

HARSH VARDHAN JAIN : PUBLICATIONS

Articles Under Review

Perfahl HP, Jain HV, Joshi, T et al. *Hybrid modelling of transarterial chemoembolisation therapies (TACE) for hepatocellular carcinoma (HCC)*.

Articles Accepted for Publication

Sorribes IC, Handelman SK, Jain HV, *Mitigating temozolomide resistance in glioblastoma via DNA damage-repair inhibition*, to appear in Journal of the Royal Society Interface.

Published Peer-Reviewed Journal Articles

2019 Sorribes IC, Moore MNJ, Byrne HM, Jain HV, *A biomechanical model of tumor-induced intracranial pressure and edema in brain tissue*, Biophysical Journal, 116:1560–1574.

2018 Poole MI, Sorribes I, Jain HV, *Modeling hepatitis C virus protein and p53 interactions in hepatocytes: Implications for carcinogenesis*, Mathematical Biosciences, 306:186–196.

Jain HV, Jackson TL, *Mathematical modeling of cellular cross-talk between endothelial and tumor cells highlights counterintuitive effects of VEGF-targeted therapies*, Bulletin of Mathematical Biology, 80:971–1016.

2017 Eisenberg M, Jain HV, *Data and identifiability in models of cancer chemotherapy: a confidence building exercise*, Journal of Theoretical Biology, 431:63–78.

2014 Jain HV, Meyer-Hermann M, Richardson A, Byrne HM, *Exploiting the synergy between carboplatin and ABT-737 in the treatment of ovarian carcinomas*, PLoS ONE, 9(1):e81582.

2013 Friedman A, Jain HV, *A partial differential equation model of metastasized prostatic cancer*, Mathematical Biosciences and Engineering, 10(3):591–608.

Jain HV, Jackson TL, *A hybrid model of the role of VEGF binding in endothelial cell migration and capillary formation*, Frontiers in Oncology, 3:102.

Jain HV, Friedman A, *Modeling prostate cancer response to continuous versus intermittent androgen ablation therapy*, Discrete and Continuous Dynamical Systems-B, 18(4):945–67.

2012 Jain HV, Byrne HM, *Qualitative analysis of an integro-differential equation model of periodic chemotherapy*, Applied Mathematics Letters, 25(12):2132-6.

Jain HV, Moldovan NI, Byrne HM, *Modelling stem/progenitor cell-induced neovascularization and oxygenation around solid implants*, Tissue Engineering Part C Methods, 18(7):4497-501.

- 2011 Jain HV, Clinton SK, Bhinder A, Friedman A, *Mathematical modeling of prostate cancer progression in response to androgen ablation therapy*, Proceedings of the National Academy of Sciences, 108(49):19701-6.
- Jain HV, Meyer-Hermann M, *The molecular basis of synergism between carboplatin and ABT-737 therapy targeting ovarian carcinomas*, Cancer Research, 71(3):705-15.
- 2009 Jain HV, Nor JE, Jackson TL, *Quantification of endothelial cell-targeted anti Bcl-2 therapy and its suppression of tumor growth and vascularization*, Molecular Cancer Therapeutics, 8(10):2926-36.
- 2008 Jain HV, Nor JE, Jackson TL, *Modelling the VEGF-Bcl-2-CXCL8 pathway in intra-tumoral angiogenesis*, Bulletin of Mathematical Biology, 70(1):89-117.
- 2007 Dong Z, Zeitlin BD, Song W, Sun Q, Karl, E, Spencer DM, Jain HV, Jackson TL, Nunez G, Nor JE, *Level of endothelial apoptosis required for a significant decrease in microvessel density*, Experimental Cellular Research, 313(16): 3645-3657.

Book Chapters

- 2012 Jain HV, Jackson TL, *Linking EC stimulation to tumor growth and vascular density: The VEGF- Bcl2-CXCL8 pathway* in Modeling Tumor Vasculature: Molecular, Cellular and Tissue Level Aspects and Implications, ed Jackson TL, Springer, pp 55-78.
- 2006 Jackson TL, Ashkenazi R, Heusel S, Jain HV, *Cancer modelling: A perspective on what's new and what's next* in Mathematical Studies on Human Disease Dynamics: Emerging Paradigms and Challenges, eds Gumel A, Castillo-Chavez C, Mickens R and Clemens DP, Contemporary Mathematics (AMS) 410:153-172.