

Robert Lesurf
Postdoctoral Research Associate
Washington University School of Medicine in St. Louis
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Education and Training

- 09/02-06/06 B.Sc. (Honours) Biomedical Computing, Queen's University, Kingston, Canada
Supervisors: Harriet Feilotter and Parvin Mousavi
Thesis topic: Classification of normal and tumor prostate samples using microarray cross-platform analyses.
- 09/06-05/09 M.Sc. Computer Science, McGill University, Montreal, Canada
Supervisor: Michael Hallett
Thesis topic: Molecular pathway analysis of mouse models for breast cancer.
- 09/08-05/15 Ph.D. Biochemistry, McGill University, Montreal, Canada
Supervisor: Michael Hallett
Thesis topic: Stratified informatics analysis for breast cancer: types, subtypes, and models of the disease.
- 09/14-Present Postdoctoral Research Associate, Washington University in St. Louis, MO
Supervisors: Obi Griffith and Elaine Mardis
Research topic: Identifying genomic features of response to trastuzumab in HER2+ breast cancer. Developing a platform for target-capture of the regulatory regions of breast cancer.

Research Interests

Cancer Biology
Precision Medicine
Genomics
Bioinformatics
Statistics
Machine Learning

Positions and Employment

- 06/02-08/02 Research Assistant, Trent University, Peterborough, Canada
Supervisor: Leon Carl
Experience: Investigated the effect of damming on watershed ecosystems in northern Ontario. Aquatic species were inventoried by electrofishing.
- 05/03-08/03 Public Health Assistant, Peterborough County-City Health Unit, Canada
Supervisor: Tom Cathcart
Experience: West Nile Virus research and public education. Surveillance was carried out for evidence of standing water, mosquito larvae, and bird deaths.

05/04-08/04	Research Assistant, Queen's University, Kingston, Canada Supervisor: Jeanette Holden Experience: Autism Spectrum Disorders internet technology assistance and database management.
05/05-08/05	Research Assistant, Queen's University, Kingston, Canada Supervisor: Harriet Feilotter Experience: Assisting with experimental designs at microarray facility and FISH scoring of breast cancer slides.
05/06-08/06	Research Assistant, Queen's University, Kingston, Canada Supervisor: Parvin Mousavi Experience: Using machine learning algorithms to develop predictors of prostate cancer tissues across different microarray platforms.
2014-Present	Postdoctoral Research Associate, Washington University in St. Louis, MO Supervisors: Obi Griffith and Elaine Mardis Experience: Identifying genomic features of response to trastuzumab in HER2+ breast cancer. Developing a platform for target-capture of the regulatory regions of breast cancer.

Peer-reviewed Publications

Research papers

Dourdin N, Schade B, **Lesurf R**, Hallett M, Munn RJ, Cardiff RD, Muller WJ. 2008. Phosphatase and tensin homologue deleted on chromosome 10 deficiency accelerates tumor induction in a mouse model of ErbB-2 mammary tumorigenesis. *Cancer Research*. 68(7):2122-31. PMID: 18381417.

Schade B, Rao T, Dourdin N, **Lesurf R**, Hallett M, Cardiff RD, Muller WJ. 2009. PTEN deficiency in a luminal ErbB-2 mouse model results in dramatic acceleration of mammary tumorigenesis and metastasis. *Journal of Biological Chemistry*. 284(28):19018-26. PMID: 19435886.

Ponzo MG*, **Lesurf R***, Petkiewicz S, O'Malley FP, Pinnaduwa D, Andrulis IL, Bull SB, Chughtai N, Zuo D, Souleimanova M, Germain D, Omeroglu A, Cardiff RD, Hallett M, Park M. 2009. Met induces mammary tumors with diverse histologies and is associated with poor outcome and human basal breast cancer. *Proceedings of the National Academy of Sciences*. 106(31):12903-8. PMID: 19617568.

Knight JF*, **Lesurf R***, Zhao H, Pinnaduwa D, Davis RR, Saleh SM, Zuo D, Naujokas MA, Chughtai N, Herschkowitz JI, Prat A, Mulligan AM, Muller WJ, Cardiff RD, Gregg JP, Andrulis IL, Hallett MT, Park M. 2013. Met synergizes with p53 loss to induce mammary tumors that possess features of claudin-low breast cancer. *Proceedings of the National Academy of Sciences*. 110(14):E1301-10. PMID: 23509284.

Schade B, **Lesurf R**, Sanguin-Gendreau V, Bui T, Deblois G, O'Toole SA, Millar EKA, Zardawi SJ, Lopez-Knowles E, Sutherland RL, Giguere V, Kahn M, Hallett M, Muller WJ. 2013. β -catenin signaling is a critical event in ErbB2-mediated mammary tumor progression. *Cancer Research*. 73(14):4474-87. PMID: 23720052.

Wallace JA, Li F, Balakrishnan S, Cantemir-Stone CZ, Pecot T, Martin C, Kladney RD, Sharma SM, Trimboli AJ, Fernandez SA, Yu L, Rosol TJ, Stromberg PC, **Lesurf R**, Hallett M, Park M, Leone G, Ostrowski MC. 2013. Ets2 in tumor fibroblasts promotes angiogenesis in breast cancer. PLoS One. 8(8):e71533. PMID: 23977064.

Vadnais C, Shooshtarizadeh P, Rajadurai CV, **Lesurf R**, Hulea L, Davoudi S, Cadieux C, Hallett M, Park M, Nepveu A. 2014. Autocrine Activation of the Wnt/ β -Catenin Pathway by CUX1 and GLIS1 in Breast Cancers. Biology Open. 3(10):937-46. PMID: 25217618.

Tofigh A, Suderman M, Paquet ER, Livingstone J, Bertos N, Saleh SM, Zhao H, Souleimanova M, Cory S, **Lesurf R**, Shahalizadeh S, Garcia Lopez N, Riazalhosseini Y, Omeroglu A, Ursini-Siegel J, Park M, Dumeaux V, Hallett M. 2014. The prognostic ease and difficulty of invasive breast carcinoma. Cell Reports. 9(1):129-42. PMID: 25284793.

***Authors contributed equally to the work.**

Abstracts

Lesurf R, Tofigh A, Shahalizadeh S, Livingstone L, Cory S, Hallett M. Breast Signature Analysis Tool (BreSAT): a framework for investigating the molecular networks of breast cancer. Abstract for poster presentation, RECOMB Computational Cancer Biology 2010. Oslo, Norway, June 2010.

Lesurf R, Tofigh A, Shahalizadeh S, Livingstone J, Cory S, Hallett M. Breast Signature Analysis Tool (BreSAT): a framework for investigating the molecular networks of breast cancer. Oral presentation, Department of Defense Breast Cancer Research Program 6th Era of Hope Conference. Orlando, FL, August 2011.

Lesurf R, Tofigh A, Shahalizadeh S, Livingstone J, Cory S, Hallett M. Breast Signature Analysis Tool (BreSAT): a framework for investigating the molecular networks of breast cancer. Abstract for poster presentation, Department of Defense Breast Cancer Research Program 6th Era of Hope Conference. Orlando, FL, August 2011.

Lesurf R, Mørk HH, Aure MR, Gribbestad I, Wårnberg F, Børresen-Dale A-L, Kristensen V, Hallett M, Sørli T. Integrated molecular profiles identify mechanisms of subtype-specific progression from ductal carcinoma in situ to early invasive breast cancer. Abstract for poster presentation, Personalized Cancer Care Symposium. Oslo, Norway, September 2012.

Academic and Professional Honors

06/02	Declared National Biology Scholar, University of Toronto, Toronto, Canada
09/02	Excellence in Science Award, Trent University, Peterborough, Canada
09/02	Governor General Medal, Adam Scott High School, Peterborough, Canada
09/02	Entrance Honours with Merit, Queen's University, Kingston, Canada
07/03	Placed on Dean's Honour List, Queen's University, Kingston, Canada
07/04	Placed on Dean's Honour List, Queen's University, Kingston, Canada
07/05	Placed on Dean's Honour List, Queen's University, Kingston, Canada
07/06	Placed on Dean's Honour List, Queen's University, Kingston, Canada

Awards and Scholarships

- 09/06-08/08 Agency: Natural Sciences and Engineering Research Council of Canada (NSERC)
Program: Postgraduate Scholarship (Master's)
Title: Intelligent Bioinformatics Management Systems
Total Value: \$34,600
- 09/06-08/08 Agency: McGill University, School of Computer Science
Program: Bioinformatics
Title: André Courtemanche Fellowship in Bioinformatics
Total Value: \$12,500
- 04/08 Agency: German Academic Exchange Service (DAAD)
Program: DAAD Research Grant
Title: Identifying the underlying mechanisms of breast cancer through molecular signature integration
Total Value: \$2,835
- 10/08 Agency: Mathematics of Information Technology and Complex Systems (MITACS)
Program: MITACS Travel Grant
Title: Systems Biology and the New Frontiers of Food Biotechnology
Total Value: \$1,000
- 06/12 Agency: Canadian Institutes of Health Research (CIHR)
Program: Canadian Student Health Research Forum (CSHRF)
Title: Breast Signature Analysis Tool (BreSAT): a framework for investigating the molecular networks of breast cancer
Total Value: \$1,000 (Declined)
- 04/12-06/12 Agency: McGill University, Faculty of Medicine
Program: Graduate Student International Travel Fund
Title: The molecular networks of breast cancer progression from DCIS to IDC
Total Value: \$3,000
- 05/10-04/13 Agency: Department of Defense
Program: Breast Cancer Research Program 2009
Title: Uncovering the hidden molecular signatures of breast cancer
Total Value: \$95,470

References

Obi Griffith (supervisor)
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Elaine Mardis (supervisor)
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