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### Degrees

<b>Medical University of South Carolina</b>	Ph.D. Environmental Risk Assessment	1996
<b>Case Western Reserve University</b>	M.S. Chemistry	1992
<b>Case Western Reserve University</b>	M.S. Systems Engineering	1988
<b>Case Western Reserve University</b>	B.S. Electrical Engineering	1987

### Work

**Cleveland Clinic Foundation**, Department of Quantitative Health Sciences, Cleveland, OH 44195  
*Associate Staff of Quantitative Health Sciences* 3/2014 - Present  
*Adjunct Staff of Translational Hematology and Oncology* 11/2012 - Present  
Data analyses with a focus on myelodysplastic syndrome and acute myeloid leukemia.

**Case Western Reserve University**, Department of Epidemiology and Biostatistics, Cleveland, OH 44106  
*Adjunct Faculty of Epidemiology and Biostatistics* 3/1/2014 - Present  
*Assistant Professor of Epidemiology and Biostatistics* 10/2001 – 2/28/2014  
*Adjunct Assistant Professor of Electrical Engineering and Computer Science* 11/2003 – 2/28/2014  
Developed research interests in models of deoxynucleotide metabolism and anti-cancer nucleoside analogs. Taught *Linear Statistical Models*, *Biostatistics of DNA Microarray Data*, *Integrative Cancer Biology*, and *Programming in R*, served as a cancer center biostatistician, and created the R packages *SEERaBomb* (for analyses of Surveillance and Epidemiological End Results data and Japanese A-Bomb survivor data), *ccems* (Combinatorially Complex Equilibrium Model Selection) and *SBMLR* (System Biology Markup Language to R).

**University of California, Berkeley**, Department of Mathematics, Berkeley, CA 94720  
*Visiting Assistant Research Mathematician* June 2000 - May 2001  
Developed radiobiological models based on the theory of dual radiation action and used them to predict dose-response shapes for radiation-induced chronic myeloid leukemia (CML) and radiation-induced *H4-RET* mediated papillary thyroid cancer. This work provided theoretical rationale for a U-shaped CML radiation dose-response.

**Medical University of South Carolina**, Department of Biometry, Charleston, SC 29425  
*Research Instructor* August 1998 - May 2000; June 2001 – August 2001  
*Postdoctoral Fellow* January 1997- July 1998  
*Graduate Student* August 1993 - December 1996  
Research in theoretical radiation biology. Dissertation: “Mathematical Models of Misrejoining DNA Double-Strand Breaks and DNA Fragment Size Distributions.” Courses: biostatistics, cancer biology, toxicology and pathology.

**The Ohio State University**, Department of Biochemistry, Columbus, OH 43210  
*Teaching Assistant* September 1992 - June 1993  
Conducted lectures, supervised experimental laboratories and prepared quizzes for a biology course. Courses taken in immunology, virology, biochemistry, cell biology, enzymology, membranes, gene regulation and physiology.

**Case Western Reserve University**, Department of Chemistry, Cleveland, OH 44106  
*Research Assistant* June 1991 - August 1992  
Investigated the theoretical chemistry of polyimide/metal interfaces using semi-empirical methods. Studied the dissociation of NO<sub>2</sub> using *ab initio* methods. Courses taken in organic-, inorganic- and quantum chemistry.

**Bailey Controls Company**, Department of Advanced Automation and Control, Wickliffe, OH 44092

*Application Engineer* February 1989 - May 1991

Developed a large scale simulation of a supercritical power plant, including conventional controls. Validated the model against dynamic response data and used it as a test-bed for the development of advanced controls.

**Max Planck Institute for Biophysical Chemistry**, Department of Molecular Biology, Göttingen, Germany

*Computer Programmer* February 1988 - December 1988

Automated fluorometer using an IBM PC. Wrote command interface routines for the TIPS imaging system.

**Case Western Reserve University**, Department of Systems Engineering, Cleveland, OH 44106

*Research/teaching Assistant* September 1986 - December 1987

Masters thesis title: "State Tolerance Relations in Deterministic and Stochastic Automata."

### Publications

1. Piston, D., Marriot, G., Radivoyevitch, T., Clegg, R. M., Jovin, T. M. and Gratton, E., Wide-band acousto-optic light modulator for frequency domain fluorometry and phosphorimetry. *Rev Sci Instrum* **60**, 2596-2600 (1989).
2. Klippenstein, S. J. and Radivoyevitch, T., A theoretical study of the dissociation of NO<sub>2</sub>. *J Chem Phys* **99**, 3644-3653 (1993).
3. Cedervall, B. and Radivoyevitch, T., Methods for analysis of DNA fragment distributions on pulsed field gel electrophoretic gels. *Electrophoresis* **17**, 1080-1086 (1996). [PMID: 8832175](#)
4. Radivoyevitch, T. and Cedervall, B., Mathematical analysis of DNA fragment distribution models used with pulsed-field gel electrophoresis for DNA double-strand break calculations. *Electrophoresis* **17**, 1087-1093 (1996). [PMID: 8832176](#)
5. Radivoyevitch, T., Hoel, D. G., Hahnfeldt, P. J., Rydberg, B. and Sachs, R. K., Recent data obtained by pulsed-field gel electrophoresis suggest two types of double-strand breaks. *Radiat Res* **149**, 52-58 (1998). [PMID 9421154](#)
6. Radivoyevitch, T., Hoel, D. G., Chen, A. M. and Sachs, R. K., Misrejoining of double-strand breaks after X irradiation: relating moderate to very high doses by a Markov model. *Radiat Res* **149**, 59-67 (1998). [PMID: 9421155](#)
7. Radivoyevitch, T., Hoel, D. G., Hahnfeldt, P. and Sachs, R. K., Size distributions of misrejoining DNA fragments in irradiated cells. *Math Biosci* **149**, 107-136 (1998). [PMID: 9621680](#)
8. Radivoyevitch, T., Ramsey, M. J. and Tucker, J. D., Estimation of the target stem-cell population size in chronic myeloid leukemogenesis. *Radiat Environ Biophys* **38**, 201-206 (1999). [PMID: 10525957](#)
9. Radivoyevitch, T. and Hoel, D. G., Modeling the low-LET dose-response of BCR-ABL formation: predicting stem cell numbers from A-bomb data. *Math Biosci* **162**, 85-101 (1999). [PMID: 10616282](#)
10. Radivoyevitch, T. and Hoel, D. G., Biologically-based risk estimation for radiation-induced chronic myeloid leukemia. *Radiat Environ Biophys* **39**, 153-159 (2000). [PMID: 11095145](#)
11. Radivoyevitch, T., Time course solutions of the Sax-Markov binary rejoining/misrejoining model of DNA double-strand breaks. *Radiat Environ Biophys* **39**, 265-273 (2000). [PMID: 11200970](#)
12. Voit, E. O. and Radivoyevitch, T., Biochemical systems analysis of genome-wide expression data. *Bioinformatics* **16**, 1023-1037 (2000). [PMID: 11159314](#)
13. Radivoyevitch, T., Sachs, R. K., Nikiforov, Y. E., Nikiforova, M. N. and Little, M. P., On target cell numbers in radiation-induced H4-RET mediated papillary thyroid cancer. *Radiat Environ Biophys* **40**, 191-197 (2001). [PMID: 11783847](#)
14. Radivoyevitch, T., The death-mutation model of carcinogenesis. *Mathematical and Computer Modeling* **33**, 1219-1226 (2001).
15. Radivoyevitch, T., Sphingoid base metabolism in yeast: Mapping gene expression patterns into qualitative metabolite time course predictions. *Comparative & Functional Genomics* **2**, 289-294 (2001). PMID: 18629242; [PMCID: PMC2448403](#)
16. Radivoyevitch, T., Kozubek, S. and Sachs, R. K., Biologically based risk estimation for radiation-induced CML. Inferences from BCR and ABL geometric distributions. *Radiat Environ Biophys* **40**, 1-9 (2001). [PMID: 11357705](#)
17. Radivoyevitch, T., Kozubek, S. and Sachs, R. K., The risk of chronic myeloid leukemia: can the dose-response curve be U- shaped? *Radiat Res* **157**, 106-109 (2002). [PMID: 11754648](#)

18. Kaminski, B. A., Kadereit, S., Miller, R. E., Leahy, P., Stein, K. R., Topa, D. A., Radivoyevitch, T., Veigl, M. L. and Laughlin, M. J., Reduced expression of NFAT-associated genes in UCB versus adult CD4+ T lymphocytes during primary stimulation. *Blood* **102**, 4608-4617 (2003). [PMID: 12946996](#)
19. Taverna, P., Hwang, H. S., Schupp, J. E., Radivoyevitch, T., Session, N. N., Reddy, G., Zarling, D. A. and Kinsella, T. J., Inhibition of base excision repair potentiates iododeoxyuridine-induced cytotoxicity and radiosensitization. *Cancer Res* **63**, 838-846 (2003). [PMID: 12591735](#)
20. Cooper, B. W., Veal, G. J., Radivoyevitch, T., Tilby, M. J., Meyerson, H. J., Lazarus, H. M., Koc, O. N., Creger, R. J., Pearson, G., Nowell, G. M., Gosky, D., Ingalls, S. T., Hoppel, C. L. and Gerson, S. L., A phase I and pharmacodynamic study of fludarabine, carboplatin, and topotecan in patients with relapsed, refractory, or high-risk acute leukemia. *Clin Cancer Res* **10**, 6830-6839 (2004). [PMID: 15501959](#)
21. Radivoyevitch, T., A two-way interface between limited Systems Biology Markup Language and R. *BMC Bioinformatics* **5**, 190 (2004). PMID: 155850559; [PMCID: PMC539231](#)
22. Radivoyevitch, T., Taverna, P., Schupp, J. E. and Kinsella, T. J., The Linear-Quadratic Log-Survival Radiation Dose Response Model: Confidence Ellipses, Drug-Drug Interactions and Brachytherapeutic Gains. *Medical Hypotheses and Research* **1**, 23-28 (2004).
23. Cooney, M. M., Radivoyevitch, T., Dowlati, A., Overmoyer, B., Levitan, N., Robertson, K., Levine, S. L., DeCaro, K., Buchter, C., Taylor, A., Stambler, B. S. and Remick, S. C., Cardiovascular safety profile of combretastatin a4 phosphate in a single-dose phase I study in patients with advanced cancer. *Clin Cancer Res* **10**, 96-100 (2004). [PMID: 14723357](#)
24. Dowlati, A., Robertson, K., Radivoyevitch, T., Waas, J., Ziats, N. P., Hartman, P., Abdul-Karim, F. W., Wasman, J. K., Jesberger, J., Lewin, J., McCrae, K., Ivy, P. and Remick, S. C., Novel Phase I Dose De-escalation Design Trial to Determine the Biological Modulatory Dose of the Antiangiogenic Agent SU5416. *Clin Cancer Res* **11**, 7938-7944 (2005). [PMID: 16278419](#)
25. Radivoyevitch, T., Folate system correlations in DNA microarray data. *BMC Cancer* **5**, 95 (2005). PMID: 16080796; [PMCID: PMC1198223](#)
26. Cooper, B. W., Radivoyevitch, T., Overmoyer, B. A., Shenk, R. R., Pham, H. T., Samuels, J. R., Parry, M. P. and Silverman, P., Phase II study of dose-dense sequential doxorubicin and docetaxel for patients with advanced operable and inoperable breast cancer. *Breast Cancer Res Treat*, 1-8 (2005). [PMID: 16344915](#)
27. Korytko, T., Radivoyevitch, T., Colussi, V., Wessels, B. W., Pillai, K., Maciunas, R. J. and Einstein, D. B., 12 Gy gamma knife radiosurgical volume is a predictor for radiation necrosis in non-AVM intracranial tumors. *Int J Radiat Oncol Biol Phys* (2005). [PMID: 16226848](#)
28. Seo, Y., Yan, T., Schupp, J. E., Radivoyevitch, T. and Kinsella, T. J., Schedule-dependent drug effects of oral 5-iodo-2-pyrimidinone-2'-deoxyribose as an in vivo radiosensitizer in U251 human glioblastoma xenografts. *Clin Cancer Res* **11**, 7499-7507 (2005). [PMID: 16243824](#)
29. Radivoyevitch, T., Loparo, K. A., Jackson, R. C. and Sedwick, W. D., On systems and control approaches to therapeutic gain. *BMC Cancer* **6**, 104 (2006). PMID: 16638124; [PMCID: PMC1484487](#)
30. Seo, Y., Yan, T., Schupp, J. E., Yamane, K., Radivoyevitch, T. and Kinsella, T. J., The Interaction between Two Radiosensitizers: 5-Iododeoxyuridine and Caffeine. *Cancer Res* **66**, 490-498 (2006). [PMID: 16397265](#)
31. Overmoyer, B., Fu, P., Hoppel, C., Radivoyevitch, T., Shenk, R., Persons, M., Silverman, P., Robertson, K., Ziats, N. P., Wasman, J. K., Abdul-Karim, F. W., Jesberger, J. A., Duerk, J., Hartman, P., Hanks, S., Lewin, J., Dowlati, A., McCrae, K., Ivy, P. and Remick, S. C., Inflammatory breast cancer as a model disease to study tumor angiogenesis: results of a phase IB trial of combination SU5416 and doxorubicin. *Clin Cancer Res* **13**, 5862-5868 (2007). [PMID: 17908980](#)
32. Azizi, F., Wan, Q., Radivoyevitch, T., Dealwis, C. and Mastrangelo, C. H., A Combinatorial Multicomponent Plug Mixer for Systems Chemistry. *Micro Total Anal Syst*, 1904-1906 (2008). PMID: 20414459; [PMCID: PMC2857516](#)
33. Radivoyevitch, T., Equilibrium model selection: dTTP induced R1 dimerization. *BMC Syst Biol* **2**, 15 (2008). PMID: 18248678; [PMCID: PMC2268910](#)
34. Radivoyevitch, T., Mass action models versus the Hill model: An analysis of tetrameric human thymidine kinase 1 positive cooperativity. *Biol Direct* **4**, 49 (2009). PMID: 20003201; [PMCID: PMC2799445](#)
35. Radivoyevitch, T., Automated mass action model space generation and analysis methods for two-reactant combinatorially complex equilibria: An analysis of ATP-induced ribonucleotide reductase R1 hexamerization data. *Biol Direct* **4**, 50 (2009). PMID: 20003203; [PMCID: PMC2799446](#)

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37. Radivoyevitch, T., How to use the computing environment R to analyze ATP-induced ribonucleotide reductase R1 hexamerization data. *Nucleosides Nucleotides Nucleic Acids* **29**, 427-432 (2010). PMID: 20544531; [PMCID: PMC2886286](#)
38. Kunos, C. A., Radivoyevitch, T., Pink, J., Chiu, S. M., Stefan, T., Jacobberger, J. and Kinsella, T. J., Ribonucleotide Reductase Inhibition Enhances Chemoradiosensitivity of Human Cervical Cancers. *Radiat Res* (2010). PMID: 20954859; [PMCID: PMC3529744](#)
39. Kunos, C. A., Colussi, V. C., Pink, J., Radivoyevitch, T. and Oleinick, N. L., Radiosensitization of human cervical cancer cells by inhibiting ribonucleotide reductase: enhanced radiation response at low-dose rates. *International journal of radiation oncology, biology, physics* **80**, 1198-1204 (2011). PMID: 21470790; [PMCID: PMC3118909](#)
40. Kunos, C. A., Ferris, G., Pyatka, N., Pink, J. and Radivoyevitch, T., Deoxynucleoside salvage facilitates DNA repair during ribonucleotide reductase blockade in human cervical cancers. *Radiation Research* **176**, 425-433 (2011). PMID: 21756082; [PMCID: PMC3191339](#)
41. Manilich, E. A., Kiran, R. P., Radivoyevitch, T., Lavery, I., Fazio, V. W. and Remzi, F. H., A novel data-driven prognostic model for staging of colorectal cancer. *J Am Coll Surg* **213**, 579-588, 588 e571-572 (2011). [PMID: 21925905](#)
42. Ng, K. P., Ebrahim, Q., Negrotto, S., Mahfouz, R. Z., Link, K. A., Hu, Z., Gu, X., Advani, A., Kalaycio, M., Sobecks, R., Sekeres, M., Copelan, E., Radivoyevitch, T., Maciejewski, J., Mulloy, J. C. and Sauntharajah, Y., p53 independent epigenetic-differentiation treatment in xenotransplant models of acute myeloid leukemia. *Leukemia* **25**, 1739-1750 (2011). PMID: 21701495; [PMCID: PMC3668642](#)
43. Radivoyevitch, T., Munch-Petersen, B., Wang, L. and Eriksson, S., A mathematical model of human thymidine kinase 2 activity. *Nucleosides Nucleotides Nucleic Acids* **30**, 203-209 (2011). PMID: 21491329; [PMCID: PMC3097248](#)
44. Manilich, E. A., OzsoyoGlu, Z. M., Trubachev, V. and Radivoyevitch, T., Classification of Large Microarray Datasets Using Fast Random Forest Construction. *J Bioinform Comput Biol* **9**, 251-267 (2011). [PMID: 21523931](#)
45. Kunos, C., Radivoyevitch, T., Abdul-Karim, F. W. and Faulhaber, P., 18F-Fluoro-2-Deoxy-d-Glucose Positron Emission Tomography Standard Uptake Value Ratio as an Indicator of Cervical Cancer Chemoradiation Therapeutic Response. *International journal of gynecological cancer* **21**, 1117-1123 (2011). [PMID: 21792015](#)
46. Kunos, C. A., Radivoyevitch, T., Ingalls, S. T. and Hoppel, C. L., Management of 3-aminopyridine-2-carboxaldehyde thiosemicarbazone-induced methemoglobinemia. *Future oncology* **8**, 145-150 (2012). PMID: 22335579; [PMCID: PMC3292053](#)
47. Sauntharajah, Y., Triozzi, P., Rini, B., Singh, A., Radivoyevitch, T., Sekeres, M., Advani, A., Tiu, R., Reu, F., Kalaycio, M., Copelan, E., Hsi, E., Lichtin, A. and Bolwell, B., p53-Independent, Normal Stem Cell Sparing Epigenetic Differentiation Therapy for Myeloid and Other Malignancies. *Seminars in oncology* **39**, 97-108 (2012). PMID: 22289496; [PMCID: PMC3655437](#)
48. Radivoyevitch, T. and Kunos, C. A., On model ensemble analyses of nonmonotonic data. *Nucleosides, nucleotides & nucleic acids* **31**, 147-156 (2012). PMID: 22303993; [PMCID: PMC3307047](#)
49. Kunos, C., Radivoyevitch, T., Abdul-Karim, F. W., Fanning, J., Abulafia, O., Bonebrake, A. J. and Usha, L., Ribonucleotide reductase inhibition restores platinum-sensitivity in platinum-resistant ovarian cancer: a Gynecologic Oncology Group study. *Journal of translational medicine* **10**, 79 (2012). PMID: 22541066; [PMCID: PMC3403898](#)
50. Radivoyevitch, T., Hlatky, L., Landaw, J. and Sachs, R. K., Quantitative modeling of chronic myeloid leukemia: insights from radiobiology. *Blood* **119**, 4363-4371 (2012). PMID: 22353999; [PMCID: PMC3362357](#)
51. Kunos, C. A., Debernardo, R., Radivoyevitch, T., Fabien, J., Dobbins, D. C., Zhang, Y. and Brindle, J., Hematological toxicity after robotic stereotactic body radiosurgery for treatment of metastatic gynecologic malignancies. *International journal of radiation oncology, biology, physics* **84**, e35-41 (2012). [PMID: 22543208](#)



52. Radivoyevitch, T., Sauntharajah, Y., Pink, J., Ferris, G., Lent, I., Jackson, M., Junk, D. and Kunos, C. A., dNTP Supply Gene Expression Patterns after P53 Loss. *Cancers (Basel)* **4**, 1212-1224 (2012). PMID: 23205301; [PMCID: PMC3509543](#)
53. Kunos, C. A., Radivoyevitch, T., Kresak, A., Dawson, D., Jacobberger, J., Yang, B. and Abdul-Karim, F. W., Elevated ribonucleotide reductase levels associate with suppressed radiochemotherapy response in human cervical cancers. *International journal of gynecological cancer* **22**, 1463-1469 (2012). PMID: 23051959; [PMCID: PMC3481180](#)
54. Mahfouz, R. Z., Jankowska, A., Ebrahim, Q., Gu, X., Visconte, V., Tabarroki, A., Terse, P., Covey, J., Chan, K., Ling, Y., Engelke, K. J., Sekeres, M. A., Tiu, R., Maciejewski, J., Radivoyevitch, T. and Sauntharajah, Y., Increased CDA expression/activity in males contributes to decreased cytidine analog half-life and likely contributes to worse outcomes with 5-azacytidine or decitabine therapy. *Clinical cancer research* **19**, 938-948 (2013). PMID: 23287564; [PMCID: PMC3577958](#)
55. Kunos, C. A., Radivoyevitch, T., Waggoner, S., Debernardo, R., Zanotti, K., Resnick, K., Fusco, N., Adams, R., Redline, R., Faulhaber, P. and Dowlati, A., Radiochemotherapy plus 3-aminopyridine-2-carboxaldehyde thiosemicarbazone (3-AP, NSC #663249) in advanced-stage cervical and vaginal cancers. *Gynecol Oncol* (2013). [PMID: 23603372](#)
56. Jackson RC, Radivoyevitch T (2013). Modelling c-Abl signalling in activated neutrophils: the anti-inflammatory effect of seliciclib. *7, 4 Biodiscovery* (2013).
57. Radivoyevitch, T., Li, H., and Sachs, R.K. (in press). Genesis and Treatment of Hematological Neoplasms: Stochastic Mathematical Models. In *A Systems Biology Approach to Blood* (S. J. Corey, M. Kimmel and J. N. Leonard, Editors), Springer.
58. Radivoyevitch T, Sauntharajah Y. Sex Difference in Myelodysplastic Syndrome Survival and Balance in Randomized Clinical Trials. *J Clin Oncol.* 32(1):60-1 (2014). [PMID: 24248691](#)
59. Radivoyevitch T, Jankovic GM, Tiu RV, Sauntharajah Y, Jackson RC, Hlatky LR, Gale RP, Sachs RK. Sex differences in the incidence of chronic myeloid leukemia. *Radiat Environ Biophys.* 53(1):55-63 (2014) [PMID: 24337217](#)
60. Solinas P, Fujioka H, Radivoyevitch T, Tandler B, Hoppel CL. Aging effects on oxidative phosphorylation in rat adrenocortical mitochondria. *Mech Ageing Dev.* 138C:10-14, 2014. [PMID: 24486556](#)
61. Gu X, Hu Z, Ebrahim Q, Crabb JS, Mahfouz R, Radivoyevitch T, Crabb JW, Sauntharajah Y. Runx1 Regulation of Pu.1 Corepressor/Coactivator Exchange Identifies Specific Molecular Targets for Leukemia Differentiation Therapy. *J Biol Chem.* (2014) [PMID: 24695740](#)

#### Abstracts/Posters

1. T. Radivoyevitch and D. G. Hoel, *Biologically Based Risk Estimation for Radiation-Induced Chronic Myeloid Leukemia*, presented at the **ICRR meeting** in Dublin (1999) and at the **DOE Low Dose Workshop** in Washington DC (1999).
2. T. Radivoyevitch, S. Kozubek and R.K. Sachs, *Net Lifetime Risk of Chronic Myeloid Leukemia: Can it have a "U" Shaped Low Dose Response?* Presented at the **DOE Low Dose Workshop** in Washington DC (2001).
3. Timothy Korytko, Tomas Radivoyevitch, Barry Wessels, Kunjan Pillai, Robert Maciunas, and Douglas Einstein, *12 Gy Gamma Knife Radiosurgical Volume Is A Predictor For Radiation Necrosis In Non-Avm Intracrainial Tumors*. Presented at the **Society for Neuro-Oncology Meeting** (2004).
4. T. Radivoyevitch, A two-way interface between systems biology markup language and R. **ICBP Meeting**, May 2005, Berkeley CA
5. T. Radivoyevitch, Rational Polynomial Representation of Ribonucleotide Reductase Activity. **ICBP Meeting**, May 2005, Berkeley CA; software demo given at **ICBP Meeting** in Washington DC (November 2005)
6. T. Radivoyevitch. Ribonucleotide Reductase: Models of R1 Subunit Oligomerization. **Symposium on Enzymes in Deoxyribonucleotide Synthesis**, Sãnga-Sãby, Stockholm, June 10-12, 2007.
7. T. Radivoyevitch. Equilibrium Model Selection. Research ShowCase 2008, April 15, 2008.
8. T. Radivoyevitch. *Automated model generation and selection methods for combinatorially complex biochemical equilibriums*. AACR, Denver 4/09 and Purine and Pyrimidine Society Meeting, Sweden, 6/22/09.

9. B. T. Hill, A. M.B. Collie, T. Radivoyevitch, E. D. Hsi, and J. Sweetenham, *Cell of Origin Determination in Diffuse Large B-Cell Lymphoma: Performance of Immunohistochemical (IHC) Algorithms and Ability to Predict Outcome*, ASH 2011
10. Y. Sauntharajah, RZ Mahfouz, R Englehaupt, J. Juersivich, L. Durkin, T. Radivoyevitch, K. Cooper, M Afable, R Dean, AS. Advani, M Kalaycio, R Sobecks, EA. Copelan, ED. Hsi, JP Maciejewski, and MA Sekeres, *A Proof of Principle Clinical Trial in Myelodysplastic Syndromes of Non-Cytotoxic Differentiation Therapy with Decitabine*, ASH 2011
11. AMB Collie, J Nolling, J Lin, BT Hill, T Radivoyevitch, L Kong, and ED Hsi, *Molecular Subtype Characterization of Formalin-Fixed, Paraffin-Embedded Diffuse Large B-Cell Lymphoma Samples on the Iceplex (R) System*. ASH 2012
12. R Mahfouz, E. Rickki, JA Juersivich, K Cooper, L Durkin, T Radivoyevitch, RV Tiu, FJ Reu, RM Dean, R Sobecks, M Kalaycio, EA Copelan, A Advani, ED Hsi, MA Sekeres, JP Maciejewski and Y Sauntharajah *Non-Cytotoxic Differentiation Therapy Based On Mechanism of Disease Produces Complete Remission in Myelodysplastic Syndromes (MDS) with High Risk Cytogenetics* ASH 2012
13. S Thota, P Lakin, H Husseinzadeh, H Makishima, BP Przychodzen, B Dienes, KM Guinta, N Hosono, T Radivoyevitch, MA. Sekeres, Y Sauntharajah, and JP Maciejewski, *Somatic Mutational Screen For Improved Prediction Of The Outcomes Of Epigenetic Therapy In MDS* ASH 2013

### Invited Lectures

1. *The Risk of Chronic Myeloid Leukemia DOE Low Dose Workshop* in Washington DC (2001).
2. *Biologically Based Risk Estimation for Radiation-Induced Chronic Myeloid Leukemia* (2001) presented at the Medical University of South Carolina (January) and at Case Western Reserve University (June). This talk is available with audio from [http://epbi-radivot.cwru.edu/ICB/CMLrisk\\_files/frame.htm](http://epbi-radivot.cwru.edu/ICB/CMLrisk_files/frame.htm).
3. *Biochemical system analyses of DNA microarray data*, Case Western Reserve University (October 2001)
4. *Biochemical system analyses of BCR-ABL childhood ALL*, CWRU (Feb. 2003 for EECS; Apr 2003 for EPBI)
5. *A two-way interface between systems biology markup language and R* CWRU, (Apr 2005 for EPBI)
6. *Case Integrative Cancer Biology Program*, Case Comprehensive Cancer Center Retreat, Geneva, OH (6/2005)
7. *Two integrative cancer biology approaches to therapeutic gain*, ICSB 2005 workshop, Harvard (Oct. 2005)
8. *Integrative Cancer Biology, ICBP workshop* in Washington DC (11/05), and at CWRU's Case Comprehensive Cancer Center (1/06), Anatomy (2/06) and Biomedical Engineering Department (3/06)
9. *Nucleotide Metabolism Based Systems Cancer Biology*, Chalmers, Göteborg, Sweden (6/8/07)
10. *Models of Ribonucleotide Reductase R1 Subunit Oligomerization* (6/11/07) Sångå Sångå, Stockholm, symposium *Enzymes in Deoxyribonucleotide Synthesis*.
11. *Nucleotide Metabolism Based Systems Cancer Biology*, Fred Hutchinson Cancer Center, Seattle (9/7/07)
12. *Equilibrium Model Selection*. Statistics Symposium, Ohio State University, (5/15/08), UseR 2008, Dortmund (8/12/2008), and CWRU Statistics (9/9/08) and Epidemiology and Biostatistics (10/7/08) seminars.
13. *Automated model generation and selection methods for combinatorially complex biochemical equilibria*. U. of Miami (3/27/09), UseR 2009, Rennes (7/9/09), DSC 2009, Copenhagen (7/14/09).
14. *Modeling Combinatorially Complex Ribonucleotide Reductase* City of Hope (5/13/10).
15. *Mathematical Models of dNTP Supply*, Case Comprehensive Cancer Center (9/16/10).
16. *dNTP Supply Gene Expression Patterns in Microarrays after P53 Loss*, Philadelphia, 11/4/11
17. *Epidemiology of CML*, Cleveland Clinic THOR 4/17/12 and CWRU Department of Epidemiology 4/18/12
18. *Integrated quantitative modeling of radiation-induced chronic myeloid leukemia (CML)*, 5<sup>th</sup> International Radiation Systems Biology Workshop, Oxford, 9/5/12.
19. *Quantitative Cancer Research* 12/17/13, Cleveland Clinic, Department of Quantitative Health Sciences

### Teaching

EPBI 432	Introductory Statistics II (Linear Models)	S2002, S2003 (~30 students each year)
EPBI 473	Biomath of DNA Microarray Data	F2002, F2003, F2004 (~5 students each year)
EPBI 473	Integrative Cancer Biology	F2005 ( <a href="http://epbi-radivot.cwru.edu/ICB/">http://epbi-radivot.cwru.edu/ICB/</a> )
EPBI 415	Advanced Programming with R	S2010-13 ( <a href="http://epbi-radivot.cwru.edu/EPBI415/">http://epbi-radivot.cwru.edu/EPBI415/</a> )
EPBI 473	Integrative Cancer Biology	F2010 ( <a href="http://epbi-radivot.cwru.edu/EPBI473/">http://epbi-radivot.cwru.edu/EPBI473/</a> )

## Mentoring

Academic Advisor: Mary E. Slaughter, Di Wu, Vinay Bhandaru, Jingting Yu, Xiaozhen Han, Paul Lakin,  
Research Advisor: Di Wu, I-Jung Feng

Dissertation/thesis committees: Robert C. Kalayjian, Gary Falk, Carolyn Onyango, Mireya Diaz, Ariadni Papan, Elena Manilich, Junheng Ma, Sanath Wijerathna

## Software Development

Created R packages ccems (Combinatorially Complex Equilibrium Model Selection), SBMLR (an interface between Systems Biology Markup Language and R), and SEERaBomb.

## Conferences Organized

Organized, chaired and prepared supplementary material (<http://epbi-radivot.cwru.edu/ICSB2005/>) for the Integrative Cancer Biology Workshop at the International Conference on Systems Biology held at Harvard Medical School on October 23<sup>rd</sup>, 2005, see <http://csbi.mit.edu/icsb-2005>. Organized a Systems Cancer Biology Symposium at Case (1/20/2006) with invited speakers John J. Tyson, Robert C. Jackson and Herbert M. Sauro.

## Peer Review Experience

### Manuscript Reviews

Served as a referee for: *Biology Direct* (while serving editorial board), *Blood*, *Cancer Research*, *Electrophoresis*, *Nucleosides, Nucleotides and Nucleic Acids*, *Mathematical Biosciences*, *Journal of Theoretical Biology*, *Radiation & Environmental Biophysics*, *Radiation Research*, *Journal of Biological Chemistry*, *PLoS Computational Biology*, *Cytometry Part A*, *Bioinformatics*, *BMC Bioinformatics*, and *Theoretical Biology and Medical Modeling*.

*Grant Reviews*: NCI-I Study Section 10/2007-2011, NASA "Radiation Carcinogenesis" NSCOR Panel 8/2004. Reviewed a radiation biology grant for the *Ministry of Education of the Czech Republic* in 2000.

## Grant Funding

### Ongoing

**Title:** Contribution of GCR exposure to hematopoietic stem cell dysfunction and oncogenesis

**Source:** NASA, NNJ13ZSA001N;

**PI:** S. Gerson; **Amount:** \$ \$906,011 (total Direct Costs)

**Duration:** 3/01/2014-2/28/2017; **TR Role:** 7.5% effort (Biostatistician)

**Title:** Improving HbF induction by inhibiting epigenetic target enzymes

**Source:** Subcontract from Univ Michigan U54HL117658-01

**PIs:** Sauntharajah, Engel, DeSimone (MPI); **Amount:** \$203,997 (Annual Direct Costs)

**Duration:** 08/15/2013 - 05/31/2018; **TR Role:** 5% effort (Biostatistician)

**Title:** Optimizing decitabine regimen + formulation for non-dna damaging dnmt1 depletion

**Source:** National Institutes of Health 5R01 CA138858-03

**PI:** Y. Sauntharajah; **Amount:** \$319,326 (Annual Direct Costs)

**Duration:** 7/01/2009-6/30/2014; **TR Role:** 10% effort (Biostatistician)

### Completed

**Title:** Intercellular interactions modulate carcinogenesis course: a dynamics study

**Source:** Subcontract from UC Berkeley award U54CA149233

**PI:** R. K. Sachs; **Amount:** \$203,997 (Annual Direct Costs)

**Duration:** 5/01/2012-2/28/2013; **TR Role:** 20% effort (Biomathematician)

**Title:** Biochemical Systems Analyses of IdUrd in MMR-/+ Cells  
**Source:** National Institutes of Health K25 CA 104791-05  
**PI:** T. Radivoyevitch; **Amount:** \$133,875 (Annual Direct Costs)  
**Duration:** 2/02/2005-1/31/2011; **TR Role:** 90% effort

**Title:** Complex Systems & Control of MMR-Deficient Cells  
**Source:** National Institutes of Health 1P20 CA112963-01  
**PI:** T. J. Kinsella; **Amount:** \$290,193 (Annual Direct Costs)  
**Duration:** 09/30/04-01/31/05; **TR Role:** 75% effort

**Title:** DNA Metabolizing Enzyme Targeted Therapy/Phase I Trials of Anticancer Agents  
**Source:** National Institutes of Health 5U01 CA62502-10  
**PI:** S.C. Remick; **Amount:** \$311,050 (Annual Direct Costs)  
**Duration:** 03/01/1994-01/31/2008; **TR Role:** Statistician, 10% effort

**Title:** Cancer Center Support Grant  
**Source:** National Institutes of Health P30 CA43703-13  
**PI:** J. K.V. Willson; **Amount:** \$2,483,930 (Annual Direct Costs)  
**Duration:** 8/1/2001-9/30/2004; **TR Role:** Statistician, 40% effort

**Title:** Biochemical System Modeling in the Treatment of Childhood Leukemia  
**Source:** American Cancer Society: Institutional Research Grant #IRG-91-022-10  
**PI:** T. Radivoyevitch; **Amount:** \$20,000 (Annual Direct Costs)  
**Duration:** 12/1/2002-11/31/2003; **TR Role:** 25% effort

**Title:** Chromatin Geometry and Intrachange Proximity Effects  
**Source:** NIH R01 GM57245-03; **PI:** R.K. Sachs; **Amount:** \$180,000 (Annual Direct Costs)  
**Duration:** 06/01/2000 - 04/30/2001 **TR Role:** 100% effort

**Title:** Radiation Leukemogenesis: Applying Basic Science to Epidemiological Estimates of Low Dose Risks  
**Source:** Department of Energy DE-FG02-99ER62728; **PI:** D.G. Hoel; **Amount:** \$75,000 (Annual Direct Costs)  
**Duration:** 11/01/1998 - 02/7/2000 **TR Role:** 100% effort