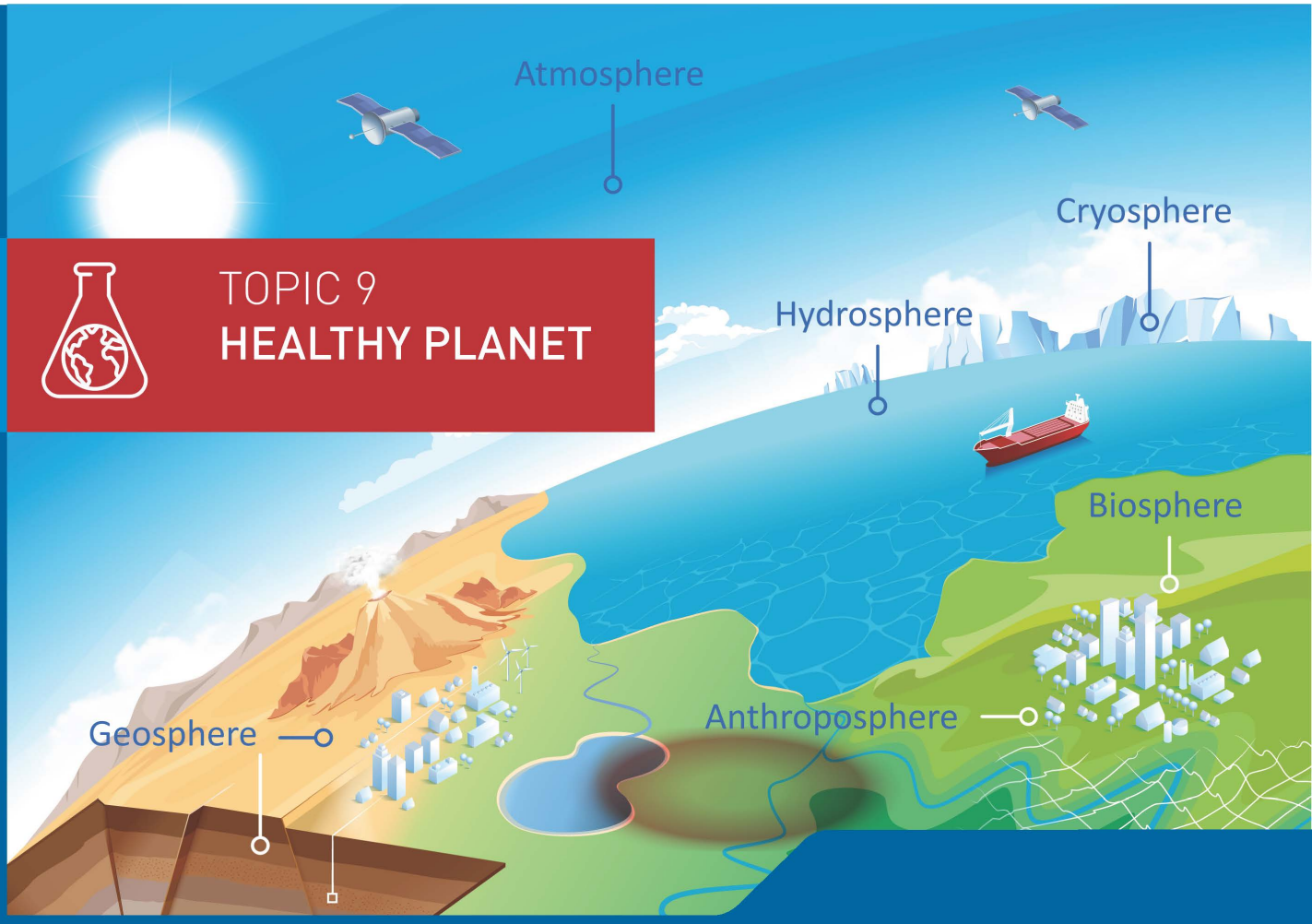
UFZ HELMHOLTZ Centre for Environmental Research



TOPIC 9
HEALTHY PLANET

Publications

Helmholtz Centre for Environmental Research – UFZ

Topic 9: Healthy Planet - Towards a Non-Toxic Environment

Preface

This list includes all publications of the year 2025 assigned to program topic 9 “Healthy Planet – Towards a Non-Toxic Environment” of the Helmholtz research program "Changing Earth – Sustaining our Future" within the research field Earth and Environment which were authored, co-authored or edited by staff members of the Helmholtz Centre for Environmental Research - UFZ.

If a publication belongs to more than one program topic, both primary and secondary assignments are indicated.

The editorial deadline for this publication list was 6 March 2026.

In contrast to external authors, UFZ staff names are highlighted in **bold type** in all publications.

The concluding index lists all UFZ authors in alphabetical order with the sequential numbers of their publications.

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Publications in ISI/Scopus listed journals/series

1. **Agyekum, M.K.,** Pathak, D., **Kindinger, A., Kumar, R., Borchardt, D., Weitere, M., Frank, K., Schmitt-Jansen, M., Büttner, O., Brauns, M., Fink, P., Scharfenberger, U.** (2025):
A hydrologically informed agricultural land use intensity index for assessing ecological impacts on streams and rivers
Commun. Earth Environ. **6** , art. 991
10.1038/s43247-025-02933-7
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2. **Aldehoff, A.S., Karkossa, I.,** Broghammer, H., Krupka, S., Weiner, J., **Goerdeler, C.,** Nuwayhid, R., Langer, S., Wabitsch, M., **Rolle-Kampczyk, U.,** Klöting, N., Blüher, M., Heiker, J.T., **von Bergen, M., Schubert, K.** (2025):
Advanced proteomics approaches hold potential for the risk assessment of metabolism-disrupting chemicals as omics-based NAM: A case study using the phthalate substitute DINCH
Environ. Sci. Technol. **59** (31), 16193 - 16216
10.1021/acs.est.5c01206

3. **Aldehoff, A.S., Türkowsky, D., Lohmann, P., Homsi, M.N., Rolle-Kampczyk, U.,** Ueberham, E., Lehmann, J., **von Bergen, M., Jehmlich, N., Haange, S.-B.** (2025):
Revealing novel protein interaction partners of glyphosate in *Escherichia coli*
Environ. Int. **195** , art. 109243
10.1016/j.envint.2024.109243

4. Allan, I.J., Miège, C., **Jahnke, A., Rojo-Nieto, E.,** Vorkamp, K., Kech, C., Polesello, S., Perceval, O., Booij, K., Dulio, V., Estoppey, N., Mayer, P., McHugh, B., Munschy, C., Staub, P.-F., Vrana, B. (2025):
Passive sampling in support of biota monitoring of hydrophobic substances under the Water Framework Directive
J. Hazard. Mater. **483** , art. 136672
10.1016/j.jhazmat.2024.136672

5. Alshetty, D., Shiva Nagendra, S.M., **Mueller, A., Schlink, U.** (2025):
Distribution of polycyclic aromatic compounds among various phases in an urban road microenvironment of a tropical megacity
Atmos. Environ-X **25** , art. 100309
10.1016/j.aeaoa.2024.100309
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6. **Alvarez-Mora, I.,** Arturi, K., Béen, F., Buchinger, S., El Mais, A.E.R., Gallampois, C., Hahn, M., Hollender, J., Houtman, C., Johann, S., **Krauss, M.,** Lamoree, M., Margalef, M., **Massei, R., Brack, W., Muz, M.** (2025):
Progress, applications, and challenges in high-throughput effect-directed analysis for toxicity driver identification — is it time for HT-EDA?
Anal. Bioanal. Chem. **417** , 451 - 472
10.1007/s00216-024-05424-4
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7. **Alvarez-Mora, I., Muratuly, A.,** Johann, S., Arturi, K., Jünger, F., **Huber, C.,** Hollert, H., **Krauss, M., Brack, W., Muz, M.** (2025):
High-throughput effect-directed analysis of androgenic compounds in hospital wastewater: identifying effect drivers through non-target screening supported by toxicity prediction
Environ. Sci. Technol. **59** (45), 2413 - 2425
10.1021/acs.est.4c09942

8. Arturi, K., Harris, E.J., Gasser, L., **Escher, B.I., Braun, G.,** Bosshard, R., Hollender, J. (2025):
MLinvitroTox reloaded for high-throughput hazard-based prioritization of high-resolution mass spectrometry data
J. Cheminformatics **17** , art. 14
10.1186/s13321-025-00950-4

9. **Austermeier, L.E.,** Voigt, K., **Böhme, A., Ulrich, N.** (2025):
Prediction of melting points of chemicals with a data augmentation-based neural network approach
ACS Omega **10** (23), 24296 - 24306
10.1021/acsomega.5c00205

10. **Ayuk, H.S., Arnold, S., Pierzchalski, A., Bauer, M., Stojanovska, V., Zenclussen, A.** (2025):
SARS-CoV-2 activated peripheral blood mononuclear cells (PBMCs) do not provoke adverse effects in trophoblast spheroids
Am. J. Reprod. Immunol. **93** (1), e70039
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11. **Ayuk, H.S., Pierzchalski, A., Tal, T.,** Myhre, O., Lindeman, B., Smith, N.M., **Stojanovska, V., Zenclussen, A.C.** (2025):
Evaluating PFAS-Induced modulation of peripheral blood mononuclear cells (PBMCs) immune response to SARS-CoV-2 spike in COVID-19 Vaccinees
Environ. Int. **198** , art. 109409
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12. Backhaus, T., Scholze, M., **Brack, W.,** Martin, O., Slunge, D., Ågerstrand, M., Kortenkamp, A., **Escher, B.** (2025):
Include a mixture allocation factor to improve EU chemical risk management. Revision of the REACH chemical regulation should enable more realistic understanding and management
Science **390** (6774), 678 - 680
10.1126/science.aeb6374

13. Bae, E., Beil, S., **König, M.,** Stolte, S., **Escher, B.I.,** Markiewicz, M. (2025):
Assessing modes of toxic action of organic cations in in vitro cell-based bioassays: the critical role of partitioning to cells and medium components
Chem. Res. Toxicol. **38** (3), 488 - 502
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14. Barber, T.R., Ribeiro, F., Claes, S., Kawamura, Y., Yeung, J., **Byrne, H.A., Weyrauch, S., Reemtsma, T.,** Unice, K.M. (2025):
The identification and quantification of tire and road wear particles in Osaka Bay, Japan, by two analytical methods
Mar. Pollut. Bull. **211** , art. 117363
10.1016/j.marpolbul.2024.117363

15. Bareth, M., Koch, B.P., Zachmann, G., Kong, X., **Lechtenfeld, O.J.,** Maneth, S. (2025):
Optimizing machine learning-based prediction of terrestrial dissolved organic matter in the ocean using fluorescence and LC-FTMS data
ACS Omega **10** (27), 29497 - 29509
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16. Benisch, J., Helm, B., **Krauss, M., Byrne, H.A.,** Becker, S., Mayer, R.P., Rojas Gómez, K.L., **Ahlheim, J., Brack, W.,** Krebs, P. (2025):
Fingerprints of micropollutants under baseflow and event discharge conditions: analysing gradients along two urban streams
Water Sci. Technol. **92** (1), 34 - 52
10.2166/wst.2025.091

17. Bertram, M.G., Ågerstrand, M., Thoré, E.S.J., Allen, J., Balshine, S., Brand, J.A., Brooks, B.W., Dang, Z., Duquesne, S., Ford, A.T., Hoffmann, F., Hollert, H., Jacob, S., Kloas, W., **Klüver, N.,** Lazorchak, J., Ledesma, M., Maack, G., Macartney, E.L., Martin, J.M., Melvin, S.D., Michelangeli, M., Mohr, S., Padilla, S., Pyle, G., Saaristo, M., Sahm, R., Smit, E., Steevens, J.A., van den Berg, S., Vossen, L.E., Wlodkowic, D., Wong, B.B.M., Ziegler, M., Brodin, T. (2025):
EthoCRED: a framework to guide reporting and evaluation of the relevance and reliability of behavioural ecotoxicity studies
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18. **Bhansali, I., Lips, S., Carmona Martinez, E., Herberth, G., Zenclussen, A., Jahnke, A., Pierzchalski, A.** (2025):
Microplastic leachates may modulate immune cell responses in human peripheral blood *in vitro*
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19. Bisle, E., **Haange, S.-B.,** Rojas, R., Behnke, A., Karabatsiakis, A., Gumpp, A., Mack, M., Mavioglu, R.N., Lutz-Bonengel, S., **Rolle-Kampczyk, U.,** Mielcarek, A., **von Bergen, M.,** Kolassa, I-T. (2025):
Serum metabolomics in women with major depressive disorder: Associations with mitochondrial function, inflammation, and oxidative stress
Psychiatry Res. **351** , art. 116569
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20. Bock, J., Neske, M., **Krauss, M.,** Dombrowski, A., Oehlmann, J. (2025):
Exploring urban garden ponds: considering chemical pollution as a limiting factor for insect diversity in cities
Environ. Sci. Eur. **37** , art. 78
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21. Cai, R., **Lechtenfeld, O.J.,** Yan, Z., Yi, Y., Chen, X., Zheng, Q., Koch, B.P., Jiao, N., He, D. (2025):
Constraining biorecalcitrance of carboxyl-rich alicyclic molecules in the ocean
Sci. Adv. **11** (28), eadw1148
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From toxicogenomics data to cumulative assessment groups: A framework for chemical grouping
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23. **Canzler, S., Schubert, K., Rolle-Kampczyk, U.E., Wang, Z., Schreiber, S.,** Seitz, H., Mockly, S., Kamp, H., Haake, V., Huisinga, M., **von Bergen, M.,** Buesen, R., **Hackermüller, J.** (2025):
Evaluating the performance of multi-omics integration: a thyroid toxicity case study
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24. Carney Almroth, B., **Carmona, E.,** Chukwuone, N., Dey, T., Slunge, D., Backhaus, T., Karlsson, T. (2025):
Addressing the toxic chemicals problem in plastics recycling
Cambridge Prisms-Plastics **3** , e3
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Food colorant brilliant blue causes persistent functional and structural changes in an *in vitro* simplified microbiota model system
ISME Commun. **5** (1), ycaf050
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Developmental neurotoxicity (DNT): A call for implementation of new approach methodologies for regulatory purposes: Summary of the 5th International Conference on DNT Testing
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27. Chen, J., **Chen, B.,** Wesseling, S., Bouwmeester, H., Rietjens, I.M.C.M., Kramer, N.I. (2025):
A population physiologically based kinetic and toxicodynamic model for acute diazinon exposure
Ecotox. Environ. Safe. **294** , art. 118083
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Predicting Caco-2/MDCK intrinsic membrane permeability from HDM-PAMPA-Derived hexadecane/water partition coefficients
Eur. J. Pharm. Sci. **214** , art. 107280
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29. **Dann, J.P.,** Ankley, G.T., Blackwell, B.R., **Escher, B.I., Jahnke, A.,** Jensen, K.M., Jenson, C., **Krauss, M., Scholz, S.,** Wernicke, T., **Brack, W.** (2025):
Current emission vs. legacy organic pollutants: Assessing the extent to which the eco-exposome of caged fish reflects external exposure
Environ. Pollut. **383** , art. 126808
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30. Dittmann, D., Görnt, A., Bauer, A., **Seelig, A.H.,** Thalmann, M., Helmecke, M., Thor, J.H., Reynaert, E., Wilkes, T., Silalahi, J., Junghans, V., **Zahn, D.,** Klitzke, S., Peters, A., Pfeifer, S., Förster, C., Hübner, N., Jekel, M., **Reemtsma, T.,** Haberkamp, J., Ruhl, A.S. (2025):
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Water Reuse **15** (3), 458 - 474
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31. Dittmar, S., **Weyrauch, S., Reemtsma, T.,** Eisentraut, P., Altmann, K., Ruhl, A.S., Jekel, M. (2025):
Settling velocities of tire and road wear particles: Analyzing finely graded density fractions of samples from a road simulator and a highway tunnel
Environ. Sci. Technol. **59** (26), 13434 - 13446
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32. **Dordoni, M., Musolff, A., Knöller, K., Coder, L., Krauss, M., Rosenlöcher, Y., Büttner, O., Tittel, J.** (2025):
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Int. Rev. Hydrobiol. **110** (2), 123 - 150
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33. **dos Santos Argolo, A., Escher, B., Braun, G., König, M.,** Vanden Heuvel, J.P., Maia Bila, D. (2025):
Dissolved and particulate micropollutant mixtures in surface waters: *in vitro* and chemical assessment in Rio de Janeiro versus global trends
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34. dos Santos Souza, E.J., Fomba, K.W., Gómez Maqueo Anaya, S., Schepanski, K., Freire, S.M., **Materić, D., Reemtsma, T.,** Herrmann, H. (2025):
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Retrospective identification of novel and legacy per- and polyfluoroalkyl substances in German archived fish livers using a combined high-resolution mass spectrometry approach
Environ. Sci. Technol. **59** (25), 12865 - 12877
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36. **Durka, W., Michalski, S.G., Höfner, J.,** Bucharova, A., Kolář, F., Müller, C.M., Oberprieler, C., Šemberová, K., Bauer, M., **Bernt, M.,** Bleeker, W., Brändel, S., Bucher, S.F., Eibes, P.M., Ewald, M., Goldberg, R., Grant, K., Haider, S., **Harpke, A.,** Haun, F., Kaufmann, R., **Korell, L.,** Kunzmann, D., Lauterbach, D., Leib, S., Lenzewski, N., Loritz, H., **Madaj, A.-M.,** Mainz, A.K., Meinecke, P., Mertens, H., Meyer, H.M., **Musche, M.,** Ristow, M., Rosche, C., **Roscher, C.,** Rutte, D., Schacherer, A., Schmidt, W., Schmoldt, J., Schneider, S., Schwarz, J.-H., Skowronek, S., Socher, S.A., Stanik, N., Twerski, A., Weiß, K., Weiß, M., Wille, A., Zehm, A., Zidorn, C., the RegioDiv Consortium, (2025):
Assessment of genetic diversity among seed transfer zones for multiple grassland plant species across Germany
Basic Appl. Ecol. **84** , 50 - 60
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37. **Ebert, A., Goss, K.-U.** (2025):
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Characterizing the distribution of aromatic amines between polyester, cotton, and wool textiles and air
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39. **Eze, O.O.,** Ogbuene, E.B., Ibraheem, O., **Küster, E., Eze, T.C.** (2025):
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Toxicology **511** , art. 154037
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40. **Faikhaw, O.,** Wagner, S., **Rynek, R., Peng, G., Materić, D., Reemtsma, T.** (2025):
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41. Farani, M.R., Esmaeilidehkordi, M., Alipourfard, I., **Azarian, M.,** Huh, Y.S. (2025):
Utilizing armchair and zigzag nanoribbons for improved detection of SO_2 toxicity with graphene biosensor
Physica B **696** , art. 416599
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42. **Foscari, A.,** Herzke, D., Mowafi, R., **Seiwert, B.,** De Witte, B., Delbare, D., Heras, G.B., Gago, J., **Reemtsma, T.** (2025):
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Environmental drivers of dissolved organic matter composition across central European aquatic systems: A novel correlation-based machine learning and FT-ICR MS approach
Water Res. **273** , art. 123018
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44. **Ghosh, D.,** Shi, Y., Zimmermann, I.M., Holzhauser, K., **von Bergen, M.,** Kaster, A.-K., Spielvogel, S., Dippold, M.A., Müller, J.A., **Jehmlich, N.** (2025):
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Dismantling EPA's research office jeopardizes environmental safety, public health, and US competitiveness
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46. **Goerdeler, C., Engelmann, B.,** Broghammer, H., **Aldehoff, A.S.,** Wabitsch, M., **Schubert, K.,** Blüher, M., Heiker, J.T., **Rolle-Kampczyk, U., von Bergen, M.** (2025):
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48. **Gómez-Olarte, S., Röder, S.,** Borte, M., **Krauss, M., Zenclussen, A., Brack, W., Herberth, G., Huber, C.** (2025):
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52. **Gutsfeld, S., Wray, C., Schweiger, N., Röhrig, A., Paschke, H., Fu, Q., Kasmanas, J.C., Kader, S., Nunes da Rocha, U., Tal, T.** (2025):
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55. Hagemann, T., **Rolle-Kampczyk, U., Schubert, K.,** Dietrich, A., **von Bergen, M.,** Blüher, M., Hoffmann, A. (2025):
Human adipose tissue gene expression signatures indicate an inflammatory response and retinoic receptor activation under persistent organic pollutants exposure
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57. Hasselder, P., Helmecke, M., Tiehm, A., Aumeier, B.M., Förster, C., **Zahn, D.,** Ho, J., Stapf, M., Zacharias, N., Dockhorn, T., Miehe, U., Ruhl, A.S. (2025):
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