

Hiroshi Maeda

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162
papers

24,256
citations

65
h-index

155
g-index

168
ext. papers

26,384
ext. citations

6.6
avg, IF

7.7
L-index

| # | Paper | IF | Citations |
|-----|--|------|-----------|
| 162 | The EPR effect: Unique features of tumor blood vessels for drug delivery, factors involved, and limitations and augmentation of the effect. <i>Advanced Drug Delivery Reviews</i> , 2011 , 63, 136-51 | 18.5 | 2580 |
| 161 | The enhanced permeability and retention (EPR) effect in tumor vasculature: the key role of tumor-selective macromolecular drug targeting. <i>Advances in Enzyme Regulation</i> , 2001 , 41, 189-207 | | 1871 |
| 160 | The EPR effect for macromolecular drug delivery to solid tumors: Improvement of tumor uptake, lowering of systemic toxicity, and distinct tumor imaging in vivo. <i>Advanced Drug Delivery Reviews</i> , 2013 , 65, 71-9 | 18.5 | 1659 |
| 159 | Exploiting the enhanced permeability and retention effect for tumor targeting. <i>Drug Discovery Today</i> , 2006 , 11, 812-8 | 8.8 | 1422 |
| 158 | Polymeric drugs for efficient tumor-targeted drug delivery based on EPR-effect. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2009 , 71, 409-19 | 5.7 | 944 |
| 157 | Mechanism of tumor-targeted delivery of macromolecular drugs, including the EPR effect in solid tumor and clinical overview of the prototype polymeric drug SMANCS. <i>Journal of Controlled Release</i> , 2001 , 74, 47-61 | 11.7 | 791 |
| 156 | Tumor-selective delivery of macromolecular drugs via the EPR effect: background and future prospects. <i>Bioconjugate Chemistry</i> , 2010 , 21, 797-802 | 6.3 | 766 |
| 155 | Toward a full understanding of the EPR effect in primary and metastatic tumors as well as issues related to its heterogeneity. <i>Advanced Drug Delivery Reviews</i> , 2015 , 91, 3-6 | 18.5 | 730 |
| 154 | Macromolecular therapeutics in cancer treatment: the EPR effect and beyond. <i>Journal of Controlled Release</i> , 2012 , 164, 138-44 | 11.7 | 621 |
| 153 | Antagonistic action of imidazolineoxyl N-oxides against endothelium-derived relaxing factor/.NO through a radical reaction. <i>Biochemistry</i> , 1993 , 32, 827-32 | 3.2 | 534 |
| 152 | Conjugates of anticancer agents and polymers: advantages of macromolecular therapeutics in vivo. <i>Bioconjugate Chemistry</i> , 1992 , 3, 351-62 | 6.3 | 482 |
| 151 | SMANCS and polymer-conjugated macromolecular drugs: advantages in cancer chemotherapy. <i>Advanced Drug Delivery Reviews</i> , 2001 , 46, 169-85 | 18.5 | 439 |
| 150 | Vascular permeability enhancement in solid tumor: various factors, mechanisms involved and its implications. <i>International Immunopharmacology</i> , 2003 , 3, 319-28 | 5.8 | 423 |
| 149 | Therapeutic strategies by modulating oxygen stress in cancer and inflammation. <i>Advanced Drug Delivery Reviews</i> , 2009 , 61, 290-302 | 18.5 | 400 |
| 148 | Early phase tumor accumulation of macromolecules: a great difference in clearance rate between tumor and normal tissues. <i>Japanese Journal of Cancer Research</i> , 1998 , 89, 307-14 | | 386 |
| 147 | Activation of matrix metalloproteinases by peroxynitrite-induced protein S-glutathiolation via disulfide S-oxide formation. <i>Journal of Biological Chemistry</i> , 2001 , 276, 29596-602 | 5.4 | 333 |
| 146 | Effect of arterial administration of high-molecular-weight anticancer agent SMANCS with lipid lymphographic agent on hepatoma: a preliminary report. <i>European Journal of Cancer & Clinical Oncology</i> , 1983 , 19, 1053-65 | | 265 |

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| 145 | A Retrospective 30 Years After Discovery of the Enhanced Permeability and Retention Effect of Solid Tumors: Next-Generation Chemotherapeutics and Photodynamic Therapy--Problems, Solutions, and Prospects. <i>Microcirculation</i> , 2016 , 23, 173-82 | 2.9 | 229 |
| 144 | Macromolecular therapeutics: advantages and prospects with special emphasis on solid tumour targeting. <i>Clinical Pharmacokinetics</i> , 2003 , 42, 1089-105 | 6.2 | 227 |
| 143 | Selective targeting of anti-cancer drug and simultaneous image enhancement in solid tumors by arterially administered lipid contrast medium. <i>Cancer</i> , 1984 , 54, 2367-74 | 6.4 | 207 |
| 142 | Activation of human neutrophil procollagenase by nitrogen dioxide and peroxynitrite: a novel mechanism for procollagenase activation involving nitric oxide. <i>Archives of Biochemistry and Biophysics</i> , 1997 , 342, 261-74 | 4.1 | 202 |
| 141 | Conjugation of poly(styrene-co-maleic acid) derivatives to the antitumor protein neocarzinostatin: pronounced improvements in pharmacological properties. <i>Journal of Medicinal Chemistry</i> , 1985 , 28, 455-61 | 8.3 | 193 |
| 140 | SMANCS and polymer-conjugated macromolecular drugs: advantages in cancer chemotherapy. <i>Advanced Drug Delivery Reviews</i> , 1991 , 6, 181-202 | 18.5 | 192 |
| 139 | Vascular permeability in cancer and infection as related to macromolecular drug delivery, with emphasis on the EPR effect for tumor-selective drug targeting. <i>Proceedings of the Japan Academy Series B: Physical and Biological Sciences</i> , 2012 , 88, 53-71 | 4 | 191 |
| 138 | Analyses of repeated failures in cancer therapy for solid tumors: poor tumor-selective drug delivery, low therapeutic efficacy and unsustainable costs. <i>Clinical and Translational Medicine</i> , 2018 , 7, 11 | 5.7 | 190 |
| 137 | Enhanced vascular permeability in solid tumor is mediated by nitric oxide and inhibited by both new nitric oxide scavenger and nitric oxide synthase inhibitor. <i>Japanese Journal of Cancer Research</i> , 1994 , 85, 331-4 | | 178 |
| 136 | EPR effect based drug design and clinical outlook for enhanced cancer chemotherapy. <i>Advanced Drug Delivery Reviews</i> , 2011 , 63, 129-30 | 18.5 | 169 |
| 135 | Factors and mechanism of "EPR" effect and the enhanced antitumor effects of macromolecular drugs including SMANCS. <i>Advances in Experimental Medicine and Biology</i> , 2003 , 519, 29-49 | 3.6 | 166 |
| 134 | Exploiting the dynamics of the EPR effect and strategies to improve the therapeutic effects of nanomedicines by using EPR effect enhancers. <i>Advanced Drug Delivery Reviews</i> , 2020 , 157, 142-160 | 18.5 | 161 |
| 133 | Enhanced delivery of macromolecular antitumor drugs to tumors by nitroglycerin application. <i>Cancer Science</i> , 2009 , 100, 2426-30 | 6.9 | 160 |
| 132 | Development of next-generation macromolecular drugs based on the EPR effect: challenges and pitfalls. <i>Expert Opinion on Drug Delivery</i> , 2015 , 12, 53-64 | 8 | 157 |
| 131 | SMA-doxorubicin, a new polymeric micellar drug for effective targeting to solid tumours. <i>Journal of Controlled Release</i> , 2004 , 97, 219-30 | 11.7 | 155 |
| 130 | In vivo antitumor activity of pegylated zinc protoporphyrin: targeted inhibition of heme oxygenase in solid tumor. <i>Cancer Research</i> , 2003 , 63, 3567-74 | 10.1 | 155 |
| 129 | Elevating blood pressure as a strategy to increase tumor-targeted delivery of macromolecular drug SMANCS: cases of advanced solid tumors. <i>Japanese Journal of Clinical Oncology</i> , 2009 , 39, 756-66 | 2.8 | 143 |
| 128 | Enhancement of chemotherapeutic response of tumor cells by a heme oxygenase inhibitor, pegylated zinc protoporphyrin. <i>International Journal of Cancer</i> , 2004 , 109, 1-8 | 7.5 | 142 |

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| 127 | Involvement of the kinin-generating cascade in enhanced vascular permeability in tumor tissue. <i>Japanese Journal of Cancer Research</i> , 1988 , 79, 1327-34 | | 138 |
| 126 | Image enhancement in computerized tomography for sensitive diagnosis of liver cancer and semiquantitation of tumor selective drug targeting with oily contrast medium. <i>Cancer</i> , 1985 , 56, 751-7 | 6.4 | 136 |
| 125 | 8-nitroguanosine formation in viral pneumonia and its implication for pathogenesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 685-90 | 11.5 | 130 |
| 124 | Enhanced vascular permeability in solid tumor involving peroxynitrite and matrix metalloproteinases. <i>Japanese Journal of Cancer Research</i> , 2001 , 92, 439-51 | | 122 |
| 123 | Excessive production of nitric oxide in rat solid tumor and its implication in rapid tumor growth. <i>Cancer</i> , 1996 , 77, 1598-604 | 6.4 | 122 |
| 122 | Pathogenesis of serratal infection: activation of the Hageman factor-prekallikrein cascade by serratal protease. <i>Journal of Biochemistry</i> , 1984 , 96, 739-49 | 3.1 | 121 |
| 121 | Excessive production of nitric oxide in rat solid tumor and its implication in rapid tumor growth. <i>Cancer</i> , 1996 , 77, 1598-1604 | 6.4 | 119 |
| 120 | Pivotal role of Cu,Zn-superoxide dismutase in endothelium-dependent hyperpolarization. <i>Journal of Clinical Investigation</i> , 2003 , 112, 1871-1879 | 15.9 | 115 |
| 119 | The link between infection and cancer: tumor vasculature, free radicals, and drug delivery to tumors via the EPR effect. <i>Cancer Science</i> , 2013 , 104, 779-89 | 6.9 | 114 |
| 118 | Free radicals in viral pathogenesis: molecular mechanisms involving superoxide and NO. <i>Experimental Biology and Medicine</i> , 1998 , 217, 64-73 | 3.7 | 107 |
| 117 | Tailor-making of protein drugs by polymer conjugation for tumor targeting: A brief review on smancs. <i>The Protein Journal</i> , 1984 , 3, 181-193 | | 101 |
| 116 | Role of microbial proteases in pathogenesis. <i>Microbiology and Immunology</i> , 1996 , 40, 685-99 | 2.7 | 97 |
| 115 | Role of nitric oxide in pathogenesis of herpes simplex virus encephalitis in rats. <i>Virology</i> , 1999 , 256, 203-12 | 3.2 | 94 |
| 114 | Isolation, identification, and structure of a potent alkyl-peroxyl radical scavenger in crude canola oil, canolol. <i>Bioscience, Biotechnology and Biochemistry</i> , 2005 , 69, 1568-74 | 2.1 | 93 |
| 113 | Improved anticancer effects of albumin-bound paclitaxel nanoparticle via augmentation of EPR effect and albumin-protein interactions using S-nitrosated human serum albumin dimer. <i>Biomaterials</i> , 2017 , 140, 162-169 | 15.6 | 90 |
| 112 | Kinin-generating cascade in advanced cancer patients and in vitro study. <i>Japanese Journal of Cancer Research</i> , 1991 , 82, 732-41 | | 89 |
| 111 | Polymeric micelles of zinc protoporphyrin for tumor targeted delivery based on EPR effect and singlet oxygen generation. <i>Journal of Drug Targeting</i> , 2007 , 15, 496-506 | 5.4 | 87 |
| 110 | Polymer therapeutics and the EPR effect. <i>Journal of Drug Targeting</i> , 2017 , 25, 781-785 | 5.4 | 85 |

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| 109 | Two step mechanisms of tumor selective delivery of N-(2-hydroxypropyl)methacrylamide copolymer conjugated with pirarubicin via an acid-cleavable linkage. <i>Journal of Controlled Release</i> , 2014 , 174, 81-7 | 11.7 | 85 |
| 108 | Copoly(styrene-maleic acid)-pirarubicin micelles: high tumor-targeting efficiency with little toxicity. <i>Bioconjugate Chemistry</i> , 2005 , 16, 230-6 | 6.3 | 85 |
| 107 | Antioxidative and antimutagenic activities of 4-vinyl-2,6-dimethoxyphenol (canolol) isolated from canola oil. <i>Journal of Agricultural and Food Chemistry</i> , 2004 , 52, 4380-7 | 5.7 | 85 |
| 106 | Oxygen free radicals as pathogenic molecules in viral diseases. <i>Experimental Biology and Medicine</i> , 1991 , 198, 721-7 | 3.7 | 80 |
| 105 | High-loading nanosized micelles of copoly(styrene-maleic acid)-zinc protoporphyrin for targeted delivery of a potent heme oxygenase inhibitor. <i>Biomaterials</i> , 2007 , 28, 1871-81 | 15.6 | 79 |
| 104 | Targeting of heat shock protein 32 (Hsp32)/heme oxygenase-1 (HO-1) in leukemic cells in chronic myeloid leukemia: a novel approach to overcome resistance against imatinib. <i>Blood</i> , 2008 , 111, 2200-10 | 2.2 | 78 |
| 103 | Identification of bradykinin receptors in clinical cancer specimens and murine tumor tissues. <i>International Journal of Cancer</i> , 2002 , 98, 29-35 | 7.5 | 76 |
| 102 | Tumor-targeted delivery of polyethylene glycol-conjugated D-amino acid oxidase for antitumor therapy via enzymatic generation of hydrogen peroxide. <i>Cancer Research</i> , 2002 , 62, 3138-43 | 10.1 | 75 |
| 101 | Viral mutation accelerated by nitric oxide production during infection in vivo. <i>FASEB Journal</i> , 2000 , 14, 1447-1454 | 0.9 | 73 |
| 100 | Kallikrein-kinin in infection and cancer. <i>Immunopharmacology</i> , 1999 , 43, 115-28 | | 69 |
| 99 | Styrene-maleic acid copolymer-encapsulated CORM2, a water-soluble carbon monoxide (CO) donor with a constant CO-releasing property, exhibits therapeutic potential for inflammatory bowel disease. <i>Journal of Controlled Release</i> , 2014 , 187, 14-21 | 11.7 | 67 |
| 98 | Bradykinin and nitric oxide in infectious disease and cancer. <i>Immunopharmacology</i> , 1996 , 33, 222-30 | | 65 |
| 97 | Assay of proteolytic enzymes by the fluorescence polarization technique. <i>Analytical Biochemistry</i> , 1979 , 92, 222-7 | 3.1 | 65 |
| 96 | HPMA Copolymer-Conjugated Pirarubicin in Multimodal Treatment of a Patient with Stage IV Prostate Cancer and Extensive Lung and Bone Metastases. <i>Targeted Oncology</i> , 2016 , 11, 101-6 | 5 | 64 |
| 95 | Carbon monoxide, generated by heme oxygenase-1, mediates the enhanced permeability and retention effect in solid tumors. <i>Cancer Science</i> , 2012 , 103, 535-41 | 6.9 | 61 |
| 94 | Potential of nitric oxide-mediated vasorelaxation by xanthine oxidase inhibitors. <i>Experimental Biology and Medicine</i> , 1996 , 211, 366-73 | 3.7 | 60 |
| 93 | Augmentation of the Enhanced Permeability and Retention Effect with Nitric Oxide-Generating Agents Improves the Therapeutic Effects of Nanomedicines. <i>Molecular Cancer Therapeutics</i> , 2018 , 17, 2643-2653 | 6.1 | 60 |
| 92 | Modulation of tumor-selective vascular blood flow and extravasation by the stable prostaglandin 12 analogue beraprost sodium. <i>Journal of Drug Targeting</i> , 2003 , 11, 45-52 | 5.4 | 58 |

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| 91 | Upregulation of heme oxygenase-1 in colorectal cancer patients with increased circulation carbon monoxide levels, potentially affects chemotherapeutic sensitivity. <i>BMC Cancer</i> , 2014 , 14, 436 | 4.8 | 55 |
| 90 | The serratial 56K protease as a major pathogenic factor in serratial keratitis. Clinical and experimental study. <i>Ophthalmology</i> , 1985 , 92, 1452-9 | 7.3 | 54 |
| 89 | Nitric oxide as an endogenous mutagen for Sendai virus without antiviral activity. <i>Journal of Virology</i> , 2004 , 78, 8709-19 | 6.6 | 53 |
| 88 | Chemical modification of superoxide dismutase. Extension of plasma half life of the enzyme through its reversible binding to the circulating albumin. <i>International Journal of Peptide and Protein Research</i> , 1988 , 32, 153-9 | | 51 |
| 87 | Dietary lipid peroxidation products and DNA damage in colon carcinogenesis. <i>European Journal of Lipid Science and Technology</i> , 2002 , 104, 439-447 | 3 | 50 |
| 86 | Superoxide generation mediated by 8-nitroguanosine, a highly redox-active nucleic acid derivative. <i>Biochemical and Biophysical Research Communications</i> , 2003 , 311, 300-6 | 3.4 | 50 |
| 85 | Protein Binding of Macromolecular Anticancer Agent SMANCS: Characterization of Poly(styrene-co-maleic acid) Derivatives as an Albumin Binding Ligand. <i>Journal of Bioactive and Compatible Polymers</i> , 1988 , 3, 319-333 | 2 | 50 |
| 84 | 4-Vinyl-2,6-dimethoxyphenol (canolol) suppresses oxidative stress and gastric carcinogenesis in <i>Helicobacter pylori</i> -infected carcinogen-treated Mongolian gerbils. <i>International Journal of Cancer</i> , 2008 , 122, 1445-54 | 7.5 | 48 |
| 83 | Micelles of zinc protoporphyrin conjugated to N-(2-hydroxypropyl)methacrylamide (HPMA) copolymer for imaging and light-induced antitumor effects in vivo. <i>Journal of Controlled Release</i> , 2013 , 165, 191-8 | 11.7 | 47 |
| 82 | Activation of blood clotting factors by microbial proteinases. <i>FEMS Microbiology Letters</i> , 1994 , 121, 327-329 | | 47 |
| 81 | S-Nitrosated human serum albumin dimer is not only a novel anti-tumor drug but also a potentiator for anti-tumor drugs with augmented EPR effects. <i>Bioconjugate Chemistry</i> , 2012 , 23, 264-71 | 6.3 | 46 |
| 80 | Nitroglycerin enhances vascular blood flow and drug delivery in hypoxic tumor tissues: analogy between angina pectoris and solid tumors and enhancement of the EPR effect. <i>Journal of Controlled Release</i> , 2010 , 142, 296-8 | 11.7 | 46 |
| 79 | In vitro and in vivo evaluation of tumor targeting styrene-maleic acid copolymer-pirarubicin micelles: Survival improvement and inhibition of liver metastases. <i>Cancer Science</i> , 2010 , 101, 1866-74 | 6.9 | 44 |
| 78 | Evidence of direct generation of oxygen free radicals from heterocyclic amines by NADPH/cytochrome P-450 reductase in vitro. <i>Japanese Journal of Cancer Research</i> , 1992 , 83, 1204-9 | | 44 |
| 77 | Tumor-selective blood flow decrease induced by an angiotensin converting enzyme inhibitor, temocapril hydrochloride. <i>Japanese Journal of Cancer Research</i> , 2000 , 91, 261-9 | | 41 |
| 76 | Anticancer effects of arterial administration of the anticancer agent SMANCS with lipiodol on metastatic lymph nodes. <i>Cancer</i> , 1987 , 59, 1560-5 | 6.4 | 41 |
| 75 | S-Nitrosated human serum albumin dimer as novel nano-EPR enhancer applied to macromolecular anti-tumor drugs such as micelles and liposomes. <i>Journal of Controlled Release</i> , 2015 , 217, 1-9 | 11.7 | 40 |
| 74 | Synthesis and therapeutic effect of styrene-maleic acid copolymer-conjugated pirarubicin. <i>Cancer Science</i> , 2015 , 106, 270-8 | 6.9 | 39 |

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| 73 | Comparison between linear and star-like HPMA conjugated pirarubicin (THP) in pharmacokinetics and antitumor activity in tumor bearing mice. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2015 , 90, 90-6 | 5.7 | 38 |
| 72 | Therapeutic potential of pegylated hemin for reactive oxygen species-related diseases via induction of heme oxygenase-1: results from a rat hepatic ischemia/reperfusion injury model. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2011 , 339, 779-89 | 4.7 | 38 |
| 71 | Nitric oxide generation from hydroxyurea via copper-catalyzed peroxidation and implications for pharmacological actions of hydroxyurea. <i>Japanese Journal of Cancer Research</i> , 1997 , 88, 1199-204 | | 38 |
| 70 | Styrene maleic acid-pirarubicin disrupts tumor microcirculation and enhances the permeability of colorectal liver metastases. <i>Journal of Vascular Research</i> , 2009 , 46, 218-28 | 1.9 | 37 |
| 69 | Intracellular uptake and behavior of two types zinc protoporphyrin (ZnPP) micelles, SMA-ZnPP and PEG-ZnPP as anticancer agents; unique intracellular disintegration of SMA micelles. <i>Journal of Controlled Release</i> , 2011 , 155, 367-75 | 11.7 | 36 |
| 68 | Oxystress inducing antitumor therapeutics via tumor-targeted delivery of PEG-conjugated D-amino acid oxidase. <i>International Journal of Cancer</i> , 2008 , 122, 1135-44 | 7.5 | 36 |
| 67 | Identification of heat shock protein 32 (Hsp32) as a novel survival factor and therapeutic target in neoplastic mast cells. <i>Blood</i> , 2007 , 110, 661-9 | 2.2 | 36 |
| 66 | Enhanced bacterial tumor delivery by modulating the EPR effect and therapeutic potential of <i>Lactobacillus casei</i> . <i>Journal of Pharmaceutical Sciences</i> , 2014 , 103, 3235-43 | 3.9 | 33 |
| 65 | Synthesis and evaluation of poly(styrene-co-maleic acid) micellar nanocarriers for the delivery of tanespimycin. <i>International Journal of Pharmaceutics</i> , 2011 , 420, 111-7 | 6.5 | 33 |
| 64 | The 35th Anniversary of the Discovery of EPR Effect: A New Wave of Nanomedicines for Tumor-Targeted Drug Delivery-Personal Remarks and Future Prospects. <i>Journal of Personalized Medicine</i> , 2021 , 11, | 3.6 | 33 |
| 63 | Free radical generation from heterocyclic amines by cytochrome b5 reductase in the presence of NADH. <i>Cancer Letters</i> , 1999 , 143, 117-21 | 9.9 | 32 |
| 62 | Augmentation of EPR Effect and Efficacy of Anticancer Nanomedicine by Carbon Monoxide Generating Agents. <i>Pharmaceutics</i> , 2019 , 11, | 6.4 | 31 |
| 61 | S-nitrosylated human alpha(1)-protease inhibitor. <i>BBA - Proteins and Proteomics</i> , 2000 , 1477, 90-7 | | 31 |
| 60 | HSP32 (HO-1) inhibitor, copoly(styrene-maleic acid)-zinc protoporphyrin IX, a water-soluble micelle as anticancer agent: In vitro and in vivo anticancer effect. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2012 , 81, 540-7 | 5.7 | 30 |
| 59 | Pronounced Cellular Uptake of Pirarubicin versus That of Other Anthracyclines: Comparison of HPMA Copolymer Conjugates of Pirarubicin and Doxorubicin. <i>Molecular Pharmaceutics</i> , 2016 , 13, 4106-4115 | 5.6 | 29 |
| 58 | Formation of abasic sites in DNA by t-butyl peroxy radicals: implication for potent genotoxicity of lipid peroxy radicals. <i>Cancer Letters</i> , 2000 , 156, 51-5 | 9.9 | 28 |
| 57 | Enhanced tumor localization of monoclonal antibody by treatment with kinase II inhibitor and angiotensin II. <i>Japanese Journal of Cancer Research</i> , 1992 , 83, 240-3 | | 28 |
| 56 | N-(2-hydroxypropyl)methacrylamide polymer conjugated pyropheophorbide-a, a promising tumor-targeted theranostic probe for photodynamic therapy and imaging. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2018 , 130, 165-176 | 5.7 | 26 |

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| 55 | Tumor-targeted chemotherapy with SMANCS in lipiodol for renal cell carcinoma: longer survival with larger size tumors. <i>Urology</i> , 2000 , 55, 495-500 | 1.6 | 26 |
| 54 | Combined targeting of STAT3 and STAT5: a novel approach to overcome drug resistance in chronic myeloid leukemia. <i>Haematologica</i> , 2017 , 102, 1519-1529 | 6.6 | 25 |
| 53 | Protective effect of canolol from oxidative stress-induced cell damage in ARPE-19 cells via an ERK mediated antioxidative pathway. <i>Molecular Vision</i> , 2011 , 17, 2040-8 | 2.3 | 25 |
| 52 | pH-sensitive polymeric cisplatin-ion complex with styrene-maleic acid copolymer exhibits tumor-selective drug delivery and antitumor activity as a result of the enhanced permeability and retention effect. <i>Colloids and Surfaces B: Biointerfaces</i> , 2016 , 138, 128-37 | 6 | 24 |
| 51 | Lymphotropic accumulation of an antitumor antibiotic protein, neocarzinostatin. <i>European Journal of Cancer</i> , 1980 , 16, 723-31 | | 24 |
| 50 | Polymer Conjugation to Cu,Zn-SOD and Suppression of Hydroxyl Radical Generation on Exposure to H ₂ O ₂ : Improved Stability of SOD in Vitro and in Vivo. <i>Journal of Bioactive and Compatible Polymers</i> , 1996 , 11, 169-190 | 2 | 23 |
| 49 | SMA-copolymer conjugate of AHPP: a polymeric inhibitor of xanthine oxidase with potential antihypertensive effect. <i>Journal of Controlled Release</i> , 2009 , 135, 211-7 | 11.7 | 22 |
| 48 | Vascular permeability enhancing activity of Porphyromonas gingivalis protease in guinea pigs. <i>FEMS Microbiology Letters</i> , 1993 , 114, 109-14 | 2.9 | 22 |
| 47 | Role of bradykinin in microbial infection: enhancement of septicemia by microbial proteases and kinin. <i>Agents and Actions Supplements</i> , 1993 , 42, 159-65 | 0.2 | 22 |
| 46 | Photodynamic therapy and imaging based on tumor-targeted nanoprobe, polymer-conjugated zinc protoporphyrin. <i>Future Science OA</i> , 2015 , 1, FSO4 | 2.7 | 21 |
| 45 | Enhanced intestinal absorption of a hydrophobic polymer-conjugated protein drug, smancs, in an oily formulation. <i>Pharmaceutical Research</i> , 1990 , 7, 852-5 | 4.5 | 20 |
| 44 | Poly-S-nitrosated human albumin enhances the antitumor and antimetastasis effect of bevacizumab, partly by inhibiting autophagy through the generation of nitric oxide. <i>Cancer Science</i> , 2015 , 106, 194-200 | 6.9 | 19 |
| 43 | Research spotlight: emergence of EPR effect theory and development of clinical applications for cancer therapy. <i>Therapeutic Delivery</i> , 2014 , 5, 627-30 | 3.8 | 19 |
| 42 | Targeting Chemotherapy of Hepatocellular Carcinoma 1987 , 343-352 | | 19 |
| 41 | Protective role of D-amino acid oxidase against Staphylococcus aureus infection. <i>Infection and Immunity</i> , 2012 , 80, 1546-53 | 3.7 | 18 |
| 40 | Identification of heat shock protein 32 (Hsp32) as a novel target in acute lymphoblastic leukemia. <i>Oncotarget</i> , 2014 , 5, 1198-211 | 3.3 | 18 |
| 39 | Effect of different chemical bonds in pegylation of zinc protoporphyrin that affects drug release, intracellular uptake, and therapeutic effect in the tumor. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2015 , 89, 259-70 | 5.7 | 17 |
| 38 | Targeting of heat-shock protein 32/heme oxygenase-1 in canine mastocytoma cells is associated with reduced growth and induction of apoptosis. <i>Experimental Hematology</i> , 2008 , 36, 1461-70 | 3.1 | 17 |

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| 37 | Metamorphosis of Neocarzinostatin to SMANCS: Chemistry, Biology, Pharmacology, and Clinical Effect of the First Prototype Anticancer Polymer Therapeutic 1997 , 227-267 | | 17 |
| 36 | Styrene-maleic acid-copolymer conjugated zinc protoporphyrin as a candidate drug for tumor-targeted therapy and imaging. <i>Journal of Drug Targeting</i> , 2016 , 24, 399-407 | 5.4 | 16 |
| 35 | Tumor-targeted chemotherapy with lipid contrast medium and macromolecular anticancer drug (SMANCS) for renal cell carcinoma. <i>Urology</i> , 1991 , 37, 288-94 | 1.6 | 16 |
| 34 | Pathophysiological Effects of High-Output Production of Nitric Oxide 2000 , 733-745 | | 15 |
| 33 | Superior Penetration and Cytotoxicity of HPMA Copolymer Conjugates of Pirarubicin in Tumor Cell Spheroid. <i>Molecular Pharmaceutics</i> , 2019 , 16, 3452-3459 | 5.6 | 14 |
| 32 | Water soluble PEG-conjugate of xanthine oxidase inhibitor, PEG-AHPP micelles, as a novel therapeutic for ROS related inflammatory bowel diseases. <i>Journal of Controlled Release</i> , 2016 , 223, 188-196 | 11.7 | 13 |
| 31 | Tissue protective effect of xanthine oxidase inhibitor, polymer conjugate of (styrene-maleic acid copolymer) and (4-amino-6-hydroxypyrazolo[3,4-d]pyrimidine), on hepatic ischemia-reperfusion injury. <i>Experimental Biology and Medicine</i> , 2010 , 235, 487-96 | 3.7 | 13 |
| 30 | Comparison of the pharmacological and biological properties of HPMA copolymer-pirarubicin conjugates: A single-chain copolymer conjugate and its biodegradable tandem-diblock copolymer conjugate. <i>European Journal of Pharmaceutical Sciences</i> , 2017 , 106, 10-19 | 5.1 | 12 |
| 29 | Singlet oxygen phosphorescence detection in vivo identifies PDT-induced anoxia in solid tumors. <i>Photochemical and Photobiological Sciences</i> , 2019 , 18, 1304-1314 | 4.2 | 12 |
| 28 | Generation of drug-resistant mutants of <i>Helicobacter pylori</i> in the presence of peroxynitrite, a derivative of nitric oxide, at pathophysiological concentration. <i>Microbiology and Immunology</i> , 2009 , 53, 1-7 | 2.7 | 12 |
| 27 | Changes in the microvascular architecture of colorectal liver metastases following the administration of SMANCS/lipiodol. <i>Journal of Surgical Research</i> , 2002 , 103, 47-54 | 2.5 | 12 |
| 26 | Tumor-Targeted Macromolecular Drug Delivery Based on the Enhanced Permeability and Retention Effect in Solid Tumor 2009 , 93-120 | | 11 |
| 25 | HPMA copolymer conjugate with pirarubicin: In vitro and ex vivo stability and drug release study. <i>International Journal of Pharmaceutics</i> , 2018 , 536, 108-115 | 6.5 | 11 |
| 24 | Stimulation of non-specific resistance to tumors in the mouse using a poly(maleic-acid-styrene)-conjugated neocarzinostatin. <i>Cancer Immunology, Immunotherapy</i> , 1989 , 30, 97-104 | 7.4 | 10 |
| 23 | Enhancement by verapamil of neocarzinostatin action on multidrug-resistant Chinese hamster ovary cells: possible release of nonprotein chromophore in cells. <i>Japanese Journal of Cancer Research</i> , 1991 , 82, 351-6 | | 9 |
| 22 | Factors affecting the dynamics and heterogeneity of the EPR effect: pathophysiological and pathoanatomic features, drug formulations and physicochemical factors. <i>Expert Opinion on Drug Delivery</i> , 2021 , 1-14 | 8 | 8 |
| 21 | Polymer-conjugated glucosamine complexed with boric acid shows tumor-selective accumulation and simultaneous inhibition of glycolysis. <i>Biomaterials</i> , 2021 , 269, 120631 | 15.6 | 8 |
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