

Gerald J. Sedgewick
Curriculum Vita

Program Director
Biomedical Image Processing Lab (BIPL)
Genomics Analysis Center (GAC), East Bank
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Education/Employment:

1998 to present	Program Director Biomedical Image Processing Lab (BIPL) & the Genomics Analysis Center (GAC). Department of Neuroscience, University of Minnesota
1986 to 1998	Principal Photographer Cell Biology and Neuroanatomy, University of Minnesota
1983 to 1998	Commercial Photographer Gerald Sedgewick Photography, St. Paul, Minnesota
1980 to 1982	Photographic Technician Department of Zoology, University of Iowa
1977 to 1982	Photographer/Multi-Media Specialist City of Flint, Flint, Michigan
1973 to 1977	B.A. Journalism/English University of Iowa

Professional Certification

Computer-Assisted Image Analysis, North Carolina State University, 1996. John Russ, Ph.D., instructor.

Applications of Unbiased Stereology to Neural Systems Course, 1997. Peter R. Mouton, Ph.D. and Mark West, Ph.D., instructors.

Publications

A. T. Haase, K. Henry, M. Zupancic, G. Sedgewick, R. A. Faust, H. Melroe, W. Cavert, K. Gebhard, K. Staskus, Z-Q Zhang, P. J. Dailey, H. H. Balfour Jr., A. Erice, A. S. Perelson. (1996) Quantitative Image Analysis of HIV-1 Infection in Lymphoid Tissue. *Science* Vol 274: 885-1048.

G. Sedgewick, Z-Q Zhang, and N. Pham. (1996) Cover Image, *Science* Vol 274

J. Sedgewick. (1997) Cover image, *Science* Vol. 276

Z-Q Zhang, D. W. Notermans, G. Sedgewick, W. Cavert, S. Wietgreffe, M. Zupancic, K. Gebhard, K. Henry, L. Boies, Z. Chen, M. Jenkins, R. Mills, H. McDade, C. Goodwin, C. M. Schuwirth, S. A. Danner, A. T. Haase. (1997) Kinetics of CD4+ T Cell Repopulation of Lymphoid Tissues After Treatment of HIV-1 Infection. *Proc Natl Acad Sci U S A*. Vol 95(3): 1154-9.

Fatemi SH, Sidwell R, Akhter P, Sedgewick J, Thuras P, Bailey K, Kist D. (1998) Human influenza viral infection in utero increases nNOS expression in hippocampi of neonatal mice. *Synapse* Vol. 29(1): 84-8.

Fatemi SH, Sidwell R, Kist D, Akhter P, Meltzer HY, Bailey K, Thuras P, Sedgewick J. (1998) Differential expression of synaptosome-associated protein 25 kDa [SNAP-25] in hippocampi of neonatal mice following exposure to human influenza virus in utero. *Brain Res*. Vol. 800(1):1-9.

Setiadi H, Sedgewick G, Erlandsen SL, McEver RP. (1998) Interactions of the cytoplasmic domain of P-selectin with clathrin-coated pits enhance leukocyte adhesion under flow. *J Cell Biol*. Vol. 142(3): 859-71.

Dombek PE, Cue D, Sedgewick J, Lam H, Ruschkowski S, Finlay BB, Cleary PP. (1999) High-frequency intracellular invasion of epithelial cells by serotype M1 group A streptococci: M1 protein-mediated invasion and cytoskeletal rearrangements. *Mol Microbiol*. Vol. 31(3): 859-70.

Wild R, Ramakrishnan S, Sedgewick J, Griffioen AW. (2000) Quantitative assessment of angiogenesis and tumor vessel architecture by computer-assisted digital image analysis: effects of VEGF-toxin conjugate on tumor microvessel density. *Microvasc Res*. Vol. 59(3): 368-76.

Rudney JD, Chen R, Sedgewick GJ. (2001) Intracellular *Actinobacillus actinomycetemcomitans* and *Porphyromonas gingivalis* in buccal epithelial cells collected from human subjects. *Infect Immun*. Vol. 69(4): 2700-7.

Grube E, Gerckens U, Yeung AC, Rowold S, Kirchhof N, Sedgewick J, Yadav JS, Stertz S. (2001) Prevention of distal embolization during coronary angioplasty in saphenous vein grafts and native vessels using porous filter protection. *Circulation*. 2001 Vol. 104(20): 2436-41.

Fatemi SH, Earle JA, Stary JM, Lee S, Sedgewick J. (2001) Altered levels of the synaptosomal associated protein SNAP-25 in hippocampus of subjects with mood disorders and schizophrenia. *Clinical Neuroscience and Neuropathology*. Vol. 12(15): 3257-62.

Sedgewick, J. (2002). *Quick Photoshop for Research: A Guide to Digital Imaging for Photoshop 4x, 5x, 6x, & 7x*. Kluwer Academic/Plenum Publishers.

Sedgewick, J. (2002). Resolution Confusion. *Microscopy Today*. Vol 9 18.

Sedgewick, J. (2003). Use Adobe Acrobat to Keep Original Resolutions and to Make TIFF Files

From Any Program. *Microscopy Today*. Vol 10: 16 -18.

Sedgewick, J. (2003). Segmentation Before Quantization By Using Photoshop: Darkfield Images. *Microscopy Today*. Vol. 11 Number 1: 18 - 22.

Sedgewick, J. (2003). Photoshop Tutorials: Selecting ROIs from Brightfield Images. *Microscopy Today*. Vol. 11 Number 2: 16 - 20.

Sedgewick, J. (2003). How To Get Some Action (In Photoshop). *Microscopy Today*. Vol. 11 Number 3: 30 - 31.

Sedgewick, J. (2003). Setting White, Black and Gamma on Continuous Tone Using Photoshop. *Microscopy Today*. Vol. 11 Number 3: 20-24.

Sedgewick, J. (2003). Adding Color to Grayscale Images. *Microscopy Today*. Vol. 11 Number 4 (in publication).

Sedgewick, J. (2003). Post-Processing Confocal Images. (Book Chapter) *Confocal Microscopy: Methods & Protocols*. Humana Press (in publication).

Teaching

University of Minnesota (1999 - Present)

Graduate Courses:

Light and Electron Microscopy. Co-taught with Stan Erlandsen, Ph.D.

Undergraduate Courses:

Tissue Engineering and Microscopy. Co-taught with Allison Hubbel, Ph.D.

Invited Training Workshops:

Digital Imaging Workshop. University of Arizona, Tucson, AZ (2003)

Photoshop for Research. McCrone Research Institute, Chicago, IL (2002)

Streamlining Digital Imaging Applications. Microscopy Society of America, Long Beach, CA (2001)

Consultantships

Color & Contrast Correction Training, Hewlett-Packard (via Microscopy, Marketing & Education), Corvallis, OR (2003).

Confocal Training, Medtronic, Minneapolis, MN (2003).

Imaging Device Invention Consultation, Blizzard Genomics, Minneapolis, MN (2001- 2002).

Digital Analysis Consultant, Paul Termin and Associates, Inc. (pathological analysis company), St. Paul, MN (1999-present).

Digital Analysis Consultant, Angiogard, Inc. (bought by Johnson & Johnson, Inc.), Plymouth, MN (1998).

Funded Projects

Sedgewick, J. (2000). Inverted Light Microscopy system for Live Cell Analysis. Minnesota Medical Foundation (\$24,000).

Sedgewick, J. (2002). Ultra-Low Light Video Rate Imaging Camera. Minnesota Medical Foundation (\$25,000).

Sedgewick J. (2003). Inverted Microscope for improved imaging of live tissue on a multi-photon confocal system. Grant-in-Aid of Research, Artistry and Scholarship Program (\$25,000).