **Failed Neck Surgery**
**Gabor B. Racz,** MD, FIPP

**11:30** **Ultrasound Guided Treatment 2012**
**Chan Hong Park,** MD, PhD, FIPP

**12:00** **Treatment of Chronic Pelvic Pain**
**Adnan A. Al-Kaisy,** MB ChB, FFRCA, FPMRCA, FIPP and **Gabor B. Racz**, MD, FIPP

**12:30** **Interventional Pain Therapy Complications – Recognition, Avoidance, Management**
**Miles Day,** MD, FIPP, DABA

**13:00** Lunch

**13:30** **Transport to University**
Labs Afternoon workshops



# FIPP Awards Ceremony

## Tuesday, 4 September , 2012, at 20:00

Master of Ceremonies:
**Miles Day,** MD, FIPP, DABA

Opening Remarks – Local Organizing Committee
**Edit Racz**, MD, FIPP
**Agnes Stogicza,** MD, FIPP
**Lorand Eross,** MD, PhD, FIPP

Speaker: **Craig Hartrick**, MD, FIPP

**Presentation of Certificates to Fellows of Interventional Pain Practice (FIPP)**
**WIP Board of Examination Members**

**FIPP names from Maastricht and Budapest 2011 and Miami and Maastricht 2012**
**FIPP Examinations**

## Maastricht FIPP Examination June 2011

| | | |
|---|---|---|
| 631 | **Hajigaldy Annehmohammadzadeh** | Iran |
| 632 | **Andrea Johanna Roswitha Balthasar** | Germany |
| 633 | **Raad Hadi Dakheel** | Belgium |
| 634 | **Satria Husada** | The Netherlands |
| 635 | **Markus Janssen** | Germany |
| 636 | **R. Anand Alister Joseph** | Ireland |
| 637 | **Jan-Willem Kallewaard** | The Netherlands |
| 638 | **Brigitte Köder** | The Netherlands |
| 639 | **Tai Toine Chuan Lim** | The Netherlands |
| 640 | **Palak Bhavin Mehta** | India |
| 641 | **Johannes Meyer** | South Africa |
| 642 | **Shirazahmed Mo Abbas Munshi** | India |
| 643 | **Andries Johannes Oberholzer** | South Africa |
| 644 | **Anant Gunvantbhai Patel** | India |
| 645 | **Jordi Perez-Martinez** | UK |
| 646 | **Edward Rouwet** | The Netherlands |
| 647 | **Bolkar Sahinler** | USA |
| 648 | **Vincent Van Dougen** | The Netherlands |
| 649 | **Eric N. Wilson** | South Africa |

## Budapest FIPP Examination September 2011

| | | |
|---|---|---|
| 650 | **Massimo Barbieri** | Italy |
| 651 | **Arun Kumar Bhaskar** | UK |
| 652 | **Jaehyun Cho** | South Korea |
| 653 | **Luigi Codipietro** | Italy |
| 654 | **Olivier de Coster** | Belgium |
| 655 | **Samir Avindbhai Desai** | India |
| 656 | **Kritika Manish Doshi** | India |
| 657 | **David Fael** | Germany |
| 658 | **Joseph D. Fortin** | USA |
| 659 | **Ted Gingrich** | USA |
| 660 | **Madhujeet Gupta** | India |
| 661 | **Fabio Intelligente** | Italy |
| 662 | **Deekirike Mudalige Nixon Rohitha Jayamaha** | Sri Lanka |
| 663 | **Charles Chul-Han Kim** | Australia |
| 664 | **Nathalie Ann Logie** | Belgium |
| 665 | **Madhuri Lokapur** | India |
| 666 | **Shantanu Prabhat Mallick** | India |
| 667 | **Manu Matthews** | USA |
| 668 | **Tomikichi Matsumoto** | Japan |
| 669 | **Virender Mohan** | India |
| 670 | **John Monagle** | Australia |
| 671 | **Chan Hong Park** | South Korea |
| 672 | **Lorenzo Pasquariello** | Italy |
| 673 | **Poupak Rahimzadeh** | Iran |
| 674 | **Vidya Ramamoorthi** | India |
| 675 | **Chinmoy Roy** | India |
| 676 | **Jaehyuck Shin** | South Korea |
| 677 | **Barry Slon** | Australia |
| 678 | **Rudi Stellema** | The Netherlands |
| 679 | **Karina Rodrigues Romanini Subi** | Brazil |
| 680 | **Arman Taheri** | Iran |
| 681 | **Henry Fa Fai Tong** | Hong Kong |
| 682 | **Audre Tyliene** | Lithuania |
| 683 | **Nattaya Udomsakdi** | Thailand |
| 684 | **Sunil Arjun Waghmare** | India |
| 685 | **Hyung Seok** | South Korea |



## Miami FIPP Examination February 2012

| | | |
|---|---|---|
| 686 | **Bassem Onsy Assad** | USA |
| 687 | **Leonard Benton** | USA |
| 688 | **Rajendra Bothra** | USA |
| 689 | **Christopher Jason Burnett** | USA |
| 690 | **Luis Cummings, Jr.** | Puerto Rico |
| 691 | **John J. D'Auria** | USA |
| 692 | **Debjyoti Dutta** | India |
| 693 | **Tamer Elbaz** | USA |
| 694 | **Jürgen Marcus Fleisch** | The Netherlands |
| 695 | **Brian Scott Foley** | USA |
| 696 | **Jason Edward Pope** | USA |
| 697 | **Etienne Prinsloo** | Canada |
| 698 | **Leonid Reyfman** | USA |
| 699 | **Andrej Szczepanek** | USA |
| 700 | **Yasser Mohamed Reda Toble** | Egypt |
| 701 | **Patrick Welsch** | Germany |
| 702 | **Andrew Jungfai Yu** | USA |

## Maastricht FIPP Examination June 2012

| | | |
|---|---|---|
| 703 | **Nico BK Blyaert, MD, FIPP** | Belgium |
| 704 | **Ravindran Deepak** | UK |
| 705 | **Arif H. Ghazi** | UK |
| 706 | **MJMM Giezeman** | The Netherlands |
| 707 | **Hari Gopal K.S.** | Ireland |
| 708 | **Preeti Tarun Gupta** | India |
| 709 | **Caroline Hens** | Belgium |
| 710 | **Christophe Lebrun** | Belgium |
| 711 | **Rolfe C. Mahne** | The Netherlands |
| 712 | **Daniel Olimpiusz Oshodi** | Ireland |
| 713 | **Ellen Jaspers-Peusens** | The Netherlands |
| 714 | **Nafez Shibayeh** | Jordan |
| 715 | **Amaury Verhamme** | Belgium |

# Syllabus

## GABOR B. RACZ , MD, FIPP

**BIOGRAPHICAL SKETCH**

Gabor B. Racz, M.D. was born in Hungary and completed M.B. and Ch.B. degrees from the University of Liverpool Medical School in Liverpool, England. He served as house surgeon and physician at the Royal Southern Hospital in Liverpool before coming to America in 1963 for an anesthesiology residency at SUNY Upstate Medical Center, Syracuse, New York. Dr. Racz filled numerous assignments, such as respiratory consultant in the neurosurgical head injury unit and Associate Professor at SUNY, until 1977 when he moved to Lubbock, Texas to become the first Chairman of the Department of Anesthesiology at the new Texas Tech University Health Sciences Center. He held that position until March 1, 1999 when, as Director of Pain Services, he focused full attention to treatment of patients, expanding the operations of pain services, and the future development of an international pain center in Lubbock, Texas. He continues as professor and chair emeritus and co-director of the pain services at TTUHSC. In 1996 Dr. Racz was honored by Texas Tech University Health Sciences Center when he was awarded the first Grover Murray
Professorship recognizing his distinguished achievements in the institution as well as internationally. In December 1998, University Medical Center named Dr. Racz recipient of a $1 million endowed chair in recognition of his "greatness in patient care, teaching and research" at Texas Tech University Health Sciences Center and University Medical Center. He served as organizing chairman of the Department of Anesthesiology at TTUHSC from 1977 to 1999 and as director of the Pain Services from 1977 to 2006 when he became Co-Director with Miles Day, Director of the clinic. On October 16 2008, Dr. Racz received the TTUHSC Distinguished Professor Award.
Dr. Racz holds the certificate of Diplomat with the American College of Pain Management, the American Board of Anesthesiology, the American Board of Pain Medicine, Fellow of Interventional Pain Practice awarded by the World Institute of Pain and the Diplomat American Board of Interventional Pain Practice (DABIPP) certification awarded by ASIPP and WIP. He is an advocate for high standards of certification and training among pain physicians and works toward the advancement of those goals. He has earned numerous awards and honors,
including the Lifetime Achievement Award from American Society of Interventional Pain Practice and is listed in all editions (1992-2011) of The Best Doctors in America. In July 2006 he received the MORICCA AWARD, the highest award presented by the Italian Pain Society. His vision of education, clinical practice and research was further fulfilled with the opening October 25 2008 of new Racz International Pain Center opened on the campus of Texas Tech University Health Sciences Center in September 2008 in Lubbock, Texas.
Dr. Racz has published numerous book chapters and journal articles describing his techniques in spinal cord and peripheral nerve stimulation, neurolysis, radiofrequency thermocoagulation and other interventional procedures used in management of pain.

**LECTURE**

### ACCESSING THE EPIDURAL SPACE

This lecture will discuss the improved safety and new developments of needle technology when accessing the epidural space.
For more information, please visit the InTech Open Access Book:
http://www.intechopen.com/books/pain-management-current-issues-and-opinions

# COSIMO BRUNI, MD

**BIOGRAPHICAL SKETCH**

Dr. Bruni is in charge of the Clinical Trials Unit, Department of Biomedicine - Division of Rheumatology, AOU Careggi - University of Florence, Italy.

**LECTURE**

## CURRENT APPROACHES TO TREATING JOINT PAIN WITH BIOLOGICAL AGENTS AND DRUGS

**Objectives**

Upon completion of this presentation attendees will be able to discuss

- Joint pain in rheumatic diseases
- The role of cytokines in inflammation and pain
- How to assess joint pain joint pain and disease activity in Rheumatoid Arthritis in daily practice
- Biological therapy and Target therapy
- The comparison between Biological drugs and DMARDs
- Effects of TNF-α inhibitors on pain during RCTs
- Goals of therapy in Rhaumatic diseases
- Future potential treatment directions

**Key Points**

- Pain is one of the main features of rheumatic diseases and its management is an area of increasing research.
- Pain in rheumatic diseases is strictly connected with inflammation, whose pathogenesis depends on many cytochines as TNF-α, IL-1β and IL-6, which have also a very important role in maintaining pain.
- Old drugs like DMARDs are able to control mainly inflammation, with a minor effect on disability and bone damage.
- It's important to asses Pain in daily practice and it is also a parameter of the Disease Activity Score (DAS), which is the best index to assess disability too, together with its Clinical (CDAI) and its Simplified (SDAI) versions.
- Biological drug are produced using biotechnology and are directed against specific cytokines or molecular pathways: this is the so-called Target Therapy.
- The first biological drugs were TNF-α inhibitors, which proved to be effective in reducing pain, improving quality of life and managing disease activity in RA and other rheumatic and non-rheumatic diseases, as shown by many RTCs.
- In rheumatological diseases the sooner the therapy is started, the better the disease activity is controlled, as patients seem to be more prone to favourable treatment outcome during the very start of the disease.
- New biological agents in development include drugs that target proximal effects of the immune response and growth factors for T-cells.

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# RICHARD RAUCK, MD, FIPP

**BIOGRAPHICAL SKETCH**

Dr. Richard Rauck, a well-known and respected Pain Management Physician, began his career at Wake Forest University Baptist Medical Center, where he began the Pain Management Center in 1986. He graduated from Bowman Gray School of Medicine (now called Wake Forest University School of Medicine) in 1982 and traveled to Columbus, Georgia and Cincinnati, Ohio to do his internship, residency and fellowship training. He began his research career in the 1980's and continues today. After leaving Wake Forest in 2000, he went into private practice with Piedmont Anesthesia and Pain Consultants, and started his own research center called The Center for Clinical Research. In 2004 he began his own pain management clinic and continued with The Center for Clinical Research, which is now housed together in one building. He treats a variety of pain management problems as well as speaking locally, nationally and internationally.

**LECTURE**

## CURRENT STATUS OF INTRATHECAL DRUG DELIVERY – DRUGS AND PUMPS

# JAMES E. HEAVNER, DVM, PhD, FIPP (Hon)

**BIOGRAPHICAL SKETCH**

Dr. James E. Heavner is a Professor Emeritus of Anesthesiology, Cell Physiology and Molecular Biophysics and Clinical Professor of Anesthesiology at Texas Tech University Health Sciences Center. He also is an honorary Fellow of Interventional Pain Practice. His scientific career spans more than 40 years. His areas of research include pain mechanism and treatment and the pharmacology and toxicology of local anesthetics. He pioneered the development of epiduroscopy. He is active in numerous national and international professional organizations and is the Registrar for the Fellow of Interventional Pain Practice examination.

**LECTURE**

## SPINAL CANAL ENDOSCOPY 2012

**Objectives**

Upon completion of this presentation attendees will be able to discuss

- Primary reasons for performing spinal endoscopy and measures of success
- Indications and techniques for performing epiduroscopy
- How patients benefit from spinal canal endoscopy
- Complications

**Key Points**

1. Epiduroscopy is direct visualization of the epidural cavity with a percutaneously inserted fiber optic device that includes a working channel for injecting fluids and instruments.
2. Goals of epiduroscopy are to gain information by direct visual observation of the epidural cavity that assists in establishing a) a diagnosis b) a treatment plan and c) a prognosis.
3. Epiduroscopy is also used to execute the treatment plan and to investigate the patho physiological changes leading to the development or maintenance of LBP or radiating pain (RP).
4. Epiduroscopy is indicated for patients with LBP and/or pain radiating to the lower part of the body and lower extremities for whom alternative approaches have been unsuccessful, failed to meet treatment objectives or are contradicted.
5. Spinal canal endoscopy may identify causes of pain that cannot be determined by physical examination and imaging (CT scan, MRI)
6. Contraindications for epiduroscopy include systemic infection, infection at the intended epidural cavity access site, coagulopathy, increased intercranial pressure, sacral deformi ties or canal too narrow preventing entry or passage of the epiduroscope.
7. Observations noted during epiduroscopy depend upon prior treatments (eg surgery) and anatomical changes documented on physical and imaging examination, changes (increase, decrease absent/abnormal) in vascularity, fat and/or fibrous tissue and/or inflammation are commonly observed.
8. Major surgical intervention can often be avoided by using minimally invasive spinal canal endoscopy.

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# JAN PETER WARNKE, MD

**BIOGRAPHICAL SKETCH**

Prof. Dr. Jan-Peter Warnke is currently Chief of Neurosurgery for The Paracelsus Clinic Group in Germany. He is appointed Professor for "Medicine-Ethics-Finances" at the University Zwickau, Germany. He held a post as Professor for Neurosurgery at the Gutenberg-University in Mainz, Germany.

Professor Warnke was appointed Chief of Neurosurgery for the Paracelsus Clinic Group for Germany in 1993, at age 33. He has developed the Paracelsus Clinic after the Wall fell from a community hospital to a centre of excellence, not only from a medical standpoint but also financially. Under his leadership, relations to universities throughout Europe have increased offering students an incite to practical medicine with state of the art equipment As a result, Paracelsus has been vaulted to an internationally recognized standard for neurosurgery in Europe, and for rare diseases as Leptomengeopathy and its variations, as Perineural Spinal Cysts (Tarlov Cysts) in the World.

Prior to joining Paracelsus Private Hospital Group, Jan-P. Warnke was a practicing Neurosurgeon and Assistant Professor in Neurosurgery at RWTH Aachen Germany, Rheinisch-Westfälische Technische Hochschule. His education is truly international including residencies in Germany, Hungary and Great Britain.

His interest in Neurosurgery focuses on Endoscopic Methods in Neuro-Oncology and the Neuro-Endoscopy of the spinal Subarachnoidal space.

**LECTURE**

## ARACHNOIDITIS, THECALOSCOPY AND TORLOV CYSTS

**Objectives**

Upon completion of this presentation attendees will be able to discuss:

- Lumbar-sacral subarachnoidal space is approached by an endoscopic technique: Thecaloscopy
- Current techniques, practical use of the method for diagnostic and therapeutic reasons
- Most common pathologies of the leptomeningeals sheets (Arachnoid&Pia mater)
- Interventional options for treatment of Arachnoiditis
- Pathophysiology of Perineural Cysts, Cyst-related Pain-Syndroms and their relation to Arachnoiditis.
- Interventional options for Perineural Cysts.

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# RAFAEL JUSTIZ, MD, MS, FIPP, DABIPP

**BIOGRAPHICAL SKETCH**

Dr. Rafael Justiz is currently the Director of Interventional Pain Management , Department of Neurosciences, Saint Anthony's Hospital, Oklahoma City, Oklahoma.

Dr Justiz earned a Bachelor and Masters in Sciences from Florida International University in Miami, Florida, then went on to receive his Doctor of Medicine from Medical college of Wisconsin. He completed his anesthesia residency at the University of South Florida in Tampa, and received his fellowship in Interventional Pain Management at Texas Tech University in Lubbock, Texas. Dr. Justiz joined the faculty at the international pain institute at University Health Sciences Center and now is currently in private practice.

He is board-certified in anesthesiology by the American Board of Anesthesiology and has Added Qualifications in Pain Management by the same board. He also holds the WIP Fellow in Interventional Pain Practice certification (FIPP) and is a Diplomate of the American Board of Interventional Pain Physicians (ABIPP).

Dr Justiz has published several book chapters and journal articles. His areas of interest's include peripheral field/spinal cord stimulation and treatment of refractory head and facial pain.

**LECTURE**

## VERTEBRAL BODY STABILIZATION TECHNIQUES

**Objectives**

Upon completion of this presentation attendees will be able to discuss

- Osteoporosis
- Treatment options for osteoporosis
- Vertebral Augmentation
- Identify patient and workup
- Different Techniques
- How to perform vertebral augmentation
- Complications

**Key Points**

- Discuss osteoporosis including risk factors, epidemiology, its economic effects and clinical consequences. Look at the guidelines for determining osteoporosis, and be able to recognize the disease process and what treatment options there are available.
- Discuss ideal patient selection and workup, and define fracture configurations.
- Discuss different imaging modalities that can be used and their differences.
- Discuss how vertebral augmentation reduces pain and what mechanism are involved.
- Look at the indications, contraindications and relative contraindications involved with vertebral augmentation.

- Discuss the different techniques employed in vertebral body augmentation, transpedicular and extrapedicular approaches. Look at the anatomical landmarks and proper imaging technique for safety. In detail define how each technique is performed and the approaches that can be employed including proper trajectory and vertebral access.
- Recognize the common complications and practice safe techniques to avoid these complication

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# RICHARD RAUCK, MD, FIPP

**LECTURE**

## URINE DRUG SCREENING IMPACT ON CARE

# RICARDO RUIZ-LÓPEZ, MD, FIPP

**BIOGRAPHICAL SKETCH**

Ricardo Ruiz-López, MD, Neurosurg., FIPP, is Director of Barcelona Spine and Pain Institute (Institut de Columna Vertebral / Clínica del Dolor de Barcelona), Executive Member of the Board of Directors of Hospital Delfos (Barcelona) and CEO Project for Barcelona Spine & Pain Surgery Clinic.

After receiving his MD degree from the University of Madrid in 1975 and the Board of Neurosurgery in 1980, he founded in 1986 Clínica del Dolor de Barcelona.

His major areas of scientific interest are the Neurosurgery of Pain, the Interventional Techniques and Surgery for Spinal Chronic Pain Conditions, and the development of new organizational models for Patient´s Care.

Editor of a number of medical journals, he has published extensively on Pain Management and Interventional Pain Therapies.

He is a Founding Member of various National and International Medical Societies on the Pain Field, and Visiting Professor and Lecturer at European and American Universities.

President of the Organizing Committee of the II EFIC Congress (European Federation of IASP Chapters) "Pain in Europe" Barcelona, September 1997 and of the 3rd World Congress on Pain of WIP (World Institute of Pain), Barcelona, September 2004.

President of World Institute of Pain (WIP) 2011-2014, President of the Catalan Pain Society (Catalonia, Spain) 2006-2010, and Permanent Trustee of the World Institute of Pain Foundation, NC. USA.

**LECTURE**

## RF - NEW IDEAS

# AARON CALODNEY, MD, FIPP

**BIOGRAPHICAL SKETCH**

Aaron Kenneth Calodney, MD is Past President of the Texas Pain Society. He currently sits on the Board of Directors of the American Society of Interventional Pain Physicians (ASIPP), and advisory Board for the World Institute of Pain (WIP). Dr. Calodney is board certified in Anesthesiology and carries subspecialty certification in Pain Management through the American Board of Anesthesiology.

Dr. Calodney earned his medical degree from the University of Missouri School of Medicine and completed a family medicine internship at St Joseph's Hospital in Syracuse, New York. His residency in anesthesiology and subsequent interventional pain management fellowship was completed at the University of Texas Health Science Center at Houston. He subsequently completed a fellowship in pediatric anesthesia at the Denver Children's Hospital.

With particular interest in Spine and special interests including Neuromodulation and Intrathecal Drug Delivery, Biological treatment of the painful degenerative disc, Peripheral nerve injury, and Radiofrequency ablation, Dr. Calodney has presented and published many articles and textbook chapters. He is actively involved in clinical research and has delivered over 250 invited lectures in the US and abroad.

Dr. Calodney is a member of the American Society of Anesthesiologists, American Society of

Regional Anesthesia and Pain Medicine, and many other elite medical societys.
He is an author of the first Evidenced Based Treatment Guidelines in Interventional Pain and Evidenced Based Guidelines for the Use of Opioids published in the Pain Physician journal and on the National Guideline Clearinghouse

**LECTURE**

## TREATMENT OPTIONS FOR SACROILIAC PAIN

# LUDGER GERDESMEYER, MD, PhD, FIPP

**BIOGRAPHICAL SKETCH**

Prof. Dr. Gerdesmeyer has practiced orthopedic and trauma surgery since 1991. During his time at the University Hospital Luebeck and the Department of Orthopedics and Traumatology of the Technical University of Munich, he has specialized in the areas of joint replacement, spine surgery, pediatrics and specialized orthopedic tumor. He is instrumental in the development of modern and minimally-invasive surgical techniques. Through national and international collaborations, patients receive treatments and information corresponding to the current state of scientific knowledge. Since July 2010 he has been the chief physician in the Orthopedic and Rheumatological Oncology Section of the University Hospital, Schleswig Holstein Campus, Kiel. Prof. Dr. Gerdesmeyer has been written over 100 publications in international journals and books, over 200 lectures worldwide, and published his own textbooks.

**LECTURE**

## UPDATE ON EPIDURAL ADHESIOLYSIS STUDIES

# GABOR B. RACZ, MD, FIPP

**LECTURE**

## SPECIFIC VS NON SPECIFIC SPINAL PAIN

This lecture will discuss the topic of specific vs. non specific spinal pain. Back pain is the one of the most common reasons for patients to visit their physicians. First contact with a patient often results with an inadequate evaluation of the patients back pain. The evaluation of patients with back pain must include physical examination where different structures in the spinal canal need to be evaluated such as the disc, spinal canal content, nerve root, posterior longitudinal ligament elements, the facet joint, muscle groups, ventral lateral iliopsoas muscle spasm, and posterior element muscle groups related causes. For more information, please visit the InTech Open Access Book: http://www.intechopen.com/books/pain-management-current-issues-and-opinions



# RAY M. BAKER, MD, FIPP

**BIOGRAPHICAL SKETCH**

Ray M. Baker, MD is the Medical Director of the EvergreenHealth Spine and Musculoskeletal Program in Kirkland, WA. He is President of the International Spine Intervention Society.

**LECTURE**

## CONTROVERSIES IN THE DIAGNOSIS OF PAINFUL LUMBAR DISC DEGENERATION

**Objectives**

Upon completion of this presentation attendees will be able to:

- Understand the current role of provocation discography in the diagnosis of painful disc degeneration.
- Understand the current role of analgesic discography in the diagnosis of painful disc degeneration.
- Understand the nature of several current controversies in the diagnosis of painful lumbar disc degeneration, including acceleration of disc degeneration related to disc puncture.
- Understand the limitations of provocation discography.
- Understand the potential future role of other diagnostic tests, including MR Spectroscopy, in the diagnosis of painful lumbar disc degeneration.

**Key Points**

- Although we do not have a Gold Standard for the diagnosis of painful lumbar disc degeneration, Provocation Discography is the best diagnostic tool to date and has a high sensitivity and a relatively low false positive rate when performed correctly on low risk individuals.
- Given a high false positive rate in certain, high-risk populations, Provocation discography is best used to determine who does not have painful lumbar disc degeneration.
- Analgesic discography can be a useful adjunct to provocation discography.
- Provocation discography is controversial:
- There is the potential for false positive results in the exact population that we most often treat: chronic pain patients, workers compensation patients, patients with significant psychological stress, patients on chronic opioids.
- There is no reference standard for painful lumbar disc degeneration.
- Rightly or wrongly, provocation discography has been linked with fusion outcomes. Thus, patient outcomes from fusion have been used as a surrogate marker for the positive predictive value of provocation discography in the diagnosis of painful lumbar disc degeneration.
- Negative predictive values are superior to positive predictive values with all injection based diagnostic procedures, including provocation discography.
- There is limited evidence from the cervical and lumbar spine that provocation discography might accelerate disc degeneration and increase the need from surgery.
- In view of the above, consideration should be given to changing the way we select patients to undergo provocation discography.
- Early studies are encouraging that markers for painful disc degeneration exist that can be measured using non-invasive, objective tools.

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# ADNAN A. AL-KAISY, MB ChB, FFRCA, FPMRCA, FIPP

**LECTURE**

## HIGH FREQUENCY SPINAL CORD STIMULATION IN THE MANAGEMENT OF AXIAL BACK PAIN

**Objectives**

Upon completion of this presentation attendees will be able to discuss

- The role of conventional Spinal Cord Stimulation (SCS) in management of Failed back Surgery Syndrome (FBSS).
- Limitations of conventional SCS in the management of Axial back pain (ABP)
- Strategies used to improve the efficacy of the conventional SCS
- What is High Frequency Stimulations?
- How High Frequency Stimulations work? How safe is it?
- What are the advantages of the high frequency stimulation for the Patients, operators and the providers?
- Future direction of high frequency SCS



**Key Points**

- Spinal Cord Stimulation is evidence based treatment used in the management of chronic pain conditions.
- While SCS is very effective for radicular pain, one notable area that SCS has had less success in is ABP, which is a mix of nociceptive and neuropathic pain.
- In conventional SCS, paraesthesia coverage has been essential for pain relief. However, coverage of low back pain without dorsal root stimulation and without undesirable stimulation is difficult to accomplish.
- One promising approach for this unmet need is High frequency SCS using up to 10 KHZ.
- In a multi-centre prospective European open label study with 84 implanted patients, High Frequency SCS technology showed significant relief for chronic back pain in difficult-to-treat patients, such as predominant back pain patients.
- Leads can be placed in anatomic midline rather than physiologic midline, making the procedure simpler. Paraesthesia mapping step is not required, making the time for High Frequency SCS surgery more predictable and potentially shorter.
- Future direction of HR SCS includes use different algorithm in programming, different application and advances in equipment technology.

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# ERIC COSMAN, JR.,PhD

**BIOGRAPHICAL SKETCH**

Dr. Eric Cosman, Jr, PhD, is the Scientific Director of Cosman Medical (Burlington, MA, USA), where his research focuses on the physical and biological mechanisms of Radiofrequency (RF) in pain management, and their translation into clinical practice. Dr. Cosman earned a BS, MEng, and PhD in Electrical Engineering and Computer Science from MIT.

**LECTURE**

## RF PHYSICS, SAFETY AND APPLICATIONS

An understanding of the physics of radiofrequency (RF) can improve its clinical application and is critical to understanding, developing, and proving the efficacy of new applications of RF in pain management. Even after 60 years of radiofrequency's use in medicine, the last decade has seen the introduction of new RF treatment modalities like Pulsed RF (PRF) and Bipolar RF, an expansion of target structures for RF in axial and peripheral anatomy, and substantial advances in RF biophysics. Upon completion of this lecture, attendees will be able to discuss:

- The electric, thermal, and biological effects of continuous/thermal RF and PRF in pain management, including the latest research results.
- The physical meaning of RF generator readings and how to apply them clinically
- Thermal lesion size for monopolar and bipolar RF

**Key Points**

- Physicians have almost 60 years of experience using radiofrequency to create controlled, reproducible thermal lesions in the central and peripheral nervous system for the treatment of various types of pain.
- Strong electric fields/current densities near the uninsulated tip of radiofrequency electrodes induce tissue heating, and heat-conduction/blood-flow dynamics influence the resulting thermal distribution.
- Voltage, current, and power are measures of RF generator output. Impedance and temperature characterize the physical state of the tissue and RF electrode.
- Thermal lesion geometry is a function of electrode size, lesion time, and lesion temperature.
- Bipolar RF, in which current passes between two nearby active electrodes, is expanding treatment options by enabling more conformal and larger lesion geometry than does standard, monopolar RF.
- PRF exposes tissue to stronger electric fields with less average heating than continuous RF. Highly local "heat flashes" are present at points of high curvature on a PRF electrode.

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# PETER STAATS, MD, FIPP

**BIOGRAPHICAL SKETCH**

Peter S. Staats, MD, MBA is a Managing Partner of Premier Pain Centers in Shrewsbury, New Jersey. He is also an Adjunct Associate Professor in the Department of Anesthesiology and Critical Care Medicine and the Department of Oncology at Johns Hopkins University School of Medicine in Baltimore, Maryland. He was the founder of the Division of Pain Medicine at Johns Hopkins University, where he was the director for ten years. Dr. Staats is internationally known for developing and implementing minimally invasive procedures for chronic pain. Dr. Staats received his medical degree from the University of Michigan Medical School in Ann Arbor and completed his residency and fellowship training at the Johns Hopkins University School of Medicine. Dr. Staats has written or co-edited five books, and close to two hundred articles, abstracts, monographs and book chapters on pain medicine in publications that include the Journal of the American Medicine Association, Pain, Anesthesiology, and the Journal of Clinical Oncology.



**LECTURE**

## MILD PROCEDURE

Lumbar spinal stenosis (LSS) is a degenerative, age-related condition that causes symptoms of pain, numbness and tingling in the back, legs and buttocks. By some estimates, over 1.2 million people are diagnosed and in treatment for LSS in the United States.[1] The narrowing of the spinal canal is believed to create an increase in pressure in the epidural space, which causes nerve root ischemia, and subsequent neurogenic claudication symptoms. Estimates in the literature indicate that neurogenic claudication may be present in 80-100% of LSS patients.[2] The current treatment protocol for LSS with neurogenic claudication includes decompression procedures such as laminotomies and laminectomies.

The mild® procedure provides a new treatment option for patients with mild-to-moderate LSS with neurogenic claudication. It is a fluoroscopically guided procedure that uses a specialized device kit to decompress the spinal canal by removing small pieces lamina and hypertrophic ligamentum flavum posterior to the epidural space through a 5.1 mm treatment portal. The procedure can be performed in about an hour in an outpatient setting under light/MAC sedation, no implants are used, and no stitches are required. The mild® procedure has been performed on approximately 12,000 patients in 45 states and data has been published in 12 peer-reviewed journal articles.

The clinical data on the mild® procedure indicate a high responder rate (79%)3, comparable to more invasive open surgery decompression techniques.[4] Long term efficacy is also comparable. Studies show that mild® patients experience dramatic functional improvement and pain reduction. At one year post-mild® patients mean standing time increased from 8 minutes to 56 minutes, mean walking distance increased from of 246' to 3,956'[5] and mean pain was reduced by 53%.[3] These dramatic outcomes come without the risks associated with open surgery and allow LSS patients to stand longer and walk father with less pain. (0% complication rate in all clinical trials.[6])

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6. Based on mild® procedure data collected in all clinical trials. Complications include dural tear and blood loss requiring transfusion.

# KEN REED, MD

**LECTURE**

## NEUROMODULATION FOR MIGRAINE

# HEMMO BOSSCHER, MD, FIPP

**BIOGRAPHICAL SKETCH**

Dr. Bosscher graduated from Vrije Universiteit te Amsterdam Medical School in Amsterdam, The Netherlands, and completed his Internal Medicine Internship at the Veterans Affairs Medical Center at Georgetown University, in Washington, DC and his Anesthesia Residency at the University of Massachusetts Medical Center in Worcester, MA. Dr. Bosscher received subspecialty training through a Pain Management Fellowship at the Texas Tech University Health Sciences Center, in Lubbock, Texas. Dr. Bosscher received additional subspecialty training through a Pediatric
Anesthesiology Fellowship at the Hospital for Sick Children, at the University of Toronto, in Ontario, Canada. More subspecialty training was received in Anesthesia for Cardiac Surgery and Critical Care, St. Antonius Ziekenhuis (Hospital), in The Netherlands. Dr. Bosscher received additional medical training at the Bolton Royal Infirmary and Bolton General Hospital, both in Bolton, England. Dr. Bosscher was on staff as Assistant Professor within the Department of Anesthesiology at Texas Tech University Health Sciences Center in El Paso, and Lubbock, Texas, for more than four years. Dr. Bosscher has been in private practice for more than twelve years.

**LECTURE**

## COMMON LOW BACK PAIN AND LATERAL RECESS STENOSIS

**Objectives**

Upon completion of this presentation attendees will be able to discuss

- Common low back pain
- Lateral recess stenosis and inferior angle stenosis
- The role of inferior angle stenosis in the pathophysiology of low back pain
- The difference between radicular and radiating pain
- Prognostic indicators of treatment using diagnostic markers obtained through epiduroscopy including inferior angle stenosis
- Some suggestions how to treat common low back pain

**Key Points**

- Common low back pain: Diverse clinical presentation but mostly one pathology
- Pathology is localized, not well defined but inferior angle stenosis is important in the pathophysiology of low back pain
- The nerve root is not involved in the pathophysiology of common low back pain
- Disc pathology is not trivial in the pathophysiology of common low back pain
- MRI is not helpful in many patients with common low back pain

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# ANDREA TRESCOT, MD, FIPP

**BIOGRAPHICAL SKETCH**

Andrea Trescot, MD is past president of ASIPP, a former professor at the University of Washington in Seattle, Washington, and previous director of the pain fellowship programs at the University of Washington and the University of Florida. She graduated from the Medical University of South Carolina, with internship and residency in anesthesia at Bethesda Naval Hospital and a fellowship in pediatric anesthesia at National Children's Hospital in DC. She is a Diplomate of the American Board of Interventional Pain Physicians, a Fellow of Interventional Pain Practice, and chair of the US section of the World Institute of Pain. Dr. Trescot is board certified in anesthesia, pain management, interventional pain management and critical care. She was a pain clinic director in private practice for 20 years before she moved to academics. She returned to private practice, first back in Florida, and most recently in Alaska as director of the Trescot Pain Fellowship.

**LECTURE**

## NEUROPATHIC PAIN: WHAT'S NEW?

**Learning Objectives**

Upon completion of this presentation, attendees should be able to:

- Discuss the presentations of neuropathic pain
- Describe some of the key features of neuropathic pain
- Recognize some of the newly recognized pathology of neuropathic pain

**Key Points**

- Neuropathic pain is very common, and often under-recognized
- Listening to the words that the patient uses to describe their pain may give clues to the appropriate treatment.
- There are new medicines and new treatments now available for neuropathic pain

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# CHRIS WELLS, MB, ChB, LRCP, MRCS, LMCC, FRCA, FIPP

**BIOGRAPHICAL SKETCH**

Dr Wells trained at, and then became Director of, the Walton Centre for Pain Relief, organizing services there from 1983 to 1994. He currently practices at Spire Cheshire Hospital and Spire Murrayfield Hospital Wirral, where he sees, assesses and treats all types of pain problems from acute back pain with sciatica, through to chronic neurological pain. Dr Wells has been Honorary Secretary of EFIC, has been made an Honorary Member of the British Pain Society, and also of the neuropathic pain Special Interest Group of IASP (NeuPSIG). Outside of work he is a keen curler, skier and enjoys anything to do with boats.

LECTURE

## BOTULINUN TOXIN, PROPERTIES AND USE IN PAIN MEDICINE

**Objectives**

Upon completion of this presentation attendees will be able to discuss

- The history of therapeutic use of Botulinum Toxin (BT)
- The pharmacological properties of BT
- The various types of BT and their differing properties
- Possible modes of action in pain relief
- The therapeutic indications for use in pain conditions
- Expected outcomes of treatments
- Limitations, complications and types of treatment
- Future direction in use of BT

**Key Points**

In addition to its cosmetic applications, Botox is currently widely used therapeutically. The main conditions treated with botulinum toxin are:

- Cervical dystonia (spasmodic torticollis) (a neuromuscular disorder involving the head and neck)
- Blepharospasm (excessive blinking)
- Severe primary axillary hyperhidrosis (excessive sweating)
- Strabismus (Squints)
- Achalasia (failure of the lower oesophageal sphincter to relax)
- Chronic focal neuropathies. The analgesic effects are not dependent on changes in muscle tone.
- Migraine and other headache disorders, although the evidence is conflicting in this indication

Other uses of botulinum toxin type A that are widely known but not specifically approved by the U.S. FDA (off-label uses) include treatment of:

- Idiopathic and neurogenic detrusor overactivity
- Pediatric incontinence
- Incontinence due to overactive bladder
- Incontinence due to Neurogenic Bladder
- Anal Fissure
- Vaginismus
- Movement disorders associated with injury or disease of the CNS including trauma, stroke, multiple sclerosis, Parkinsons's Disease, or cerebral palsy
- Focal dystonias affecting the limbs, face, jaw, or vocal cords
- TMJ pain disorders
- Diabetic Neuropathy
- Wound healing
- Excessive saliva
- Vocal Cord Dysfunction(VCD) including spasmodic dysphonia and tremor
- Reduction of Masseter Muscle size to improve appearance of jaw
- Painful bladder syndrome
- Detrusor sphincter dyssynergia
- Benign prostatic hyperplasia
- Treatment and prevention of chronic headache
- Chronic musculoskeletal pain
- Weight loss, by increasing the gastric emptying time
- A study in China reports benefit in the management of postherpetic neuralgia.
- Management of spinal cord injury-related pain.




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# LORAND EROSS, MD, PhD, FIPP

**BIOGRAPHICAL SKETCH**

Dr. Lorand Eross is the director of Functional Neurosurgical Program and head of the Functional Neurosurgical Department at the National Institute of Neuroscience in Budapest. He is a board certified neurologist and neurosurgeon. He has got his PhD degree at Semmelweis University, Faculty of Medicine in 2010. His main interest is epilepsy surgery, movement disorder surgery, pain treatment, spasticity, intraoperative neuormonitoring and neuromodulation. He is teaching at Semmelweis University at the Faculty of Medicine and at Pazmany Peter University Faculty of Information Technology. His research activity is in vitro and in vivo electrophysiological investigational methods in epilepsy.

LECTURE

## NEUROSURGICAL APPROACHES TO CHRONIC PAIN MANAGEMENT

**Learning objectives:**

This summary focuses exclusively on neurosurgical procedures against pain. SCS and periferial nerve stimulation will be discussed by other authors.

**Key Points:**
The neurosurgical treatment of pain is divided into two subgroups: ablative and neuroaugmentative therapies.

**Ablative procedures** include all types of surgical interventions, when an irreversible action is taken to stop pain. **Neurolysis**: separation of a peripheral nerve from the surrounding structures to which is adherent. The use of internal neurolysis is clearly necessary in dissecting an injured nerve for interfacicular nerve graft or to evaluate a neuroma-in-continuity. **Trigeminal neurectomy:** Peripheral trigeminal neurectomy can be useful in elderly debilitated patients who cannot undergo more substantive procedure for V/1 division neuralgia. 50-60% of trigeminal neuropathic pain cases are successfully treated with neurectomy. **Dorsal Root ganglionectomy and Dorsal Rhizotomy (DR):** The largest series of DR in cancer pain was published in 1982 by Sindou and Lapras, success rate was 47% in a series of 585 patients. **Sympathectomy:** Currently surgical sympathecomy is reserved for treating hyperhydrosis, sympathetically maintained pain and limited cases of vasculitis (i.e. Raynaud's syndrome). The success rate of sympathectomy in the literature after 1990 ranges from 65% to 100%. **Dorsal Root Entry Zone leasioning:** Indications for drezotomy includes 1.Cancer pain that is limited in extent (e.g.: Pancoast syndrome), 2.Persistent neuropathic pain, 3.Disabling hyperspasticity, especially when associated with pain. Surgery in the DREZ must be considered within the frame of all the methods belonging to the armamentarium of pain surgery. **Midline myelotomy:** Gildenberg and Hirschberg (1984) performed myelotomy for visceral pain with excellent results in 8 out of 12 patients. Punctuate midline myelotomy after laminectomy at T8 level for malignant visceral pain found efficient by Nauta et al. (2000). This technique has limited indication today. **Anterior Cordotomy:** The ideal candidates for Percutan Cordotomy (PC) are cancer patients with unilateral localized pain if the primary malignant disease is under control. The initial success rate of 3742 cases collected by Lorenz was 75 to 96%. **Percutaneous extralemniscal myelotomy:** Indicated in cancer patients with pelvic or lower trunk or lower extremity pain. Kanpolat reported 15 cases, with rectal, pancreatic, colon, renal tumors without complication rate. 6 of the 15 patient had complete 5 of 15 cases had partial pain relief. **Mesencephalotomy:** Amano in 1998 reported 76% long-term pain relief in patients with central and deafferentation pain with an overall morbidity of 4%. No recent report of this procedure in practice. **Medial Thalamotomy (MT):** MT is capable of alleviating neuropathic and nociceptive pain and has the advantage of low morbidity. Medial thalamotomy in any nucleus is more effective in relieving nociceptive than neuropathic pain and those results are modest: 46% relief of nociceptive usually cancer pain and 29% in neuropathic pain. **Stereotactic cingulotomy:** 394 patients were reported until today, in patients with benign origin 53% was useful and 47% of non-useful. In malignant pain the result was just similar. The initial good response to cingulotomy progressively fades over time. **Hypophysectomy:** There are few clinical report on hypophysectomy for pain in the literature since 1984. Recently some center reported on few patients gamma knife hypophysectomies with limited results. **Percutan Radiofrequency Trigeminal Gangliolysis or Rhizotomy:** In summary of several series of RF trigeminal rhizolysis 99% of patients became pain free immediately after the procedure. In a review of 1200 patients followed 1-20 years (mean 9 years), 93 % reported excellent or good results, and 4% reported fair results because undesirable side effects, 1% reported poor results because of severe denervation dysesthesia. RF trigeminal rhizolysis is effective in primary trigeminal neuralgia. RF leasion-ing can effectively treat paroxysmal facial pain associated with tumors and multiple sclerosis. **Percutan Retrogasserian Glycerol Rhizotomy (PRGR) PRGR** is a useful minimal invasive technique in trigeminal neuralgia when MVD is not possible. Long term pain control (7 years) was 85%; the 11 years follow up in Lundsford series showed 77% pain relief. **Microvascular decompression (MVD) for Trigeminal Neuralgia:** Jannetta reported a total



success rate of 88% at 1 year and 74% at 10 year follow up. MVD is the treatment of choice for patient with typical trigeminal neuralgia, with MRI diagnosed neurovascular compression if the patient medical condition allow the risk of craniotomy. **Posterior Fossa Trigeminal Rhizotomy (PFTR):** Several contemporary neurosurgeons indicate PFTR when MVD surgery or other procedures failed. In 3% of patients operated with MVD no vascular compression is found. In these cases an optional treatment strategy could be partial sectioning the nerve. **Gamma Knife Radiosurgery for Trigeminal Neuralgia:** With this method by the end of 2010 more than 17 000 patients were treated worldwide. Approximately 75% of patients achieve good (pain free on medication) or excellent results (pain free w/o medication) within 1-8 weeks of the initial treatment.
**Neuromodulative therapy** includes only reversible neurostimulation type procedures: **Primary Motor Cortex Stimulation (MCS):** Chronic epidural MCS can control central deafferentation pain in 45-75% of cases. The best results were observed in central post-stroke pain and trigeminal neuropathy (>90%). The results improved during the last 10 years due to better targeting of the motor cortex (fMRI, neuronavigation, SSEP, intraoperative stimulation). **Deep Brain Stimulation (DBS):** In general patients with refractory neuropathic pain should undergo paraesthesia producing stimulation, whereas those with nociceptive pain should undergo periventricular gray/periaqueductal gray matter stimulation, long-term success rate varies between 26% to 72%. The best results of DBS are in cancer pain, FBSS, cervical and brachial avulsions and peripheral neuropathy. **Gasserian Ganglion Stimulation:** Stimulation of the gasserian ganglion presents a surgical option with atypical trigeminal pain. In a large clinical series of 182 patients 92 had more than 50% pain relief and 82 were implanted. At long-term follow up 70% of patients had 75 -100% pain relief. The most benefiters were patients with neuropathic pain after intervention of the maxillary sinus, posttraumatic facial pain, and those with severe dysesthesia after trigeminal destructive procedures.

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## GABOR B. RACZ, MD, FIPP

**LECTURE**

### FAILED NECK SURGERY

This lecture will discuss failed neck surgery cases and share interventional solutions for specific pain conditions.
For more information, please visit the InTech Open Access Book:
http://www.intechopen.com/books/pain-management-current-issues-and-opinions

# CHAN HONG PARK, MD, PhD, FIPP

**BIOGRAPHICAL SKETCH**
Dr. Park is Director of Pain Medicine and Non-Surgical Treatment Center, and Vice President, Departments of Anesthesiology and Pain Medicine, Wooridul Spine Hospital, Daegu, South Korea

**LECTURE**
## ULTRASOUND GUIDED TREATMENT 2012

**Objectives**
Upon completion of this presentation attendees will be able to discuss
- Why we should use ultrasound as a guidance method in pain treatment
- What the basic principle of ultrasound imaging is
- For what ultrasound guided is used in the field of pain treatment
- Relationships between the inserted needle and inner structures
- Proper postures during ultrasound guided intervention
- How Sonoanatomy compare with real anatomy
- Examples of ultrasound application for pain treatment

**Key Points**
- Ultrasonography has potential usefulness in pain management including diagnosis and interventional treatment.
- The rational for performing ultrasound guided treatment is that it provides information that aids in establishing a diagnosis and prognosis, locating areas of pathology, and providing therapy via a real-time visualization.
- Ultrasonography is the only modality that allows direct visualization of relationships between the inserted needle and inner structures such as vessels or nerves in the way of target areas to avoid an iatrogenic injury of them.
- Barriers to the use of ultrasound in clinical practice include necessity of training for operation.
- Expected outcomes include ruling in or out area or areas of pathology, facilitating treatment, better forecasting of prognosis and future treatment options.

**References**

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# ADNAN A. AL-KAISY, MB ChB, FFRCA, FPMRCA, FIPP, GABOR B. RACZ, MD, FIPP

**BIOGRAPHICAL SKETCH**
Dr Al-Kaisy is currently Clinical Lead and Consultant at the Pain Management and Neuromodulation Centre/ Guy's and St Thomas Hospital. He trained in Chronic Pain Medicine at The Walton Centre, Liverpool for Neurology and Neurosurgery. He has a fellowship in Chronic Pain Management at University of Toronto Hospital, Canada.
He has a number of publications and research in variety of categories in pain management. His interest is in management of Spine and Neuropathic pain. He has extensive experience in Neuromodulation: Spinal Cord Stimulation for Failed Back Surgery Syndrome, Intractable Angina, Nerve Lesion, and Sacral Nerve Stimulation for Urinary Incontinence, Interstitial Cystitis and Bowel Incontinence.
Dr. Al-Kaisy was voted the Hospital Doctor of the Year in 2001 for the Pain Management.

**LECTURE**
## TREATMENT OF CHRONIC PELVIC PAIN

This lecture will discuss pelvic pain. Pelvic Pain can be lumbosacral nerve root origin as well as autonomic dysfunction. Examination of the patient and the patient's history is significant as well as identifying pain generators. Pelvic and/or rectal examination to identify pelvic pain is often helpful.
For more information, please visit the InTech Open Access Book:
http://www.intechopen.com/books/pain-management-current-issues-and-opinions

# MILES DAY, MD, FIPP, DABA

**BIOGRAPHICAL SKETCH**
Dr. Miles R. Day is the Pain Management Fellowship Director and Professor for the Department of Anesthesiology and Pain Management at Texas Tech University School of Medicine. Dr. Day received his MD from Texas A&M University, and did his residency and fellowship at Texas Tech. He currently serves on the editorial boards of Pain Physician and Pain Practice journals, and is the chair of the WIP Board of Examination.

**LECTURE**
## INTERVENTIONAL PAIN THERAPY COMPLICATIONS – RECOGNITION, AVOIDANCE, MANAGEMENT

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