

## Joel A. Swanson Publications

1. Swanson, J. A. & G. L. Floyd. 1978. Fine structure of the zoospores and thallus of *Blidingia minima*. *Trans. Amer. Microsc. Soc.* 97: 549-558.
2. Swanson, J. A. & G. L. Floyd. 1979. Acid phosphatase in *Asteromonas gracilis* (Chlorophyceae, Volvocales): a biochemical and cytochemical characterization. *Phycologia* 18: 362-368.
3. Floyd, G. L.; H. J. Hoops & J. A. Swanson. 1980. Fine structure of the zoospore of *Ulothrix belkæ* with emphasis on the flagellar apparatus. *Protoplasma* 104: 17-31.
4. Luna, E. J.; V. M. Fowler; J. Swanson; D. Branton & D. L. Taylor. 1981. A membrane cytoskeleton from *Dictyostelium discoideum*. I. Identification and partial characterization of an actin-binding activity. *J. Cell Biol.* 88: 396-409.
5. Swanson, J. A.; D. L. Taylor & J. T. Bonner. 1981. Coated vesicles in *Dictyostelium discoideum*. *J. Ultrastr. Res.* 75: 243-249.
6. Salisbury, J. L.; J. A. Swanson; G. L. Floyd; R. Hall & N. J. Maihle. 1981. Ultrastructure of the flagellar apparatus of the green alga *Tetraselmis subcordiformis*. With special consideration given to the function of the rhizoplast and rhizanchora. *Protoplasma* 104: 1-11.
7. Hoops, H. J.; G. L. Floyd & J. A. Swanson. 1982. Ultrastructure of the biflagellate motile cells of *Ulvaria oxysperma* (Kütz.) Bliding and phylogenetic relationships among ulvophyceean algae. *Amer. J. Bot.* 69: 150-159.
8. Taylor, D. L.; J. Heiple; Y. -L. Wang; E. J. Luna; L. Tanasugarn; J. Brier; J. Swanson; M. Fechheimer; P. Amato; M. Rockwell & G. Daley. 1982. Cellular and molecular aspects of amoeboid movement. Cold Spring Harbor Symp. Quant. Biol. v. XLVI 101-111.
9. Swanson, J. A. & D. L. Taylor. 1982. Local and spatially coordinated movements in *Dictyostelium discoideum* amoebae during chemotaxis. *Cell* 28: 225-232.
10. Brier, J.; M. Fechheimer; J. Swanson & D. L. Taylor. 1983. Abundance, relative gelation activity, and distribution of the 95,000-dalton actin-binding protein from *Dictyostelium discoideum*. *J. Cell Biol.* 97: 178-185.
11. Swanson, J. A.; B. D. Yirinec & S. C. Silverstein. 1985. Phorbol esters and horseradish peroxidase stimulate pinocytosis and redirect the flow of pinocytosed fluid in macrophages. *J. Cell Biol.* 100: 851-859.
12. Bonner, J. T.; B. D. Joyner; A. A. Moore; H. B. Suthers & J. A. Swanson. 1985. Successive asexual life cycles of starved amoebae in the cellular slime mould *Dictyostelium mucoroides* var. *stoloniferum*. *J. Cell Sci.* 77: 19-26.
13. McNeil, P. L.; J. A. Swanson; S. D. Wright; S. C. Silverstein & D. L. Taylor. 1986. Fc-receptor-mediated phagocytosis occurs in macrophages without an increase in average  $[Ca^{++}]_i$ . *J. Cell Biol.* 102: 1586-1592.
14. Swanson, J.; B. Yirinec; E. Burke; A. Bushnell & S. C. Silverstein. 1986. Effect of alterations in the size of the vacuolar compartment on pinocytosis in J774.2 macrophages. *J. Cell. Physiol.* 128: 195-201.
15. Swanson, J.; A. Bushnell & S. C. Silverstein. 1987. Tubular lysosome morphology and distribution within macrophages depend on the integrity of cytoplasmic microtubules. *Proc. Nat. Acad. Sci. U.S.A.* 84: 1921-1925.
16. Swanson, J.; E. Burke & S. C. Silverstein. 1987. Tubular lysosomes accompany stimulated pinocytosis in macrophages. *J. Cell Biol.* 104: 1217-1222.
17. Steinberg, T. H.; A. S. Newman; J. A. Swanson & S. C. Silverstein. 1987. ATP4-permeabilizes the plasma membrane of mouse macrophages to fluorescent dyes. *J. Biol. Chem.* 262: 8884-8888.

18. Steinberg, T. H.; A. S. Newman; J. A. Swanson & S. C. Silverstein. 1987. Macrophages possess probenecid-inhibitable organic anion transporters that remove fluorescent dyes from the cytoplasmic matrix. *J. Cell Biol.* 105: 2695-2702.
19. Swanson, J. A. & P. L. McNeil. 1987. Nuclear reassembly excludes large macromolecules. *Science* 238: 548-550.
20. DiVirgilio, F.; T. H. Steinberg; J. A. Swanson & S. C. Silverstein. 1988. Fura-2 secretion and sequestration in macrophages. A blocker of organic anion transport reveals that these processes occur via a membrane transport system for organic anions. *J. Immunol.* 140: 915-920.
21. Swanson, J. & S. C. Silverstein. 1988. Pinocytic flow through macrophages. In: Processing and Presentation of Antigens. Pernis, B., S. C. Silverstein & H. Vogel, eds. Academic Press, NY. pp. 15-27.
22. Steinberg, T. H.; J. A. Swanson & S. C. Silverstein. 1988. A prelysosomal compartment sequesters membrane-impermeant fluorescent dyes from the cytoplasmic matrix of J774 macrophages. *J. Cell Biol.* 107: 887-896.
23. Swanson, J. 1989. Fluorescent labeling of endocytic compartments. In: Fluorescence Microscopy of Living Cells in Culture (Vol. 29 of Methods in Cell Biology) Y.L. Wang & D.L. Taylor, eds. Academic Press, NY. pp.137-151.
24. Swanson, J. 1989. Phorbol esters stimulate macropinocytosis and solute flow through macrophages. *J. Cell Sci.* 94: 135-142.
25. Racoosin, E. L. and J. A. Swanson. 1989. Macrophage colony stimulating factor (rM-CSF) stimulates pinocytosis in bone marrow-derived macrophages. *J. Exp. Med.* 170: 1635-1648.
26. Knapp, P. E. & J. A. Swanson. 1990. Plasticity of the tubular lysosomal compartment in macrophages. *J. Cell Sci.* 95: 433-439.
27. Hollenbeck, P. J. & J. A. Swanson. 1990. Radial extension of macrophage tubular lysosomes supported by kinesin. *Nature* 346: 864-866.
28. Swanson, J. A.; M. Lee & P. E. Knapp. 1991. Cellular dimensions affecting the nucleocytoplasmic volume ratio. *J. Cell Biol.* 115: 941-948.
29. Cannon, G. J. & J. A. Swanson. 1992. The macrophage capacity for phagocytosis. *J. Cell Sci.* 101: 907-913.
30. Racoosin, E. L. & J. A. Swanson. 1992. M-CSF-induced macropinocytosis increases solute endocytosis but not receptor-mediated endocytosis in mouse macrophages. *J. Cell Sci.* 102: 867-880.
31. Swanson, J. A.; A. Locke; P. Ansel & P. J. Hollenbeck. 1992. Radial movement of lysosomes along microtubules in permeabilized macrophages. *J. Cell Sci.* 103: 201-209.
32. Alpuche-Aranda, C. M.; J. A. Swanson; W. P. Loomis & S. I. Miller. 1992. *Salmonella typhimurium* activates virulence gene transcription within acidified macrophage phagosomes. *Proc. Nat. Acad. Sci. U.S.A.* 89: 10079-10083.
33. Racoosin, E. L. & J. A. Swanson. 1993. Macropinosome maturation and fusion with tubular lysosomes in macrophages. *J. Cell Biol.* 121: 1011-1020.
34. Swanson, J. A. 1993. Pure thoughts with impure proteins. Permeabilized cell models of organelle motility. *BioEssays* 15: 715-722.
35. Steinberg, T. H. & J. A. Swanson. 1994. Measurement of phagosome-lysosome fusion and phagosomal pH. *Methods in Enzymol.* 236: 147-160.
36. Alpuche-Aranda, C. M.; E. L. Racoosin; J. A. Swanson & S. I. Miller. 1994. *Salmonella* stimulate macrophage macropinocytosis and persist within spacious phagosomes. *J. Exp. Med.* 179: 601-608.
37. Racoosin, E. L. & J. A. Swanson. 1994. Labeling of endocytic vesicles using fluorescent probes for fluid-phase endocytosis. In: Cell Biology: A Laboratory Handbook. J.E. Celis, ed. Academic Press, NY. pp. 375-380.
38. Swanson, J. A. & S. C. Baer. 1995. Phagocytosis by zippers and triggers. *Trends in Cell Biol.* 5: 89-93.

39. Berthiaume, E. P.; C. Medina & J. A. Swanson. 1995. Molecular size-fractionation during endocytosis in macrophages. *J. Cell Biol.* 129: 989-998.
40. Rosania, G. & J. A. Swanson. 1995. Effects of macromolecular crowding on nuclear size. *Exp. Cell Res.* 218: 114-122.
41. Steinman, R. M. and J. Swanson. 1995. The endocytic activity of dendritic cells. *J. Exp. Med.* 182: 283-288.
42. Swanson, J. A. & C. Watts. 1995. Macropinocytosis. *Trends in Cell Biol.* 5: 424-428.
43. Alpuche-Aranda, C. M.; E. P. Berthiaume; B. Mock; J. A. Swanson & S. I. Miller. 1995. Spacious phagosome formation within mouse macrophages correlates with Salmonellae serotype pathogenicity and host susceptibility. *Infection and Immunity* 63: 4456-4462.
44. Oh, Y. -K. & J. A. Swanson. 1996. Different fates of phagocytosed particles after delivery into macrophage lysosomes. *J. Cell Biol.* 132: 585-593.
45. Lee, K. -D.; Y. -K. Oh; D. A. Portnoy & J. A. Swanson. 1996. Delivery of macromolecules into cytosol using liposomes containing hemolysin from *Listeria monocytogenes*. *J. Biol. Chem.* 271: 7249-7252.
46. Rosania, G. R. & J. A. Swanson. 1996. Microtubules can modulate pseudopod activity from a distance inside macrophages. *Cell Motility Cytoskel.* 34: 230-245.
47. Oh, Y. -K.; C. M. Alpuche-Aranda; E. P. Berthiaume; T. Jinks; S. I. Miller & J. A. Swanson. 1996. Rapid and complete fusion of macrophage lysosomes with phagosomes containing *Salmonella typhimurium*. *Infection and Immunity* 64: 3877-3883.
48. Araki, N., M. T. Johnson & J. A. Swanson. 1996. A role for phosphoinositide 3-kinase in the completion of macropinocytosis and phagocytosis in macrophages. *J. Cell Biol.* 135: 1249-1260.
49. Oh, Y. -K.; C. V. Harding & J. A. Swanson. 1997. The efficiency of antigen delivery from macrophage phagosomes into cytoplasm for MHC class I-restricted antigen presentation. *Vaccine* 15: 511-518.
50. Beauregard, K. E., K.-D. Lee, R. J. Collier & J. A. Swanson. 1997. pH-dependent perforation of macrophage phagosomes by listeriolysin O from *Listeria monocytogenes*. *J. Exp. Med.* 186: 1159-1163.
51. Araki, N. & J. A. Swanson. 1998. Labeling of endocytic vesicles using fluorescent probes for fluid-phase endocytosis. In: *Cell Biology: A Laboratory Handbook*. Vol. 2. (2<sup>nd</sup> edition) J.E. Celis, ed. Academic Press, NY. pp. 495-500.
52. Swanson, J. A., M. T. Johnson, K. Beningo, P. Post, M. Mooseker & N. Araki. 1999. A contractile activity that closes phagosomes in macrophages. *J. Cell Sci.* 112: 307-316.
53. Barker, S.L.R., H. A. Clark, S. F. Swallen, R. Kopelman, A. W. Tsang and J. A. Swanson. 1999. Development and applications of ratiometric and fluorescence lifetime based biosensors for detection of extra- and intracellular macrophage nitric oxide. *Anal. Chem.* 71: 1767-1772.
54. Swanson, J. A. 1999. Pathways through the macrophage vacuolar compartment. In: *Advances in Cell and Molecular Biology of Membranes and Organelles*, Vol. 5, Phagocytosis: The Host. S. Gordon, ed., JAI Press, NY. pp. 265-282.
55. Sund, S. E., J. A. Swanson and D. Axelrod. 1999. Cell membrane curvature visualized by polarized total internal reflection fluorescence. *Biophys. J.* 77: 2266-2283.
56. Beauregard, K. E., R. J. Collier and J. A. Swanson. 2000. Proteolytic activation of receptor-bound anthrax protective antigen on macrophages promotes its internalization. *Cell. Microbiol.* 2: 251-258.
57. Tsang, A. W., K. Oestergaard, J. T. Myers and J. A. Swanson. 2000. Altered membrane trafficking in activated bone marrow-derived macrophages. *J. Leukoc. Biol.* 68: 487-494.
58. Dixon, T. C., A. A. Fadl, T. M. Koehler, J. A. Swanson and P. C. Hanna. 2000. Early *Bacillus anthracis*-macrophage interactions: intracellular survival and escape. *Cell. Microbiol.* 2: 453-463.
59. Christensen, K. A., J. T. Myers and J. A. Swanson. 2002. pH-dependent regulation of lysosomal calcium in macrophages. *J. Cell Sci.* 115: 599-607.

60. Diakonova, M., G. Bokoch and J. A. Swanson. 2002. Dynamics of cytoskeletal proteins during Fc $\gamma$  receptor-mediated phagocytosis in macrophages. *Mol. Biol. Cell* 13: 402-411.
61. Glomski, I. J., M. M. Gedde, A. W. Tsang, J. A. Swanson and D. A. Portnoy. 2002. The *Listeria monocytogenes* hemolysin has an acidic pH optimum to compartmentalize activity and prevent damage to infected host cells. *J. Cell Biol.* 156: 1029-1038.
62. Grieshaber, S., J. A. Swanson and T. Hackstadt. 2002. Determination of the physical environment within the *Chlamydia trachomatis* inclusion using ion-selective ratiometric probes. *Cell. Microbiol.* 4: 273-283.
63. Myers, J. T. and J. A. Swanson. 2002. Calcium spikes in activated macrophages during Fc $\gamma$  receptor-mediated phagocytosis. *J. Leukoc. Biol.* 72: 677-684.
64. Swanson, J. A. 2002. The extraordinary phagosome. *Nature* 418: 286-287.
65. Swanson, J. A. 2002. Ratiometric fluorescence microscopy. In: Methods in Microbiology, Molecular Cellular Microbiology. Vol. 31, P. Sansonetti and A. Zychlinsky, eds., Academic Press, NY. pp 1-18.
66. Hoppe, A. D., K. A. Christensen and J. A. Swanson. 2002. Fluorescence resonance energy transfer-based stoichiometry in living cells. *Biophys. J.* 83: 3652-3664.
67. Araki, N., T. Hatae, A. Furukawa and J. A. Swanson. 2003. Phosphoinositide 3-kinase-independent contractile activities associated with Fc $\gamma$  receptor-mediated phagocytosis and macropinocytosis in macrophages. *J. Cell Sci.* 116: 247-257.
68. Saito, G., J. A. Swanson and K. -D. Lee. 2003. Drug delivery strategy utilizing conjugation via reversible disulfide linkages: Role and site of cellular reducing activities. *Adv. Drug Deliv. Revs.* 55: 199-215.
69. Myers, J. T., A. W. Tsang and J. A. Swanson. 2003. Localized reactive oxygen and nitrogen intermediates inhibit escape of *Listeria monocytogenes* from vacuoles in activated macrophages. *J. Immunol.* 171: 5447-5453.
70. Henry, R. M., A. D. Hoppe, N. Joshi and J. A. Swanson. 2004. The uniformity of phagosome maturation in macrophages. *J. Cell Biol.* 164: 185-194.
71. Henry, R. M. and J. A. Swanson. 2004. Phagocytosis. Encyclopedia of Molecular Cell Biology and Molecular Medicine. Wiley-VCH Verlag, Germany.
72. Hoppe, A. D. and J. A. Swanson. 2004. Cdc42, Rac1 and Rac2 display distinct patterns of activation during phagocytosis. *Mol. Biol. Cell.* 15: 3509-3519.
73. Swanson, J. A. and A. D. Hoppe. 2004. The coordination of signaling during Fc receptor-mediated phagocytosis. *J. Leukoc. Biol.* 76: 1093-1103.
74. Swanson, J. A. and P. J. Peters. 2005. Editorial Overview: Subcellular Imaging Technologies – Microscopic Visual Thinking. *Curr. Opin. Microbiol.* 8: 313-315.
75. Komiyama, T, J. A. Swanson and R. S. Fuller. 2005. Protection from anthrax toxin-mediated killing of macrophages by the combined effects of furin inhibitors and chloroquine. *Antimicrob. Agents and Chemotherapy* 49: 3875-3882.
76. Swanson, J. A. 2006. The pick of the nibbled bits. *Nature* 440: 750-751.
77. Hoppe, A. D., J. A. Swanson and S. L. Shorte. 2006. Three-dimensional FRET microscopy. *Proc. of SPIE* 6089: 609804-1-9.
78. Swanson, J. A. 2006. CFTR: Helping to acidify macrophage lysosomes. *Nature Cell Biol.* 8: 908-909.
79. Henry, R. M., L. Shaughnessy, M. J. Loessner, C. Alberti-Segui, D. E. Higgins and J. A. Swanson. 2006. Cytolysin-dependent delay of vacuole maturation in macrophages infected with *Listeria monocytogenes*. *Cell. Microbiol.* 8: 107-119.
80. Shaughnessy, L., A. D. Hoppe, K. A. Christensen and J. A. Swanson. 2006. Membrane perforations inhibit lysosome fusion by altering pH and calcium in *Listeria monocytogenes* vacuoles. *Cell. Microbiol.* 8: 781-792.
81. Beemiller, P., A. D. Hoppe and J. A. Swanson. 2006. A phosphatidylinositol-3-kinase-dependent signal transition regulates ARF1 and ARF6 during Fc $\gamma$  receptor-mediated phagocytosis. *PLoS Biology* 6(4): e162.

82. Shaughnessy, L. M. and J. A. Swanson. 2007. The role of the activated macrophage in clearing *Listeria monocytogenes* infection. *Frontiers Biosci.* 12: 2683-2692.
83. Walter, N.G, J.-C. Meiners, E. Meyhofer, R. R. Neubig, R. K. Sunihara, N. C. Perkins, D. G. Steel and J. A. Swanson. 2007. Under the microscope. Single molecule symposium at the University of Michigan, 2006. *Biopolymers* 85: 106-114.
84. Cai, D., A. D. Hoppe, J. A. Swanson and K. J. Verhey. 2007. Kinesin-1 structure and conformational changes revealed by FRET stoichiometry in live cells. *J. Cell Biol.* 176: 51-63.
85. Seveau, S., T. N. Tham, B. Payrastre, A. D. Hoppe, J. A. Swanson and P. Cossart. 2007. A FRET analysis to unravel the role of cholesterol in Rac1 and PI 3-kinase activation in the InlB/Met signalling pathway. *Cell. Microbiol.* 9(3): 790-803.

#### **Articles Accepted for Publication:**

86. Shaughnessy, L. M., P. Lipp, K.-D. Lee and J. A. Swanson. 2007. Localization of protein kinase C  $\epsilon$  to macrophage vacuoles perforated by *Listeria monocytogenes* cytolysin. *Cell. Microbiol.* (in press).
87. Diakonova, M., E. Helfer, T. Svitkina, J. A. Swanson, C. Kocks, G. G. Borisy, M.-F. Carlier, and C. Carter-Su. 2007. Adapter protein SH2-B $\beta$  is a new functional link to VASP-dependent regulation of *Listeria monocytogenes* motility. *Infect. Immunity.* (in press).
88. Kamen, L. A., J. Levinsohn and J. A. Swanson. 2007. Differential localization of phosphatidylinositol 3-kinase, SHIP-1 and PTEN with forming phagosomes. *Mol. Biol. Cell.* (in press).