

## PUBLICATION LIST

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### PEER-REVIEWED PUBLICATIONS

- M. J. Kiel, S. He, R. Ashkenazi, S. N. Heusel, M. Teta, J. A. Kushner, T. L. Jackson, & S. J. Morrison, Hematopoietic stem cells do not segregate chromosomes asymmetrically and cannot be reliably identified based on bromo-deoxyuridine label-retention *NATURE* **449** xiii (2007) pp. 238-242.
- A. L. Bauer, T. L. Jackson & Y. Jiang, A Cell-Based Model Exhibiting Branching and Anastomosis During Tumor-Induced Angiogenesis *Biophys. J.* **92** (2007) pp 1-17.
- Z. Dong, W. Song, Q. Sun, B. D. Zeitlin, E. Karl, D. M. Spencer, T.L. Jackson, G. Nez, & J. E. Nr, Apoptotic Requirement for Microvessel Disruption *J Exp. Med.* **313(16)** (2007) pp. 3645-3657.
- H. V. Jain, J. E. Nor & T. L. Jackson, Investigating the VEGF-Bcl-2-CXCL8 Pathway and Its Role in Sustained Angiogenesis *Bull. Math. Biol.* (**In Press**).
- R. Ashkenazi, T.L. Jackson, G. Dontu & M. S. Wicha, Breast Cancer Stem Cells Research Opportunities Utilizing Mathematical Modeling *Stem Cell Rev.* (**In Press**).
- M. Wu, H.Y. Kwon, F. Rattis, J. Blum, C. Zhao, R. Ashkenazi, T.L. Jackson, N. Gaiano, T. Oliver & T. Reya, Imaging Hematopoietic Precursor Division in Real-Time *Cell - Stem Cell* (**In Press**).
- D. M. Bortz, T. L. Jackson, K. A. Taylor, and J. G. Younger, Klebsiella pneumoniae flocculation dynamics, *Bull. Math. Biol.* (**In Press**).
- H. Chung, M.M. Cartwright, D.M. Bortz, T.L. Jackson, J.G. Younger, Dynamical System Analysis Reveals a Multi-Organ Filtration Defect During Neutropenic Staphylococcus epidermidis Bloodstream Infection (**In Press**).
- T.L. Jackson, R. Ashkenazi, S. Heusel, and H.V. Jain, Cancer Modeling: A Perspective on What's New and What's Next, *Contemporary Mathematics* **40** (2006) pp. 229-234.
- A. L. Garner, Y. Y. Lau, T.L. Jackson, M.D. Uhler, D. Jordan, R.M. Gilgnebach, Incorporating spatial dependence into a multicellular tumor spheroid growth model *J Applied Phys* **98** (2005) pp. 124701-8.
- I. Ben-David , S. E. Price, D. M. Bortz, S. E. Cohen, A. L. Bauer, T. L. Jackson & J. G. Younger, Dynamics of intrapulmonary bacterial growth in a murine model of repeated microaspiration. *Am J Res Cell and Molec Biol* **33** (2005) pp. 476-482.
- P. J. Bushnell, T. J. Shafer, A. S. Bale, W. K. Boyes, J. E. Simmons, C. Eklund, & T. L. Jackson, Developing an Exposure-Dose-Response Model for Organic Solvents: Overview and Progress on in vitro Models and Dosimetry Envir. Tox. Pharm. **19(3)** (2005) pp. 607-614.

- T. L. Jackson, A Mathematical Investigation of the Multiple Pathways to Recurrent Prostate Cancer: Comparison with Experimental Data *Neoplasia* **6**(6) (2004) 697-704.
- R. Lai & T. L. Jackson, A Mathematical Model of Receptor-Mediated Apoptosis: Fas Dying to Know Why FasL is a Trimer *Mathem. Biosci. Engin.* **1**(2) (2004) pp. 325-338.
- T. L. Jackson, A Mathematical Model of Prostate Tumor Growth and Androgen-Independent Relapse *Discrete Contin. Dynam. Sys.* **4**(1) (2004) pp. 187-202.
- T. L. Jackson, J. Arciero, & D. Kirschner, A Mathematical Model of Tumor Immune Evasion and siRNA Treatment *Discrete Contin. Dynam. Sys.* **4**(1) (2004) pp. 39-58.
- W. O. Criminale & T. L. Jackson & P. W. Nelson, Limit Cycle-Strange Attractor Competition *Studies in Appl. Math.* **112** (2004) pp. 133-160
- T. L. Jackson, Intracellular Accumulation and Mechanism of Action of Doxorubicin in a Spatio-Temporal Tumor Model *J. Theor. Biol.* **220**(2) (2003) pp. 201-213.
- T. L. Jackson, Vascular Tumor Growth and Treatment: Consequences of polyclonality, competition, and dynamic vascular support *J. Math. Biol.* **44**(3) (2002) pp. 201-226.
- S. R. Lubkin & T. L. Jackson, Multiphase Mechanics of Capsule Formation in Tumors *J. Biomech. Eng.* **124**(2) (2002) pp. 237-243.
- T. L. Jackson & H. M. Byrne, A Mechanical Model of Tumor Encapsulation and Transcapsular Spread *Mathem. Biosci.* **180** (2002) pp. 307-328.
- T. L. Jackson & H. M. Byrne, A Mathematical Model to Study the Effects of Drug Resistance and Vasculature on the Response of Solid Tumors to Chemotherapy *Math. Biosci.* **164** (2000) pp. 17-38.
- T. L. Jackson, P. D. Senter, & J. D. Murray, Development and Validation of a Mathematical Model to Describe Anti-cancer Prodrug Activation by Antibody-Enzyme Conjugates. *J. Theoret. Med.* **2**(2) (2000) pp. 93-111.
- T. L. Jackson, S. R. Lubkin, & J. D. Murray, Theoretical Analysis of Conjugate Localization in Two-Step Cancer Chemotherapy, *J. of Math. Bio.* **(39)**4 (1999) pp. 353-376.
- T. L. Jackson, S. R. Lubkin, N. O. Siemers, D. Kerr, P. D. Senter, & J. D. Murray, Mathematical and Experimental Analysis of Localization of Anti-Tumor Antibody Enzyme Conjugates, *Br. J. of Cancer* **80**(11) (1999) pp. 1747-1753.
- B. Tang, A. Sitomer, & T. L. Jackson, Population Dynamics and Competition in Chemostat Models with Adaptive Nutrient Uptake, *J. of Math. Bio* **35** (1997) pp. 453-479.
- Book Review: L. Preziosi, Editor, Cancer Modeling and Simulation, Chapman and Hall/CRC (2003) ISBN 1584883618 (hardback), 456 pp, USD 129.95. *Mathem. Biosci* **193**(1): 3-4 **2005**.
- A. L. Bauer , T. L. Jackson , Y. Jiang, Topography of Extracellular Matrix Mediates Vascular Morphogenesis and Migration Speeds *Biophys. J submitted*.
- R. Ashkenazi, S.N. Heusel, & T.L. Jackson, Pathways to Tumorigenesis: Mathematical Modeling of Cancer Stem Cell Hypothesis *J. Biol. Sys.* **submitted**.
- X. Zheng, T.L. Jackson, A new model of proliferation and extension of blood vessels in Angiogenesis *Applied Math Lett* **submitted**.

## IN PREPARATION

- H. Jain & J. E. Nor & T. L. Jackson, A Validated Mathematical Model of the Therapeutic Potential of Small Molecule Inhibitors of Bcl-2.
- A. L. Bauer , T. L. Jackson , Y. Jiang, RTK-ITG-Cadherin Cross-Talk: A Boolean Network Model for the Intracellular Signaling Associated with Endothelial Cell Proliferation and Migration.

- A. L. Bauer , T. L. Jackson , Y. Jiang, A Multiscale Model of Tumor-Induced Angiogenesis.
- L. M. Bilinsky,T. L. Jackson,P.W. Nelson, A time delay model of competing tumor phenotypes.