

**CURRICULUM VITAE**  
**NORMAN BARKER, MA, MS, RBP**

The Johns Hopkins University, School of Medicine

**April, 2014**

**DEMOGRAPHIC INFORMATION**

**Current Appointments**

Director of Pathology Photography and Graphic Arts Laboratory  
 Associate Professor of Pathology  
 Associate Professor of Art as Applied to Medicine

**Personal Data**

The Johns Hopkins University School of Medicine  
 Department of Pathology, Division of Informatics  
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**Education and Training**

1977–1981 Bachelor of Fine Art, **BFA**, Maryland Institute College of Art, Photography, Cum Laude  
 1982–1985 Masters of Science, **MS**, Johns Hopkins University, Adult & Continuing Education  
 2002–2005 Masters of Art, **MA**, The University of Baltimore, Publications Design  
 1981–1983 Certificate of Training in Biomedical Photography; Pathology Photography, Johns Hopkins University, School of Medicine  
 1986 Registered Biological Photographer, **RBP**, Board Certification, Biological Photographic Association, Keystone, CO

**Professional Experience**

1976-1981 W. Bell & Co. Photographic Sales Consultant  
 1980-1981 Maryland Institute College of Art, Teaching Assistant  
 1983–1986 Senior Medical Photographer, The Johns Hopkins University School of Medicine, Department of Pathology  
 1986–4/00 Assistant Director, Pathology Photography and Graphic Arts, The Johns Hopkins University School of Medicine  
 4/00–2001 Acting Director, Pathology Photography and Graphic Arts, The Johns Hopkins University School of Medicine  
 2001–Present Director, Pathology Photography and Graphic Arts, The Johns Hopkins University School of Medicine  
 1990–1995 Instructor of Pathology and Art as Applied to Medicine, The Johns Hopkins University, School of Medicine  
 1995–2004 Assistant Professor of Pathology and Art as Applied to Medicine, The Johns Hopkins University School of Medicine  
 4/04–Present Associate Professor of Pathology and Art as Applied to Medicine, The Johns Hopkins University School of Medicine

## RESEARCH ACTIVITIES

### Peer-Reviewed Original Research Articles

1. Foster G, **Barker NJ**. *Suggestions for Photographing Jewelry*, J Gemology, 1991;22(5);287-291
2. **Barker NJ**, Meritt D. *Photographing the Osprey in the Chesapeake Bay Region*. J Biol Photography, April 1992;60(2);63-70
3. **Barker NJ**. "Front Cover." J Biol Photography, April 1992;60(2)
4. Foster G, **Barker NJ**. *Photographing Small Archaeological Objects in Color*, Cover and Article. J Field Archaeology, 1996;23(3);369-375
5. **Barker NJ**. "Front Cover." J Biol Photography, July 1997;65(3)
6. **Barker NJ**, Zahurak M, Olson JL, Nadasdy T, Racusen LC, Hruban RH. *Digital Imaging of Black and White Photomicrographs: Impact of File Size*, Am J Surgical Pathology. Nov 1998; 22(2):1411-1416. This was one of the first studies to show the importance of file size in the publishing of black & white digital photomicrographs.
7. **Barker NJ**. "Gallery." J Biological Communication. 2001; 28(3)
8. **Barker NJ**. "Gallery." J Biological Communication. 2003; 29(4):30
9. **Barker NJ**, Foster G. *Ancient Microworlds, Showcase*. J BioCommunication. 2007;33(2). <http://jbiocommunication.org/issues/33-2/showcase.html>
10. **Barker NJ**. "Gallery." J BioCommunication. 2007; Vol. 33, No. 2
11. Torbenson M, **Barker NJ**. *Selling the Cure: Images of Health and Disease in Early American Patent Medicine Advertisements*. J BioCommunication, 2007; Vol. 33, No. 3
12. **Barker NJ**. "Gallery." J BioCommunication, 2008; 34(2) [www.jbiocommunication.org](http://www.jbiocommunication.org)
13. Moens AL, Leyton-Mange JS, Niu X, Yang R, Cingolani O, Arkenbout EK, Champion HC, Bedja D, Gabrielson K, Chen J, Xia Y, Hale AB, Channon KM, Halushka M, **Barker NJ**, Wuyts FL, Kaminski PM, Wolin MS, Kass DA, Barouch LA. *Adverse Ventricular Remodeling and Exacerbated NOS Uncoupling from Pressure-Overload In Mice Lacking the Beta3-Adrenoreceptor*. J Molec Cell Biol. 2009; 4C: 3, 4
14. **Barker NJ**. "Gallery." J BioCommunications, 2009;35(2). [www.jbiocommunication.org](http://www.jbiocommunication.org)
15. **Barker NJ**. RIT Big Shot, *Ain't Technology Great*, Newsletter of BioCommunications Assoc, Spring 2010
16. **Barker NJ**. "Gallery." J BioCommunications, 2010;36(2). [www.jbiocommunication.org](http://www.jbiocommunication.org)
17. **Barker NJ**. "Gallery." J BioCommunications, 2011; 37(1)1-6. [www.jbiocommunication.org](http://www.jbiocommunication.org)
18. **Barker NJ**. *Photography is an Incredible Way to Experience the World*, Newsletter of BioCommunication Assoc, Fall. 2011;6
19. Kim B, **Barker NJ**, Hruban RH, Sandone C, Cornish TC. *The Johns Hopkins Atlas of Pancreatic Pathology: Developing an Interactive Atlas and Teaching Algorithm for the Apple iPad*. J BioCommunications. 2012;38(1)
20. **Barker NJ**. *Invisible Worlds*, Newsletter of BioCommunication Assoc. Fall 2013; 8

### Juried Exhibitions & Museum Catalogs

1. Peres M, Davidhazy A. editors, *Images from Science 2: An Exhibition of Scientific Photography from Some of the Top Photographers from Around the World*, Exhibit and Book, Organized by Rochester Institute of Photography, I participated in this juried exhibition and images are published in the catalog, RIT Carey Graphic Arts Press, Sept 2008; 4-5
2. *A Century of Medical Illustration at Johns Hopkins, 1911–2011*, A catalog of the exhibit celebrating the centennial of the founding of the Department of Art as Applied to Medicine, Johns Hopkins University, School of Medicine, p55, Celebrating One Hundred Years of Teaching Excellence in Medical Illustration, Exhibit in Turner Auditorium of more than 200 Illustrations, 9/11-10/11
3. *International Images for Science Exhibition 2011: An Exhibition of Scientific Photography*; In Ansary A (ed). A Traveling Exhibition and Book of the Best Scientific Photography from Around the World. I participated in this juried traveling exhibition and catalog. The images are published in the exhibition catalog, Royal Photographic Society, Bath, England, 2011;19-23
4. *Edinburgh International Science Festival, Making The Invisible Visible*, Microbiology, Image used on the front cover and all promotional material involved for the month long, Science Festival, April, 2012
5. *International Images for Science Exhibition 2013: An Exhibition of Scientific Photography*; In Ansary A (ed). A Traveling Exhibition and Book of the Best Scientific Photography from Around the World, I participated in this juried traveling exhibition and catalog. The images are published in the exhibition catalog, Royal Photographic Society, Bath, England, 2013:29, 49, 50

**Inventions, Patents, Copyrights** none**Extramural Funding**

- 3/94 To study digital imaging at The Center for Creative Imaging, Camden, ME  
Biological Photographic Assoc; grant from the Endowment Fund for Education  
\$1500
- 2007 To complete and frame an exhibit, Tucson, AZ  
BioCommunications Assoc / Endowment Fund for Education  
\$1500
- 6/10 To complete a book project entitled Hidden Beauty: Exploring The Aesthetics of Medical Science  
BioCommunications Assoc / Endowment Fund for Education  
\$1500
- 12/11 To produce the Movie "Halsted" in Hi-Definition broadcast on PBS Television  
Blum-Kovler Foundation  
\$56,000
- 5/13 To buy custom built Museum shipping cases for the traveling exhibit of Hidden Beauty:  
Exploring The Aesthetics of Medical Science  
BioCommunications Assoc / Endowment Fund for Education  
\$1500

**EDUCATIONAL ACTIVITIES****Educational Publications****Published Books**

1. Foster G, **Barker NJ**. *Ancient Microworlds*, Custom & Limited Editions, San Francisco. A large format color monograph combining art, and science to bring out the beauty as well as describe the morphology of fossils, using techniques of high magnification photography. Along with the book the images were on a tour of Museums throughout the United States and Europe for 10 years. (See Gallery Exhibits p.5-6); 10/00
2. **Barker NJ**, Foster G. *Seaweeds: Wonders of The Ocean Realm*, Man & Lion Press, Book and Photographic Exhibition at The Charleston Museum, Charleston, SC, 11/06
3. Foster G, Schultz R, **Barker NJ**, editors. *Faces of Ancient Arabia: The Giraud and Carolyn Foster Collection of South Arabian Art*, Man & Lion Press and The Walters Art Museum, 8/08
4. **Barker NJ**. *Paleobotanical Splendor*, Man & Lion Press, 4/11
5. **Barker NJ**, Iacobuzio-Donahue C. *Hidden Beauty: Exploring The Aesthetics of Medical Science*, Schiffer Books, 3/13, Book and Traveling Museum Exhibit
6. Torbenson M, **Barker NJ**. *Patent Medicine: Selling The Cure*, Man & Lion Press, 1/14

**Book Chapters**

1. **Barker NJ**. *Gross Specimen Photography*. In: Westra WH, Hruban RH, Phelps TH, Isacson C. *Illustrated Manual for the Dissection of Surgical Pathology Specimens*, New York: Springer-Verlag, 1995:22-27. This chapter sets the standard for high quality imaging of gross specimens.
2. **Barker NJ**, *Gross Specimen Photography*. In: Westra WH, Hruban RH, Phelps TH, Isacson C. 2nd ed. *Illustrated Manual for the Dissection of Surgical Pathology Specimens*, New York: Springer-Verlag, Second Edition, 2003

**Non-Peer Reviewed Publications**

1. **Barker NJ**, Foster G. *High Magnification with Hasselblad Cameras*, Forum; 1998; 40(2): 4-9
2. **Barker NJ**. *Using Macro In Large Format*, View Camera Magazine, Jan/Feb 2000; 30-37
3. **Barker NJ**, Foster G. *Inner Beauty*, Front Cover and inside story, Natural History Magazine, J American Museum Natural History, NY, 2000; 48-53
4. **Barker NJ**, Foster G. *Photographing Ancient Microworlds*, Photo Techniques Magazine, 3-4/00; 28-30
5. Varon L, Foster G, **Barker NJ**. *Magnification of Fossils Brings Out a World of Color*. Rock and Gem Magazine, Jun 2001; 40-42
6. Foster G, **Barker NJ**. *Techniques of Macro Photography*, RangeFinder Magazine, Jun 2001; 30-35
7. **Barker NJ**, Foster G. *World Class*, The Times Journal of Photography, Bennett, Coleman & Co. Ltd. TOI Suburban Press, Oct 2005

8. **Barker NJ**, *BCA Member Profile*, BCA News, Fall 2007
9. **Barker NJ**. *Behind The Lens with Norm Barker*. Popular Photography; Nov 2007; 1-5
10. **Barker NJ**. *Learn from the Experts*, Article and Interview on BioCommunications website; [www.bca.org/resources/experts.html](http://www.bca.org/resources/experts.html), June 2013
11. **Barker NJ**. *In Their Words: Norman Barker*, Focal Point Magazine, Baltimore Camera Club, 2013;10-11

**Published Photographic Essays:** These photographic articles/essays, are published in the popular press.

1. **Barker NJ**. *Ancient Microworlds*. Johns Hopkins Magazine, Ap 1998; 50(2):15-19
2. **Barker N**. *Upon Further Review*. Photo District News, International Publication for Professional Photographer, Mar 2001; 124-127
3. **Barker N**. *Marrying Paleontology with Photography*, American Scientist. Magazine of Sigma XI, Scientific Research Magazine, May-Jun 2001; 9
4. **Barker N**. *One More Frame by Norman Barker*, Professional Photographer, Feb 2001; 80
5. **Barker N**, Foster G. *Ancient Microworlds*. Photo Art International: The Art and Craft of Photography, Issue 32, Feb/Mar 2003; 16-19
6. **Barker N**, Foster G. *Rediscovering the Beauty of Fossils*. Nature's Best Magazine, Sept 2003; 26-39
7. Amato I, (ed). *Super Vision: A New View of Nature*. Harry N. Abrams, Inc. Publ, 2003; 160-163
8. **Barker N**. *Inner Beauty*. Mankind and Nature China. Wei Weller Publication, Jan 2005; 3,6-45
9. **Barker N**. *What is it? Boning Up*. Scientific American Magazine, Mar 2011; 21
10. **Barker N**. *What is it? Fraying Matter*. Scientific American Magazine, Jun 2011; 23
11. **Barker N**. Kalb C. *Anatomy, Fetal Armor*. Scientific American Magazine, Feb 2012; 72-73
12. **Barker N**. *Capturing Inner Beauty: Medical Imagery That Delves into the Aesthetic* [Slide Show] Norm Barker's photographs lie at the interface of art and science. Feb 2012; [www.ScientificAmerican.com/feb2012/placenta](http://www.ScientificAmerican.com/feb2012/placenta)
13. **Barker N**. *Artifact*, Johns Hopkins Magazine. Spring 2012; 64 (1); 16-17, also a portfolio available on the web @ [magazine.jhu.edu/spring-2012/pretty-painful](http://magazine.jhu.edu/spring-2012/pretty-painful)
14. Smith W. *From Embryos To Autopsies: Capturing medicine's big moments with photos*, Hopkins Medicine Magazine, Spring/Summer 2013:17-19
15. **Barker N.**, Iacobuzio C., *Hidden Beauty: Exploring the Aesthetics of Medical Science*, Civilization Magazine (in Press, for publication in June 2014)

**Photographic Contributions to Medical & Scientific Textbooks:** These are textbooks written by others with major contributions of my photographs.

1. Crosby RW, Cody J, Brodel M. *The Man Who Put Art into Medicine*, Springer-Verlag, New York, 1991, I served as picture consultant and printer for all the Illustrations used from the Brodel Archive.
2. Heptinstall R. *Pathology of the Kidney*, Three Vol. Set, 3rd Edition, Little Brown Co, Boston, 1992. I served along with Raymond Lund as photomicrographer and helped provide more than 2000 images for this classic textbook in its 6th edition.
3. Nager GT. *Pathology of the Inner Ear and Temporal Bone*, Lippincott, Williams Wilkins, 1993. I served along with Raymond Lund as photomicrographer and helped provide more than 800 B&W photomicrographs and xrays.
4. Epstein J. *Differential Diagnosis in Pathology: Urologic Disorders*, Igaku-Shoin, New York, 1994. I served as contributing photomicrographer for the project.
5. McCarthy EF. *Differential Diagnosis in Pathology: Bone and Joint Disorders*, Igaku-Shoin, New York, 1996. I served as contributing photomicrographer and provided more than 200 B&W photomicrographs and xrays.
6. McCarthy EF, Frassica F. *Pathology of Bone and Joint Disorders, with Clinical and Radiographic Correlation*, WB Saunders, 1998. I served as contributing photomicrographer and provided more than 250 B&W photomicrographs and xrays.
7. Kurman R. *Blaustein's Pathology of the Female Genital Tract*, 5th Ed. Springer-Verlag, 2002. I served as picture editor, updating and correcting photomicrographs.
8. Burger P. *Surgical Pathology of the Nervous System and Its Coverings*. Churchill Livingstone, Philadelphia, 2002. I served as contributing photomicrographer and picture editor providing more than 2000 photomicrographs and xrays for the project.
9. Von Hoff DD, Evans DB, Hruban RH. *Pancreatic Cancer*. Jones/Bartlett Publ, 2005, I provided photomicrography support for many chapters.

10. Hruban R, Pittman M, Klimstra D. *Atlas of Tumor Pathology: Tumors of the Pancreas*, 4th Series, American Registry of Pathology, Mar 2007. I served as contributing photomicrographer and picture editor providing more than 600 color photomicrographs.
11. Burger P, Scheithauer B. *Tumors of the Central Nervous System*, American Registry of Pathology, 2007. I served as contributing photomicrographer and picture editor, providing more than 1200 color photomicrographs and xrays.
12. Ali SZ, Erozan YS, Hruban RH, *Atlas of Pancreatic Cytopathology: With Histo-Pathologic Correlations*, Demos Medical Publ, March 2009. I provided photomicrography support for many chapters.
13. Burger P. Smears and Frozen Sections: In *Surgical Neuropathology, A Manual*, PB Publ, Baltimore, 2009. I served as contributing photomicrographer and picture editor, providing more than 1500 color photomicrographs and 650 CT scans.
14. Kurman RJ, Ronnett BM, Sherman ME, Wilkinson EJ. *Tumors of the Cervix, and Vulva*, Am Registry Pathology, 2011. I served as contributing photomicrographer and picture editor providing more than 400 color photomicrographs.
15. Kurman RJ, Ellenson LH, Ronnett BM. 6th ed. *Blaustein's Pathology of the Female Genital Tract*, Springer, 2011. I served as picture editor, updating and correcting photomicrographs for the current edition.
16. Brushart TM. *Nerve Repair*, Oxford Univ Press, 2011. I provided photography support for the entire book.
17. Burger P, Scheithauer B, *Diagnostic Neuropathology*, Amirsys, 2012. I served as contributing photomicrographer, providing more than 2000 macro/micro photographs and CT images.
18. Hruban RH, Kim B, Sandone C, Cornish T., *The Johns Hopkins Atlas of Pancreatic Pathology*. The iPad application, the first of its kind, supports the display of high-resolution images covering 115 diagnostic entities with 1,400 photographs and 26 medical illustrations. iTunes Store, 2012. I served as contributing photomicrographer and picture editor providing color photomicrographs and gross specimen images.
19. Tatsas A, Cornish T, Lennon AM, Fishman E., *The Johns Hopkins Atlas of Pancreatic Cytopathology*, The atlas covers over 25 diagnostic entities of principle importance in the cytologic evaluation of pancreatic lesions and contains over 700 high-resolution images. iTunes Store, 2013. I served as contributing photomicrographer and picture editor providing color photomicrographs and CT images.
20. Argani P, Cimino-Matthews A., *Interoperative Frozen Sections: Diagnostic Pitfalls*, Demos Medical Publishing, July 2013. I served as picture editor.
21. Fanaian N, Hruban RH, Euan K, Cornish T, *The Johns Hopkins iCareBook for Pancreatic Cancer*, A Video iPad app, supported by the Blum Kovler Foundation, from the Sol Goldman Pancreatic Cancer Research Center, Johns Hopkins University, School of Medicine, I served as video and picture editor.
22. McCarthy EF, Frassica F. *Pathology of Bone and Joint Disorders, with Clinical and Radiographic Correlation*, Cambridge University Press, September 2014 (In Press), I served as picture editor, updating and correcting photomicrographs and xrays for the current edition.

### Video & Websites

1. Hruban RH, **Barker NJ**, Producers; for "HALSTED" This Award Winning Hi-Definition, 55 min Documentary was broadcast on WETA, PBS Washington DC in April, 2012, as well as more than 50 other Public Broadcasting Station markets around the country, including Chicago, New York, Los Angeles, Boston. <http://halstedthedocumentary.org/>
2. **Barker NJ**, Foster G. [www.ancientmicroworld.com](http://www.ancientmicroworld.com), a web site showing photomicrography technique as well as describing fossil morphology.
3. **Barker NJ**, Iacobuzio C. [www.hiddenbeautyinmedicine.com](http://www.hiddenbeautyinmedicine.com), A website showing the collaboration between an artist and scientist as they explore the aesthetics of medicine.

### Museum & Gallery Exhibitions:

- These exhibits have featured my scientific photographs.
- |           |   |
|-----------|---|
| 8/95      | Gomez Gallery, Baltimore, MD, <i>Ancient Microworlds</i> , Gallery Exhibition   |
| 5/99      | Johns Hopkins University, Baltimore, MD, <i>The Nature of Art and Science</i> , Group Faculty Show, Department of Art As Applied to Medicine, |
| 6/99      | Randolph Macon College, Ashland, VA, <i>High Magnification Images</i> , University Gallery Exhibition   |
| 10/99     | Borders Bookstore, <i>Ancient Microworlds</i> , Photographic Exhibition, Baltimore, MD  |
| 6/00-9/00 | Virginia Museum of Natural History, Martinsville, VA, <i>Ancient Microworlds</i>  |
| 10/00     | Gomez Gallery, Baltimore, MD, Gallery Exhibit and Lecture, <i>Ancient Microworlds</i>   |
| 11/00     | School 33 Art Center, Baltimore, MD, Gallery Exhibit and Lecture, <i>Ancient Microworlds</i>  |



- 9/00 -1/1/02 Miami Museum of Science, Miami, FL, Museum Exhibit, *Signs of Life*
- 9/30/00-4/30/01 University of Michigan, Exhibit Museum of Natural History, Ann Arbor, MI, Museum Exhibit and Lecture, *Ancient Microworlds*
- 1/28/-4/30/01 New Mexico Museum of Natural History and Science, Albuquerque, NM, Museum Exhibit and Lecture, *Ancient Microworlds*
- 5/1/ -9/1/01 American Museum of Natural History, New York, Museum Exhibit & Lecture, *Ancient Microworlds*
- 10/14/01-1/6/02 Chicago Academy of Sciences, Peggy Notebaert Nature Museum, Chicago, IL, *Ancient Microworlds*
- 2/23/-5/19/02 Cleveland Museum of Natural History, Cleveland, OH, *Ancient Microworlds*
- 6/02-9/02 Fort Worth Museum of Science and History, Fort Worth, TX, *The Inner Beauty of Fossils*
- 3/02 Syracuse University, Syracuse, NY, *Exploring Beauty*, Lecture and Exhibit
- 10/02-3/03 Fernbank Museum of Natural History, Atlanta, GA, *Ancient Microworlds*
- 2/03-5/03 Southeast Museum of Photography, Daytona, FL, *Photography and Science*, Lecture & Exhibit
- 3/03-5/03 Delaware Center for Contemporary Art, Wilmington, DE, *The Beauty of Fossil Plants*
- 6/03-9/03 McMullen Museum of Art, Boston College, Boston Massachusetts, *Ancient Microworlds*
- 10/03-4/04 Newark Museum of Art, Newark, NJ, *The Beauty of Fossil Plants*
- 6/04-9/04 Smithsonian Institution, National Museum of Natural History, Washington D.C., *Fossil Forests*
- 10/04-1/05 Austin Science Center, Austin, TX, *Ancient Microworlds*
- 10/04-4/05 Museum fur Naturkunde, Chemnitz, Germany, *Ancient Microworlds*
- 11/04-6/05 National Museum (Nardoni) Prague, Czech Republic, *Inner Beauty of Fossils*,
- 2/05-5/05 McWane Center, Birmingham, AL, *Ancient Microworlds*
- 5/05-10/05 University of Colorado, Museum of Natural History, Boulder CO, *Ancient Forests*
- 9/05 Fine Print Gallery, Towson, MD, *Sea Mosses*
- 11/05-4/06 Houston Museum of Natural History, Houston, TX, *Fossil Forests and Ancient Microworlds*
- 2/06-4/06 Kalamazoo Nature Center, Kalamazoo, MI, *The Inner Beauty of Fossils*
- 2/06-4/06 Creative Alliance, Baltimore, MD, *Seaweeds: Wonders of the Ocean Realm*
- 6/06-8/06 Sternberg Museum of Natural History, Hays, KA, *Ancient Microworlds*
- 10/06-12/06 Utah Museum of Natural History, Salt Lake City, UT, *Ancient Microworlds*
- 11/06-4/07 Charleston Museum, Charleston, SC, *Seaweeds: Wonders of the Ocean Realm*
- 2/07-4/07 Petroleum Museum, Midlands, TX, *Ancient Microworlds*
- 6/07-9/07 Houston Museum of Natural History, Houston TX, *Seaweeds: Wonders of the Ocean Realm*
- 7/07 Biocommunications Assoc, Tuscon AZ, *Patent Medicine in the Early 20th Century*
- 10/07-8/08 Erie Art Museum, Erie, PA, *Ancient Microworlds*
- 10/07-2/08 Roper Mountain Science Center, Greenville, SC, *Seaweeds: Wonders of the Ocean Realm*
- 2/08-8/08 Science Place, Dallas, TX, *Ancient Microworlds*
- 10/08-12/08 Anniston Museum of Natural History, Anniston, AL, *Ancient Microworlds*
- 11/08 Rochester Institute of Technology, School of Photographic Arts and Sciences, Rochester NY, *Images from Science 2*, Group Exhibition and Printed Catalogue
- 11/08-12/08 National Arts Program, Johns Hopkins Medicine, First Annual Exhibit and Awards of The National Arts Program, Group Exhibit, "*Peabody Institute*," Print was selected for the permanent art collection at the Hackerman-Patz Patient and Family Pavilion of The Sidney Kimmel Cancer Center
- 3/09-4/09 Cross Mackenzie Gallery, Washington D.C., *Microworlds*
- 6/09-9/09 Everhart Museum of Natural History Science and Art, Scranton, PA, *Ancient Microworlds*
- 1/10-6/10 *George Peabody Library: An Exhibit of Photographs* by Norm Barker, 1<sup>st</sup> floor JHMI, Pathology Bldg.
- 12/09-3/10 National Arts Program, Johns Hopkins Medicine, Baltimore, MD, 2nd Annual Exhibit and Awards of The National Arts Program, Group Exhibit, *The Peabody Library*, Print was selected for the permanent art collection at the Hackerman-Patz Patient and Family Pavilion of The Kimmel Cancer Center,
- 11/09-4/10 Museum of Life and Science, Durham, NC, *Ancient Microworlds*
- 1/11-3/11 National Arts Program, Johns Hopkins Medicine, Baltimore, MD, 3rd Annual Exhibit and Awards of The National Arts Program, *Cleopatra*, Group Exhibit
- 7/11 Celebrating 100 years: Teaching Excellence in Medical Illustration, Art as Applied to Medicine, *Gallstones*, Group Exhibit, Turner Auditorium, Johns Hopkins School of Medicine
- 9/11 International Images for Science Exhibition, Royal Photographic Society, Fenton House, Group Exhibit, *Microbiology & Osteoporosis*, An exhibit of the best scientific photography from around the world, Bath, England

- 1/4-25/12 International Images for Science Exhibition, Bath Royal Literary & Scientific Institution Group Exhibit, *Microbiology & Osteoporosis*, An exhibition of the best scientific photography from around the world, Bath, England
- 2/4-9/12 International Images for Science Exhibition, Palace of Westminster, House of Commons Upper Waiting Hall, Jubilee Room, Group Exhibit, *Microbiology & Osteoporosis*, An exhibit of the best scientific photography from around the world London, England
- 2/7-4/15/12 Edinburgh International Science Festival, *Making The Invisible Visible*, Group Exhibit, Outdoor large-scale exhibition in St. Andrews Square, Edinburgh, Scotland
- 2/27-3/27/12 The International Images for Science Exhibition, Royal Albert Hall, Kensington Gore, Group Exhibit, *Microbiology & Osteoporosis*, An exhibition of the best scientific photography from around the world London, England
- 2/12-4/12 National Arts Program, Johns Hopkins Medicine, 4th Annual Exhibit and Awards of The National Arts Program, Group Exhibit, *Watkins Glen*, Baltimore, MD
- 4/12-5/12 International Images for Science Exhibition, University Complutense of Madrid, Group Exhibit, *Microbiology & Osteoporosis*, An exhibition of the best scientific photography from around the world. Madrid, Spain
- 4/12-5/12 The International Images for Science Exhibition, FOTOSPACE, Group Exhibit, *Microbiology & Osteoporosis*, An exhibition of the best scientific photography from around the world. Glenrothes, Scotland
- 5/3-16/12 DRUPA, Group Exhibit, *Dinosaur Bone*, This is the biggest exhibition for the printing industry and happens every 4 years. Dusseldorf, Germany
- 5/22-6/17/12 Venue, London Gallery West, University of Westminster, Broad Vision: Inspired by Images of Science 2, Group Exhibit, *Dinosaur Bone*, Broad Vision is a multi-disciplinary arts/science project involving student researchers and academic staff from a number of different disciplines, including Imaging Science, Photographic Arts, Biosciences, Illustration, Computing and Psychology
- 9/12-12/12 Cleveland Museum of Art, DIY, Photographers & Books, Group Exhibit, *Paleobotanical Splendor*, Cleveland, OH
- 11/12 Second Annual ARTCAN Exhibit for Cancer, Group Show, *Heal, Empower, Impact* Bill Lowe Gallery Midtown Atlanta, GA
- 2/13-4/13 National Arts Program, Johns Hopkins Medicine, 5th Annual Exhibit and Awards of The National Arts Program, Group Show, *Passing Storm*, Baltimore, MD
- 4/10/-5/31/13 Johns Hopkins University, School of Medicine, *Hidden Beauty: Exploring The Aesthetics of Medical Science*, Inaugural exhibit of the traveling show with more than 50 large-scale images from the book.
- 9/13 International Images for Science Exhibition 2013, Royal Photographic Society, Fenton House, Bath, England, Group Exhibit, *Gallstones, Red Fossil Coral and Gomphothere Tooth*, 100 of the best images from science – selected by scientists, photographers, and those working in the field – will be included in an exhibition that will open in Newcastle, England in Sept 2013 as part of the British Science Festival and will then tour the UK and abroad.
- 11/13-12/1/13 Royal Photographic Society, International Images for Science Exhibition 2013, Royal Albert Hall, Ground floor corridor, London, England, *Red Fossil Coral, Gallstones, Gomphothere Tooth*
- 10/13-11-13 Fotografia Scientifica 2013, Mostra Internazionale Itinerante, Verona, Italy, *Red Fossil Coral*
- 3/14-5/30/14 International Images for Science Exhibition 2013, Art Cell Gallery, Cancer Research UK, Cambridge, England Research Institute, which consists of 100 stunning prints, showcases an extraordinary variety of scientific photography – images that explore worlds we can only imagine, or that are used as tools in everyday life in medicine, engineering and other related fields. They do this in a way that informs, questions and inspires.
- 4/14/-10/14 The American Center for Physics, *Time Exposed*, 25 large format photomicrographs of Ancient Fossils, Invited exhibition, guest curated by Sarah Tanguy, College Park, MD
- 5/14-6/14 Royal Photographic Society, *Visualizing Medicine: Medical Photography Exhibition, Human Brain, Smokers Lung, Placenta, Culture Plates*, Juried Group Exhibit, Fenton House, Bath, England
- 9/14-10/14 Rochester Institute of Technology, *Hidden Beauty: Exploring The Aesthetics of Medical Science*, Exhibit of the traveling show with more than 50 large-scale images from the book, and invited lecture. Rochester, NY
- 01/15-07/15 The Mütter Museum, *Hidden Beauty: Exploring The Aesthetics of Medical Science*, Exhibition of the traveling show with more than 50 large-scale images from the book. Philadelphia, PA

### Photographs in Museum's Permanent Collections

Museum Curators have selected my scientific images to be housed in the permanent collections of their Institutions.

1. Smithsonian Institution (National Museum of Natural History) Washington DC
2. National Museum (Narodni) Prague, Czech Republic
3. George Eastman House, International Museum of Photography, Rochester, NY
4. American Museum of Natural History, New York, NY
5. Science Museum, London, England
6. University Art Museum, University of New Mexico, Albuquerque, NM
7. Dayton Art Institute, Dayton, OH
8. Creative Photographic Art Center of Maine, Lewiston, ME
9. Columbus Museum of Art, Columbus, OH
10. Mint Museum of Art, Charlotte, NC
11. University of Michigan Museum of Art, Ann Arbor, MI
12. Ackland Art Museum, Chapel Hill, NC
13. Syracuse University Museum of Art, Syracuse, NY
14. Mobile Museum of Art, Mobile, AL
15. Montana Museum of Art and Culture, Missoula, MT
16. Center for Photography at Woodstock, Woodstock, NY
17. Museum fur Naturkunde, Chemnitz, Germany
18. Miami Museum of Science, Miami, FL
19. New Orleans Museum of Art, New Orleans, LA
20. Southeast Museum of Photography, Daytona Beach, FL
21. Polk Museum of Art, Lakeland, Florida
22. University of Michigan Exhibit Museum of Natural History, Ann Arbor, MI
23. Center for Photography as an Art Form, Delhi India
24. Museum of Birbal Sahini Institute of Paleobotany, Lucknow, India
25. Newark Museum, Newark, NJ
26. "Grigore Antipa" National Museum of Natural History, Bucharest, Romania
27. McMullin Museum of Art, Boston, MA
28. Nelson Atkins Museum of Fine Arts, Kansas City, MO
29. Colorado Photographic Art Center, Denver, CO
30. University of Maryland University College, Adelphi, MD
31. Houston Museum of Natural Science, Houston, TX
32. Science Museum of Minnesota, St. Paul, MI
33. Charleston Museum, Charleston, SC
34. Australian Museum, Sydney, Australia
35. Johns Hopkins Medicine, Permanent Art Collection at the Hackerman-Patz Patient and Family Pavilion of The Kimmel Cancer Center, Baltimore, MD
36. Johns Hopkins University, Sheridan Libraries, George Peabody Library Project Portfolio, Baltimore, MD
37. Paleontological Research Institution, Museum of the Earth, Ithaca, NY

### Teaching

Graduate Program in Medical and Biological Illustration in the Department of Art as Applied to Medicine

- 1991–Present Course of Photography and Digital Imaging, to the first year graduate students in Art as Applied to Medicine. Communications Media: Skills laboratory providing hands-on experience in photography, camera and lighting techniques are emphasized, ME:120.717

Medical Photography: use of the camera as an adjunct to the illustrators communication skills. Perfect printing for salon reproduction is stressed. ME:120.808

### Mentoring

- 1982–Present Direct the College Internship Program: An excellent relationship has been developed with colleges and universities to enable advanced college students to work for credit and gain valuable, practical hands-on experience as well as giving them experience and a behind-the-scene look at Biomedical Photography as a career choice.



In fifteen years we have had over thirty students participating in photography internships. Colleges participating in the Pathology Photography Internship Program: The Maryland Institute College of Art, Dundalk Community College, Rochester Institute of Technology, University of Maryland at Baltimore County, University of Baltimore and Cecil Community College

### **Educational Program Building**

- 1985–2005 Head of the Two-Year Certificate Training Program in BioMedical Photography, Department of Pathology, Johns Hopkins School of Medicine. Responsible for training in all phases of medical photography and certification of forty-five Biomedical Photographers. These individuals have gone on to run media, photography and graphics departments themselves and include:  
 Richard DeWitt, now at Memorial Sloan Kettering  
 Mark Teske, now at the University of Maryland  
 Ben Ehrman, now at Sinai Hospital  
 Richard Yeinger, now at the Maryland State Police, Photography Section,  
 James Van Rensselear, now at the Johns Hopkins Homewood Campus.
- 1995-Present Art as Applied to Medicine, Photography and Digital Imaging Course, which is reviewed and updated every year to keep up with the changing technology in the publishing industry. Student evaluations rate the course Outstanding and say it should be extended.

|   |      |
|---|------|
| <b>Educational Extramural</b>                               | None |
| <b>Clinical Activities</b>                                  | None |
| <b>System Innovation and Quality Improvement Activities</b> | None |

### **ORGANIZATIONAL ACTIVITIES**

#### **Institutional Administrative Appointments**

- 2001–Present Serve as Director of Pathology Photography and Graphics Laboratory, which provides photography and graphic services for teaching, research and publication for the entire Hopkins community.
- 2002–2003 Pathology Department Web Committee

#### **Editorial Activities**

- 1998–2001 Editorial Board, Journal of BioCommunications Association
- 2011–2014 BioCommunications Assoc, Journal of BioCommunications, Management Board
- 2013–2014 Serve as evaluator for Pathology Residents, Grand Round Presentations

#### **Advisory & Professional Society Committees**

- 1984–1988 Biological Photographic Assoc. Chairman, Chesapeake Chapter, organized
- 1985–Present Biological Photographic Assoc. Member, House of Delegates
- 1989–Present Curriculum Development Advisory Board, Dundalk Community College
- 1990–1992 Advisory Board for Media Curriculum, Howard Community College
- 1990–1994 Elected Biological Photographic Assoc., Board of Registry, Coordinator, Oral Exam
- 1995–Present Advisory Board for Media and Art, Harford Community College
- 1995–1999 BioCommunications Assoc., Chairman of Fellowship Committee
- 1996 Biological Photographic Assoc., nominated to run for The Board of Governors
- 1997–2005 Biological Photographic Assoc., Vice-Chairman Chesapeake Chapter
- 2008–2009 BioCommunications Assoc., Chairman of The Louis Schmidt Award Committee

#### **Professional Societies**

- 1982–Present BioCommunications Association, BCA, Elected Fellow (FBCA) of the Organization in 1995 for outstanding contributions to BioMedical Photography and meritorious service to imaging in the Life Sciences
- 1998–2004 Association of BioCommunications Directors, ABCD
- 2000–2005 American Society of Media Photographers, ASMP
- 2001–Present Institute of Medical Illustrators, IMI
- 2004–Present National Association of Photoshop Professional, NAPP

2013–Present Society of Photographic Education, SPE  
 2014–Present Royal Photographic Society, RPS

### Conference Organizer, Session Chair

9/92 Biological Photographic Assoc, Portland, OR, Session Moderator, Natural History Session  
 9/93 Biological Photographic Assoc, Stamford, CT, Session Moderator/ Speaker, Natural History Session  
 9/95 Biological Photographic Assoc, San Antonio, TX, Moderator/Speaker Natural History Session  
 9/96 Biological Photographic Assoc, Milwaukee, WI, Digital Imaging in Photomicrography, Session Moderator/Speaker, Digital Microscopy at Johns Hopkins Pathology  
 4/03 Mid-Atlantic BioCommunicators Regional Conference, University of Maryland, Organizer, Host & Chair of Scientific Program of Conference, as well as presenter, Telling the Wildlife Story  
 9/12 Institute of Medical Illustrators, Session Chair for afternoon Scientific Program Glasgow, Scotland

**Consultantships** none

### RECOGNITION

#### Honors & Awards

1987-2010 Nikon International Small World Competition

1987 Honorable Mention  
 1988 Honorable Mention  
 1989 10th Place  
 1990 12th place  
 1991 15th Place  
 1992 Honorable Mention  
 1993 5th Place  
 1994 20th Place  
 1997 Two Honorable Mentions  
 1998 12th Place  
 2000 Image of Distinction  
 2009 Image of Distinction  
 All images published in the Nikon Calendar.

1988 American Society of Clinical Pathologists, *Membranous Glomerulonephritis x240* Excellence in Photomicrography  
 1989 Biological Photographic Assoc, BioImage Salon, *Heart Worm in Canine Blood, x450* Honorable Mention, Print Series, St Louis, MO  
 1990 Biological Photographic Assoc, BioImage Salon, *Dinosaur Bone x60*, Charles Foster Memorial Citation for Excellence in Photomicrography, Tampa, FL  
 1991 Biological Photographic Assoc, Silver Medal for Best Oral Paper, *Documenting the Fossil Record*, Tampa, FL  
 1992 Biological Photographic Assoc, BioImage Salon, *Nautilus, Aronauta argo*, Second Award, Specimen Color Print, Tarsi, *Predacious Diving Beetle x40*, Second Award, Portland, OR  
 1993 Biological Photographic Assoc, H. Lou Gibson Best Journal Paper Award: *Photographing The Osprey in The Chesapeake Bay Region*, Stamford, CT  
 1993 Biological Photographic Assoc, BioImage Salon, *Dinosaur Bone-Medullary Canal x200*, Second Award, *Nymphalis antiopia eggs x60*, Honorable Mention, Stamford, CT  
 3/94 Biological Photographic Assoc, received grant from the Endowment Fund for Education to study digital imaging at the Center for Creative Imaging, Camden, ME  
 1994 World Congress on Biomedical Communications, Media Expo, Fine Art, *Eve*, Award of Excellence, Orlando, FL  
 1997 Biological Photographic Assoc, BioImage Salon, *Pointsettia Leaf x20*, Award of Excellence and The Canadian Founders Natural Science Award, Reno, NV  
 1998 BioCommunications Assoc, BioImage Salon, *Mice*, Award of Excellence and *Stromatolite Fossil Cyanobacteria x40*, Award of Excellence, *Department Identity Brochure*, Award of Excellence & The Charles Foster Memorial Citation, for Excellence in Photomicrography, Portland, ME

- 1999 BioCommunications Assoc, BioImage Salon, *Fossil Cast of Wood, Indonesia x10*, Award of Excellence and The Charles Foster Memorial Citation, for Excellence in Photomicrography, two Citations of Merit, Phoenix, AZ
- 2001 BioCommunications Assoc, BioImage Salon, *Cenocerus pseulineatus*, Award of Excellence and The B.C.A. Medical Education Award, Dallas, TX
- 2003 BioCommunications Assoc, BioImage Salon, *Ostera virginica*, Award of Excellence and The Canadian Founders Natural Science Award, [http://jbiocommunication.org/free\\_issues/29-4/Gallery.html](http://jbiocommunication.org/free_issues/29-4/Gallery.html), Las Vegas, NV
- 2005 BioCommunications Assoc, BioImage Salon, *Sea Mosses Poster*, Award of Excellence for Graphic Poster Design and Best of Show, <http://jbiocommunication.org/issues/31-2/issuegallery.html>, Portland, OR
- 2007 BioCommunications Assoc, BioImage Salon, *Araucaria mirabilis, Fossil Pine Cone*, Award of Excellence and Favosites sp., *Red Sponge Coral*, The Charles Foster Memorial Citation, for Excellence in Photomicrography, Two Citations of Merit, <http://jbiocommunication.org/issues/33-2/gallery.html>, Tucson, AZ
- 2008 BioCommunications Assoc, BioImage Salon, *Carditamera floridana*, Two Citations of Merit, *Paleobotanic Beauty Triptych*, Award of Excellence and *Yowah Nut Opal*, The Charles Foster Memorial Citation for Excellence in Photomicrography, <http://jbiocommunication.org/issues/34-2/gallery.html>, Rochester, NY
- 2008 BioCommunications Assoc, *2008 Louis Schmidt Award*, The highest award given by the Association for outstanding contributions to the progress of communications in the life sciences, promotion of understanding and cooperation within the field of biocommunications, maintenance of an ethical approach to professional relationships and a willingness to freely share scientific information and technique, *A Lifetime Achievement Award*, Rochester, NY
- 2009 BioCommunications Assoc, BioImage Salon, *Brown Pelican Chick*, Award of Excellence and The Canadian Founders Natural Science Award, *George Peabody Library*, Award of Excellence for Graphics in Poster Design, also Two Citations of Merit, <http://jbiocommunication.org/issues/35-2/gallery.html>, Salt Lake City, UT
- 2009-2010 Olympus Bioscapes International Digital Imaging Competition, Honorable Mention, *Red Sponge Coral*, published in Olympus 2010 Calendar
- 2010 BioCommunications Assoc, BioImage Salon, *Fungus Plates*, Award of Excellence, *Gallstones x10*, Award of Excellence, *OR Concentration*, Award of Excellence, Boston MA,
- 6/11 BioCommunications Assoc, BioImage Salon, BCA Medical Education Award, Medical Photography Award & Award of Excellence, Specimen, *Osteoporosis*, Award of Excellence, Graphic Poster, *Microbiology*, Award of Excellence, Photomicrograph, *Placenticerias mieki*, Citation of Merit, Graphic Poster, Evergreen, Phoenix, AZ
- 2012 Royal Society of Chemistry, RSC Library Photograph Competition, Science in The Library, *The George Peabody Library*. Winner published on front cover of RSC Publishing Catalogue for 2012
- 3/12 Frank H. Netter Award from the Vesalius Trust for *The Johns Hopkins Atlas of Pancreatic Pathology*. This innovative, visually based training product is delivered on an iPad and improves understanding of medical information. The atlas was created by Ralph Hruban, MD; Bona Kim, MA; Norma Barker, MS; Corinne Sandone, MA, CMI; and Toby Cornish MD, PhD. The application supports the display of high-resolution images covering 115 diagnostic entities with 1,400 photographs and 26 medical illustrations.
- 6/12 Health and Science Communications Associations, Bronze Award for *HALSTED*, Ralph Hruban & Norman Barker, Producers, Providence, RI
- 7/12 BioCommunications Assoc, BioImage Salon, Citations of Merits for, *Guairea cariera, Smokers Lung and Solenestrea*, Bar Harbor, ME
- 7/12 BioCommunications Assoc, BioImage Salon, BCA Medical Education Award, Medical Video, for *HALSTED*, Ralph Hruban & Norman Barker, Producers, Bar Harbor, ME [www.bca.org/gallery/bioimages2012awards.html](http://www.bca.org/gallery/bioimages2012awards.html)
- 2/12-4/13 National Arts Program, Johns Hopkins Medicine, Fifth Annual Exhibit and Awards of The National Arts Program, 3rd place, *Passing Storm*, Baltimore, MD

- 6/13 BioCommunications Assoc, BioImage Salon, BCA Medical Education Award, & an Award of Excellence for Graphics Media and Book Design, for *Hidden Beauty: Exploring The Aesthetics of Medical Science*, Norman Barker & Christine Iacobuzio Donahue, Pacific Grove, CA, [www.bca.org/gallery/bioimages2013awards.html](http://www.bca.org/gallery/bioimages2013awards.html)
- 10/13 Web Health Awards, Honoring the Best Mobile Health Resources, Merit Award Winner for, *The Johns Hopkins iCareBook for Pancreatic Cancer*, Category: Mobile Application: Medical Education: Large Mobile Device, Ralph Hruban, Toby Cornish, Norman Barker & Development Team, Madison Films

### Invited Talks & Presentations

- 5/86 *Photography of Small Objects*, Association of Medical Illustrators, Baltimore, MD
- 8/86 *Photography of Metallic Subjects*, Biological Photographic Assoc, Keystone, CO
- 3/87 *Electronic Flash in the Field*, Biological Photographic Assoc, Baltimore, MD
- 8/88 *Tent Lighting of Small Biomedical Objects*, Biological Photographic Assoc, Baltimore, MD
- 8/88 *Exposure Booth in a High Volume Lab*, Biological Photographic Assoc, Ann Arbor, MI
- 8/89 *Return of the Osprey*, Biological Photographic Assoc, St. Louis, MO
- 1/90 *Photography of Small Insects in the Field*, Baltimore Camera Club, Baltimore, MD
- 3/90 *Photographing Small Archaeological Objects*, Poster Session, Barker NJ, Foster G., Archaeological Institute of America, San Francisco, CA
- 8/90 *Photomicrography with the Wild 400*, & Moderator, Photomicrography Session Biological Photographic Assoc, Phoenix, AZ
- 9/90 *Techniques on Documenting the Fossil Record*, Explorers Club, Photographic Exhibition, Barker NJ, Foster G., Washington, D.C.
- 8/91 *Documenting the Fossil Record*, Biological Photographic Assoc, Tampa, FL
- 10/91 *Techniques of Photography in Paleontology & The R.B.P. Challenge*, Biological Photographic Assoc, Regional Meeting, Baltimore, MD
- 8/92 Session Moderator/Speaker, Natural History Story, Biological Photographic Assoc, Portland, OR
- 8/93 *Photography in The Field*, Session Moderator/Speaker, Natural History Session Biological Photographic Assoc, Stamford, CT
- 10/93 *Managing Digital Photography*, 25th Anniversary Symposium of The Biomedical Photography Department, Rochester Institute of Technology, Rochester, NY
- 6/94 *Training in Biomedical Photography: The Two-Year, On-The-Job Training Program at Johns Hopkins University, School of Medicine*, World Congress on Biomedical Communication, Orlando, FL
- 8/95 Session Moderator/Speaker, *Flash in the Field*, Natural History Session Biological Photographic Assoc, San Antonio, TX
- 9/95 *Photography of Natural History Subjects*, Biological Photographic Assoc, Atlanta, GA
- 5/96 *Macro and Micro in Medicine & Close-Up Work in the Applied Sciences*, Biological Photographic Assoc, Memphis, TN, Regional Meeting
- 8/96 *Digital Imaging in Photomicrography*, Session Moderator/Speaker, Biological Photographic Assoc, Milwaukee, WI
- 9/96 *Using a Camera in Biomedical Research*, Maryland Institute College of Art, Baltimore, MD
- 5/97 *Bio-Medical Photography and Digital Imaging at Johns Hopkins School of Medicine*, Mid-Atlantic Medical Writers Assoc, Columbia, MD
- 7/97 *Photography in the Field and the Operating Room*, Association of Medical Illustrators, (National Meeting), Baltimore, MD
- 8/97 *Quick Shots: Techniques in Studio Photography*, Biological Photographic Assoc, Reno, NV
- 8/98 *What is Biomedical/Scientific Photography*, Maryland Science Center, Baltimore, MD
- 8/99 *Macro and Micro In Paleontology & The Noritsu Digital Printer*, BioCommunications Assoc, Phoenix, AZ
- 9/99 *Photography in Medicine*, Maryland Institute College of Art, Baltimore, MD
- 2/00 *Digital Imaging*, New York Microscopy Society, American Museum of Natural History, New York,
- 7/00 *Special Techniques in BioPhotography*, BioCommunications Assoc, Rochester, MN
- 9/00 *Imaging at Johns Hopkins School of Medicine, Department of Pathology*, BioCommunications Assoc. and Assoc. of Medical Illustrators, Durant, MI

- 10/00 *Exploring Cameras and their use in The Biological Sciences*, Towson State University, Baltimore, MD
- 10/00 *Career Day, Biophotography: Career Opportunities in the Sciences*, Maryland Institute College of Art, Baltimore, MD
- 10/00 *Standardization in Patient Photography for Publication and Presentation*, Johns Hopkins School of Medicine, Department of Plastic and Reconstructive Surgery, Grand Rounds, Johns Hopkins Hospital
- 2/01 *Applications of Macro and Micro Photography*, Baltimore Camera Club, Baltimore, MD
- 3/02 *The Inner Beauty of Fossils*, Exploring Beauty Symposium, Syracuse University, Syracuse, NY
- 4/02 *Imaging and Graphics at Pathology Photography*, Poster Session, Johns Hopkins School of Medicine, Department of Medicine, Research Retreat, Johns Hopkins Applied Physics Laboratory, Laurel, MD
- 11/02 *Specialized Techniques in Bio-Medical Photography*, Maryland Institute College of Art, Baltimore, MD
- 11/02 *Close-Up, Macro and Micro Photography*, Bryn Mar School, Baltimore, MD
- 2/03 *Photography and Science: The Relationship Between Scientific Inquiry, Knowledge and Photography*, Southeast Museum of Photography, Daytona Beach, FL
- 3/03 *Natural Science Photography*, BioCommunications Assoc, Las Vegas, NV
- 3/03 *Natural Science Photography: Publishing the Wildlife Story*, Program organizer and speaker, Mid-Atlantic Biocommunicators Regional Conference, Baltimore, MD
- 4/03 *Photography, Science and Art*, Chesapeake Gem and Mineral Society, Baltimore, MD
- 4/03 *Imaging and Graphics at Pathology Photography*, Johns Hopkins School of Medicine, Department of Medicine, Research Retreat, Poster Session, JHU Applied Physics Laboratory, Laurel, MD
- 12/03 *Portrait Photography on a Budget*, Bryn Mar School, Baltimore, MD
- 4/04 *The Camera as a Tool: Natural Science Photography*, Johns Hopkins School of Medicine, Department of Art as Applied to Medicine, Medical College of Georgia and University of Toronto Student Exchange, Baltimore, MD
- 4/05 *Imaging and Graphics at Pathology Photography*, The Johns Hopkins School of Medicine, Department of Medicine, Research Retreat, Poster Session, Johns Hopkins Hospital, Turner Auditorium, Baltimore, MD
- 2/06 *Digital Imaging in Scientific Research*, The Maryland Institute College of Art, Baltimore, MD
- 9/06 *Ancient Microworlds: Photography in Paleontology*, University of Utah, Salt Lake City, UT
- 11/06 *Seaweeds and Early Photography: The Connection*, Mid-Atlantic BioCommunicators, Fredrick, MD
- 4/07 *The Cyanotype Process*, Johns Hopkins School of Medicine, Department of Art as Applied to Medicine, Student Exchange with Medical College of Georgia and University Toronto
- 5/07 *Poster Session, Imaging and Graphics at Pathology Photography*, Johns Hopkins School of Medicine, Department of Medicine, Research Retreat, JHH, Turner Auditorium, Baltimore, MD
- 7/07 *Historical Techniques in Early Photography*, BioCommunications Assoc, Tucson, AZ
- 3/08 *Travel as Influence and Inspiration*, Maryland Institute College of Art, Baltimore, MD
- 10/08 *Using High Magnification Photography*, Tidewater Camera Club, Easton, MD
- 11/08 *Early Photographic History*, Baltimore Camera Club, Baltimore, MD
- 7/09 *Architectural Photography at The George Peabody Library*, BioCommunications Assoc, Show us your Stuff, Salt Lake City, UT
- 6/10 *The Challenges of Self Publishing*, BioCommunications Assoc, Show us your Stuff, Boston, MA
- 6/11 *Techniques in Photographing Culture Plates*, BioCommunications Assoc, Phoenix, AZ
- 6/11 *Halsted: The Man & The Genius*, Screening of the Documentary Film, "HALSTED", Dr. Ralph Hruban and, Norman Barker producers, 6th Annual Jan Wyatt Symposium, The Cashiers Historical Society, Cashiers, NC
- 7/11 *Lighting Strategies for Small Object Photography*, Association of Medical Illustrators 66th Annual Meeting, Baltimore, MD
- 3/12 *Anatomy of a Photoshoot*, Baltimore Camera Club, Baltimore, MD
- 6/12 *Halsted: Our Surgical Heritage and The Johns Hopkins iPad Atlas of Pancreas Pathology*, BioCommunications Assoc, Bar Harbor MA
- 3/13 *So You Want to Publish a Photo Book*, Baltimore Camera Club, Baltimore, MD
- 4/13 *Photography for The Medical Illustrator*, Johns Hopkins School of Medicine, Department of Art as Applied to Medicine, Student Exchange with The Medical College of Georgia and University of Toronto, Baltimore, MD

- 6/7/13 *Viewing and Introduction of Award Winning "PBS Halsted Documentary"*, JHH, at the Scientific Session of Halsted Resident Biennial Meeting, Baltimore, MD
- 6/13 *A Survey of Medical Publishing: From Print to iPad*, BioCommunications Assoc, Asilomar, CA
- 9/13 *Hidden Beauty: The Beauty of the Scientific Image*, Inaugural Pathology Educational Symposium, JHH, Turner Auditorium, Baltimore, MD
- 3/14 *Artistic & Creative Careers in the Sciences*, The Intersection of Art & Science, Maryland Institute College of Art, Internship Fair & Panel Discussion, Baltimore, MD
- 6/14 *Patent Medicine: Selling The Cure*, 5<sup>th</sup> Annual Conference on Comics and Medicine, Baltimore, MD
- 7/14 *Patent Medicine: Selling The Cure*, Combined Meeting of the Association of Medical Illustrators and BioCommunications Association, Mayo Clinic Rochester MI,

### **International Invited Talks & Presentations**

- 6/90 *How to Photograph Jewelry*, Fifth Annual Meeting of Jewelry Historians, Barker NJ, Foster G., London, England
- 8/99 *Mini Labs: A Marriage of Traditional and Digital*, 2nd World Congress on Biomedical Communications, Amsterdam, Holland
- 9/01 *Techniques in Macro and Micro Imaging*, Institute of Medical and Biological Illustration, Harrowgate, England
- 9/02 *Natural Science Photography: Publishing the Wildlife Story*, Institute of Medical and Biological Illustration, Derby, England
- 9/04 *Noritsu Mini Lab in a Hospital Environment*, Institute of Medical and Biological Illustration, Brighton, England
- 1/08 Johns Hopkins University, Near Eastern Studies Department, Archeological Photography for Dr. Betsy Bryan, The JHU Mut Temple Foundation Project, Luxor, Egypt; Published @ [www.jhu.edu/egypttoday/2007/index2007.html](http://www.jhu.edu/egypttoday/2007/index2007.html)
- 1/09 Johns Hopkins University, Near Eastern Studies Department, Archeological Photography for Dr. Betsy Bryan, JHU/ARCE Mut Lake Collaboration, 2008-2009, Luxor, Egypt; Published @ [www.jhu.edu/egypttoday/2009/index2009.html](http://www.jhu.edu/egypttoday/2009/index2009.html)
- 9/09 *The Early History of Photography and its Applications in the Sciences*, Institute of Medical Illustrators, Cumbernauld, Scotland
- 10/11 *Non-Traditional Publication Modes for Medical Teaching and Self-Publishing*, Institute of Medical Illustrators, Cheshunt, England
- 9/12 *Halsted: Our Surgical Heritage*, Institute of Medical Illustrators, Glasgow, Scotland
- 10/13 *The Photo Book*, Institute of Medical Illustrators, Leicester, England
- 10/14 *Patent Medicine: Selling The Cure*, Institute of Medical Illustrators, Bristol England