

EMERGING SCIENCE FOR ENVIRONMENTAL HEALTH DECISIONS  
*Metabolomics as a Tool for Characterizing the Exposome*

## Suggested Readings

Athersuch, T.J. 2012. The role of metabolomics in characterizing the human exposome. *Bioanalysis*. 4(18): 2207-2212.

Han, J., R.M. Danell, J.R. Patel, D.R. Gumerov, C.O. Scarlett, J.P. Speir, C.E. Parker, I. Rusyn, S. Zeisel, and C.H. Borchers. 2008. Towards high-throughput metabolomics using ultrahigh-field fourier transform ion cyclotron resonance mass spectrometry. *Metabolomics*. 4:128-140.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2600444/pdf/nihms51024.pdf>.

Hebels, D.G.A.J., P. Georgiadis, H.C. Keun, T.J. Athersuch, P. Vineis, R. Vermeulen, L. Portengen, I.A. Bergdahl, G. Hallmans, D. Palli, D. Bendinelli, V. Krogh, R. Tumino, C. Sacerdote, S. Panico, J.C.S. Kleinjans, T.M.C.M. de Kok, M.T. Smith, and S.A. Kyrtopoulos. 2013. Performance in omics analyses of blood samples in long-term storage: Opportunities for the exploitation of existing biobanks in environmental health research. *Environ. Health Persp.* 121(4):480-487.

<http://ehp.niehs.nih.gov/wp-content/uploads/121/4/ehp.1205657.pdf>.

NRC (National Research Council). 2009. Chapter 5: Toward a Unified Approach to Dose-Response Assessment in Science and Decisions. National Academies Press: Washington, DC. <http://www.nap.edu/catalog/12209/science-and-decisions-advancing-risk-assessment>.

NRC. 2010. ESEH Newsletter: The Exposome: A Powerful Approach for Evaluating Environmental Exposures and Their Influences on Human Disease.

[http://nas-sites.org/emergingscience/files/2011/05/newsletter3\\_exposomes-rev.pdf](http://nas-sites.org/emergingscience/files/2011/05/newsletter3_exposomes-rev.pdf)

NRC. 2012. ESEH Newsletter: Measuring Individual Exposomes.

<http://nas-sites.org/emergingscience/files/2011/05/indiv-exposomeCS4-071.pdf>

Rappaport, S.M. and A. Macherone. 2013. Using the blood exposome to discover causes of disease. Agilent Technical Note 5991-3418. Agilent Technologies, Inc. <http://www.chem.agilent.com/Library/technicaloverviews/Public/5991-3418EN.pdf>.

Rappaport, S.M., D.K. Barupal, D. Wishart, P. Vineis, and A. Scalbert. 2014. The blood exposome and its role in discovering causes of disease. *Environ. Health Persp.* 122(8):769-774.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4123034/pdf/ehp.1308015.pdf>.

Stein, R.A. 2013. Exposing the exposome. *Genetic Engineering & Biotechnology News*. 33(9).

Vrijheid, M., R. Slama, O. Robinson, L. Chatzi, M. Coen, P. van den Hazel, C. Thomsen, J. Wright, T.J. Athersuch, N. Avellana, X. Basagana, C. Brochot, L. Bucchini, M. Bustamante, A. Carracedo, M. Casas, X. Estivill, L. Fairley, D. van Gent, J.R. Gonzalez, B. Granum, R. Grazuleviciene, K.B. Gutzkow, J. Julvez, H.C. Keun, M. Kogevinas, R.R.C. McEachan, H.M. Meltzer, E. Sabido, P.E. Schwarze, V. Siroux, J. Sunyer, E.J. Want, F. Zeman, and M.J. Nieuwenhuijsen. 2014. The human early-life exposome (HELIX): Project rationale and design. *Environ. Health Persp.* 122(6):535-544.

<http://ehp.niehs.nih.gov/wp-content/uploads/122/6/ehp.1307204.pdf>.