

The International Skeletal Society

Refresher Course

September 9–12, 1998

Dublin, Ireland

Refresher Course Committee

Gil Brogdon, M.D., Chairman

Claus-Peter Adler, M.D.

Javier Beltran, M.D.

Helen Carty, M.D.

Alain Chevrot, M.D.

Louis A. Gilula, M.D.

Harry J. Griffiths, M.D.

Juerg Hodler, M.D.

Herwig Imhof, M.D.

Vladimir Jevtic, M.D., Ph.D.

Douglas J. Pritchard, M.D.

Maximilian F. Reiser, M.D.

Jonas Rydberg, M.D.

Lorraine G. Shapeero, M.D.

Suzanne Staples Spanier, M.D.

Murali Sundaram, M.D.

Anthony J. Wilson, M.D.

Holger T. A. Petterson, M.D. (Ex-officio)

Donald L. Resnick, M.D. (Ex-officio)

REFRESHER COURSE

Day 1

S E P T E M B E R						
S	S	M	T	W	T	F
				9		

7:00–8:00 a. m.

Registration, Ballroom Foyer

8:00–8:10 a. m.

Welcome and Information

Holger T. A. Pettersson, President ISS
Gil Brogdon, Refresher Course Chairman

Session 1 A – Technical Advances in Radiography and Communications Systems (Ballroom)

Moderators: Javier Beltran (New York, NY, USA)
Herwig Imhof (Vienna, Austria)

8:10–8:30 a. m.

Direct Radiography

Maximilian F. Reiser (Munich, Germany)

8:30–9:00 a. m.

PACS: Clinical Impact in Musculoskeletal Imaging

Thomas H. Berquist (Jacksonville, FL, USA)

9:00–9:30 a. m.

Advances in MRI Technology

J. Bruce Kneeland (Philadelphia, PA, USA)

9:30–9:35 a. m.

Discussion

9:35–9:50 a. m.

Break

Session 1 B – The Price of Progress: Cost Effectiveness in Musculoskeletal Radiology (Ballroom)

Moderators: Maximilian F. Reiser (Munich, Germany)
Jeremy W. R. Young (Charleston, SC, USA)

9:50–10:10 a. m.

Cost-Effectiveness Evaluation in Musculoskeletal Imaging

Mark E. Schweitzer (Philadelphia, PA, USA)

10:10–10:30 a. m.

Cost-Effectiveness Studies in Skeletal Radiology: Safeguard for Our Specialty?

Maximilian F. Reiser (Munich, Germany)

10:30–10:50 a. m.

Cost-Efficacy: The Economics of Skeletal Imaging in the New Millennium

John V. Crues, III (Los Angeles, CA, USA)

10:50–11:00 a. m.

Discussion

11:00 a. m.–12:00 p. m.

Founders Lecture in Honor of Murray K. Dalinka, M. D.

11:00–11:05 a. m.

Introduction of Founders Lecturer

Holger T. A. Pettersson (Lund, Sweden)

REFRESHER COURSE

Day 1

S E P T E M B E R						
S	S	M	T	W	T	F
				9		

11:05–11:50 a. m.	<p>Founders Lecture MR of the Marrow: Age Related Considerations and Responses to Disease Morrie E. Kricun (Philadelphia, PA, USA)</p>
11:50 a. m.–12:00 p. m.	<p>Presentation Ceremony and Remarks Holger T. A. Pettersson, President ISS Murray K. Dalinka, Past President ISS</p>
12:00–1:30 p. m.	<p>Lunch (on your own)</p> <p>Session 2 – Interventional Spine Procedures: A Detailed Approach (Ballroom) Moderators: Louis A. Gilula (St. Louis, MO, USA) Phoebe A. Kaplan (Charlottesville, VA, USA)</p>
1:30–1:35 p. m.	<p>Introduction and Overview Louis A. Gilula (St. Louis, MO, USA)</p> <p>Facets</p>
1:35–1:50 p. m.	<p>Cervical and Thoracic Facet Blocks Douglas K. Smith (Indianapolis, IN, USA)</p>
1:50–2:05 p. m.	<p>Lumbar Facets, SI Joints and Transitional Vertebrae Robert G. Dussault (Charlottesville, VA, USA)</p>
2:05–2:15 p. m.	<p>Discussion</p> <p>Nerve Blocks</p>
2:15–2:30 p. m.	<p>Cervical and Thoracic Louis A. Gilula (St. Louis, MO, USA)</p>
2:30–2:45 p. m.	<p>Lumbar and Sacral, Transforaminal W. Bonner Guilford (Charlotte, NC, USA)</p> <p>Epidural Injections</p>
2:45–3:00 p. m.	<p>Cervical and Lumbar Phoebe A. Kaplan (Charlottesville, VA, USA)</p>
3:00–3:10 p. m.	<p>Discussion</p>

Day 1

S E P T E M B E R

S S M T W T F

9

Discograms

3:10–3:25 p. m.

Cervical, Thoracic and Lumbar: Provocative/Diagnostic
Jamshid Tehranzadeh (Orange, CA, USA)**Biopsy**

3:25–3:40 p. m.

Spine Biopsy
Daniel I. Rosenthal (Boston, MA, USA)**Discussion**

3:40–3:50 p. m.

3:50–4:05 p. m.

Break**Other Spinal Therapeutic Procedures**

4:05–4:20 p. m.

Radiofrequency Facet Denervation
Phillip H. Lander (Montreal, Quebec, Canada)

4:20–4:35 p. m.

Intradiscal Therapy
Jean-Denis Laredo (Paris, France)

4:35–4:50 p. m.

Vertebroplasty
Alain Chevrot (Paris, France)

4:50–5:00 p. m.

Discussion and Adjournment

6:00–8:00 p. m.

Reception, Jurys Pub
For registrants and one guest or companion

REFRESHER COURSE

Day 2

S E P T E M B E R						
S	S	M	T	W	T	F
					10	

Simultaneous Sessions in Ballroom and Elm and Oak Room

Session 3 A – Generalized Bone Disease: Metabolism and Marrow (Ballroom) Simultaneous with Session 4 A

Moderators: Harry Genant (San Francisco, CA, USA)
Timothy E. Moore (Omaha, NE, USA)

8:00–8:20 a. m.

Osteoporosis: An Overview

Lee F. Rogers (Winston-Salem, NC, USA)

8:20–8:40 a. m.

Variants of Osteoporosis

Claus-Peter Adler (Freiburg, Germany)

8:40–9:00 a. m.

Ultrasound of Tibial Cortical Bone as a Method of Diagnosing Osteoporosis

Ronald A. Bloom (Jerusalem, Israel)

9:00–9:20 a. m.

Osteomalacia: An Overview

Murali Sundaram (St. Louis, MO, USA)

9:20–9:40 a. m.

B2 Microglobulin Amyloidosis in Chronic Hemodialysis Patients

Jean F. Garcia (Geneva, Switzerland)

9:40–10:00 a. m.

Paget's Disease of Bone: When Nature Bends the Rules

Timothy E. Moore (Omaha, NE, USA)

10:00–10:10 a. m.

Discussion

10:10–10:30 a. m.

Break

Session 3 B – Metabolism and Marrow (continued) (Ballroom)

Simultaneous with Session 4 B

Moderators: Lorraine G. Shapeero (Bethesda, MD, USA)
Michael J. Pitt (Birmingham, AL, USA)

10:30–10:50 a. m.

MRI of Paraendocrine Related Musculoskeletal Symptoms

Frieda Feldman (New York, NY, USA)

10:50–11:10 a. m.

MRI of Bone Marrow Edema: Findings and Differential Diagnosis

Klaus Bohndorf (Augsburg, Germany)

11:10–11:30 a. m.

MRI in Benign and Malignant Marrow Disorders

George Hermann (New York, NY, USA)

11:30–11:50 a. m.

Imaging of Hematologic Disease

Thomas L. Pope, Jr. (Charleston, SC, USA)

REFRESHER COURSE

REFRESHER COURSE

Day 2

S E P T E M B E R						
S	S	M	T	W	T	F
					10	

11:50 a.m.–12:00 p.m.

Discussion

12:00–1:20 p.m.

Lunch (on your own)

Session 4 A – Trauma and Stress (Elm and Oak Room)

Simultaneous with Session 3 A

Moderators: George K. Chapman (Cremorne, NSW, Australia)
Jeremy W.R. Young (Charleston, SC, USA)

8:00–8:20 a.m.

Imaging of Stress Fractures: A Multimodality Approach

Adam Greenspan (Sacramento, CA, USA)

8:20–8:40 a.m.

Imaging of Foot Injuries in the Athlete

Helene Pavlov (New York, NY, USA)

8:40–9:00 a.m.

Bone SPECT in the Evaluation of Sports Injuries

Seoung-Oh Yang (Ulsan, Korea)

9:00–9:20 a.m.

Ankle Trauma

Anthony J. Wilson (Seattle, WA, USA)

9:20–9:40 a.m.

Ultrasound of Injuries of the Extensor Mechanism of the Knee

Stefano Bianchi (Genoa, Italy)

9:40–10:00 a.m.

Pelvic Fractures

Jeremy W.R. Young (Charleston, SC, USA)

10:00–10:10 a.m.

Discussion

10:10–10:30 a.m.

Break

Session 4 B – Vertebral Column, Non-Trauma (Elm and Oak Room)

Simultaneous with Session 3 B

Moderators: Alain Chevrot (Paris, France)
Bryan J. Preston (Nottingham, UK)

10:30–10:50 a.m.

MRI Appearances of Different Discovertebral Lesions

Vladimir Jevtic (Ljubljana, Slovenia)

10:50–11:10 a.m.

MRI in Assessment of Complications of Ankylosing Spondylitis

Bryan J. Preston (Nottingham, UK)

11:10–11:30 a.m.

Paraspinal Ossification

Judith E. Adams (Manchester, UK)

REFRESHER COURSE

Day 2

S E P T E M B E R						
S	S	M	T	W	T	F
					10	

11:30–11:50 a. m.

Hemispherical Spondylosclerosis

Wolfgang W. Dihlmann (Hamburg, Germany)

11:50 a. m.–12:00 p. m.

Discussion

12:00–1:20 p. m.

Lunch (on your own)

Session 5 A – Trauma to the Axial Skeleton (Ballroom)

Simultaneous with Session 6 A

Moderators: Jonas Rydberg (Huddinge, Sweden)

John H. Harris, Jr. (Houston, TX, USA)

1:20–1:40 p. m.

Imaging of Facial Fractures

Richard H. Daffner (Pittsburgh, PA, USA)

1:40–2:00 p. m.

Imaging of Occipital Condyle Fractures

Jeno I. Sebes (Memphis, TN, USA)

2:00–2:20 p. m.

Rotatory Injuries of the Atlanto-Axial Articulation

John H. Harris, Jr. (Houston, TX, USA)

2:20–2:40 p. m.

Functional MRI in Whiplash: Evaluation of the Alar Ligaments

Andreas Nidecker (Basel, Switzerland)

2:40–3:00 p. m.

How to Approach Cervical Spine Injuries

Akbar Bonakdarpour (Philadelphia, PA, USA)

3:00–3:10 p. m.

Discussion

3:10–3:30 p. m.

Break

Session 5 B – Trauma to the Axial Skeleton (continued) (Ballroom)

Simultaneous with Session 6 B

Moderators: Vladimir Jevtic (Ljubljana, Slovenia)

Herwig Imhof (Vienna, Austria)

3:30–3:50 p. m.

Injuries of the Lower Cervical Spine

Mary H. Kathol (Iowa City, IA, USA)

3:50–4:10 p. m.

Normal Variants that May Mimic Injury in the Cervical Spine

Stanley P. Bohrer (Winston-Salem, NC, USA)

4:10–4:30 p. m.

CT and MRI of Thoracolumbar Spine Trauma

Jeremy J. Kaye (New York, NY, USA)

REFRESHER COURSE

Day 2

S E P T E M B E R						
S	S	M	T	W	T	F
					10	

4:30–4:50 p. m.

Severe Spinal Trauma
Herwig Imhof (Vienna, Austria)

4:50–5:00 p. m.

Discussion and Adjournment

Session 6 A – Tumor (Elm and Oak Room)
Simultaneous with Session 5 A

Moderators: Jean Pringle (Stanmore, Middlesex, UK)
Rikuo Machinami (Tokyo, Japan)

1:20–1:40 p. m.

Aneurysmal Bone Cyst: Fact or Fiction?
Mark J. Kransdorf (Richmond, VA, USA)

1:40–2:00 p. m.

Cysts and Cystic Lesions of Bone
Dennis J. Stoker (Crowthorne, Berkshire, UK)

2:00–2:20 p. m.

Imaging of Intraosseous, Intramuscular and Periosteal Ganglia
Ibrahim F. Abdelwahab (New York, NY, USA)

2:20–2:40 p. m.

Imaging of Osteoid Osteoma
Kristian Herrlin (Lund, Sweden)

2:40–3:00 p. m.

Surface Lesions of Bone
Samuel Kenan (New York, NY, USA)

3:00–3:10 p. m.

Discussion

3:10–3:30 p. m.

Break

Session 6 B – Tumor (continued) (Elm and Oak Room)
Simultaneous with Session 5 B

Moderators: Claus-Peter Adler (Freiburg, Germany)
Daniel Vanel (Villejuif, France)

3:30–3:50 p. m.

Enchondroma vs. Chondrosarcoma: Fact or Fiction?
Mark D. Murphey (Silver Springs, MD, USA)

3:50–4:10 p. m.

Imaging Features of Bone and Soft Tissue Lymphoma
Michael E. Mulligan (Baltimore, MD, USA)

4:10–4:30 p. m.

Benign Bone Lesions Mimicking Malignancy
Clement Fauré (Paris, France)

4:30–4:50 p. m.

Traumatic or Tumoral Musculoskeletal Lesions: A Sometimes Difficult Radiological Diagnosis
Daniel Vanel (Villejuif, France)

4:50–5:00 p. m.

Discussion

5:00 p. m.

Adjournment

REFRESHER COURSE

REFRESHER COURSE

Day 3

S E P T E M B E R						
S	S	M	T	W	T	F
						11

	Simultaneous Sessions in Ballroom and Oak and Elm Room
	Session 7 A – Appendicular Skeleton (Ballroom) Simultaneous with Session 8 A
	Moderators: Ray Cope (Columbia, MO, USA) Lynne S. Steinbach (San Francisco, CA, USA)
8:00–8:20 a. m.	Plain Films in Shoulder Disease Bryan J. Preston (Nottingham, UK)
8:20–8:40 a. m.	Glenohumeral Joint Instability: MR Imaging Donald L. Resnick (San Diego, CA, USA)
8:40–9:00 a. m.	MRI of the Shoulder: Beyond Rotator Cuff and Labrum Javier Beltran (New York, NY, USA)
9:00–9:20 a. m.	MRI of Masses Around the Shoulder Wilfred C. G. Peh (Hong Kong, China)
X 9:20–9:40 a. m.	MRI of the Elbow Lynne S. Steinbach (San Francisco, CA, USA)
9:40–10:00 a. m.	Wrist MRI: What Should We Do With It? Saara M. S. Totterman (Rochester, NY, USA)
10:00–10:10 a. m.	Discussion
10:10–10:30 a. m.	Break
	Session 7 B – Appendicular Skeleton (continued) (Ballroom) Simultaneous with Session 8 B
	Moderators: Melvin H. Becker (Manhasset, NY, USA) Jack P. Lawson (New Haven, CT, USA)
10:30–10:50 a. m.	The Sphinx of Solitary Osteoproliferative Changes of the Hand and Foot Jürgen Freyschmidt (Bremen, Germany)
10:50–11:10 a. m.	MRI Evaluation of Heel Pain Arthur A. De Smet (Madison, WI, USA)
11:10–11:30 a. m.	The Fibula: Atypical Tubular Bone Shigeru Ehara (Morioka, Japan)
11:30–11:50 a. m.	MRI of the Knee Murray K. Dalinka (Philadelphia, PA, USA)

REFRESHER COURSE

REFRESHER COURSE

Day 3

S E P T E M B E R						
S	S	M	T	W	T	F
						11

11:50 a.m.–12:00 p.m.

Discussion

12:00–1:20 p.m.

Lunch (on your own)

Session 8 A – Pediatric (Elm and Oak Room)

Simultaneous with Session 7 A

Moderators: Gerald A. Mandell (Wilmington, DE, USA)
Theodore E. Keats (Charlottesville, VA, USA)

8:00–8:20 a.m.

Some Normal Growth Phenomena which Simulate Disease

Theodore E. Keats (Charlottesville, VA, USA)

8:20–8:40 a.m.

Comparison of US, NM, CT and MRI in Skeletal Lesions in Children

Soroosh Mahboubi (Philadelphia, PA, USA)

8:40–9:00 a.m.

Imaging of Stress on the Immature Skeleton

A. Mark Davies (Birmingham, UK)

9:00–9:20 a.m.

Basic Concepts in Imaging of the Child's Elbow

John B. Campbell (Orlando, FL, USA)

9:20–9:40 a.m.

Ultrasound of Children's Hips

David J. Wilson (Headington, Oxford, UK)

9:40–10:00 a.m.

MRI of the Pediatric Hip

E. Michel Azouz (Montreal, Quebec, Canada)

10:00–10:10 a.m.

Discussion

10:10–10:30 a.m.

Break

Session 8 B – Pediatric (continued) (Elm and Oak Room)

Simultaneous with Session 7 B

Moderators: Clement Fauré (Paris, France)
Lionel W. Young (Loma Linda, CA, USA)

10:30–10:50 a.m.

Child Abuse: Where to Now, Dr. Caffey?

Paul K. Kleinman (Worcester, MA, USA)

10:50–11:10 a.m.

Pediatric Cortical Hyperostosis

Lionel W. Young (Loma Linda, CA, USA)

11:10–11:30 a.m.

Punctate Epiphyses: A Sign of Various Disorders

Andrew Poznanski (Chicago, IL, USA)

REFRESHER COURSE

Day 3

S E P T E M B E R						
S	S	M	T	W	T	F
						11

11:30–11:50 a. m.	Principles of Bone Dysplasia Interpretation Alan E. Oestreich (Cincinnati, OH, USA)
11:50 a. m.–12:00 p. m.	Discussion
12:00–1:20 p. m.	Lunch (on your own)
	Session 9 A – Operative and Para-Operative Procedures and Diagnostic Problems (Ballroom) Simultaneous with Session 10 A Moderators: Samuel Kenan (New York, NY, USA) David Karasick (Philadelphia, PA, USA)
1:20–1:40 p. m.	X Diagnosis of Infected Joint Prostheses Robert Schneider (New York, NY, USA)
1:40–2:00 p. m.	MRI of the Post-Operative Shoulder Michael B. Zlatkin (Hollywood, FL, USA)
2:00–2:20 p. m.	MRI of the Post-Operative Knee Victor Cassar-Pullicino (Owesity, Shropshire, UK)
2:20–2:40 p. m.	Custom Endoprosthesis for Limb Salvage Leanne L. Seeger (Los Angeles, CA, USA)
2:40–3:00 p. m.	X Complications of Cervical Spine Fusion David Karasick (Philadelphia, PA, USA)
3:00–3:10 p. m.	Discussion
3:10–3:30 p. m.	Break
	Session 9 B – Operative and Para-Operative Procedures and Diagnostic Problems (continued) (Ballroom) Simultaneous with Session 10 B Moderators: Richard H. Gold (Los Angeles, CA, USA) Douglas J. Pritchard (Rochester, MN, USA)
3:30–3:50 p. m.	X The Role of Synoviorthesis in the Management of Articular Disorders Francisco Aparisi-Rodriguez (Valencia, Spain)
3:50–4:10 p. m.	Stereolithography John Earwaker (Brisbane, Australia)
4:10–4:30 p. m.	Bone Biopsy Gunner Åström (Uppsala, Sweden)
4:30–4:50 p. m.	X Iatrogenic Diseases of the Bone Richard H. Gold (Los Angeles, CA, USA)

REFRESHER COURSE

Day 3

S E P T E M B E R						
S	S	M	T	W	T	F
						11

4:50–5:00 p. m.

Discussion and Adjournment

6:30–7:00 p. m.

Reception, Ballroom Foyer

7:00–10:00 p. m.

Dinner and Jurys Irish Cabaret, Ballroom

Session 10 A – Miscellaneous (Elm and Oak Room)

Simultaneous with Session 9 A

Moderators: Walter Bessler (Winterthur, Switzerland)

Stefano Bianchi (Genoa, Italy)

1:20–1:40 p. m.

Murphy's Law and Bone Imaging

George B. Greenfield (Tampa, FL, USA)

1:40–2:00 p. m.

Painful Normal Variants

Jack P. Lawson (New Haven, CT, USA)

2:00–2:20 p. m.

Fibrous Lesions of Bone

Jean Pringle (Stanmore, Middlesex, UK)

2:20–2:40 p. m.

Imaging of Peripheral Nerve Tumors

Ian Beggs (Edinburgh, UK)

2:40–3:00 p. m.

Soft Tissue Masses: The Underutilization of Sonography

Bruno D. Fornage (Houston, TX, USA)

3:00–3:10 p. m.

Discussion

3:10–3:30 p. m.

Break

Session 10 B – Miscellaneous (continued) (Elm and Oak Room)

Simultaneous with Session 9 B

Moderators: Ronald S. Adler (Ann Arbor, MI, USA)

Gene P. Siegal (Birmingham, AL, USA)

3:30–3:50 p. m.

Application of Doppler Techniques to Musculoskeletal Inflammatory Disease

Ronald S. Adler (Ann Arbor, MI, USA)

3:50–4:10 p. m.

Bone Scanning: The Chase for Hidden Lesions

Walter Bessler (Winterthur, Switzerland)

4:10–4:30 p. m.

The Value of Immunohistochemistry in the Diagnosis of Selected Bone Neoplasms

Gene P. Siegal (Birmingham, AL, USA)

4:30–4:50 p. m.

Morphometry, Cytogenetics and Molecular Biology in the Diagnosis of Chondroid Tumors

Rikuo Machinami (Tokyo, Japan)

4:50–5:00 p. m.

Discussion and Adjournment

6:30–7:00 p. m.

Reception, Ballroom Foyer

7:00–10:00 p. m.

Dinner and Jurys Irish Cabaret, Ballroom

Day 4

S E P T E M B E R						
S	S	M	T	W	T	F
12						

	<p>Session 11 A – Arthrography and Arthroscopy: Complement or Competition? (Ballroom) Moderators: Javier Beltran (New York, NY, USA) Douglas J. Pritchard (Rochester, NY, USA)</p>
8:00–8:20 a. m.	<p>CT Arthrography of the Shoulder Joint Ranier Erlemann (Duisburg, Germany)</p>
8:20–8:40 a. m.	<p>MRI Arthrography of the Shoulder: A Comparative Evaluation Leanne L. Seeger (Los Angeles, CA, USA)</p>
8:40–9:00 a. m.	<p>Arthroscopy of the Shoulder Franklin H. Sim (Rochester, MN, USA)</p>
9:00–9:20 a. m.	<p>Arthrography of the Knee: MRI vs. Arthroscopy Carlo Masciocchi (L'Aquila, Italy)</p>
9:20–9:40 a. m.	<p>Arthroscopy of the Knee: Counterpoint Franklin H. Sim (Rochester, MN, USA)</p>
9:40–10:00 a. m.	<p>Break</p>
10:00–10:30 a. m.	<p>Indirect and Direct MR Arthrography of Small Joints: Ankle, Wrist, and Elbow Mark E. Schweitzer (Philadelphia, PA, USA)</p>
10:30–10:50 a. m.	<p>Arthroscopy of Small Joints Franklin H. Sim (Rochester, MN, USA)</p>
10:50–11:00 a. m.	<p>Discussion</p>
	<p>Session 11 B – Arthritis (Ballroom) Moderators: Harry J. Griffiths (Columbia, MO, USA) Anthony J. Wilson (Seattle, WA, USA)</p>
11:00–11:20 a. m.	<p>MRI of Synovial Arthritis: What Are the Benefits? Klaus Bohndorf (Augsburg, Germany)</p>
11:20–11:40 a. m.	<p>Arthritic Disorders Associated with Crystal Deposition Jenő I. Sebes (Memphis, TN, USA)</p>
11:40 a. m.–12:00 p. m.	<p>Reactive Arthritis: Alphabet Soup Harry J. Griffiths (Columbia, MO, USA)</p>
12:00–12:20 p. m.	<p>Discussion and Adjournment</p>

PARTICIPATING FACULTY

Ibrahim F. Abdelwahab, M. D.
New York, NY, USA

Judith E. Adams, M. D.
Manchester, UK

Claus-Peter Adler, M. D.
Freiburg, Germany

Ronald S. Adler, Ph. D., M. D.
Ann Arbor, MI, USA

Francisco Aparisi-Rodriguez, M. D.
Valencia, Spain

Gunner Åström, M. D.
Uppsala, Sweden

E. Michel Azouz, M. D.
Montreal, Canada

Melvin H. Becker, M. D.
Manhasset, NY, USA

Ian Beggs, M. D.
Edinburgh, UK

Javier Beltran, M. D.
New York, NY, USA

Thomas Berquist, M. D.
Jacksonville, FL, USA

Walter Bessler, M. D.
Winterthur, Switzerland

Stefano Bianchi, M. D.
Genoa, Italy

Ronald A. Bloom, M. D.
Jerusalem, Israel

Klaus Bohndorf, M. D.
Augsburg, Germany

Stanley P. Bohrer, M. D.
Winston-Salem, NC, USA

Akbar Bonakdarpour, M. D.
Philadelphia, PA, USA

Gil Brogdon, M. D.
Mobile, AL, USA

John B. Campbell, M. D.
Orlando, FL, USA

Victor Cassar-Pullicino, M. D.
Owesty, UK

George K. Chapman, M. D.
Cremorne, Australia

Alain Chevrot, M. D.
Paris, France

Ray Cope, M. D.
Columbia, MO, USA

John V. Crues, III, M. D.
Los Angeles, CA, USA

Richard H. Daffner, M. D.
Pittsburgh, PA, USA

Murray K. Dalinka, M. D.
Philadelphia, PA, USA

A. Mark Davies, M. D.
Birmingham, UK

Arthur A. De Smet, M. D.
Madison, WI, USA

Wolfgang W. Dihlmann, M. D.
Hamburg, Germany

Robert G. Dussault, M. D.
Charlottesville, VA, USA

John Earwaker, M. D.
Brisbane, Australia

Shigeru Ehara, M. D.
Morioka, Japan

Ranier Erlemann, M. D.
Duisburg, Germany

Clement Fauré, M. D.
Paris, France

Frieda Feldman, M. D.
New York, NY, USA

Bruno D. Fornage, M. D.
Houston, TX, USA

Jürgen Freyschmidt, M. D.
Bremen, Germany

Jean Garcia, M. D.
Geneva, Switzerland

Harry K. Genant, M. D.
San Francisco, CA, USA

Louis A. Gilula, M. D.
St. Louis, MO, USA

Richard H. Gold, M. D.
Los Angeles, CA, USA

George B. Greenfield, M. D.
Tampa, FL, USA

Adam Greenspan, M. D.
Sacramento, CA, USA

Harry J. Griffiths, M. D.
Columbia, MO, USA

W. Bonner Guilford, M. D.
Charlotte, NC, USA

John H. Harris, Jr., M. D., D. Sc.
Houston, TX, USA

George Hermann, M. D.
New York, NY, USA

Kristian Herrlin, M. D.
Lund, Sweden

Herwig Imhof, M. D.
Vienna, Austria

Vladimir Jevtic, M. D.
Ljubljana, Slovenia

Phoebe A. Kaplan, M. D.
Charlottesville, VA, USA

David Karasick, M. D.
Philadelphia, PA, USA

Mary H. Kathol, M. D.
Iowa City, IA, USA

Jeremy J. Kaye, M. D.
New York, NY, USA

Theodore E. Keats, M. D.
Charlottesville, VA, USA

Samuel Kenan, M. D.
New York, NY, USA

Paul K. Kleinman, M. D.
Worcester, MA, USA

J. Bruce Kneeland, M. D.
Philadelphia, PA, USA

Mark J. Kransdorf, M. D.
Richmond, VA, USA

Morrie E. Kricun, M. D.
Philadelphia, PA, USA

PARTICIPATING FACULTY

- | | | |
|---|---|---|
| Phillip H. Lander, M.D.
Montreal, Canada | Thomas L. Pope, Jr., M.D.
Charleston, SC, USA | Franklin H. Sim, M.D.
Rochester, MN, USA |
| Jean-Denis Laredo, M.D.
Paris, France | Andrew Poznanski, M.D.
Chicago, IL, USA | Douglas K. Smith, M.D.
Indianapolis, IN, USA |
| Jack P. Lawson, M.D.
New Haven, CT, USA | Bryan J. Preston, M.D.
Nottingham, UK | Lynne S. Steinbach, M.D.
San Francisco, CA, USA |
| Rikuo Machinami, M.D.
Tokyo, Japan | Jean Pringle, M.D.
Stanmore, UK | Dennis J. Stoker, M.D.
Crowthorne, UK |
| Soroosh Mahboubi, M.D.
Philadelphia, PA, USA | Douglas J. Pritchard, M.D.
Rochester, MN, USA | Murali Sundaram, M.D.
St. Louis, MO, USA |
| Gerald A. Mandell, M.D.
Wilmington, DE, USA | Maximilian F. Reiser, M.D.
Munich, Germany | Jamshid Tehranzadeh, M.D.
Orange, CA, USA |
| Carlos Masciocchi, M.D.
L'Aquila, Italy | Donald L. Resnick, M.D.
San Diego, CA, USA | Saara M. S. Totterman, M.D., Ph.D.
Rochester, NY, USA |
| Timothy E. Moore, M.D.
Omaha, NE, USA | Lee F. Rogers, M.D.
Winston-Salem, NC, USA | Daniel Vanel, M.D.
Villejuif, France |
| Michael E. Mulligan, M.D.
Baltimore, MD, USA | Daniel I. Rosenthal, M.D.
Boston, MA, USA | Anthony J. Wilson, M.D.
Seattle, WA, USA |
| Mark D. Murphey, M.D.
Silver Springs, MD, USA | Jonas Rydberg, M.D.
Huddinge, Sweden | David J. Wilson, M.D.
Headington, UK |
| Andreas Nidecker, M.D.
Basel, Switzerland | Robert Schneider, M.D.
New York, NY, USA | Seoung-Oh Yang, M.D.
Seoul, Korea |
| Alan Oestreich, M.D.
Cincinnati, OH, USA | Mark E. Schweitzer, M.D.
Philadelphia, PA, USA | Jeremy W. R. Young, M.D.
Charleston, SC, USA |
| Helene Pavlov, M.D.
New York, NY, USA | Jeno I. Sebes, M.D.
Memphis, TN, USA | Lionel W. Young, M.D.
Loma Linda, CA, USA |
| Wilfried C. G. Peh, M.D.
Hong Kong, China | Leanne L. Seeger, M.D.
Los Angeles, CA, USA | Michael B. Zlatkin, M.D.
Hollywood, FL, USA |
| Holger T. A. Pettersson, M.D.
Lund, Sweden | Lorraine G. Shapeero, M.D.
Bethesda, MD, USA | |
| Michael J. Pitt, M.D.
Birmingham, AL, USA | Gene P. Siegal, M.D., Ph.D.
Birmingham, AL, USA | |