Welcome, AMI!

…to the beautiful Pacific Northwest—where Lewis and Clark culminated their fabled journey of discovery to this American frontier, and where our journey continues, in its 65th year. Portland, Oregon, our gathering ground for this convention of the Association of Medical Illustrators, is considered by many as the “Greenest City in America”, and truly is a destination for every taste and penchant. As a family vacation destination, it is perfect with so much to do and see—from mountains and rivers to the ocean. You’ll also have a fabulous urban experience in a surprisingly people-sized city.

Our “Branching Out” theme matches the verdant venue, and also describes the wonderful turns our profession is taking. AMI members continue to display the diversity, ingenuity, and adaptability that keep us competitive yet collegial. We are constantly cultivating our skill sets to suit our new markets, and exciting new business models are emerging. Our impulse to exchange ideas, techniques and strategies keeps our organization vital and growing in many exciting ways, from root to leafy twig!

Portland was built by pioneers who pushed boundaries and confronted the unknown. So this innovative frontier city is a fitting site for the theme of our conference this year.

Frontiers present us with opportunities to change. And change presents us with opportunities to expand our vision of who we are. To become stronger. To become better. So, take advantage of our signature event of the year. It’s an unequalled opportunity to benefit from the extraordinary talent in our vibrant organization. You’ll be changed by the experience. For good.
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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
<th>CEUs</th>
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<tbody>
<tr>
<td>8 am</td>
<td>Welcome to Portland!</td>
<td>Smith Ballroom</td>
<td>0.10 CEUs Biomed</td>
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<tr>
<td>9 am</td>
<td>Brodel Memorial Lecture: How a Surgeon Uses Medical Illustration</td>
<td>Smith Ballroom</td>
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<td>Open Lunch • Special Interest Groups/Committee Meetings</td>
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<tr>
<td>12 pm</td>
<td>Minimally Invasive Neurological Surgery</td>
<td>Smith 327/328</td>
<td>0.15 CEUs Biomed</td>
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<tr>
<td>1 pm</td>
<td>Communicating Data Visually</td>
<td>Smith Ballroom</td>
<td>0.05 Art &amp; 0.05 Biomed CEUs</td>
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<td>1 pm</td>
<td>Composition</td>
<td>Smith 327/328</td>
<td>0.10 CEUs Art</td>
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<td>Bring the User into the Picture</td>
<td>Smith 228</td>
<td>0.125 CEUs Art</td>
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<td>Optimizing Searching: Dermatology Lexicon</td>
<td>Smith 228</td>
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<td>3 pm</td>
<td>Measuring Effectiveness of Visualization</td>
<td>Smith 327/328</td>
<td>0.10 CEUs Biomed</td>
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<td>Medical Illustration in Clinical Informatics</td>
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<td>Measuring Effectiveness of Visualization</td>
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<td>Alumni Night • Dinner on your own</td>
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<td>6 pm</td>
<td>Salon Opening Reception &amp; Vesalius Trust Poster Session</td>
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**WEDNESDAY Workshops**

**First-Timers’ Workshop**  
Megan E. B. Foldenhauer, MA, CMI; Emily Shaw, MA, CMI, EMT-B; and David Bolinsky

This workshop is intended for students, new AMI members, and all other individuals who are attending the AMI meeting for their first time. The session will introduce newcomers to each other, the AMI, the Annual Meeting, AMI Headquarters, the AMI Board of Governors, and much more. Attendees of this workshop can expect to gain a sense of appreciation for the AMI and how it can facilitate advancement in a medical illustrator’s career. Several AMI member guest speakers will visit and discuss some of their reasons for becoming involved in the AMI. Featured “keynote” speakers will give presentations on their careers as medical illustrators, showing pieces from their student and professional portfolios, while giving insight into their development as professional artists.

Megan E. B. Foldenhauer is a 2002 graduate of The Johns Hopkins University School of Medicine’s Department of Art as Applied to Medicine, a 1998 graduate from The School of the Art Institute of Chicago (with a focus on scientific illustration/drawing), and has run her own scientific illustration studio, Megalo-Media Illustration, for 8 years. She is also a fine artist with over 10 years exhibiting experience and is a recipient of several teaching awards, including the Outstanding Supplemental Instruction Leader of the Year (in Anatomy) at Eastern Michigan University. She remains an anatomic nut, audiophile, genealogist, and a die-hard Cubs fan as she makes her way through her doctorate in anatomy and cell biology at Wayne State University, School of Medicine in Detroit, Michigan. She is also a 2010 candidate for the AMI’s Board of Governors.

Emily Shaw is a certified medical illustrator having graduated in 2003 from the The Johns Hopkins University School of Medicine’s Department of Art as Applied to Medicine. While at Hopkins she was awarded a Vesalius Trust Alan W. Cole scholarship for a 3D animation of trypanosome KDNA replication. Her fine arts experience was acquired at Maryland Institute College of Art, where she earned a BFA with a focus on painting and art history. Since 2003, Emily has been sole proprietor of the company, Illustrating Medicine, and has produced work for clients such as Wilmer Eye Institute, Johns Hopkins, National Institutes of Health, Johnson & Johnson, Lippincott Williams & Wilkins, Women’s Magazine, Journal of Bone and Joint Surgery, Quality Medical Publishing, Laerdal Medical Corporation, MedStar Health, and GBMC. She holds a position as manager of the MedStar SiTEL Clinical Simulation Center providing simulation-based continuing education to Baltimore-area hospital staff. Emily volunteers as an Emergency Medical Technician for a local fire department and is currently pursuing an associate of applied science degree in emergency medicine including certification as an EMT-Paramedic. Outside of work, she enjoys ice hockey, roller derby, and motherhood.

David Bolinsky is one of the earliest pioneers of digital medical animation. After starting his career as a medical book illustrator, he founded Advanced Imaging in 1983 on an Artron 2000 computer, which ran on an operating system that predated MS-DOS! In 2001, David cofounded XVIVO, a full-service animation firm producing award-winning work for clients including Merck, Genentech, NBC, NOVA, PBS, Disney Imagineering, Harvard University, and The Smithsonian Museum. As XVIVO’s Medical Director, David is a frequent speaker with recent engagements as far afield as China, Sweden, and the acclaimed TED conference in California.

**Female Pelvic Anatomy**  
W. Thomas Gregory, MD, and Amy Thurmond, MD

This half-day workshop combines lecture with hands-on exploration of fresh prossected specimens. Drs. W. Thomas Gregory and Amy Thurmond will give a 60 minute lecture to workshop attendees, who will be joined by a small group of midwifery students. Dr. Gregory will review pelvic organs and musculoskeletal and neurovascular anatomy using 2D and 3D anatomic drawings, and Dr. Thurmond will focus on diagnostic medical images of the pelvis and their clinical relevance. Following this, the AMI attendees will break into small groups and spend the remaining 3 hours rotating among 3 fresh prossected cadavers. Each cadaver will focus on a particular concept or anatomic feature. OHSU OB/GYN fellows and residents will demonstrate and review the anatomy of each specimen and discuss clinical and surgical relevance.

At the end of this workshop, attendees will be able to:
- recognize normal female pelvic organs
- better understand the birth canal (vaginal support, pelvic floor muscles, bony pelvis inlet and outlet)
- visualize the pelvic vessels and nerves
- better interpret X-ray, MRI, CT, and ultrasound images of the pelvis and describe their clinical relevance.

W. Thomas Gregory is an Associate Professor and Fellowship Director of Urogynecology and Reconstructive Pelvic Surgery (Department of Obstetrics and Gynecology) at Oregon Health & Science University (OHSU). Dr. Gregory specializes in pelvic organ prolapse, fecal incontinence, and childbirth-related changes to the pelvis. His research interests include pelvic floor imaging (ultrasound and MRI), pelvic neurophysiology, and pelvic floor neuromuscular injury associated with pregnancy and childbirth. Along with his teaching responsibilities for the fellowship and residency program at OHSU, Dr. Gregory regularly directs 2 postgraduate courses on pelvic floor ultrasound and pelvic floor neurophysiology.
Have you ever wanted an in-depth, hands-on skull base surgery and neuroanatomy learning experience? If you answered “yes,” then here’s your chance! Part lecture, part surgical observation, part dissection lab—this workshop delivers a multifaceted opportunity to learn the complex anatomy and fascinating surgical approaches involved in skull base neurological surgery.

The day will begin with an approximately one-hour lecture from expert Oregon Health & Science University (OHSU) neurosurgeons about the intricacies of human brain anatomy and the exposures used to access deep brain structures. Next, we’ll move to the OR AV room to witness a neurosurgical procedure. Cameras from the operating room and microscope will be linked to a large flat screen in an adjacent room where you will be able to see the room layout, the opening dissection, as well as the surgeon’s view from the scope while delicate work is being done. This will be augmented with a step-by-step description from a neurosurgeon ready to explain and answer any questions about the procedure and anatomy encountered.

The final destination is the dissection laboratory. Bring your curiosity and an innate desire to understand how a neurosurgeon approaches delicate and intricate brain structures. Skull base surgeons will be available to teach the group about surgical exposures and anatomy. Pre-dissected cadaver heads representing standard skull base approaches will be available to you for a unique hands-on approach. Workstations will be equipped with operating microscopes and surgical instruments for great viewing and manipulation of the surgical field. Participants will also have an opportunity to cut a burr hole or turn a bone flap to get a sense of the dimensional and tissue dynamics involved in neurological surgery.

At the end of this workshop, attendees will have:
- gained in-depth knowledge of skull base anatomy and neuroanatomy
- learned how and why complex skull base approaches are used based on the nature and location of pathology and the anatomy that must be bypassed to get to them
- gained appreciation for the delicate nature of many neuroanatomical structures and the depth and small corridors of exposures that surgeons must work in to reach these structures
- experienced how bone and brain tissue reacts to surgical instruments and manipulation

Johnny B. Delashaw Jr., MD

Johnny B. Delashaw Jr. is a neurosurgeon with expertise in primary brain tumors, skull base, cerebello-pontine angle, acoustic neuroma, pituitary tumors, as well as cerebral aneurysms. Dr. Delashaw graduated from Stanford University in 1979 and attended the University of Washington School of Medicine. In 1992, he was recruited to OHSU from the University of Florida where he specialized in brain tumors and skull base tumors. Dr. Delashaw performs approximately 400 craniotomies per year to treat difficult primary brain tumors, acoustic neuromas, and cerebral aneurysms. He has published in numerous neurosurgery and otolaryngology journals. Every year he conducts courses on surgical approaches and management for difficult brain tumors for international audiences.

He grew up in Longview, Washington, where he now holds a neurosurgical clinic once a week. He lives in Portland, Oregon, with his wife and two Mastiffs (Chloe and Max) and is an avid fisherman in his spare time.
WEDNESDAY

8am – 5pm
PNCA
(0.7 CEUs Art)

Adobe® Illustrator® Tips and Tricks
Jim Perkins, MS, MFA, CMI, FAMI

After working with Adobe® Illustrator® for nearly 20 years, our esteemed colleague Jim Perkins has picked up a few tricks, many of which aren’t documented in any user manual or third-party book. This workshop will introduce you to his favorite techniques for creating the illusion of 3D form: gradients, object blends, gradient mesh, and 3D effects. He’ll show you how to work with fill patterns, pattern brushes, and other custom brushes and, if time permits, he’ll demonstrate some applications of Live Trace. Throughout the workshop, Jim will demonstrate keyboard commands and other shortcuts to speed up your workflow.

This is not intended to be an exhaustive overview of new features in Illustrator® CS4. Instead, this workshop will focus on those techniques that have worked for Jim over many years. The workshop assumes a basic working knowledge of Illustrator®.

Adobe is a Gold Educational Sponsor for this workshop.

8am – 5pm
PSU Broadway 225
(0.7 CEUs Art)

Intermediate MAXON Cinema 4D
Cameron Slayden

Realistic blood flow, lipid bilayers, Brownian motion, molecules that form helical strands that can be animated or dynamic—this intermediate level all-day workshop will include instruction on how MAXON’s MoGraph 2, BodyPaint, Hair, and PyroCluster can be used together to make extremely complex animations that are easy to build and execute.

Cameron Slayden, previously a scientific illustrator for Science Magazine, graduated with his master of science degree in medical illustration from the Medical College of Georgia in 2005. He then founded Cosmocyte, a 3D animation studio located in Maryland, and now produces animation and interactivity for a variety of biomedical corporate and broadcast clients. He has been working in Cinema 4D since 2002, and has taught numerous private and public workshops on how to maximize its effectiveness as applied to medical animation.

Note: This workshop assumes that you have experience working with Cinema 4D.

8am – 5pm
PNCA
(0.7 CEUs Art)

Stop the Madness! Adventures in Medical Stop-Motion Animation
Wes Price

Are you a tactile artist? In a world where 3D is king, this workshop delivers a true “hands-on” approach. We’ll be crafting unique, stop-motion animated medical shorts using simple digital cameras, tripods, fundamental traditional skills, and your unlimited creativity. We will train in Adobe® Photoshop®, After Effects®, Audition®, and Encore® on how to edit an eye-popping animatic (an animated pre-visualization of a final production). Bring an open mind, an innate desire to coax inanimate objects to life, and a digital camera (and the cable required for downloading images). Art supplies such as anatomical props, surgical instruments, pencils, paper, and paint will be provided but feel free to bring your own favorites as well.

Have you ever wondered where stop-motion animation came from? Enjoy the history of this classic animation technique, as well as a group demonstration on how its modern equivalent is invaluable in our field as a pre-visualization tool. Guaranteed to amaze and delight, the results of this workshop will be projected throughout the conference and beyond.

Wes Price has over 12 years professional experience in illustration and animation with a track record of producing extraordinary results for many national and community-based organizations. He is a life-long student of anatomy and animation, and was awarded a master of science degree in Medical Illustration by the Medical College of Georgia in 1996. Working in conjunction with Engineering Animation, Inc. and Visible Productions, LLC, Wes has created both entertainment and scientific animations for New Life Cinema, Warner Brothers, Buena Vista Games, Simon & Goodman Picture Company and National Geographic. He served as a juror for the Best Animated Short award, and was instrumental in delivering the Animation Station workshop during the 2009 Starz Denver Film Festival. Currently, Wes is a freelance illustrator, animator, and full-time faculty member of the Media Arts and Animation Department at the Art Institute of Colorado.

8am – 5pm
PSU Broadway 225
(0.7 CEUs Art)

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MAXON provided Cinema 4D demo disks for this workshop.

MAXON provided Cinema 4D demo disks for this workshop.
8am – 5pm
PNCA
(0.7 CEUs Art)

### Introduction to Flash® for the Medical Illustrator

Glen Hintz

Do you feel like you missed the boat on Adobe® Flash®? Did you learn it way back in school, but never had a chance to really get into it? If you want to be able to offer Flash animations to your clients, but don’t know where to begin, then this workshop is for you! This workshop will be an introduction to animation and interactive navigation using Flash® CS4. The instruction will be tailored for the medical illustrator. Importing raster- and vector-based images and image sequences, from Adobe® Illustrator® and Photoshop® CS4 into Flash® will also be introduced. Additionally, students will learn how to “publish” their Flash® files and to upload them to a server accessible via the web.

After completing this course, the learner will be able to:
- create Movie Clip and Button symbols and employ their instances on the scene stage
- create animations using Motion Tween, Shape Tween, and Classic Tween techniques
- import JPEG, PNG, GIF, and PSD files into Flash®
- copy and paste Illustrator® CS4 vector objects into Flash®
- import Illustrator® CS4 blends as sequential keyframes in an animation
- write fundamental ActionScript 3.0 code to permit interactive navigation and control of their project

### Plein Air Painting in the Cascade Mountains

Deborah Ravin

If you enjoy mountain views, fresh air, and would love the change to work outdoors for a day, then this is the workshop for you! Painting en plein air, or, out in plain air, will take you back to the days when Lewis and Clark set out West to explore and record a new wilderness, and later in the 19th century, when painters like Albert Bierstadt and Thomas Moran made striking visual records of new discoveries. Although not on as grand a scale as these historic landscape painters, Deb Ravin will give demonstrations in oil painting on small canvas boards, and promises a worthwhile experience. Attention will be given to the use of a limited palette to achieve color harmony, with an emphasis on “capturing the moment” by blocking in light and shadow areas before building up detail. Workshop attendees will need a portable easel set up. Specific details about the materials will be sent to attendees upon registration.

Deborah Ravin is a certified medical illustrator who has illustrated a number of surgical textbooks in the méthode traditionelle of pen and ink. A 1985 University of Michigan graduate, Deb takes many opportunities to share her love of art and illustration through instructing others. She teaches unique summer art courses to middle schoolers at Phoenix Country Day School, offers courses in drawing herbarium specimens and classical pen and ink at the Desert Botanical Gardens in Phoenix, and has given private instruction in her home studio. Deb loves painting in oils en plein air, having taken many classes since 1990 with well-known painters at the Scottsdale Artists School (SAS). After teaching her first plein air painting workshop at the 2007 AMI meeting in Bozeman, Montana, Deb’s painting, Gallatin Bales, was accepted into the Best and the Brightest, an annual juried show at the SAS. Her most memorable painting experience was a trip to southern France with Maggie Siner and a group of medical illustrators in 1999. Deb most recently has immersed herself in the contemplative art of writing religious icons in the Russian tradition. She lives in Phoenix, Arizona, with her husband Mark Schornak, their teenage son Joe, and a wild wooly weiner dog named Wadju.

Attendees should check at the registration desk for details about transportation. The workshop will take place at a site 40+ miles from Portland in the Mt. Hood forest area of the Cascade Mountain range. Plan on enjoying a picturesque picnic lunch (provided). Don’t forget your hat. This will be a full-day workshop, including travel.

Wacom provided wacom tablets for all of the digital workshops.
WEDNESDAY

1 – 5pm
PSU Smith 327
(0.35 CEUs Art)

Video Compression for the Medical Animator
Jim Perkins, MS, MFA, CMI, FAMI

Have you ever asked yourself, “Why doesn’t my video play in PowerPoint?” “Why does my client get an error when viewing my animation?”, “How do I know what type of file to deliver?”, or “How do I get my portfolio on the web?”

Envisioning and creating video or animation isn’t all we’re called to do these days. We have to make sure we deliver files that our clients can use on various platforms, within a staggering number of technical constraints. This workshop will give the hands-on skills needed to compress your animation and video with optimal quality, minimal hassles, and full compatibility. Renowned compression expert Ben Waggoner will teach you to improve the quality of your final content and develop effective workflows.

The AMI’s own Craig Foster will present one of his projects as a case study, outlining the requirements, the constraints, and ultimate delivery method.

At the end of this half-day lecture and discussion, you’ll have an understanding of the most common compression codecs, formats, and tools, and you’ll know how to choose the right one for your project—whether you’re delivering for the web, DVD, Blu-ray, mobile devices, or beyond.

The last segment of this workshop will be interactive. Ben invites you to bring problems and questions with you. Bring an outline of a recent project or bring the actual problem footage. Don’t miss this opportunity to have compression, codecs, and file formats demystified!

Ben Waggoner has been compressing video for nearly 20 years. He cofounded the pioneering digital media services company Journeyman Digital, launched Terran Interactive’s consulting services division, and was principal of Interframe Media. Ben joined Microsoft in 2005, and is now Principal Video Strategist for Microsoft’s Silverlight platform. He is the author of Compression for Great Video and Audio from Focal Press. He is a frequent speaker at trade shows, and teaches compression classes at Portland State University and at Harvard and Stanford through the Digital Media Academy.

Craig Foster is an experienced medical illustrator and animator who has produced award-winning visuals for Time Life Medical, major pharmaceutical corporations, and biotechnology companies. A member of the Association of Medical Illustrators and a Certified Medical Illustrator, Craig has formal training in the arts and a graduate degree in medical illustration from the Medical College of Georgia. Craig has operated a successful medical communications partnership since 1996. His work has appeared on the covers of U.S. Pharmacist and Sports Illustrated. He has also produced artwork for the American Museum of Natural History, Natural History Magazine, Memorial Sloan-Kettering Cancer Center, Axxan, Genentech, and PTC Therapeutics. Craig was also a Maya® instructor with New York University’s Center for Advanced Digital Applications from 1997 to 1999. His work was part of the National Library of Medicine’s exhibition Anatomical Revisioning: Art as Applied to Medicine, and appeared as part of a segment on promising technologies for the Muscular Dystrophy Association’s annual Labor Day weekend telethon.

Salon Opening & Third Annual Vesalius Trust Poster Session, 6 – 9pm

Traditional Salons: 2nd Floor Student Lounge, Rooms 236 & 238, Smith Memorial Student Union
3D Interactive Salons: Rm 294, Second Floor, Smith Memorial Student Union

Join us for the Salon Opening Reception from 6–9pm at PSU’s Smith Memorial Student Union, where attendees will enjoy light hors d’oeuvres and no-host bar. This reception is the kickoff highlight of the meeting, showcasing our beautiful and inspirational Salon, and features the “best of the best” of this year’s biocommunications in all media. The AMI-Portland 2010 Salon will include the Professional and Student Exhibitions, three-dimensional models, computer animation, and interactive media.

The electronic portion of the Salon will feature fully interactive Flash-based kiosks for the web and interactive categories, and a special interactive “Coverflow” presentation for the animation categories. Nathaniel “Nick” Klein and the group from ISO-FORM, LLC and biological/pre-medical illustration undergraduate students from Iowa State University have graciously supplied the Coverflow design and technology.

Poster exhibits from several of this year’s Vesalian Scholars, will give a hint of what we can expect from our students and recent graduates in the future.

We look forward to seeing you at the gala opening!
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<td>Brödel Memorial Lecture: How a Surgeon Uses Medical Illustration</td>
<td>PSU Smith Ballroom</td>
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<td>John G. Hunter, MD, FACS</td>
<td>Dr. Hunter is the author of several surgical textbooks. His current book, which is in progress, is the <em>Atlas of Minimally Invasive Surgical Operations</em>. He is working with two medical illustrators, both members of the AMI, on this project. Based on these experiences, Dr. Hunter will discuss how medical illustrators can better visualize concepts when preparing surgical illustrations, by offering insight into translating operations into illustrations. He will also offer unique insight into how surgeons learn from medical illustration.</td>
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<td>Tim Girvin</td>
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<td>11am – 12pm</td>
<td>Presidential Address: In Search of Invisible Lizards</td>
<td>PSU Smith Ballroom</td>
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<td>Betsy Palay, MS, CMI, FAMI</td>
<td>Betsy Palay has developed biomedical media for scores of life sciences companies and organizations. She was founder, former president, and creative director of Artemis Creative, Inc.—a design firm that specialized in investor communications for the biotechnology market. Her work as a medical illustrator and art director has won over 120 industry awards from the AMI, the Medical Marketing Association, the Rx Club, and others.</td>
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<td>Betsy Palay, AMI President 2009 to 2010, will address the future of our profession and the compelling reasons for expanding our vision of who we are. The meeting’s theme, “Branching Out: Always Growing”, is a point of departure for an exploration of pushing boundaries and embracing change, while reinforcing the roots that form our core.</td>
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**John G. Hunter** is currently the Mackenzie Professor and Chair of the Department of Surgery at Oregon Health & Science University in Portland, Oregon—a position he has held since 2001. He received his advanced degree from the University of Pennsylvania, with Intern and Residency at the University of Utah. He has completed several fellowships: Research Fellow in Laser and Endoscopic Surgery, University of Utah, 1983-1984; Clinical Fellow in Surgery, Endoscopic Unit, Massachusetts General Hospital, 1987; Clinical Fellow in Surgery, Pancreaticobiliary Endoscopy, University of Western Ontario, Canada, 1988. Dr. Hunter's clinical interests include surgery of the foregut (esophagus, gastric and biliary tree), surgery of the pancreas, surgery for pancreatic, endocrine and adrenal diseases, and minimally invasive surgery.

**Tim Girvin** is an artist—an illustrator, a calligrapher, a writer and photographer, blogger, and brand and design theorist. He is an award-winning American designer concentrating on branding and packaging design, with offices in Seattle, New York City, and an affiliate in Tokyo. His company, GIRVIN | Strategic Branding and Design, was founded in 1977. Girvin's work focuses on community, relationships and communication, and how this practice and attention can add value to businesses.

**Betsy Palay** has developed biomedical media for scores of life sciences companies and organizations. She was founder, former president, and creative director of Artemis Creative, Inc.—a design firm that specialized in investor communications for the biotechnology market. Her work as a medical illustrator and art director has won over 120 industry awards from the AMI, the Medical Marketing Association, the Rx Club, and others.
1:30 – 3pm
PSU Smith Ballroom
(0.075 CEUs Art & 0.075 CEUs Biomed)

**Vesalius Trust for Visual Communication in the Health Sciences**

Moderator: Jennifer E. Fairman, MA, CMI

The Vesalius Trust for Visual Communication in the Health Sciences is proud to host this Vesalius Scholars’ Session devoted to student research in the areas of medical illustration and biomedical communication. The Trust is pleased to have awarded significant financial grants this year in support of these student projects, and we welcome each of the student presenters. In addition, we congratulate every Vesalius Trust grant recipient, and we wish all of this year’s biocommunication graduates success, four of whom will present the research done as part of their graduate studies.

These award recipients will describe their research goals, problem-solving techniques and general methodology, including the use of traditional and innovative, computer-based techniques. Gain keen insight into the clinical, biomedical, and instructional design research currently being undertaken by medical illustration students in North America.

Jennifer E. Fairman is the Founder and Principal of Fairman Studios, LLC. She is also an Assistant Professor in the Department of Art as Applied to Medicine where she previously received her master of arts degree in medical and biological illustration from the Johns Hopkins University School of Medicine. Jennifer has received numerous grants and awards for her work from the Association of Medical Illustrators, The Illustrators' Club of DC, the National Science Foundation, the Smithsonian Women's Committee, the James Smithson Society, and the Vesalius Trust. She is also the 1999 recipient of the Inez Demonet Award. She was inducted as a Fellow of the AMI during its 62nd Annual Meeting. Most recently, she was honored with the AMI's Outstanding Achievement Award. Lastly, she is a proud new mom to baby Zachary Aaron!

### Award Recipients

- **Neil McMillan, Johns Hopkins University, Alan Cole Scholar**
  - Closing Gaps in Cleft Palate Research and CD Visualization: Investigating Morphology to Improve Surgical Outcomes and Patient Education

- **Shizuka Aoki, Johns Hopkins University, Vesalian Scholar & Inez Demonet Scholar**
  - Old Gaps, New Bridges: Visualizing the Dynamics of Planar Cell Polarity and its Impact on the Co-Occurrence of Incomplete Midline Closures

- **Gwun-Yee Chin, University of Toronto, Vesalian Scholar**
  - Visualizing the Motor Movements of Autism Using Motion Capture Animation to Facilitate Differential Diagnosis

- **Elizabeth Weissbrod, Johns Hopkins University, Vesalian Scholar**
  - Visualizing Plasmodium Interaction with the Mosquito Midgut: Development of an Interactive Educational Module

1:30 – 3pm
PSU Smith 327/328
(0.15 CEUs Biomed)

**Minimally Invasive Neurological Surgery: Visualizing Endoscopic Approaches and Anatomy**

Daniel Guillaume, MD, MSc, and Nicholas Coppa, MD

**Endoscopic Anatomy and Minimally Invasive Approaches to the Ventricular System**

Dr. Guillaume will discuss how, with technological advances and a trend toward minimal invasiveness in neurosurgery, the neuro-endoscope has emerged and now plays a powerful role in the management of many neurosurgical conditions. These include the management of ventricular lesions, treatment of hydrocephalus, and resection of anterior skull base tumors via an endonasal transphenoidal approach. The endoscope improves visualization of anatomical structures with high-resolution cameras and extreme magnification. It also offers an angled perspective that gives a view that is much different from conventional microscope or "naked eye" point of view. This presentation will review ventricular anatomy, comparing anatomic views as imaged by the microscope to images obtained from endoscopic cameras, as well presenting common and uncommon endoscopic procedures.

**Anterior Skull Base Anatomy: An Exocranial Perspective During Endoscopic Surgery**

Dr. Coppa will discuss the anatomy of the ventral midline skull base as seen from both an exocranial and endocranial perspective. The surgical strategy of approaching this region endoscopically for common disease processes such as pituitary tumors, cancer of the nasal cavity, and esthesioneuroblastoma will be reviewed. Techniques of endoscopic reconstruction of the skull base will also be discussed. An effort will be made to contrast endoscopic surgery with open skull base surgery while emphasizing the relevant anatomy.

Daniel Guillaume is a pediatric neurosurgeon at OHSU and Doernbecher Children's Hospital. In addition to general and pediatric neurosurgical training, he traveled to Australia to obtain fellowship training in minimally invasive neurosurgery and neuro-endoscopy. He has published extensively on the topics he will be discussing, and he played an active role in regional and national courses devoted to teaching neuro-endoscopy to practicing neurosurgeons.

Nicholas Coppa is a neurosurgeon at OHSU. He is a part of the division of skull base surgery within the department of neurological surgery. He completed his general neurological training at Georgetown University Hospital and fellowship at OHSU. He plays an integral role in the minimally invasive, endoscopic treatment of anterior skull base pathology.
Optimizing Search within a Clinical Diagnostic Decision Support System

Art Papier, MD, and Glen Hintz, MS

Medical atlases—typically picture books of diseases sorted by specialty—are often the most well-worn books in the primary care office or emergency room. Though a primary resource, the atlas is hampered as a diagnostic tool, since it is indexed by disease. While search engines index images, and online clinical atlases are increasing in number, the online atlases are indexed similarly to print atlases—by disease. Yet clinicians are often evaluating visual clues and need diagnostic assistance. How do you search by disease if you do not know the disease? Decision support systems search by patient symptoms and other signs. These systems are growing in use, and one is optimized for visual diagnostic searches. A team consisting of software engineers, physicians, and a medical illustrator has developed a visually-guided menu for evaluating clinical visual characteristics within a widely used decision support system. Illustrations and photographs were investigated as possible iconic search entry solutions. Illustrations alone were often too broad and general, while photographs were too specific and unique. The final lexicons are hybrids merging illustrations and photographs. These hybrids combine the sculptural form and texture of an illustration, while maintaining photographic authenticity and relevance to the pattern recognitions task.

Art Papier is an Associate Professor in Dermatology and Medical Informatics at the University of Rochester. Dr. Papier specializes in contact and occupational dermatitis and has a special interest in acute skin rashes and skin presentations of infectious disease. His research focuses on point-of-care reference systems for physicians and internet-based medical information for patients. He is particularly interested in the topic of diagnostic errors in medical decision making and decision support systems. Dr. Papier was the principal investigator of a NIAMS/NIH contract to develop a comprehensive dermatology lexicon. This work has transitioned to the American Academy of Dermatology as DermLex. Dr. Papier also is Chief Scientific Officer of Logical Images, the developer of VisualDx and an Internet self-paced course in dermatology education. He is a graduate of Wesleyan University and completed his premed studies at Columbia University, his doctorate of medicine at the University of Vermont College of Medicine, and graduate medical training at the Berkshire Medical Center and the University of Rochester Medical Center.

Glen Hintz is an Associate Professor and former Chairman of the Fine Arts Department at the Rochester Institute of Technology. Mr. Hintz specializes in medical illustration and animation using traditional, as well as 2D and 3D computer media. He designed, illustrated, and animated the DLP website (www.dermatologylexicon.org). Presentations include The Dermatology Lexicon Project at the Association of Medical Illustrators Annual Meeting in 2007. Glen graduated from Lafayette College with a bachelor of arts degree in biology, and Medical College of Georgia with a master of science degree in medical illustration.

Communicating Data Visually

Bang Wong

Researchers at the Broad Institute of MIT and Harvard generate a staggering amount of data each day. The challenge is to benefit from this data deluge without being overwhelmed. Visually representing data can offer insights that lead to new understanding, whether the purpose is communication or data analysis. The Data Visualization Initiative at Broad is aimed at creating informative visualization models to support research and enable discovery. The same raw data along with current research is communicated to the community at large through the DNAtrium, an exhibition space that relies on large-scale media wall and multi-touch smart tables to empower people to explore the human genome.

Bang Wong is the Creative Director of the Broad Institute of MIT and Harvard and an Adjunct Assistant Professor in the Department of Art as Applied to Medicine at the Johns Hopkins University School of Medicine. His work focuses on communicating science visually in the areas of scientific graphics, data visualization, and art and design. He received a master's degree in immunology and a master's degree in medical and biological illustration both from The Johns Hopkins University School of Medicine. www.bangwong.com
Composition: The Key to Visual Communication
Marcia Hartsock, MA, CMI

The purpose of illustration is to illuminate, to show, to teach. As scientific illustrators, we are very well-trained in our subject matter and the importance of scientific accuracy. We learn the media specific to our field, and how to break down complex information into understandable components. The most important part of our job, however, is creating images that successfully convey information. In our profession, the image carries the message. We are better at what we do when we understand the impact that composition has on human perception, and use this understanding to tell our story with clarity and impact. This presentation will examine the role of composition as a communication tool, and offer tips on creating an effective composition.

This presentation will draw from both contemporary illustrations and techniques used by Renaissance Masters to present different theories of arranging the elements of a complex image, and discuss the impact of each on the intended message. Emphasis will be on utilizing structural elements, movement within the illustration, and color balance to intentionally guide the viewer where you want them to look.

Marcia Hartsock has been a self-employed medical illustrator in Cincinnati, Ohio, for over 25 years. She holds an Honors bachelor of fine arts degree from the University of Cincinnati College of Design, Art, Architecture, and Planning, and an master of arts degree in illustration from Syracuse University. She has won 9 AMI Salon Awards, including the Ralph Sweet Best of Show Award in 1997, and has exhibited at the New York Society of Illustrators. In Cincinnati, her work has been displayed as part of an artist-in-residence program at the Lloyd Library, and she was selected by Artworks Cincinnati as one of the Top 100 Secret Artists of 2008. She has taught illustration at Northern Kentucky University and is on the summer faculty of the Fine Arts Camp in Sitka, Alaska.

The Healthwise® Low Back Pain Microsite: Bringing the User into the Picture
Steve Graepel

In the fall of 2009, Healthwise® redirected its low back pain content by applying the principles of user-centered design. Usability test data and interviews with low back pain sufferers brought the user into the site design process. Text content was enhanced and often replaced with engaging illustrations, animations, videos, and interactive conversations. Content was reorganized according to groupings identified by users, resulting in intuitive navigation.

Steve Graepel will present the strategy that Healthwise® employed to effect user-centric design, including:

- user-based card-sorting to design new information architecture
- user testing

Attendees should come away with an understanding of the principles of user-centered design and how to integrate these steps when challenged to build relevant, easy-to-navigate sites that encourage repeated user visits.

Steve Graepel is a Portland native and a graduate of The Johns Hopkins University Art as Applied to Medicine program. He worked for 8 years as a staff illustrator at the Mayo Clinic. He lives in Idaho and works as the visual content manager at Healthwise Inc., a Boise-based health information company.

How Medical Illustration Can Be Used in Clinical Informatics to Improve Communication
Blake J. Lesselroth, MD, MBI

There is a significant overlap between the specialties of clinical informatics and medical illustration. Case studies have been published discussing the novel use of visual data to change the landscape of medication informatics and electronic health record implementation. Although medical illustrators have not traditionally played a central role in the design of clinical information systems, reference resources, or quality improvement initiatives, they possess special expertise with design modalities and a unique insight into the power of visual communication. Furthermore, the increased availability and improved usability of rendering technologies has catalyzed change across many industries including entertainment, finance, and retail. The healthcare industry is poised for similar change—clinicians and patients need better ways to summarize, visualize, and share data. Medical illustrators of the 21st century are well positioned to guide this transition and will have opportunities to partner with multi-disciplinary teams to re-invent the ways patients and providers collaborate, consume data, and interact with their environment.

Blake J. Lesselroth is currently a staff teaching hospitalist at the Portland VA Medical Center (PVAMC) and an assistant professor of medicine and medical informatics with Oregon Health & Science University (OHSU). Dr. Lesselroth received his medical degree from Tulane University in New Orleans. After a residency in internal medicine at OHSU and a general medicine fellowship at PVAMC, he completed a Master's degree in biomedical informatics from the OHSU Department of Medical Informatics and Clinical Epidemiology. Currently, Blake splits his time between the Department of Hospital Medicine and the Technology and Information Management Service, working on a variety of applied informatics and quality improvement initiatives. His current areas of interest include medication safety using reconciliation software and decision support using concept-oriented dashboard displays.
Some local dinner options to consider

- Southpark (southparkseafood.com)
- Veritable Quandary (www.veritablequandary.com)
- Pastini Pastaria (www.pastini.com)
- BridgePort Brewpub (www.bridgeportbrew.com)
- McMenamins (www.mcmenamins.com)
- Huber's (www.hubers.com)
- Lucky Lab Brewing Company (www.luckylab.com)
- Deschutes Brewery Portland Pub (www.deschutesbrewery.com)
- Dan & Louis Oyster Bar (www.danandlouis.com)
- Jake's Famous Crawfish (503)226–1419
- Virginia Café (503)227–0033
- Carafe (www.carafebitstro.com)
**Second Story: Elevating the Art of Storytelling**  
Julie Beeler

Julie Beeler is cofounder of Second Story, a Portland, Oregon-based team of artists, designers, producers, and developers that create innovative websites, interactive installations, and media environments for museums, cultural organizations, governments, and industry that inspire, educate, entertain, and enchant visitors through new forms of storytelling. Julie will describe her studio's focus on the fusion of interaction, electronic media, and the physical world. Audiences crave ever-greater control and personalization over information, content, and experiences they have. Because the interface between the digital and physical worlds is blurring, an evolution of interaction is expanding beyond the screen. Giving definition and new forms to this “blur” is one of the exciting frontiers of this young, transforming industry. The studio's storytelling and content-focused projects have been recognized in hundreds of books, magazines, and websites, and in almost every interactive design competition. With a background in visual design, art history, and the liberal arts, Julie Beeler leads the studio in shaping unique, innovative, interactive experiences that peak curiosity, spur discovery, and inspire audiences. From concept through completion, Julie interacts with various industry disciplines, guiding the studio to realize holistic approaches to successful projects. Julie is a frequent speaker at various conferences and schools across the country on topics ranging from interactive design methodologies to usability and the marriage of rich content and technology and is currently serving on the National Board of the AIGA. Julie graduated magna cum laude with a bachelor of fine arts degree in graphic design and art history from the University of the Pacific.

**Antitrust Laws and the AMI: What it Means for Members**  
Matthew P. Farmer, Esq.

The AMI is committed to antitrust compliance and expects its members to do the same. This presentation will offer a “plain talk” discussion of state and federal antitrust laws and how they affect the AMI and AMI membership. This presentation will clarify these laws by covering: general antitrust guidelines, AMI conduct/member conduct and what being a trade association (the AMI) means. Learn how prohibitions against price fixing, group boycotts, market allocation, unfair and deceptive trade practices and the like can sneak up and bite you or your association when you least expect it. Learn from the mistakes other trade associations members and volunteers by examining real antitrust cases brought against professional associations and their members. When it comes to antitrust laws, forewarned is indeed forearmed. Matt Farmer is the former General Counsel for the Oregon Association of REALTORS®, a statewide trade association representing some twenty thousand REALTORS® in Oregon. He continues to advise the association as an “Of Counsel” attorney. Matt is a magna cum laude graduate of Willamette University School of Law and has clerked for the Oregon Supreme Court. In addition to the private practice of law in Oregon, he has taught at Willamette University and written extensively on legal issues affecting real estate and trade associations.

Mr. Farmer assisted AMI member Bill Hamilton and the AMI Professional Guidelines Committee in generating the Antitrust Guidelines for the AMI.
Creating Photorealistic Surface Textures for Anatomical Structures in MAXON Cinema 4D
Michael Corrin

Many rendering styles are achievable using digital three-dimensional rendering tools including photorealism. When a scene rendered in a photorealistic style includes organs and tissues, audiences with backgrounds in medicine and anatomy are very discerning about verisimilitude. In this talk, we will take a close look at the visual qualities of the surfaces of various tissues and then examine some methods of creating photorealistic textures in Cinema 4D and its sister application BodyPaint 3D.

The talk will cover the following:
- constructing procedural textures to replicate the appearance of specific tissue surfaces.
- combining procedural shaders and raster-based texture maps.
- creating multi-tissue surfaces such as the heart.

Michael Corrin is a lecturer in the Biomedical Communications graduate program at the University of Toronto. He currently teaches foundation courses in digital media production and illustration. Michael also works as a member of the Perioperative Interactive Education (PIE) group in the Department of Anaesthesia and Pain Management at Toronto General Hospital. This group creates and evaluates online teaching tools for residents and fellows.

Visualizing the Power Plant: The History of the Mitochondrion
Dave Mazierski

The iconic image of the double-walled mitochondrion filled with parallel rows of cristae represents the culmination of 75 years of cytological and biochemical research. Ultimately, it was the invention of the electron microscope in the 1940s that made it possible to reconcile theories about the role and structure of the organelle, and demonstrate the close relationship between the two. Newer imaging techniques such as transmission electron microscopy show that mitochondria possess a great range of morphological diversity and malleability. Studies of mitochondrial DNA confirm Richard Altmann's theory of 1890 that the presence of mitochondria in the eukaryotic cell represents a symbiotic relationship of separate organisms, and lend new insight into the origin of life. Our continuing investigations into the role of the mitochondrion are closely tied with our ability to visualize this important organelle, representing the classic interdisciplinary nature of our profession.

Dave Mazierski graduated from the Department of Art as Applied to Medicine at the University of Toronto in 1982. His first professional assignment was to illustrate the world's first atlas of camel anatomy. Since then, he has contributed to many other medical and scientific books, including Grant’s Atlas of Anatomy. As an Associate Professor in Biomedical Communications at the University of Toronto, he currently teaches foundation courses in traditional and digital media production and illustration, as well as undergraduate courses in scientific visualization, while also maintaining a freelance illustration studio. Recently, he completed a master of science degree in vertebrate paleontology at the University of Toronto.

Annual Business Meeting
Box lunch provided

Members Forum

The AMI is a vibrant dynamic community. We continually evolve through the exchange of ideas among members. We want you to be there for our most exciting Members Forum ever. We’re setting strategic priorities for the AMI over the next five years, and we need your input to turn vision into reality. Come to this interactive multi-media brainstorming session where you can be a participant in creating AMI’s future through tweeting, live streaming, data visualization, and more...don’t miss it!
Building an Animated Drop-Down Interface with Flash® and ActionScript 3.0

Nick Klein

Learn how to build a reusable, professional looking, animated interface in Adobe® Flash® CS4, using ActionScript 3.0. This interface can be customized for use in many projects including eLearning modules, learning objects, Flash® games, websites, and interactive lectures. Familiarity with Flash® and some basic script-based programming knowledge is recommended.

Nick Klein is a medical Illustrator and animator for the Medical College of Georgia's School of Medicine, and is also Director of Operations and Partner at iSO-FORM, LLC. Nick has been producing multimedia artwork and animation with Flash® since 2002. He received his bachelor of arts degree in biological/pre-medical illustration from Iowa State University and his master of science degree in medical illustration from the Medical College of Georgia. He is a professional member of the Association of Medical Illustrators.

Radiological Imaging Modalities: Reading and Integrating Various Data sets into Your Workflow

Lydia Gregg

Multiple new medical imaging techniques have become widely available in recent years. With image resolution poised to take even bigger steps forward, a good understanding of how to read and integrate medical datasets into your workflow is a must. Because radiologists and clinicians may not know what file types are most useful to medical illustrators, it is imperative to not only know how to read the data sets, but also what file types to request. This presentation will detail the key differences between various modalities, with quick tips for reviewing images and incorporating them into your work. OsiriX, Adobe® Photoshop®, and Cinema 4D will be used, but the focus of this presentation will remain on the data sets themselves with concentration on structural neuroimaging. Descriptions of some new imaging modalities will also be included.

Lydia Gregg is employed in the Division of Interventional Neuroradiology at The Johns Hopkins University School of Medicine as a medical illustrator/animator and research associate. She is also cofounder of ProAtlantal Studio with her husband, Fabian de Kok-Mercado. She received her master of arts degree in medical and biological illustration in 2007 from the Johns Hopkins University School of Medicine.

Getting Started with Storyboarding for Animation

Anneliese Lilienthal, MS and Christine Young, MA, CMI

This presentation given by creative directors, animators, and illustrators from medical animation firms will review the basics for getting started with storyboarding for animation. Medical illustrators are a key asset to the growing field of medical animation, especially when it comes to storyboarding. Storyboards are the backbone to most animation projects and require creativity, scientific knowledge, and the ability to visually tell a story—skills at which medical illustrators excel. The presentation will provide insight on what you need to know before you get started, what style of boards you might consider, ways of describing motion for storyboards, techniques for drawing storyboards, referencing your storyboards, and programs & equipment to create your storyboards.

Anneliese Lilienthal is a Medical Producer and Senior Medical Illustrator for XVIVO Scientific Animation in Rocky Hill, Connecticut. She joined the XVIVO team in 2008, after graduating with a master of science degree in medical illustration from the Medical College of Georgia. In addition to providing clients with production support through all stages of program development, Anneliese also contributes medical and scientific input on all the projects she coordinates. She has created, as well as collaborated, on several storyboard projects for medical device companies and pharmaceuticals, including MOA, MOD, educational instruction animations and interactive programs.

Christine Young’s work focuses on science strategy and storyboard development for both medical advertising agencies and animation companies in partnership with biopharmaceutical companies. With over a decade of experience in building visual science stories for pre-commercialization, professional medical education, and launch media projects—from blockbuster to biotechnology specialty therapeutics—she understands the value of creating storyboards that serve client, medical/legal regulatory, and animation teams. Currently, she consults for the Euro RSCG medical agency network, Hud Studios at Grey Healthcare Group, and XVIVO Scientific Animation. She graduated from the Department of Art as Applied to Medicine at The Johns Hopkins University School of Medicine and survived most of paramedic school to continue learning in the trenches of medical care.
Techniques Showcase, 2 – 5pm (Coffee break from 2:45–3:15pm)
Third floor, Smith Memorial Student Union

David Aten is Senior Medical Illustrator at the University of Texas M. D. Anderson Cancer Center in Houston. He has used Freeform software to create surgical models for the last 5 years.

Haptic Controls for Modeling and Simulation
David Aten

Force-feedback haptic hardware provides new options for modeling and manipulating 3D data. David Aten will be demonstrating 3D modeling using Sensable’s Freeform software and Phantom haptic platform.

David Aten is Senior Medical Illustrator at the University of Texas M. D. Anderson Cancer Center in Houston. He has used Freeform software to create surgical models for the last 5 years.

Gaël McGill, PhD

This showcase will introduce participants to Molecular Maya (mMaya)—a free, newly released software toolkit that extends Maya’s capabilities by allowing users to import, build, and animate molecular structures. Although Autodesk’s 3D software package Maya® is a workhorse in the film industry’s special effects and animated feature films, it was never intended for accurate modeling and animation of molecules. We will not only cover how mMaya v1 brings molecular graphics functionality to this powerful platform, but also preview novel animation and simulation capabilities currently in development for upcoming versions. By the end of the session, participants will know enough about Maya® and Molecular Maya capabilities to decide whether these might be useful software tools in their own work.

Gaël McGill is Director of Molecular Visualization at the Center for Molecular and Cellular Dynamics at Harvard Medical School where he also teaches scientific visualization. He is the founder & CEO of Digizyme, Inc., a firm dedicated to the visualization and communication of science through advanced technology applications. Dr. McGill is the creator of the online portal molecularmovies.org and the Molecular Maya software toolkit. He is also a technical editor for Wiley/SYBEX Publishing where he has contributed to leading Maya® and 3D software textbooks. Dr. McGill is also currently the Digital Media Director for E.O. Wilson’s Life on Earth next-generation digital biology textbook. He has served as a scientific and communications consultant for the Boston Scientific Corporation and is also a scientific advisory board member of Vast Scientific, Sage Science, and a board member of the Vesalius Trust. After working at Dupont-Merck Pharmaceuticals and INSERM/Cochin Hospital in Paris, he completed his doctorate at Harvard Medical School in the Division of Medical Sciences (Biochemistry & Molecular Pharmacology) and postdoctoral fellowship at the Dana Farber Cancer Institute. His research on the mechanisms of tumor cell death/apoptosis was supported by the Howard Hughes Medical Institute and Sandoz Pharmaceuticals fellowships. He received his bachelor of arts degree summa cum laude in biology, music, and art history from Swarthmore College.

How to Add Line to Your 3D Geometry with Cinema 4D Using the Sketch and Toon Module
Fabian de Kok-Mercado

I find myself using MAXON’s Cinema 4D more and more for my illustration, specifically to render line work with its fully integrated Sketch and Toon module. Sketch and Toon is a robust tool set that adds lines to your 3D geometry in a wide variety of styles. Lines can be saved as raster images or exported as vector artwork for use with Adobe® Illustrator®. I will cover my favorite line presets and how they can be used to generate line work for multiple types of illustration. I find this tool especially handy for cellular diagrams and mechanical objects such as medical devices.

Fabian de Kok-Mercado received his master of arts degree in medical illustration in 2008 from The Johns Hopkins School of Medicine. He is employed by the Battelle Memorial Institute as the Medical Illustrator for the NIH National Institute of Allergy and Infectious Diseases (NIAID) Integrated Research Facility in Frederick, MD. He also operates ProAtlantal Studio with his wife, Lydia Gregg.

MAXON is a Gold Educational Sponsor for this presentation and has donated demo disks and MAXON T-shirts for give-away, and a copy of CINEMA 4D Core Edition ($995 value) to be raffled off during the Techniques Showcase.

Unity Game Engine: Development of 3D Educational Games and Learning Objects
Kenneth Coulter, MFA

The Unity Game Engine showcase will explore a custom designed 3D environment, covering basic features of the Unity gaming engine, engine performance, version options, and system requirements. The development process of creating 3D assets, integrating them into the Unity engine, animation, and interactivity will be examined, along with using Unity as a real-time development tool to create learning objects.

Kenneth Coulter is the Assistant Professor of Animation, Interactive Design, and Educational Gaming at UT Southwestern Medical Center at Dallas, Department of Biomedical Communications. Kenneth has recently worked with a legal support firm in Dallas, Texas, where he served as an animator, illustrator, interactive designer, and trial consultant for numerous high profile clients. He received his master of fine arts degree in medical illustration from the Cleveland Institute of Art with science coursework fulfilled at Case Western Reserve University School of Medicine in Cleveland, Ohio. His bachelor of fine arts degree is from the Columbus College of Art and Design in Columbus, Ohio. Kenneth's interest in games for learning led to his master's thesis on the effectiveness of educational gaming.
Friday

Step Back in Time
Christy Krames

Ever miss those days when eraser crumbs languished about the perimeters of your sketch? Do you long to gaze once again on actual cellulose fibers? Have you ever wondered what it would be like to create images that have no capacity whatsoever to move? Christy Krames will present an overview of the “less is more” creative approach to her traditional-looking artwork. Called upon frequently for her figurative work, she will explain her reliance on her own photographic reference, her artistic philosophy of getting to the point, and the innumerable ways in which the joys of Photoshop® CS4 will make it a mathematical certainty that it will be the only digital program she will ever master.

Christy Krames is a 1981 graduate of the UT Southwestern School of Biocommunications. She has maintained a successful freelance career for over 25 years. She also gets to live in Austin, Texas. In 2006, Ms. Krames became a Fellow of the Association of Medical Illustrators.

Adobe® Acrobat, from Static to 3D
Deborah K. Haines, MFA, CMI, FAMI

Deb Haines will demonstrate the differences between the Adobe® Acrobat versions (Acrobat, Acrobat Pro and Acrobat Pro Extended) from simple to complex uses. Deb will touch briefly on how she uses Acrobat from generating small file sizes for review, commenting and sharing with others as well as securing documents and signatures, and a brief preview of how Adobe® Acrobat Extended Pro is used by those in 3D and what files can be converted to PDF. References and other expert websites will be highlighted.

Deborah K. Haines has been employed as a medical illustrator at the University of Tennessee College of Veterinary Medicine for the past 17 years. She is a graduate of the University of Michigan program and has worked in both university and small business settings. Her interest in technology and using software to simplify process and production has always been a priority and she enjoys testing the boundaries.

Advanced Sliders in Adobe® Flash®
Tami Tolpa

Tami Tolpa will demonstrate how to use a traditional slider to create simulations in Adobe® Flash®. She’ll give a brief introduction to what a slider is, show a recent project that featured several advanced sliders, and then present the source files and explain how to decipher and manipulate the code.

Tami Tolpa has 12 years experience creating compelling and instructive images for science and technology. Based in Seattle, Washington, she owns and runs Tolpa Studios, Inc., specializing in illustrations and animations for major publications, biotechnology and pharmaceutical companies, advertising agencies, e-learning providers, as well as many independent physicians and scientists.

“Traditional” 2D Animation in Flash®
Wes Price

2D animation lives! The traditional pencil and paper method may be a thing of the past, but with Adobe® Flash® you can create wildly expressive and scientifically accurate animations by applying the time-honored principles of animation. With the help of a Wacom® stylus and pad, we will use Flash® to draw frame-by-frame animation, just like in the old days!

Wes Price is a lifelong student of anatomy and animation. He holds a master of science degree in medical illustration from the Medical College of Georgia and is on the faculty of the Media Arts and Animation Department at the Art Institute of Colorado. Wes is also a freelance illustrator and animator. He serves on the Board of Directors for ASIFA-Colorado, the regional arm of the International Animated Film Society, an organization promoting the power, diversity, and application of animation in all media through community-outreach education programs.

Vesalius Trust Silent Auction and Alan Cole Memorial Live Auction
Ballroom, Smith Memorial Student Union

As always, the Vesalius Trust Auction is going to be a memorable, fun-filled highlight of the Annual Meeting. This year’s Vesalius Trust Auction will be held Friday, July 30, from 5:15–7:30pm in the Ballroom of the Smith Memorial Student Union—the same location as all of the plenary lectures. Stop by the auction immediately after the Techniques Showcase and enjoy hors d’oeuvres and a cash bar.

For this year’s Alan Cole Memorial Live Auction, our school programs will be decorating a model of a beaver, in honor of the Oregon state animal and nickname. The beaver models will compete by “munching” their way through a tree bark racecourse. Come cheer for your school and help support student scholarships and professional research in the use of visual media in the health sciences.

The Vesalius Trust Silent Auction provides an annual opportunity to bid on and purchase some of the most unique and intriguing items for your studio. Included will be medical illustrations, anatomical models, old and new medical books, medical instruments, drawing supplies, and just about anything else imaginable. All items will be on display in the Ballroom and bidding will end before the live auction gets under way.

Tami Tolpa

Deborah K. Haines, MFA, CMI, FAMI
A Good Man: Gregory Pincus and the Development of Oral Contraception
Leon Speroff, MD

The story of the birth control pill provides an appreciation for the enormous personal and social impact of this achievement, and an understanding of what one person can accomplish with perseverance and dedication. This presentation offers a biography about Gregory Pincus and what he contributed to the development of oral contraception. This includes the importance of producing and testing synthetic progestational drugs, acknowledging the contributions of the entire development team, and an understanding of why the oral contraceptive was a focus of political conflict.

Leon Speroff is Professor Emeritus of Obstetrics and Gynecology at the Oregon Health & Science University in Portland. Dr. Speroff has served as President of the American Fertility Society (now the American Society for Reproductive Medicine) and was the founding President of the Society of Reproductive Endocrinologists. His wide range of editorial activities includes 14 specialty journals in obstetrics, gynecology, and reproductive medicine. He served as the host of the Lifetime Cable Television program on obstetrics and gynecology. Dr. Speroff is the senior author of Clinical Gynecologic Endocrinology and Infertility, now in its 7th edition, and A Clinical Guide for Contraception, now in its 4th edition. He has written the biography of Carlos Montezuma, an American Indian physician who was a prominent activist for Indian rights in the early 1900s. His latest works include the historical story of two railroads, competing with each other as they were building on opposite banks of the same river: The Deschutes River Railroad War, a journal of his rookie senior softball season: A Slow-Pitch Summer, and A Good Man, and the biography of Gregory Pincus, the developer of the birth control pill.

Electron Microscope Tomography (ET) and the Visualization of Pancreatic Beta Cells
Brad Marsh, PhD

Electron microscope tomography (ET) has emerged as a powerful research tool for studying mammalian cell and tissue biology in three-dimensions (3D) in situ, in an appropriate physiological context. ET uses mathematical techniques similar to clinical and diagnostic 3D imaging techniques such as computed tomography (CT), magnetic resonance imaging (MRI) and positron emission tomography (PET). However, rather than computing a 3D reconstruction of a patient's (or an animal's) anatomy, a 3D snapshot revealing a cell's anatomy is produced instead, at approximately 105-106 times higher resolution (~5nm) than for our clinical imaging counterparts. High-resolution tomograms of large cellular volumes generated and analyzed in this way have already provided fundamental new insights at a number of levels regarding key structure-function relationships among the compartments that underpin insulin biosynthesis and secretion.

Brad Marsh is a world leader in whole-cell tomography and diabetic cell structure biology. After completing a bachelor of science degree with a double major in biochemistry and genetics in 1992, Brad received First Class Honors for postgraduate research in immunology/parasitology in 1993. Brad Marsh then undertook a PhD project with Professor David James at the University of Queensland characterizing protein targeting and membrane trafficking of the insulin-responsive glucose transporter (GLUT4) in fat cells. He subsequently undertook postdoctoral studies in the USA from December 1997 through December 2003 with Professors Dick McIntosh (Department of Molecular, Cellular and Developmental Biology, University of Colorado, Boulder) and Kathryn Howell (University of Colorado Health Sciences Center/School of Medicine, Denver) focused on elucidating structure-function relationships in mammalian cells in 3D at high-resolution using the technique referred to as electron tomography (ET). This led to pioneering work combining ET with more sophisticated computational approaches for whole cell mapping and quantitative analysis of beta cells in pancreatic islets. Brad returned to Australia in December 2003 to take up a new Group Leader faculty appointment at the Institute for Molecular Bioscience (IMB), where he has continued to focus on the detailed characterization of the cellular machinery involved in (pro)insulin biosynthesis and insulin secretion in 3D at high-resolution.
Illustrating for the Animation Industry—Deconstructing the Illusion
Scott Fassett

Illustrating for the Animation Industry requires a thorough understanding of design, composition, light, color, and contrast. Usually, it’s about telling a narrative story, not unlike children’s book illustration. This presentation will concentrate on creating concept paintings for an animated film, using Adobe® Photoshop® CS4 and Corel® Painter 11. With Photoshop®, a layout drawing and final, completed painting will be demonstrated with the use of thumbnails sketches, black and white value studies, and color keys. Painter will then be demonstrated, but using a more direct painting approach, which will show the evolution of an entire painting in 5 minutes using Painter’s recordable brushstroke feature. A discussion of the pros and cons, of when to use each application for the best effect, will follow.

Open Lunch

Try the Portland Farmers Market...
Held right on the Portland State University campus in the South Park Blocks, this Saturday Farmers Market is consistently ranked as one of the best farmers markets in the country! It has grown to become one of Portland’s premier events for locals and tourists alike.

From Concept to Completion: Real World Development of High End 3D Medical Animations (Part 1 of 2)
Michael Astrachan and Anneliese Lilienthal

This presentation will walk through the 3D medical animation production process step-by-step, from providing a creative overview and being awarded the project to completion and delivery. We will discuss the types of expectations clients have and, when possible, compare the “ideal” to the “realities” found in production. We aim to enlighten students and professionals looking to learn more about the real world animation production experience. The presentation will briefly entertain questions from the audience between each major production step before moving on. Following this concurrent will be a panel discussion speaking to the unique client interactions and relationships one encounters during 3D animation production.

Scott Fassett is a visual development artist working in the animation industry. He graduated from Art Center College of Design in Pasadena in 1994 with a bachelor of fine arts degree (Honors) in illustration. From there, he worked at the prestigious Walt Disney Feature Animation Studio in Burbank, California, where he continued his on-the-job education, learning the meticulous craft of background painting. During his six years at the studio he painted backgrounds for such films as Hercules, Tarzan, and Treasure Planet. Inspired by the landscapes of the great Southwest, Scott and his wife Shelly decided to move to Arizona. He freelanced for Disney Toon Studios, contributing background art to such classics as Winnie the Pooh, Bambi II, and Tinkerbell. From there he moved to Portland, Oregon, where he spent 3 years developing the visual style for Jack and Ben, an animated feature film from Laika Entertainment. Scott returned to Southern California in early 2010, to continue work for the animation industry. He is now exploring 3D environment design, concept, and matte painting.

Michael Astrachan has been involved in the visual arts for over 25 years and is a founding partner with David Bolinsky of XVIVO Scientific Animation, where he also serves as Creative Director. Michael has developed and directed mechanism of disease (MOD) and mechanism of action animations (MOA) for numerous pharmaceutical clients. Michael also has been involved in many medical educational projects, developing work for museums, broadcasters, and universities. Rob Lue, Harvard professor of the Practice of Molecular and Cellular Biology, commissioned XVIVO to develop the ground-breaking “Inner Life of the Cell” for Biovisions. Recently, Michael was invited to join the task force for the “Encyclopedia of Life Project” at the Field Museum in Chicago, Illinois. He is currently working with a team of health educators, physicians, and artists to develop innovative tools for future health initiatives.

Anneliese Lilienthal is Medical Producer and Senior Medical Illustrator for XVIVO Scientific Animation in Rocky Hill, Connecticut. She joined the XVIVO team in 2008, after graduating with a master of science degree in medical illustration from the Medical College of Georgia. In addition to providing clients with production support through all stages of program development, Anneliese also contributes medical and scientific input on all the projects she coordinates. She has collaborated on several animation projects for medical device companies and pharmaceuticals, including MOA, MOD, educational instruction animations, and interactive programs. Anneliese has been invaluable in developing the visual vocabulary for many of XVIVO’s animations. Anneliese is a 2008 Vesalian Scholar and has been awarded The Stenstrom Award of Excellence.
Health Literacy: Opportunities and Challenges for Biomedical Communicators
Shelley Wall, Wendy Hiller Gee, Jodie Jenkinson (see bio on page 12), and Sue Seif

Health literacy is the set of "skills to enable access, understanding, and use of information for health." It includes reading and numeracy skills, but also involves a basic familiarity with the language of medicine, related concepts, and visual conventions. The impact of poor health literacy can be profound. People with low health literacy are less likely to access healthcare or make informed health decisions; they may take medicine incorrectly, misunderstand doctors' instructions, or be unable to read health and safety warnings.

Low health literacy is a very real problem in North America. As biomedical communicators, we need to ensure that our images and words speak clearly to our target audience. This session will present, in panel discussion form, an introduction to the issue and a suite of strategies to create accurate, accessible visuals and text for patients and consumers with health literacy challenges. As the statistics demonstrate, that describes a large proportion of the population. The panel represents AMI members with expertise in a range of field. Speakers will address approaches to visual representation, interaction design, writing, and medical-legal illustration.

Wendy Hiller Gee has over 20 years experience in medical illustration and biocommunications. Wendy holds a master of arts degree in medical illustration from the University of Texas Southwestern Graduate School and has been a Certified Medical Illustrator for over 15 years. Since 1998, Wendy has been employed at Krames Patient Education, a healthcare publisher. She manages the Krames Art Department, consisting of medical illustrators, designers, and photography production. Wendy is an active member of the AMI, currently serving a four-year term on the Board of Governors, and was also 2008-2009 Chair of the Board.

Shelley Wall is a practicing medical illustrator and a full-time faculty member in the Biomedical Communications program, University of Toronto. As an illustrator, she specializes in web-based patient education, and has worked at The Hospital for Sick Children as a multimedia developer and a consultant on writing in Plain Language. As an instructor at the University of Toronto, she teaches courses in pathological and bioscientific illustration, research methods in biomedical communication, and writing for healthcare.

Sue Seif is a graduate of The Johns Hopkins School of Medicine program in Art as Applied to Medicine. She was on the faculty of the Medical College of Virginia for a number of years, leaving with the rank of Associate Professor. In 1994, she founded Seif & Associates, Inc., a provider of medical-legal exhibits for the defense of malpractice actions. She is a frequent lecturer to legal and insurance groups, providing continuing legal education; she has been an invited speaker at a number of national meetings. Sue is a Past-President of the Association of Medical Illustrators, past chairperson of the Board of Certification of Medical Illustrators, and is still a member of that Board. She is a former editor of the Journal of Biocommunication, trustee of the Vesalius Trust for Visual Communication, and chaired the 1983 annual meeting in Norfolk, and the 2009 meeting in Richmond. She has won a number of awards for both illustration and for art direction.

Artists Rights 2010: Online Resources, Orphan Works and World Reprographic Rights

Moderator: Rick Gersony, MFA, CMI

Panelists: Stephen Combs, Esq., Bob Morreale, and Cynthia Turner, MA, CMI

The Artists Rights Committee will conduct a panel discussion including Steve Combs, Esq., and Cynthia Turner, who will be linked to our discussion remotely via a video conference call. Topics include:

- New AMI online resource developed to help AMI members protect their rights and manage risk with online contract examples, and educational information.
- A synopsis on the state of “Orphan Works” proposed legislation in the United States Congress
- Worldwide Reprographic Rights with an emphasis on authors’ rights.

Panelists for Q&A will also include members of the AMI Artists Rights Committee, the AMI Professional Guidelines Committee and the AMI Web Committee. After the meeting, AMI members can explore the website demonstrated and contribute feedback to continually improve the content on the site.

Rick Gersony has been the Chair of the AMI Artists Rights Committee since 2006, is a certified medical illustrator, and is CEO and cofounder of Medmovie.com. Medmovie provides medical illustration, animation, and multimedia including online solutions to life science companies, medical trade associations, government agencies, medical publishers, advertising agencies, law firms, healthcare organizations, patients, and other consumers of medical information.

Bob Morreale is the current Chair of the AMI Web and Design Editorial Committee, a certified medical illustrator and the Unit Head of Medical Illustration and Animation at Mayo Clinic. He is also a graduate of the RIT program.

Stephen Combs is an attorney who assists clients with protecting and leveraging intellectual property assets. He is Vice President Legal of Sharecare, Inc. (www.sharecare.com) a highly searchable healthcare platform organizing and answering the questions of health. He is a past coeditor of The Law of the Internet, a LexisNexis publication. Steve reviewed the AMI Medical Illustration Business Practices 2nd Edition, Chapter 5: Contracts Licenses & Business Forms.

Cynthia Turner is a certified medical illustrator, member of AMI Artists Rights Committee, Fellow of the Association of Medical Illustrators, and Partner of Alexander & Turner Studio. She is a founding member and Board Member of

(Continued on page 21)
Panel Discussion: On the Front Lines of 3D Medical Animation Program Development (Part 2 of 2)

**Moderator:** Anneliese Lilienthal (see bio on page 15) ; **Panelists:** Michael Astrachan (see bio on page 19), Donna DeSmet, and Sonya Amin

This panel presentation aims to develop a greater awareness of the 3D medical animation industry within our field and the challenges often faced in the production process. The focus of the discussion will be on the breadth of situations that arise in the production of client communication and interactions. Panel members who are currently involved “on the front lines” of medical animation production, will contribute knowledge from their real-world experiences, as well as discuss the roles they have held in the production process and skill sets required. Our intent is that members of the AMI, especially students, will use this information to gain a clearer understanding of job potential within the 3D medical animation industry, as well as identify additional skills to acquire and/or strengthen. While the panel will focus on 3D medical animation production, the questions and discussion will likely hit on themes that may be applied to all areas of medical visualization and client relations.

**Donna DeSmet** has been with Hurd Studios since its inception in 1997. In her current capacity as SVP/Creative Director she plays a key role in the overall strategic development and direction of the company. Donna oversees art direction of all projects for Hurd Studios as well as supervising the production process and staff.

Additionally, she is responsible for researching, conceptualizing, storyboarding, 2D animation and medical illustration, and oversees editing, sound design, voiceovers and scripting. Clients include AstraZeneca, Johnson & Johnson, ImClone, Genentech, Novartis, Pfizer, and Merck among other major pharma companies. Prior to Hurd Studios, Donna worked with Jane Hurd at *Time Life Medical* and Medical News Network. Donna received her master of arts degree in medical and biological illustration from The Johns Hopkins University School of Medicine and her bachelor of arts degree in fine art from Loyola University of Chicago.

**Sonya Amin** is a graduate of the Biomedical Communications program at the University of Toronto. She worked as a freelance medical animator before founding AXS Biomedical Animation Studio in 2005 with fellow graduates Eddy Xuan and Jason Sharpe. As a small business owner and visual artist, Sonya’s duties encompass everything from business management and sales, to project management and art direction, right down to storyboarding and illustration. As an animation producer “on the front lines,” Sonya interacts with a variety of clients, including film/TV producers, agency account managers and art directors, pharmaceutical product managers, lecturers, and researchers.

Medical Visualization of Conjoined Twins

**Travis Vermilye**

Modern medical visualization tools and technologies have played an important role in surgical pre-planning and successful separation of recent conjoined twin cases allowing miraculous surgeries to take place with incredible results. Through his experience creating imagery and rapid prototype models based on medical image data, Travis has helped surgeons visualize the complex and unique anatomy of several cases of conjoined twins. This presentation will explore the medical image-based techniques and visuals produced for surgical planning and public awareness of the craniopagus Egyptian twins, Ahmed and Mohamed Ibrahim. In addition, Travis will discuss similarities and differences in visuals produced for several other conjoined twin cases with focus on innovative approaches in the use of medical imaging studies.

**Travis Vermilye** is a graduate of the University of Michigan program in medical and biological illustration. He is currently Assistant Professor at the College of Arts and Media at the University of Colorado Denver. He has been involved in the creation of anatomical models, illustrations, and animations derived from medical image data for the surgical planning and separation of more than 16 cases of conjoined twins. His work has been shown on the Oprah Winfrey Show, Dateline NBC, and Discovery Health as well as international magazines, e-zines, and publications. His award-winning illustrations and animations have served such clientele as: Abbott Laboratories, Stryker Medical, Cincinnati Children’s Hospital Medical Center, Medical Modeling LLC, The World Craniofacial Foundation, The New York Times, and National Geographic.
Biomedical Games: Designing Learning Experiences for the Next Generation
Geoffrey L. Cheung, Wensi Sheng, Krista Shapton, and Michael Corrin (see bio on page 14)

Gaming in education is a hot topic. Researchers suspect games may capture student attention by employing intrinsic motivators, and satisfying psychological needs. Games may also improve recall through repetition of concepts, and by breaking up information into logical and manageable chunks. The consensus is that fun is a powerful vehicle for learning. The adoption of gaming by those who create medical educational media has been slow. Perhaps, this is because making medical video games requires a very diverse set of specialties: scientific knowledge, the capacity to create visual interpretations of information, a sensitivity to target audiences, practical knowledge of computer graphics software, and computer application interface design. Medical illustrators possess this rare set of multidisciplinary skills and knowledge; why shouldn’t they take a central role in this new market? In this presentation, we will discuss educational game research, current and past biomedical gaming projects, and the design of our own game prototype set in a 3D lymph node environment. Krista, Wensi, and Geoff are second-year students in the University of Toronto Biomedical Communications graduate program. With the support of University of Toronto faculty member Michael Corrin, the 3 students initiated a new course on the development and design of digital biomedical games.

Your Future as a Self-Employed Medical Illustrator: Starve, Survive, or Flourish?
William B. Westwood, Wayne Heim, and Christine Young (see bio on page 15)

Recently, lively discussions on the AMI Listserv about the long-term viability of self-employed medical illustrators was sparked by posts from several members who have been struggling to get work and make a “respectable” living as solo operators. This discussion will continue that dialogue and search for answers. The roundtable open discussion will be led by self-employed medical illustrators Bill Westwood, Wayne Heim, and Christine Young. Looking to the future, are self-employed medical illustrators potential dinosaurs? If you’re solo, can you support a family, pay for health insurance, a mortgage and make car payments (not to mention fund a retirement plan)? Can you avoid obsolescence? What do you do in business when you discover you’re in financial trouble? Are there too many “industrial strength devices” (like Work-for-Hire, lack of professional respect, or basement-level prices) working against self-employed success? Are self-employed medical illustrators giving up on the profession and dropping out to look for employment in different fields? Bring your questions, concerns, fears, and a willingness to share with others in the room and this should potentially be the most lively and informative “give and take” discussion about the viability of solo self-employment that our association has ever sponsored.

Bill Westwood is a graduate of the Medical Illustration Program at the Medical College of Georgia. After 10 years with the Mayo Clinic in Rochester, MN, Bill left to become a solo entrepreneur. Since then, he has grown and managed a successful, full-time medical illustration business in Albany, NY. Bill Westwood is board-certified and a Fellow of the AMI. He is a Past-President of the AMI and served two terms on the Board of Governors. Bill is a well-known speaker on business issues affecting medical illustrators, including: artist’s rights/copyright, marketing, business practices and pricing. He created the Medical Illustration Source Book (a visual marketing tool for self-employed medical illustrators) in 1982 and guided its growth as Editor through 2000. He also serves on the business advisory board MySmartSimulations, a rapidly growing simulation-based training company in Saratoga, NY and is Director of Strategic Marketing and Development for Indexed Visuals. Until recently, he taught a course on “Business Practices for Visual Artists” at the Sage Colleges, in Albany, NY.

Wayne Heim is a 1991 graduate of the bachelor of fine arts medical illustration program at the Cleveland Institute of Art. Wayne also spent part of his undergraduate training studying surgery and medical illustration techniques at MCG. After receiving his degree in 1991, he worked for a Cleveland-based hospital and a local medical-legal company, and later as the senior illustrator/designer for a local advertising agency. In 1995, he became a full time self-employed illustrator. Wayne and his partners started Indexed Visuals, Inc. in 1999 to help fellow medical illustrators to better leverage the Internet to market their work to buyers around the world. He continues running Indexed Visuals while maintaining a robust and successful medical illustration business. He is a professional member of the AMI, is board-certified, and an AMI Fellow. He has served on the AMI Board of Governors, the Vesalius Trust Board and also chaired the Corporate/Meeting Sponsorship committee for the AMI.
2011
July 20 to July 23

66th Annual Meeting
Baltimore, Maryland

The 2011 AMI annual meeting will be held in the Tremont Grand. All-suite accommodations will be available at the connecting hotel, the Tremont Plaza, located in downtown Baltimore within blocks of the Inner Harbor, National Aquarium, Maryland Science Center, Walters Art Museum, and much more.

Look forward to seeing you next year!