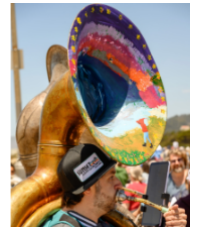


Edik M Blais, PhD

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*Standing up tech sys bio publications & virtual cell intelligence for science.
Available for full-time or contract work via ggomics.com on the SF peninsula.*



INDUSTRY EXPERIENCE

- Perthera (San Bruno, CA) – *Vice President of Research* Jan 2023 – Dec 2025
- Managed computational biologists, data scientists, clinical data curators, and research partnerships
 - Built AI/ML tools (e.g. to predict outcomes for two standard chemotherapy options in pancreatic cancer)
- Perthera (San Bruno, CA) – *Director of Bioinformatics* Jan 2020 – Dec 2022
- Led biomarker discovery studies with oncologists using multi-omics and progression-free survival data
 - Demonstrated the real-world impact of precision medicine on outcomes in patients with pancreatic cancer
- Perthera (McLean, VA) – *Computational Biologist* Sep 2016 – Dec 2019
- Improved the efficiency of our virtual molecular tumor board with clinical trial matchmaking algorithms
 - Developed databases and pipelines to analyze genomics, proteomics, and phosphoproteomics data

RESEARCH HIGHLIGHTS

Pishvaian MJ*, **Blais EM***, *et al.* Validation of PDACai v2.0 in predicting relative benefit from frontline FOLFIRINOX and gemcitabine/nab-paclitaxel for patients with metastatic pancreatic cancer. [ASCO GI25](#)

Pishvaian MJ*, **Blais EM***, *et al.* Overall survival in patients with pancreatic cancer receiving matched therapies following molecular profiling: a retrospective analysis of the Know Your Tumor registry trial.

The Lancet Oncology. Mar 2, 2020; [PMID: 32135080](#)

Ebia MI, **Blais EM**, *et al.* Evaluating the Effect of KRAS Variants on Survival Outcomes and Therapy Response in Pancreatic Cancer. *JCO Precision Oncology.* Aug 9, 2025; [PMID: 40834324](#)

Hendifar AE*, **Blais EM***, *et al.* Retrospective case series analysis of RAF family alterations in pancreatic cancer: real-world outcomes from targeted and standard therapies. *JCO Precision Oncology.* 2021; [PMID: 34476331](#)

Pishvaian MJ*, **Blais EM***, *et al.* A virtual molecular tumor board platform to improve efficiency and scalability of delivering precision oncology to physicians and their patients. *JAMIA Open.* Oct 7, 2019; [PMID: 32025647](#)

**co-first authorship; more info on 70+ papers/posters co-authored by edik are available below and via [Google Scholar](https://scholar.google.com/citations?user=edik)*

ACADEMIC EDUCATION

University of Virginia, Charlottesville, VA

PhD in Biomedical Engineering, awarded in 2016

University of Washington, Seattle, WA

BS in Bioengineering, awarded in 2010

Dissertation: Reconciled rat and human metabolic networks for comparative toxicogenomics and biomarker predictions. *Nature Communications*; [PMID: 28176778](#)

ENGINEERING SKILLS

- computational biology, bioinformatics, biostatistics, network visualization, clinical reporting, IP strategy
- NGS variant interpretation, genomics, transcriptomics, proteomics, metabolomics, flux balance analysis
- R tidyverse, python, multivariate survival analysis, propensity matching, predictive modeling, enrichment
- shiny apps, fastAPI, github copilot, claude code, docker, AWS, Postgres, MySQL, neo4j, RAG, AI, ML

SUPPLEMENTARY FIGURES

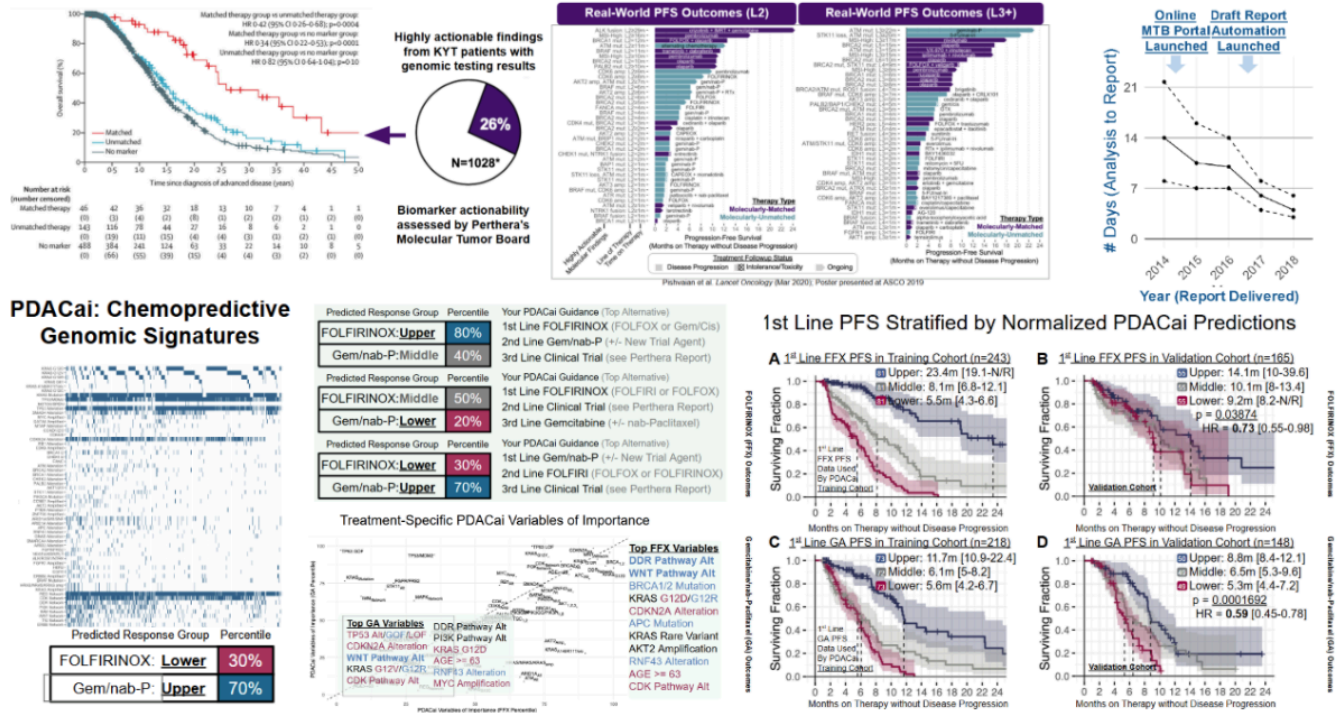


Figure 1 - Visual abstract of original contribution highlights by Edik at Perthera

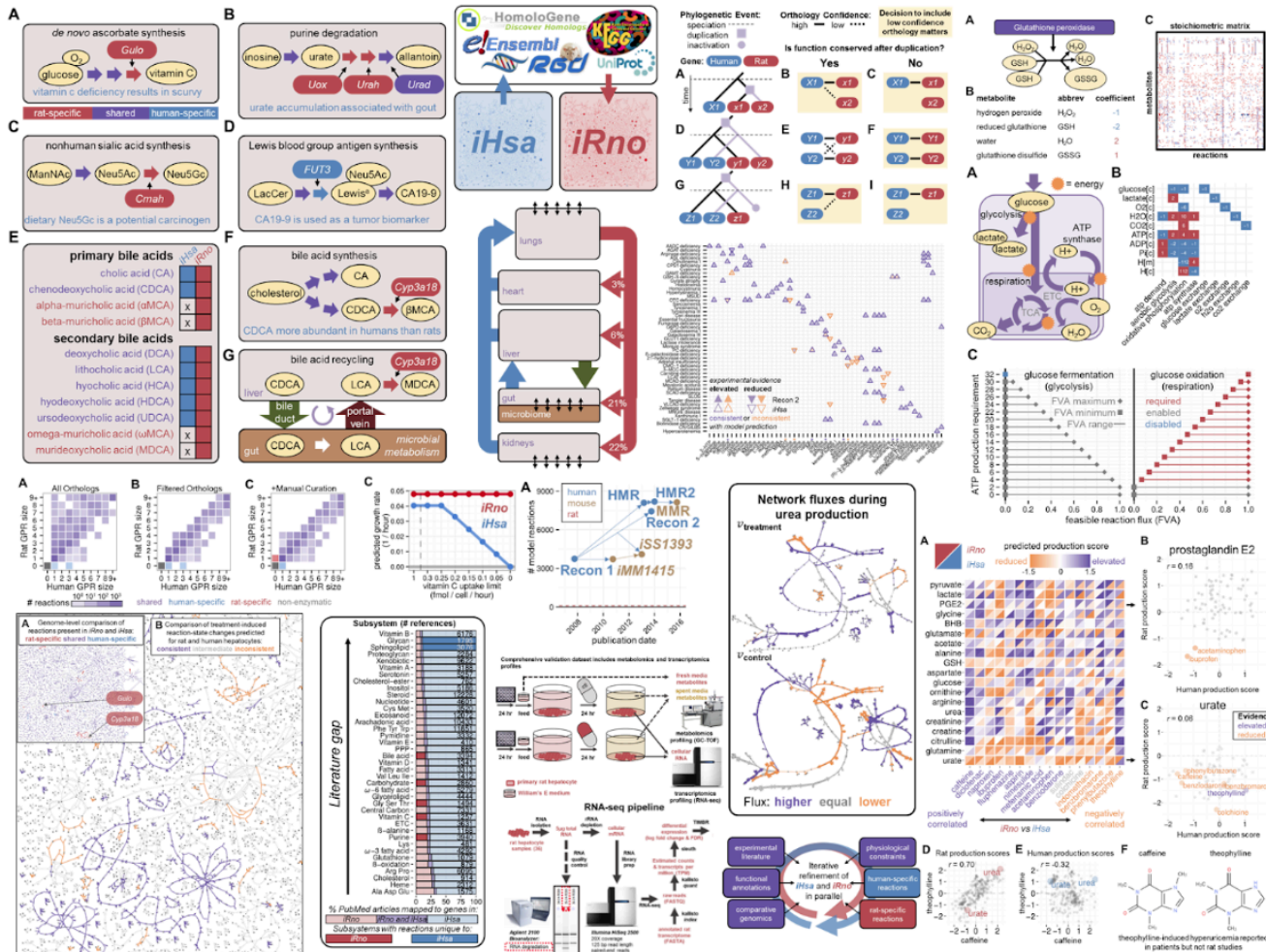


Figure 2 - Visual abstract of original contributions by Edik at UVA

CHRONOLOGICAL PUBLICATIONS

Ebia MI, **Blais EM**, Cui Y, Petricoin EF 3rd, Pishvaian M, Gaddam S, Gong J, Osipov A, Hendifar AE. Evaluating the Effect of KRAS Variants on Survival Outcomes and Therapy Response in Pancreatic Cancer. *JCO Precision Oncology*. Aug 20, 2025; [PMID: 40834324](#)

Levi A, **Blais EM**, Davelaar J, Ebia MI, Minasyan A, Nikraves N, Gresham G, Zheng L, Chuy JW, Shroff RT, Wadlow RC, DeArbeloa P, Matrisian LM, Petricoin E, Pishvaian MJ, Gong J, Hendifar AE, Osipov A. Clinical outcomes and molecular characteristics of lung-only and liver-only metastatic pancreatic cancer: results from a real-world evidence database. *The Oncologist*. Mar 10, 2025; [PMID: 40079530](#)

Prasad D, Baldelli E, **Blais EM**, Davis J, El Gazzah E, Mueller C, Gomeiz A, Ibrahim A, Newrekar AV, Corgiat BA, Dunetz R, Petricoin III EF, Wei Q, Pierobon M. Functional activation of the AKT-mTOR signalling axis in a real-world metastatic breast cancer cohort. *British Journal of Cancer*. Sep 25, 2024; [PMID: 39322687](#)

Delgado-Coka L, Horowitz M, Torrente-Goncalves M, Roa-Peña L, Leiton CV, Hasan M, Babu S, Fassler D, Oentoro J, Bai JK, Petricoin EF, Matrisian LM, **Blais EM**, Marchenko N, Allard FD, Jiang W, Larson B, Hendifar A, Chen C, Abousamra S, Samaras D, Kurc T, Saltz J, Escobar-Hoyos LF, Shroyer KR. Keratin 17 modulates the immune topography of pancreatic cancer. *Journal of Translat. Medicine*. May 10, 2024; [PMID: 38730319](#)

Delgado-Coka LA, Roa-Peña L, Babu S, Horowitz M, Petricoin EF, Matrisian LM, **Blais EM**, Marchenko N, Allard FD, Akalin A, Jiang W, Larson BK, Hendifar AE, Picozzi VJ, Choi M, Shroyer KR, Escobar-Hoyos LF. Keratin 17 is a prognostic and predictive biomarker in pancreatic ductal adenocarcinoma. *American Journal of Clinical Pathology*. Sep 3, 2024; [PMID: 38642081](#)

Micaily I, **Blais EM**, Carhart R, Lam S, Cohen SJ, Cannaday SJ, Halverson D, Matrisian LM, DeArbeloa P, Thach D, Petricoin E 3rd, Pishvaian MJ, Lavu H, Yeo CJ, Mallick AB. Association of Pancreatic Adenocarcinoma Location With DNA Damage Response Status and Response to Platinum-Based Therapy. *JCO Precision Oncology*. Sep, 2023; [PMID: 38085059](#)

Hendifar A, **Blais EM**, Wolpin B, Subbiah V, Collisson E, Singh I, Cannon T, Shaw K, Petricoin EF 3rd, Klempner S, Lyons E, Wang-Gillam A, Pishvaian MJ, O'Reilly EM. Retrospective Case Series Analysis of RAF Family Alterations in Pancreatic Cancer: Real-World Outcomes From Targeted and Standard Therapies. *JCO Precision Oncology*. Aug 25, 2021; [PMID: 34476331](#)

Gupta M, Sherrow C, Krone M, **Blais EM**, Pishvaian MJ, Petricoin EF, Matrisian LM, DeArbeloa P, Gregory GL, Brown A, Zalewski O, Prinzing G, Roche C, Kanehira K, Mukherjee S, Iyer R, Fountzilias C. Targeting NTRK Fusion Gene In Pancreatic Acinar Cell Carcinoma: A Case Report and Review of Literature. *Journal of the National Comprehensive Cancer Network*. Jan 6, 2021; [PMID: 33406492](#)

Jiang H, Torphy RJ, Steiger K, Hongo H, Ritchie AJ, Kriegsmann M, Horst D, Umetsu SE, Joseph NM, McGregor K, Pishvaian MJ, **Blais EM**, Lu B, Li M, Hollingsworth M, Stashko C, Volmar K, Yeh JJ, Weaver VM, Wang ZJ, Tempero MA, Weichert W, Collisson EA. Pancreatic ductal adenocarcinoma progression is restrained by stromal matrix. *Journal of Clinical Investigation*. Sep 1, 2020; [PMID: 32749238](#)

Pishvaian MJ, **Blais EM**, Brody JR, Lyons E, DeArbeloa P, Hendifar AE, Mikhail S, Chung VM, Sahai V, Sohal D, Bellakbira S, Thach D, Rahib L, Madhavan S, Matrisian LM, Petricoin EF. Overall survival in patients with pancreatic cancer receiving matched therapies following molecular profiling: a retrospective analysis of the Know Your Tumor registry trial. *The Lancet Oncology*. Mar 2, 2020; [PMID: 32135080](#)

Lowder C, Dhir T, Goetz A, Thomsett H, Bender RJ, Tatarian T, Madhavan S, Petricoin EF, **Blais EM**, Lavu H, Winter J, Posey J, Brody J, Pishvaian MJ, Yeo CJ. A step towards personalizing next line therapy for resected pancreatic and related cancer patients: a single institution's experience. *Surgical Oncology*. Feb 8, 2020; [PMID: 32561076](#)

Rawls KD, **Blais EM**, Dougherty BV, Vinnakota KC, Pannala VR, Wallqvist A, Kolling GL, Papin JA. Genome-Scale Characterization of Toxicity-Induced Metabolic Alterations in Primary Hepatocytes. *Toxicological Sciences*. Dec 1, 2019; [PMID: 31501904](#)

Pishvaian MJ, **Blais EM**, Brody JR, Rahib L, Lyons EE, DeArbeloa P, Hendifar AE, Mikhail S, Chung V, Sohal DP, Leslie S, Mason K, Tibbets L, Madhavan S, Matrisian LM, Petricoin EF. Outcomes in Pancreatic Adenocarcinoma Patients with Genetic Alterations in DNA Damage Response Pathways: Results from the Know Your Tumor Program. *JCO Precision Oncology*. Oct 23, 2019; [PMID: 35100730](#)

Gong J, **Blais EM**, Bender RJ, Guan M, Placencio V, Petricoin EF, Pishvaian MJ, Gregory GL, Tuli R, Hendifar AE. Multiplatform profiling of pancreatic neuroendocrine tumors: Correlative analyses of clinicopathologic factors and identification of co-occurring pathogenic alterations. *Oncotarget*. Oct 22, 2019; [PMID: 31692857](#)

Pishvaian MJ, **Blais EM**, Bender RJ, Chung V, Hendifar AE, Mikhail S, Sohal DP, Pohlmann PR, Moore KN, He K, Monk BJ, Coleman RL, Herzog TJ, Halverson DD, DeArbeloa P, Petricoin EF, Madhavan S. A virtual molecular tumor board platform to improve efficiency and scalability of delivering precision oncology to physicians and their patients. *JAMIA Open*. Oct 7, 2019; [PMID: 32025647](#)

Brar G, **Blais EM**, Bender RJ, Brody J, Sohal D, Madhavan S, Picozzi VJ, Hendifar AE, Chung VM, Halverson D, Mikhail S, Matrisian LM, Rahib L, Petricoin EF, Pishvaian MJ. Multi-omic molecular comparison of primary versus metastatic pancreatic tumors. *British Journal of Cancer*. July 11, 2019; [PMID: 31292535](#)

Rawls KD, Dougherty BV, **Blais EM**, Stancliffe E, Kolling GL, Vinnakota K, Pannala VR, Wallqvist A, Papin JA. A simplified metabolic network reconstruction to promote understanding and development of flux balance analysis tools. *Computers in Biology and Medicine*. Feb 1, 2019; [PMID: 30584952](#)

Pishvaian MJ, Bender RJ, Halverson D, Rahib L, Hendifar AE, Mikhail S, Chung VM, Picozzi VJ, Sohal D, **Blais EM**, Mason K, Lyons EE, Matrisian LM, Brody JR, Madhavan S, Petricoin EF. Molecular Profiling of Patients with Pancreatic Cancer: Initial Results from the Know Your Tumor Initiative. *Clinical Cancer Research*. Oct 15, 2018; [PMID: 29954777](#)

Blais EM, Rawls KD, Dougherty BV, Li ZI, Kolling GL, Ye P, Wallqvist A, Papin JA. Reconciled rat and human metabolic networks for comparative toxicogenomics and biomarker predictions. *Nature Communications*. Feb 8, 2017; [PMID: 28176778](#); github.com/edikblais/ratcon

Newhook TE, **Blais EM**, Lindberg JM, Adair SJ, Xin W, Lee JK, Papin JA, Parsons JT, Bauer TW. A thirteen-gene expression signature predicts survival of patients with pancreatic cancer and identifies new genes of interest. *PLOS One*. Sep 2, 2014; [PMID: 25180633](#)

Walters DM, Stokes JB, Adair SJ, Stelow EB, Borgman CA, Lowrey BT, Xin W, **Blais EM**, Lee JK, Papin JA, Parsons JT, Bauer TW. Clinical, molecular and genetic validation of a murine orthotopic xenograft model of pancreatic adenocarcinoma using fresh human specimens. *PLOS One*. Oct 18, 2013; [PMID: 24204737](#)

Blais EM, Chavali AK, Papin JA. Linking genome-scale metabolic modeling and genome annotation. *Methods in Molecular Biology*. 2013; [PMID: 23417799](#)

Tilghman RW, **Blais EM**, Cowan CR, Sherman NE, Grigera PR, Jeffery ED, Fox JW, Blackman BR, Tschumperlin DJ, Papin JA, Parsons JT. Matrix rigidity regulates cancer cell growth by modulating cellular metabolism and protein synthesis. *PLOS One*. May 18, 2012; [PMID: 22623999](#)

Burnett LA, **Blais EM**, Unadkat JD, Hille B, Tilley SL, Babcock DF. Testicular expression of Adora3i2 in Adora3 knockout mice reveals a role of mouse A3Ri2 and human A3Ri3 adenosine receptors in sperm. *Journal of Biological Chemistry*. Oct 29, 2010; [PMID: 20732875](#)

PATENTS ISSUED

Methods for predicting relative benefit of therapy options and devices thereof; May 31, 2023; US Patent 20240404705

Systems and methods for an expert system for precision oncology; Dec 29, 2017; US Patent 20190355478

HONORS & ACTIVITIES

- Sunset Community Band, Sousaphone, 2024-present
- Native Plants Volunteer, Trail Maintenance, Pacifica Land Trust, 2020-2022
- UVA Predoctoral Cancer Training Program (NCI-funded T32), 2011-2013
- NSF Graduate Research Fellowship Program Honorable Mention, 2011 & 2012
- Graduate Teaching Assistant, UVA Biomedical Engineering Senior Capstone Design I/II, 2012-2013
- Recruitment Chair, UVA Graduate Biomedical Engineering Society, 2013 – 2014
- Co-ed kickball, 2013 Cville Social Rookie League Champions, 2013 – 2015
- Vice President of Communications, Sigma Phi Epsilon Fraternity, UW Chapter, 2008
- University of Washington Husky Marching Band, Sousaphone, 2007 – 2010