

Sarah Lyons

INTERMEDIATE COMPUTATIONAL BIOLOGIST

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Background

Sarah Lyons is an experienced analyst specializing in biological data. She has a multi-disciplinary background in statistics, ecology, metabolomics, genomics, and microbiology. She has contributed to a wide variety of research publications in the context of data analysis, visualizations, and analytical method development.

Education

2020 MSc in Biological Sciences

University of British
Columbia

2013 BA in Biological Sciences

Colorado State
University

Career

2023 Intermediate Computational Biologist

Poisson Consulting
Supra Research

2021 Analytical Chemist

and Development
Colorado State

2013 Research Associate

University

Key Publications

- Barentsen, K. C., Lyons, S., Stevens, J. M., Broeckling, C., Kirkwood, J., Krisher, R. L., & Schoolcraft, W. B. (2016). Elevated BMI in patients of advanced maternal age does not affect blastocyst development or chromosomal complement, but has negative consequences for embryo metabolism and implantation. *Fertility and Sterility*, 106(3), e349. <https://doi.org/10.1016/j.fertnstert.2016.07.991>
- Fleischmann, J., Broeckling, C. D., & Lyons, S. (2017). *Candida krusei* form mycelia along agar surfaces towards each other and other *Candida* species. *BMC Microbiology*, 17(1), 60. <https://doi.org/10.1186/s12866-017-0972-z>
- Favell, J. W., Noestheden, M., Lyons, S. M., & Zandberg, W. F. (2019). Development and Evaluation of a Vineyard-Based Strategy To Mitigate Smoke-Taint in Wine Grapes. *Journal of Agricultural and Food Chemistry*, 67(51), 14137–14142. <https://doi.org/10.1021/acs.jafc.9b05859>
- Herrick, J. R., Lyons, S. M., Greene-Ermisch, A. F., Broeckling, C. D., Schoolcraft, W. B., & Krisher, R. L. (2018). A carnivore embryo's perspective on essential amino acids and ammonium in culture medium: Effects on the development of feline embryos†. *Biology of Reproduction*, 99(5), 1070–1081. <https://doi.org/10.1093/biolre/i0y122>
- Krisher, R. L., Lyons, S., Greene, A., Stevens, J. M., Herrick, J., Kirkwood, J., Prenni, J., Broeckling, C., & Schoolcraft, W. B. (2016). A novel, highly sensitive tandem mass spectrometry metabolomics approach predicts outcome of poor quality day 5 blastocysts. *Fertility and Sterility*, 106(3), e358. <https://doi.org/10.1016/j.fertnstert.2016.07.1016>
- Zaytsoff, S. J. M., Lyons, S. M., Garner, A. M., Uwiera, R. R. E., Zandberg, W. F., Abbott, D. W., & Inglis, G. D. (2020). Host responses to *Clostridium perfringens* challenge in a chicken model of chronic stress. *Gut Pathogens*, 12(1), 24. <https://doi.org/10.1186/s13099-020-00362-9>
- Whitmore, B. A., McCann, S. E., Noestheden, M., Dennis, E. G., Lyons, S. M., Durall, D. M., & Zandberg, W. F. (2021). Glycosidically-Bound Volatile Phenols Linked to Smoke Taint: Stability during Fermentation with Different Yeasts and in Finished Wine. *Molecules*, 26(15), 4519. <https://doi.org/10.3390/molecules26154519>
- Favell, J. W., Wilkinson, K. L., Zigg, I., Lyons, S. M., Ristic, R., Puglisi, C. J., Wilkes, E., Taylor, R., Kelly, D., Howell, G., McKay, M., Mokwena, L., Plozza, T., Zhang, P., Bui, A., Porter, I., Frederick, O., Karasek, J., Szeto, C., ... Noestheden, M. (2022). Correlating Sensory Assessment of Smoke-Tainted Wines with Inter-Laboratory Study Consensus Values for Volatile Phenols. *Molecules*, 27(15), 4892. <https://doi.org/10.3390/molecules27154892>
- Heuberger, A. L., Robison, F. M., Lyons, S. M. A., Broeckling, C. D., & Prenni, J. E. (2014). Evaluating plant immunity using mass spectrometry-based metabolomics workflows. *Frontiers in Plant Science*, 5. <https://doi.org/10.3389/fpls.2014.00291>

10. Herrick, J. R., Lyons, S. M., Greene, A. F., Broeckling, C. D., Schoolcraft, W. B., & Krisher, R. L. (2016). Direct and Osmolarity-Dependent Effects of Glycine on Preimplantation Bovine Embryos. *PLOS ONE*, *11*(7), e0159581. <https://doi.org/10.1371/journal.pone.0159581>
11. Lyons, S. M., Morgan, S. C., McCann, S., Sanderson, S., Newman, B. L., Watson, T. L., Jiranek, V., Durall, D. M., & Zandberg, W. F. (2021). Unique volatile chemical profiles produced by indigenous and commercial strains of *Saccharomyces uvarum* and *Saccharomyces cerevisiae* during laboratory-scale Chardonnay fermentations. *OENO One*, *55*(3), 101–122. <https://doi.org/10.20870/oeno-one.2021.55.3.4551>