# Melody A Swartz

List of Publications by Year
in descending order



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|---|---|---|---|
| 106 papers | 16,646 citations | 17405 63 h-index | 28224 105 g-index |
| 110 all docs | 110 docs citations | 110 times ranked | 18304 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Hyperplasia of Lymphatic Vessels in VEGF-C Transgenic Mice. Science, 1997, 276, 1423-1425. | 6.0 | 1,160 |
| 2 | Exploiting lymphatic transport and complement activation in nanoparticle vaccines. Nature Biotechnology, 2007, 25, 1159-1164. | 9.4 | 1,142 |
| 3 | Dendritic-cell trafficking to lymph nodes through lymphatic vessels. Nature Reviews Immunology, 2005, 5, 617-628. | 10.6 | 989 |
| 4 | In vivo targeting of dendritic cells in lymph nodes with poly(propylene sulfide) nanoparticles. Journal of Controlled Release, 2006, 112, 26-34. | 4.8 | 605 |
| 5 | Interstitial Fluid and Lymph Formation and Transport: Physiological Regulation and Roles in Inflammation and Cancer. Physiological Reviews, 2012, 92, 1005-1060. | 13.1 | 538 |
| 6 | Engineering synthetic vaccines using cues from natural immunity. Nature Materials, 2013, 12, 978-990. | 13.3 | 500 |
| 7 | Interstitial Flow and Its Effects in Soft Tissues. Annual Review of Biomedical Engineering, 2007, 9, 229-256. | 5.7 | 491 |
| 8 | Autologous Chemotaxis as a Mechanism of Tumor Cell Homing to Lymphatics via Interstitial Flow and Autocrine CCR7 Signaling. Cancer Cell, 2007, 11, 526-538. | 7.7 | 483 |
| 9 | Lymphatic and interstitial flow in the tumour microenvironment: linking mechanobiology with immunity. Nature Reviews Cancer, 2012, 12, 210-219. | 12.8 | 461 |
| 10 | Induction of Lymphoidlike Stroma and Immune Escape by Tumors That Express the Chemokine CCL21. Science, 2010, 328, 749-752. | 6.0 | 429 |
| 11 | Growth Factors Engineered for Super-Affinity to the Extracellular Matrix Enhance Tissue Healing. Science, 2014, 343, 885-888. | 6.0 | 406 |
| 12 | Interstitial fluid flow induces myofibroblast differentiation and collagen alignment in vitro. Journal of Cell Science, 2005, 118, 4731-4739. | 1.2 | 322 |
| 13 | VEGF-C Promotes Immune Tolerance in B16 Melanomas and Cross-Presentation of Tumor Antigen by Lymph Node Lymphatics. Cell Reports, 2012, 1, 191-199. | 2.9 | 284 |
| 14 | Interstitial Flow as a Guide for Lymphangiogenesis. Circulation Research, 2003, 92, 801-808. | 2.0 | 263 |
| 15 | Targeting the tumor-draining lymph node with adjuvanted nanoparticles reshapes the anti-tumor immune response. Biomaterials, 2014, 35, 814-824. | 5.7 | 256 |
| 16 | Synergy between interstitial flow and VEGF directs capillary morphogenesis in vitro through a gradient amplification mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 15779-15784. | 3.3 | 254 |
| 17 | Complete and Specific Inhibition of Adult Lymphatic Regeneration by a Novel VEGFR-3 Neutralizing Antibody. Journal of the National Cancer Institute, 2005, 97, 14-21. | 3.0 | 226 |
| 18 | Nanoparticle conjugation of CpG enhances adjuvancy for cellular immunity and memory recall at low dose. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 19902-19907. | 3.3 | 223 |

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|---|---|---|---|
| 19 | Lymph node stromal cells acquire peptideâ€“MHCII complexes from dendritic cells and induce antigen-specific CD4+ T cell tolerance. Journal of Experimental Medicine, 2014, 211, 1153-1166. | 4.2 | 210 |
| 20 | Secondary lymphedema in the mouse tail: Lymphatic hyperplasia, VEGF-C upregulation, and the protective role of MMP-9. Microvascular Research, 2006, 72, 161-171. | 1.1 | 207 |
| 21 | Transmural Flow Modulates Cell and Fluid Transport Functions of Lymphatic Endothelium. Circulation Research, 2010, 106, 920-931. | 2.0 | 207 |
| 22 | Dendritic cell activation and T cell priming with adjuvant- and antigen-loaded oxidation-sensitive polymersomes. Biomaterials, 2012, 33, 6211-6219. | 5.7 | 206 |
| 23 | Antigen delivery to dendritic cells by poly(propylene sulfide) nanoparticles with disulfide conjugated peptides: Cross-presentation and T cell activation. Vaccine, 2010, 28, 7897-7906. | 1.7 | 199 |
| 24 | Engineering Approaches to Immunotherapy. Science Translational Medicine, 2012, 4, 148rv9. | 5.8 | 194 |
| 25 | Interstitial flow differentially stimulates blood and lymphatic endothelial cell morphogenesis in vitro. Microvascular Research, 2004, 68, 258-264. | 1.1 | 189 |
| 26 | Emerging roles of lymphatic endothelium in regulating adaptive immunity. Journal of Clinical Investigation, 2014, 124, 943-952. | 3.9 | 188 |
| 27 | Steady-State Antigen Scavenging, Cross-Presentation, and CD8+ T Cell Priming: A New Role for Lymphatic Endothelial Cells. Journal of Immunology, 2014, 192, 5002-5011. | 0.4 | 178 |
| 28 | Tumor lymphangiogenesis promotes T cell infiltration and potentiates immunotherapy in melanoma. Science Translational Medicine, 2017, 9, . | 5.8 | 174 |
| 29 | Antigens reversibly conjugated to a polymeric glyco-adjuvant induce protective humoral and cellular immunity. Nature Materials, 2019, 18, 175-185. | 13.3 | 172 |
| 30 | Combined CSL and p53 downregulation promotes cancer-associated fibroblast activation. Nature Cell Biology, 2015, 17, 1193-1204. | 4.6 | 170 |
| 31 | Vascular Endothelial Growth Factor-C and C-C Chemokine Receptor 7 in Tumor Cellâ€“Lymphatic Cross-talk Promote Invasive Phenotype. Cancer Research, 2009, 69, 349-357. | 0.4 | 169 |
| 32 | Enhancing Efficacy of Anticancer Vaccines by Targeted Delivery to Tumor-Draining Lymph Nodes. Cancer Immunology Research, 2014, 2, 436-447. | 1.6 | 165 |
| 33 | Nanoparticle conjugation of antigen enhances cytotoxic T-cell responses in pulmonary vaccination. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, E989-97. | 3.3 | 160 |
| 34 | Lymphatic function, lymphangiogenesis, and cancer metastasis. Microscopy Research and Technique, 2001, 55, 92-99. | 1.2 | 157 |
| 35 | Lymphatic vessels regulate immune microenvironments in human and murine melanoma. Journal of Clinical Investigation, 2016, 126, 3389-3402. | 3.9 | 157 |
| 36 | Primary Human and Rat Î²-Cells Release the Intracellular Autoantigens GAD65, IA-2, and Proinsulin in Exosomes Together With Cytokine-Induced Enhancers of Immunity. Diabetes, 2017, 66, 460-473. | 0.3 | 152 |

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|---|---|---|---|
| 37 | Fibroblast alignment under interstitial fluid flow using a novel 3-D tissue culture model. American Journal of Physiology - Heart and Circulatory Physiology, 2003, 284, H1771-H1777. | 1.5 | 148 |
| 38 | Collagen-binding IL-12 enhances tumour inflammation and drives the complete remission of established immunologically cold mouse tumours. Nature Biomedical Engineering, 2020, 4, 531-543. | 11.6 | 141 |
| 39 | Mechanics of interstitial-lymphatic fluid transport: theoretical foundation and experimental validation. Journal of Biomechanics, 1999, 32, 1297-1307. | 0.9 | 140 |
| 40 | Characterization of lymphangiogenesis in a model of adult skin regeneration. American Journal of Physiology - Heart and Circulatory Physiology, 2006, 291, H1402-H1410. | 1.5 | 135 |
| 41 | Targeted antibody and cytokine cancer immunotherapies through collagen affinity. Science Translational Medicine, 2019, 11, . | 5.8 | 134 |
| 42 | Matrix-binding checkpoint immunotherapies enhance antitumor efficacy and reduce adverse events. Science Translational Medicine, 2017, 9, . | 5.8 | 131 |
| 43 | Toll-like receptor 8 agonist nanoparticles mimic immunomodulating effects of the live BCG vaccine and enhance neonatal innate and adaptive immune responses. Journal of Allergy and Clinical Immunology, 2017, 140, 1339-1350. | 1.5 | 128 |
| 44 | Cooperative and redundant roles of VEGFRâ€2 and VEGFRâ€3 signaling in adult lymphangiogenesis. FASEB Journal, 2007, 21, 1003-1012. | 0.2 | 126 |
| 45 | Lymphatic drainage function and its immunological implications: From dendritic cell homing to vaccine design. Seminars in Immunology, 2008, 20, 147-156. | 2.7 | 126 |
| 46 | Tunable T cell immunity towards a protein antigen using polymersomes vs. solid-core nanoparticles. Biomaterials, 2013, 34, 4339-4346. | 5.7 | 116 |
| 47 | Peripherally Administered Nanoparticles Target Monocytic Myeloid Cells, Secondary Lymphoid Organs and Tumors in Mice. PLoS ONE, 2013, 8, e61646. | 1.1 | 116 |
| 48 | Impaired Humoral Immunity and Tolerance in K14-VEGFR-3-Ig Mice That Lack Dermal Lymphatic Drainage. Journal of Immunology, 2012, 189, 2181-2190. | 0.4 | 111 |
| 49 | Engineering opportunities in cancer immunotherapy. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14467-14472. | 3.3 | 111 |
| 50 | Overexpression of VEGF-C Causes Transient Lymphatic Hyperplasia but Not Increased Lymphangiogenesis in Regenerating Skin. Circulation Research, 2005, 96, 1193-1199. | 2.0 | 108 |
| 51 | Nanoparticle conjugation and pulmonary delivery enhance the protective efficacy of Ag85B and CpG against tuberculosis. Vaccine, 2011, 29, 6959-6966. | 1.7 | 107 |
| 52 | Collecting Lymphatic Vessel Permeability Facilitates Adipose Tissue Inflammation and Distribution of Antigen to Lymph Nodeâ€“Homing Adipose Tissue Dendritic Cells. Journal of Immunology, 2015, 194, 5200-5210. | 0.4 | 102 |
| 53 | Tumor-associated factors are enriched in lymphatic exudate compared to plasma in metastatic melanoma patients. Journal of Experimental Medicine, 2019, 216, 1091-1107. | 4.2 | 102 |
| 54 | Exploiting lymphatic vessels for immunomodulation: Rationale, opportunities, and challenges. Advanced Drug Delivery Reviews, 2017, 114, 43-59. | 6.6 | 99 |

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|---|---|---|---|
| 55 | Perivascular Macrophages Limit Permeability. Arteriosclerosis, Thrombosis, and Vascular Biology, 2016, 36, 2203-2212. | 1.1 | 97 |
| 56 | Regulation of tumor invasion by interstitial fluid flow. Physical Biology, 2011, 8, 015012. | 0.8 | 96 |
| 57 | Local induction of lymphangiogenesis with engineered fibrin-binding VEGF-C promotes wound healing by increasing immune cell trafficking and matrix remodeling. Biomaterials, 2017, 131, 160-175. | 5.7 | 92 |
| 58 | Nano-sized drug-loaded micelles deliver payload to lymph node immune cells and prolong allograft survival. Journal of Controlled Release, 2011, 156, 154-160. | 4.8 | 90 |
| 59 | Transcellular Pathways in Lymphatic Endothelial Cells Regulate Changes in Solute Transport by Fluid Stress. Circulation Research, 2017, 120, 1440-1452. | 2.0 | 90 |
| 60 | Recruitment of CD103 <sup>+</sup> dendritic cells via tumor-targeted chemokine delivery enhances efficacy of checkpoint inhibitor immunotherapy. Science Advances, 2019, 5, eaay1357. | 4.7 | 87 |
| 61 | Immunomodulatory Roles of Lymphatic Vessels in Cancer Progression. Cancer Immunology Research, 2014, 2, 701-707. | 1.6 | 76 |
| 62 | A tissueâ€engineered model of the intestinal lacteal for evaluating lipid transport by lymphatics. Biotechnology and Bioengineering, 2009, 103, 1224-1235. | 1.7 | 73 |
| 63 | Intravital Immunofluorescence for Visualizing the Microcirculatory and Immune Microenvironments in the Mouse Ear Dermis. PLoS ONE, 2013, 8, e57135. | 1.1 | 56 |
| 64 | 6-Thioguanine-loaded polymeric micelles deplete myeloid-derived suppressor cells and enhance the efficacy of T cell immunotherapy in tumor-bearing mice. Cancer Immunology, Immunotherapy, 2015, 64, 1033-1046. | 2.0 | 56 |
| 65 | Normal Dendritic Cell Mobilization to Lymph Nodes under Conditions of Severe Lymphatic Hypoplasia. Journal of Immunology, 2013, 190, 4608-4620. | 0.4 | 53 |
| 66 | Growth factors with enhanced syndecan binding generate tonic signalling and promote tissue healing. Nature Biomedical Engineering, 2020, 4, 463-475. | 11.6 | 53 |
| 67 | Vaccine nanocarriers: Coupling intracellular pathways and cellular biodistribution to control CD4 vs CD8 T cell responses. Biomaterials, 2017, 132, 48-58. | 5.7 | 50 |
| 68 | Lymphatic endothelial cells prime naÃ¯ve CD8+ T cells into memory cells under steady-state conditions. Nature Communications, 2020, 11, 538. | 5.8 | 50 |
| 69 | Lymphatic vessel density is associated with CD8<sup>+</sup> T cell infiltration and immunosuppressive factors in human melanoma. OncoImmunology, 2018, 7, e1462878. | 2.1 | 47 |
| 70 | Nanoparticle conjugation enhances the immunomodulatory effects of intranasally delivered CpG in house dust mite-allergic mice. Scientific Reports, 2015, 5, 14274. | 1.6 | 42 |
| 71 | Immune Checkpoint Ligand PD-L1 Is Upregulated in Pulmonary Lymphangioleiomyomatosis. American Journal of Respiratory Cell and Molecular Biology, 2018, 59, 723-732. | 1.4 | 37 |
| 72 | Lymphangiogenesis-inducing vaccines elicit potent and long-lasting T cell immunity against melanomas. Science Advances, 2021, 7, . | 4.7 | 36 |

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|---|---|---|---|
| 73 | Improving Efficacy and Safety of Agonistic Anti-CD40 Antibody Through Extracellular Matrix Affinity. Molecular Cancer Therapeutics, 2018, 17, 2399-2411. | 1.9 | 34 |
| 74 | Connecting (T)issues: How Research in Fascia Biology Can Impact Integrative Oncology. Cancer Research, 2016, 76, 6159-6162. | 0.4 | 34 |
| 75 | Masking the immunotoxicity of interleukin-12 by fusing it with a domain of its receptor via a tumour-protease-cleavable linker. Nature Biomedical Engineering, 2022, 6, 819-829. | 11.6 | 32 |
| 76 | T Cells Redirected to a Minor Histocompatibility Antigen Instruct Intratumoral TNFÎ± Expression and Empower Adoptive Cell Therapy for Solid Tumors. Cancer Research, 2017, 77, 658-671. | 0.4 | 30 |
| 77 | Optimization and regeneration kinetics of lymphatic-specific photodynamic therapy in the mouse dermis. Angiogenesis, 2014, 17, 347-357. | 3.7 | 29 |
| 78 | Nanoparticle Conjugation of Human Papillomavirus 16 E7-long Peptides Enhances Therapeutic Vaccine Efficacy against Solid Tumors in Mice. Cancer Immunology Research, 2018, 6, 1301-1313. | 1.6 | 27 |
| 79 | Combination of Synthetic Long Peptides and XCL1 Fusion Proteins Results in Superior Tumor Control. Frontiers in Immunology, 2019, 10, 294. | 2.2 | 27 |
| 80 | Generation of potent cellular and humoral immunity against SARS-CoV-2 antigens via conjugation to a polymeric glyco-adjuvant. Biomaterials, 2021, 278, 121159. | 5.7 | 23 |
| 81 | Engineering Targeting Materials for Therapeutic Cancer Vaccines. Frontiers in Bioengineering and Biotechnology, 2020, 8, 19. | 2.0 | 23 |
| 82 | VEGFR-3 Neutralization Inhibits Ovarian Lymphangiogenesis, Follicle Maturation, and Murine Pregnancy. American Journal of Pathology, 2013, 183, 1596-1607. | 1.9 | 22 |
| 83 | Myeloid Cells Orchestrate Systemic Immunosuppression, Impairing the Efficacy of Immunotherapy against HPV+ Cancers. Cancer Immunology Research, 2020, 8, 131-145. | 1.6 | 21 |
| 84 | Polymersomes Decorated with the SARS-CoV-2 Spike Protein Receptor-Binding Domain Elicit Robust Humoral and Cellular Immunity. ACS Central Science, 2021, 7, 1368-1380. | 5.3 | 21 |
| 85 | Prolonged residence of an albuminâ€“IL-4 fusion protein in secondary lymphoid organs ameliorates experimental autoimmune encephalomyelitis. Nature Biomedical Engineering, 2021, 5, 387-398. | 11.6 | 20 |
| 86 | ADAM17 Promotes Motility, Invasion, and Sprouting of Lymphatic Endothelial Cells. PLoS ONE, 2015, 10, e0132661. | 1.1 | 19 |
| 87 | Oxidation-sensitive polymersomes as vaccine nanocarriers enhance humoral responses against Lassa virus envelope glycoprotein. Virology, 2017, 512, 161-171. | 1.1 | 19 |
| 88 | A Cationic Micelle Complex Improves CD8+ T Cell Responses in Vaccination Against Unmodified Protein Antigen. ACS Biomaterials Science and Engineering, 2016, 2, 231-240. | 2.6 | 18 |
| 89 | Long-term Intravital Immunofluorescence Imaging of Tissue Matrix Components with Epifluorescence and Two-photon Microscopy. Journal of Visualized Experiments, 2014, , . | 0.2 | 17 |
| 90 | Polypropylene Sulfide Nanoparticle p24 Vaccine Promotes Dendritic Cell-Mediated Specific Immune Responses against HIV-1. Journal of Investigative Dermatology, 2016, 136, 1172-1181. | 0.3 | 17 |

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|---|---|---|---|
| 91 | Inherent biomechanical traits enable infective filariae to disseminate through collecting lymphatic vessels. Nature Communications, 2019, 10, 2895. | 5.8 | 17 |
| 92 | Fibronectin EDA and CpG synergize to enhance antigen-specific Th1 and cytotoxic responses. Vaccine, 2016, 34, 2453-2459. | 1.7 | 16 |
| 93 | Experimental Drainage Device to Reduce Lymphoedema in a Rat Model. European Journal of Vascular and Endovascular Surgery, 2019, 57, 859-867. | 0.8 | 13 |
| 94 | Lymph Node-Targeted Synthetically Glycosylated Antigen Leads to Antigen-Specific Immunological Tolerance. Frontiers in Immunology, 2021, 12, 714842. | 2.2 | 10 |
| 95 | Dorsal Ear Skin Window for Intravital Imaging and Functional Analysis of Lymphangiogenesis. Methods in Molecular Biology, 2018, 1846, 261-277. | 0.4 | 8 |
| 96 | Trojan horses for immunotherapy. Nature Nanotechnology, 2019, 14, 196-197. | 15.6 | 8 |
| 97 | Pro-lymphangiogenic VEGFR-3 signaling modulates memory T cell responses in allergic airway inflammation. Mucosal Immunology, 2021, 14, 144-151. | 2.7 | 8 |
| 98 | Pathogenic Exploitation of Lymphatic Vessels. Cells, 2022, 11, 979. | 1.8 | 6 |
| 99 | Introduction to the special issue on lymphangiogenesis in inflammation. Angiogenesis, 2014, 17, 323-324. | 3.7 | 4 |
| 100 | Inflammatory lymphangiogenesis in postpartum breast tissue remodeling. Journal of Clinical Investigation, 2014, 124, 3704-3707. | 3.9 | 4 |
| 101 | Lymphoidal chemokine CCL19 promoted the heterogeneity of the breast tumor cell motility within a 3D microenvironment revealed by a LÃ©vy distribution analysis. Integrative Biology (United Kingdom), 2020, 12, 12-20. | 0.6 | 4 |
| 102 | Cell jam. Nature Materials, 2015, 14, 970-971. | 13.3 | 3 |
| 103 | Adjuvant-free immunization with infective filarial larvae as lymphatic homing antigen carriers. Scientific Reports, 2020, 10, 1055. | 1.6 | 1 |
| 104 | Overcoming transport barriers to immunotherapy. Drug Delivery and Translational Research, 2021, 11, 2273-2275. | 3.0 | 1 |
| 105 | Active response of the lymphatic endothelium to acute inflammation vs. chronic lymphedema: in vivo and in vitro studies. FASEB Journal, 2007, 21, A848. | 0.2 | 0 |
| 106 | ACTIVE REGULATION OF LIPID TRANSPORT AND METABOLISM BY LYMPHATICS: COMPLIMENTARY IN VIVO AND IN VITRO STUDIES. FASEB Journal, 2009, 23, 813.2. | 0.2 | 0 |