Publications and Reports from ILA Science Research for Environment and Health

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
ENVIRONMENT PROGRAMS					
Freshwater lead					
ILHE-2: Lead Ecotoxicity	2025	Peters A, Gopalapillai Y, Cooper C, Middleton E, Chowdhury J. Effects of metal mixtures on benthic macroinvertebrate communities in the field.	Journal paper	Available upon publication	In internal review
ILHE-2: Lead Ecotoxicity	2025	Merrington et al. Bioavailability and risk assessment of metals in freshwaters: is global regulatory implementation keeping pace with the scientific developments?	Journal paper	Available upon publication	In internal review
ILHE-1: Lead Biotic Ligand Model	2023	Nys, C., and De Schamphelaere, K.A.C. 2023. Ecotoxicity of lead (Pb) to a phytoplankton community: effects of pH and phosphorous addition and implications for risk assessment. Environmental Toxicology and Chemistry, 00: 1-17.	Journal paper	https://doi.org/10.1002/etc.5739	Available online
ILHE-1: Lead Biotic Ligand Model	2023	Weighman K., Viaene, K., Koch, J., De Schamphelaere, K.A.C. 2023. Using a dynamic energy budget model to investigate the physiological mode of action of lead (Pb) to *Lymnaea stagnalis*. Aquatic Toxicology, 261: 106617.	Journal paper	https://doi.org/10.1016/j.aquatox.2023.106617.	Available online
ILHE-2: Lead Ecotoxicity	2023	Brix K. V., Baken, S., Poland, C. A., Blust, R., Pope, L. J., Tyler, C. R. 2023. Challenges and recommendations in assessing potential endocrine-disrupting properties of metals in aquatic organisms. Environmental Toxicology and Chemistry, 00: 1-16.	Journal paper	https://doi.org/10.1002/etc.5741	Available online (Open access)

Publications and Reports from ILA Science Research for Environment and Health

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
ILHE-2: Lead Ecotoxicity	2022	Adams et al., 2022. Application of persistence, bioaccumulation, and toxicity for metal hazard assessment is questioned. Environmental Toxicology and Chemistry – Points of Reference, 41(11): 2629-2631.	Journal paper	https://doi.org/10.1002/etc.5459	Available online (Open access)
Lead REACH Consortium project managed by ILA	2021	Peters, A., Roylance, K., and Leverett, D. 2021. Variability in Ecotoxicity Testing of *Lymnaea stagnalis* with Trace Metals. Report prepared by WCA Environment Ltd., for ILA. May, 2021.	Topical Science Report for regulatory needs	Contact ILA	Availability is subject to permission from Lead REACH Consortium.
ILHE-28: MLR-based aquatic life criteria	2020	DeForest, D. K., Tear, L. M., and Brix, K. B. 2020. Comparison of Multiple Linear Regression Models and Biotic Ligand Models for Predicting Acute and Chronic Lead Toxicity to Freshwater Organisms. Report prepared by Windward Environmental (Seattle, WA) and EcoTox (Miami, FL) for International Lead Association. March 10, 2020.	Lead bioavailability report submitted to USEPA under CRADA (Cooperative Research and Development Agreement)	Contact ILA	Availability is restricted as it is under review by EPA and a manuscript for publication is under preparation.
Lead REACH Consortium project managed by ILA	2020	Scymaris 2020. Lead nitrate: Determination of effects on reproduction of L*ymnaea stagnalis*. Final Report prepared by Scymaris Ltd., Brixham, Devon, UK for International Lead Association, Durham, NC, USA.	Final Study Report	Contact ILA	Availability is subject to permission from Lead REACH Consortium.

Publications and Reports from ILA Science Research for Environment and Health

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
ILHE-1: Lead Biotic Ligand Model	2018	Peters, A., Wilson, I., Merrington, G, and Chowdhury, M. J. 2018. Are lead exposures a risk in European Freshwaters? A regulatory assessment accounting for bioavailability. Bulletin of Environmental Contamination and Toxicology. 100 (1): 127 – 133.	Journal paper	https://doi.org/10.1007/s00128-017-2238-8	Available online
ILHE-1: Lead Biotic Ligand Model	2017	Peters, A., Wilson, I., and Merrington, G. 2017. An indicative compliance assessment for lead using European freshwater datasets. WCA Final Report submitted to International Lead Association in July 2017. WCA Project# P0607-17-18.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILHE-14: Lead chronic criteria	2017	DeForest, D.K., Santore, R.C., Ryan, AC, Church, B., Chowdhury, M.J., and Brix, K.V. 2017. Development of biotic ligand model (BLM)-based freshwater aquatic life criteria for lead in the United State. Environmental Toxicology and Chemistry. 36(11): 2965 – 2973.	Journal paper	DOI: 10.1002/etc.3861	Available online (free access)
ILHE-1: Lead Biotic Ligand Model	2016	Nys, C., Janssen, C., De Schamphelaere, K.A.C. 2016. Development and validation of a chronic Pb bioavailability model for the freshwater rotifer *Brachionus calyciflorus*. Environmental Toxicology and Chemistry, 35 (2): 2977 – 2986.	Journal paper	DOI: 10.1002/etc.3480	Available online
ILHE-10: Dietary Effects of Lead	2016	Besser, J.M., Ivey, C.D., Brumbaugh, W.G., Ingersoll, C.G. 2016. Effect of diet quality on the chronic toxicity of aqueous lead to the amphipod, Hyalella Azteca. Environmental Toxicology and Chemistry, 35 (7): 1825 – 1834.	Journal paper	DOI: 10.1002/etc.3341	Available online

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ILHE-1: Lead Biotic Ligand Model	2016	Van Sprang, PA., Nys, C., Blust, R., Chowdhury, M.J. Gustafsson, J.P., Janssen, C.J., and De Schamphelaere, K.A.C. 2016. The derivation of safe concentrations of lead for European freshwater ecosystems. Environmental Toxicology and Chemistry, 35(5):1310-1320.	Journal paper	DOI: 10.1002/etc.3262	Available online
ILHE-10: Dietary Effects of Lead	2016	Alsop, D., Ng, T. Y.-T., Chowdhury, M.J., Wood, C.M. 2016. Interactions of waterborne and dietborne Pb in rainbow trout, Oncorhynchus mykiss: bioaccumulation, physiological responses, and chronic toxicity. Aquatic Toxicology, 177 (2016):343–354	Journal paper	doi:10.1016/j.aquatox.2016.06.007	Available online
ILHE-2: Lead Ecotoxicity	2015	DeForest, D.K. and Meyer, J.S. 2015. Critical Review: Toxicity of Dietborne Metals to Aquatic Organisms, Critical Reviews in Environmental Science and Technology, 45:11, 1176-1241.	Journal paper	DOI: 10.1080/10643389.2014.955626	Available online
ILHE-1: Lead Biotic Ligand Model	2014	De Schamphelaere, K.A.C, Nys, C., Janssen, C.R. 2014. Ecotoxicity of lead (Pb) to freshwater green algae: development and validation of a bioavailability model and inter-species sensitivity comparison. Aquat Toxicol 155: 348-359.	Journal paper	doi:10.1016/j.aquatox.2014.07.008	Available online
ILREACH-1: Lemna minor Validation	2014	Antunes, P.M.C., Kreager, N.J. 2014. Lead toxicity to Lemna minor predicted using a metal speciation chemistry approach. Environ Toxicol Chem 33: 2225-2233.	Journal paper	DOI: 10.1002/etc.2688	Available online
ILHE-1: Lead Biotic Ligand Model	2014	Nys, C., C.R. Janssen, E.M. Mager, A.J. Esbaugh, K.V. Brix, M. Grosell, W.A. Stubblefield, K. Holtze, K.A.C. De Schamphelaere. 2014. Development and	Journal paper	DOI: 10.1002/etc.2433	Available online

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
		validation of a biotic ligand model for predicting chronic toxicity of lead to Ceriodaphnia dubia. Environ. Toxicol. Chem. 33(2): 394-403.			
ILHE-1: Lead Biotic Ligand Model	2014	Blust R et al. 2014. Chemical analysis and speciation modeling of lead solubility under ecotoxicity testing relevant exposure scenarios. Department of Biology, University of Antwerp, Belgium. Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.34 p.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILHE-1: Lead Biotic Ligand Model	2013	Munley, K.M., K.V. Brix, J. Panlilio, D.K. Deforest, and M. Grosell. 2013. Growth inhibition in early life-stage tests predicts full life-cycle toxicity effects of lead in the freshwater pulmonate snail, Lymnaea stagnalis. Aquat. Toxicol. 128-129: 60-66	Journal paper	aquatox.2012.11.020	Available online
ILHE-1: Lead Biotic Ligand Model	2013	Nys C, and De Schamphelaere KAC. 2013. Effect of Ca and pH on acute toxicity of Pb to Ceriodaphnia dubia. Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILHE-1: Lead Biotic Ligand Model	2013	Nys C, Janssen CR, De Schamphelaere KAC. 2013. A comparison of chronic Pb sensitivity between laboratory and field populations of Lymnaea stagnalis. Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILHE-10: Dietary Effects of Lead	2013	Nys C, Janssen CR, De Schamphelaere KAC. 2013. An investigation of the potential toxicity of dietary Pb to Ceriodaphnia dubia. Report prepared for International Lead Zinc Research Organization (ILZRO), Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request

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Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
ILHE-1: Lead Biotic Ligand Model	2012	Nys C, Janssen CR, De Schamphelaere KAC. 2012. Estimation of the effects of Ca2+, H+ (pH) and DOC on chronic toxicity of Pb2+ to Brachionus calyciflorus: Development and validation of a Biotic Ligand Model (BLM). Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILHE-1: Lead Biotic Ligand Model	2012	Esbaugh, A.J., K.V. Brix, E.M. Mager, K. De Schamphelaere, and M. Grosell. 2012. Multi-linear regression analysis, preliminary biotic ligand modeling, and cross species comparison of the effects of water chemistry on chronic lead toxicity in invertebrates. Comp. Biochem. Physiol. 155C: 423-431.	Journal paper	doi:10.1016/j.cbpc.2011.11.005	Available online
ILHE-1: Lead Biotic Ligand Model	2012	Brix, K.V., A.J. Esbaugh, K.M. Munley, and M. Grosell. 2012. Investigations into the mechanism of lead toxicity to the freshwater pulmonate snail, Lymnaea stagnalis. Aquat. Toxicol. 106-107: 147-156.	Journal paper	aquatox.2011.11.007	Available online
ILHE-1: Lead Biotic Ligand Model	2012	AquaTox. 2012. Report on the toxicity of lead to the freshwater invertebrate, Ceriodaphnia dubia . Report Prepared by AquaTox for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILHE-1: Lead Biotic Ligand Model	2012	Nguyen LTH, Janssen CR, De Schamphelaere KAC. 2012. Chronic toxicity of Pb to Chironomus riparius in five natural waters. Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request

Publications and Reports from ILA Science Research for Environment and Health

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
ILHE-10: Dietary Effects of Lead	2012	Wood, C.M., Alsop, D. 2012. Evaluating the relative contributions of waterborne and dietary lead to toxicity in rainbow trout. Report Prepared by McMaster University for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILHE-1: Lead Biotic Ligand Model	2011	Esbaugh, A.J., K.V. Brix, E.M. Mager, and M. Grosell. 2011. Multi-linear regression models predict the effects of water chemistry on acute lead toxicity to Ceriodaphnia dubia and Pimephales promelas. Comp. Biochem. Physiol. 154C: 137-145.	Journal paper	doi:10.1016/j.cbpc.2011.04.006	Available online
ILHE-1: Lead Biotic Ligand Model	2011	Mager, E.M. and M. Grosell. 2011. Effects of acute and chronic waterborne lead exposure on the swimming performance and aerobic scope of fathead minnows (Pimephales promelas). Comp. Biochem. Physiol. 154C: 7-13.	Journal paper	doi:10.1016/j.cbpc.2011.03.002	Available online
ILHE-1: Lead Biotic Ligand Model	2011	Mager, E.M., K.V. Brix, R.M. Gerdes, A.C. Ryan, and M. Grosell. 2011. Effects of water chemistry on the chronic toxicity of lead to the cladoceran, Ceriodaphnia dubia. Ecotoxicol. Environ. Saf. 74: 238-243.	Journal paper	doi:10.1016/j.ecoenv.2010.11.005	Available online
ILHE-1: Lead Biotic Ligand Model	2011	Mager, E.M., A.J. Esbaugh, K.V. Brix, A.C. Ryan, and M. Grosell. 2011. Influences of water chemistry on the acute toxicity of lead to Pimephales promelas and Ceriodaphnia dubia. Comp. Biochem. Physiol. 153C: 82-90.	Journal paper	doi:10.1016/j.cbpc.2010.09.004	Available online
ILHE-2: Lead Ecotoxicity	2011	Al-Reasi, H.A., Wood, C.M., Smith, D.S. 2011. Physicochemical and spectroscopic properties of natural organic matter (NOM) from various sources	Journal paper	doi:10.1016/j.aquatox.2011.02.015	Available online

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
		and implications for ameliorative effects on metal toxicity to aquatic biota. Aquat. Toxicol. 103:179-190.			
ILHE-1: Lead Biotic Ligand Model	2010	Mager, E.M., K.V. Brix and M. Grosell. 2010. Influence of bicarbonate and humic acid on effects of chronic waterborne lead exposure to fathead minnow (*Pimephales promelas*). Aquat. Toxicol. 96: 135-144	Journal paper	doi:10.1016/j.aquatox.2009.10.012	Available online
ILREACH-1: Lemna minor Validation	2010	Antunes P, Holtze K. 2010. Final report: Testing the toxicity of Pb to Lemna minor in natural waters. Study number: aquatox 162704736. Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILHE-1: Lead Biotic Ligand Model	2010	Parametrix. 2010. Chronic toxicity of lead to the cladoceran, Ceriodaphnia dubia, under varying calcium and pH water quality conditions. Study number: 598-3690-008. Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILHE-1: Lead Biotic Ligand Model	2010	Parametrix. 2010a. Chronic toxicity of lead to the fathead minnow, Pimephales promelas, in natural waters. Report no.: 598-3690-008. Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILHE-1: Lead Biotic Ligand Model	2009	Grosell, M. and K.V. Brix. 2009. High net calcium uptake explains the hypersensitivity of the freshwater pulmonate snail, Lymnaea stagnalis, to chronic lead exposure. Aquat. Toxicol. 91: 302-311.	Journal paper	doi:10.1016/j.aquatox.2008.10.012	Available online

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ILHE-1: Lead Biotic Ligand Model	2008	Mager, E.M., H. Wintz, C.D. Vulpe, K.V. Brix, and M. Grosell. 2008. Toxicogenomics of water chemistry influence on chronic lead toxicity to the fathead minnow (Pimephales promelas). Aquat. Toxicol. 87(3): 200-209.	Journal paper	doi:10.1016/j.aquatox.2008.02.001	Available online
LDAI Project	2007	Parametrix. 2007. Evaluation of Chronic Lead Toxicity to the Great Pond Snail, Lymnaea stagnalis. Report no.: 598-3690-008. Report Prepared for Lead Development Association, London, UK.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILZRO BLM project	2006	Grosell, M., R. Gerdes, and K.V. Brix. 2006. Influence of Ca, humic acid and pH on lead accumulation and toxicity in the fathead minnow during prolonged water-borne lead exposure. Comp. Biochem. Physiol. 143C: 473-483.	Journal paper	doi:10.1016/j.cbpc.2006.04.014	Available online
ILZRO BLM Project	2006	Grosell, M., R.M. Gerdes and K.V. Brix. 2006. Chronic toxicity of lead to three freshwater invertebrates - Brachionus calyciflorus, Chironomus tentans, and Lymnaea stagnalis. Environ. Toxicol. Chem. 25(1): 97-104.	Journal paper	DOI: 10.1897/04-654R.1	Available online
Marine (saltwater) lead					
ILHE-8: Lead in Marine Water	2025	Smith, D.S. and McGeer, J. C. Impacts of Waterborne Pb to Americamysis bahia in a Chronic 30 day Flow-through Exposure: including analytical best practices and marine Pb solubility modelling.	Journal paper	Available upon publication	In internal review
ILHE-8: Lead in Marine Water	2018	Reynolds, E., Smith, S., Chowdhury, M. J., and Hoang, T. 2018. Chronic effects of lead exposure on	Journal Paper	https://doi.org/10.1002/etc.4241	Available online

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
		topsmelt fish (*Atherinops affinis):* influence of salinity and organism age. Environ. Toxicol. Chem.			
ILHE-14: Lead chronic criteria	2017	Church, B. G., Van Sprang, P.A., Chowdhury, M.J., and DeForest, D.K. 2017. Updated species sensitivity distribution evaluations for acute and chronic lead toxicity to saltwater aquatic life. Environ. Toxicol. Chem. 36 (11): 2974 – 2980.	Journal paper	DOI: 10.1002/etc.3863	Available online (free access)
ILHE-8: Lead in Marine Water	2015	Hoang, T. 2015. Chronic Toxicity of Lead to Topsmelt (Atherinops affinis). Report Prepared by Loyola University for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	Published as a journal paper (Reynolds et al., 2018)
ILHE-8: Lead in Marine Water	2013	Nadella, S.R., Tellis, M., Diamond, R., Smith, D.S., Bianchini, A., Wood, C.M. 2013. Toxicity of lead and zinc to developing mussel and sea urchin embryos: Critical tissue residues and effects of dissolved organic matter and salinity. Comp. Biochem. Physiol. [C]. 158:72-83.	Journal paper	doi:10.1016/j.cbpc.2013.04.004	Available online
ILHE-8: Lead in Marine Water	2013	Tellis, M.S., Lauer, M.M., Nadella, S., Bianchini, A., Wood, C.M. 2013. Sublethal mechanisms of Pb and Zn toxicity to the purple sea urchin (Strongylocentrotus purpuratus) during early development. Aquat. Toxicol. 146:220-229.	Journal paper	doi:10.1016/j.aquatox.2013.11.004	Available online
ILHE-8: Lead in Marine Water	2013	Vukov, O., Nasir, R., Cunningham, J., Smith, D.S. and McGeer, J. 2013. Impacts of Waterborne Pb to Americamysis bahia in a Chronic 30 day Flow-through Exposure. Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request

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ILHE-8: Lead in Marine Water	2013	Smith, D.S., Cunningham, J., and McGeer, J. 2013. Analytical Chemistry of Marine Aqueous Pb Determination: comparison of three methods. Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Project Report	Contact ILA	A pdf can be made available upon request
ILREACH-3: Marine SSD (U. Vigo)	2013	Beiras, R., González, S., Trigo, N., and Tato, T. 2013. Lead full life-cycle toxicity tests with the marine copepod Tisbe battagliai. Report Prepared by the University of Vigo for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILREACH-3: Marine SSD (U. Vigo)	2012	Beiras, R., Trigo, N., Durán, I., and Tato, T. 2012. Toxicity of Pb to early life stages of the bivalve Mytilus galloprovincialis and to the microalgae Phaeodactylum tricornutum. Report Prepared by the University of Vigo for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILREACH-3: Marine SSD (U. Vigo)	2012	Beiras, R., Trigo, N., and Durán, I. 2012a. Toxicity of Pb to the sea urchin embryo bioassay with Paracentrotus lividus. Report Prepared by the University of Vigo for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILHE-1: Lead Biotic Ligand Model	2012	Holtz, K. 2012. Report on the toxicity of lead to the marine macroalgae, Champia Parvula. Report Prepared by AquaTox for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILHE-8: Lead in Marine Water	2011	Wood, C.M. 2011. Effects of salinity and DOC on Pb Toxicity to Marine Organisms. Report Prepared by	Final Study Report	Contact ILA	A pdf can be made

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
		McMaster University for International Lead Zinc Research Organization, Durham, NC, USA.			available upon request
LDAI project	2010	Parametrix, 2010b. Toxicity of Lead to the Marine Flagellate, Dunaliella tertiolecta. Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
LDAI project	2010	Parametrix, 2010c. Toxicity of Lead to the Mussel (Mytilus galloprovincialis). Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
LDAI project	2010	Parametrix, 2010d. Life-Cycle Toxicity of Lead to the Marine Polychaete, Neanthes arenaceodentata. Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
LDAI project	2010	Parametrix, 2010e. Toxicity of Lead to the Oyster (Crassostrea gigas). Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
LDAI project	2010	Parametrix, 2010f. Toxicity of Lead to the Sand Dollar (Dendraster excentricus). Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
LDAI project	2010	Parametrix, 2010g. Toxicity of Lead to the Purple Sea	Final Study Report	Contact ILA	A pdf can be made available upon request

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
		Urchin (Strongylocentrotus purpuratus). Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.			
LDAI project	2010	Parametrix, 2010h. Early Life-Stage Toxicity of Lead to the Sheepshead Minnow (Cyprinodon variegatus). Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
LDAI project	2010	Parametrix, 2010i. Toxicity of Lead to the Marine Diatom, *Skeletonema costatum*. Report Prepared for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
Terrestrial (soil) lead					
Lead REACH Consortium project on Man via Environment	2022	De Brouwere, K. Verdonck, F., Geerts, L., Navis, S., Vanhamel, M. 2022 Assessment of human exposure to environmental sources of lead arising from the lead battery manufacturing and recycling sector in Europe: demonstration of a tiered approach in a case study. Journal of Exposure Science & Environmental Epidemiology, 32: 418 – 426.	Journal paper	https://doi.org/10.1038/s41370-021-00395-5	Available online
ILHE-19: Lead in soil	2021	Oorts, K., Smolders, E., Lanno, R, and Chowdhury, M.J. 2021. Lead toxicity to soil organisms: derivation of ecological standards. Environmental Toxicology & Chemistry, 40 (7): 1948 – 1961.	Journal paper	DOI: 10.1002/etc.5051	Available online (Open access)
ILHE-27: Lead Soil EcoSSL	2019	Sample, B. E., Beyer, W. N. and Wentsel, R. 2019. Revisiting the avian Eco-SSL for lead: recommendations for revision. Integrated Environmental Assessment and Management (IEAM), 15: 739 – 749.	Journal paper	DOI: 10.1002/ieam.4157	Available online

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Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
ILA/REACH: Soil Ageing and Bioavailability	2019	Lanno, R. P., Oorts, K., Smolders, E., and Chowdhury, M.J. 2019. Effects of soil properties on the toxicity and bioaccumulation of lead in soil invertebrates. Environmental Toxicology & Chemistry, 38 (7): 1486–1494.	Journal paper	DOI: 10.1002/etc.4433	Available online
ILA/REACH: Soil Ageing and Bioavailability	2015	Smolders, E., Oorts, K., Peeters, S., Lanno, R., Cheyns, K. 2015. Toxicity in lead salt spiked soils to plants, invertebrates and microbial processes: unraveling effects of acidification, salt stress and ageing reactions. Science of the total environment, 536: 223 – 231.	Journal paper	doi:10.1016/j.scitotenv.2015.07.067	Available online
ILA/REACH: Soil Ageing and Bioavailability	2012	Cheyns, K., Peeters, S., Delcourt, D., Smolders, E. 2012. Lead phytotoxicity in soils and nutrient solutions is related to lead induced phosphorus deficiency. Environmental pollution, 164:242-247.	Journal paper	Doi: 10.1016/j.envpol.2012.01.027	Available online
ILA/REACH: Soil Ageing and Bioavailability	2012	Lanno, R. 2012. Toxicity of lead salts to higher plants, invertebrates, and soil microbial processes: effects of soil type and ageing after soil amendment (Collembola and earthworms). Report Prepared by Ohio State University for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request
ILA/REACH: Soil Ageing and Bioavailability	2011	Smolders, E., Cheyns, K., Peeters, S., 2011. Toxicity of lead salts to higher plants, invertebrates, and soil microbial processes: effects of soil type and ageing after soil amendment. Report Prepared by Katholieke Universiteit Leuven for International Lead Zinc Research Organization, Durham, NC, USA.	Final Study Report	Contact ILA	A pdf can be made available upon request

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
LDAI Project (Lead Secondary Poisoning)	2009	Buekers, J., Steen Redeker, E., Smolders, E. 2009. Lead toxicity to wildlife: Derivation of a critical blood concentration for wildlife monitoring based on literature data. Science of the total environment, 407: 3431–3438.	Journal paper	doi:10.1016/j.scitotenv.2009.01.044	Available online
LDAI Project (Lead Secondary Poisoning)	2009	Exponent, 2009. Lead Secondary Poisoning Expert Panel Workshop. Report Prepared by Exponent for International Lead Zinc Research Organization, Durham, NC, USA.	Final Workshop Report	Contact ILA	A pdf can be made available upon request
LDAI/Euromet aux Project (KUL)	2006	Lock K., Waegeneers N., Smolders E., Criel P., Van Eeckhout H., Janssen C.R. (2006) Effect of leaching and aging on the bioavailability of lead to the springtail Folsomia candida. Environmental Toxicology and Chemistry 25:2006-2010.	Journal paper	DOI: 10.1897/05-612r.1	Available online
LDAI/Euromet aux Project (KUL)	2004	Waegeneers N., Vassilieva, E; Smolders E. (2004). Toxicity of Lead in the Terrestrial Environment. Fnal Report submitted to Lead Development Association International and International Lead Zinc Research Organization. November 2004.	Final Report	Contact ILA	A pdf can be made available upon request
HEALTH PROGRAMS					
ILHE-11: Prospective Medical Surveillance Study	2015	Hara, A., Gu, Y.M., Petit, T., Liu, Y.P., Jacobs, L., Zhang, Z.Y., Yang, W.Y., Jin, Y., Thijs, L., Wei, F.F., Nawrot, T.S., and Staessen, J.A. 2015. Study for Promotion of Health in Recycling Lead - Rationale and design. Blood Press. 24(3):147-157.	Journal paper	Open access	Available here
ILHE-11: Prospective	2018	Yang, W-Y., Mujaj, B., Efremov, L., Zhang, Z-Y., Thijs, L., Wei, F.F., Huang, O-F., Luttun, A., Verhamme, P.,	Journal paper	Open access	Available here

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
Medical Surveillance Study		Nawrot, T.S., Boggia, J., and Staessen, J.A. 2018. ECG Voltage in Relation to Peripheral and Central Ambulatory Blood Pressure. Am J Hypertens. 31(2):178-187.			
ILHE-11: Prospective Medical Surveillance Study	2018	Yang, W-Y., Efremov, L., Mujaj, B., Zhang, Z-Y., Wei, F-F., Huang, Q-F., Thijs, L., Vanassche, T., Nawrot, T., and Staessen, J.A. 2018. Association of office and ambulatory blood pressure with blood lead in workers before occupational exposure. Journal of the American Society of Hypertension 12(1):14-24.	Journal article	Open access	Available here
ILHE-11: Prospective Medical Surveillance Study	2019	Mujaj, B., Yang, W-Y., Zhang, Z-Y., Wei, F-F., Thijs, L., Verhamme, P., and Staessen, J.A. 2019. Renal function in relation to low-level environmental lead exposure. Nephrology Dialysis Transplantation 34(6):941-946.	Journal article	Open access	Available here
ILHE-11: Prospective Medical Surveillance Study	2018	Yang, W-Y., Staessen, J.A. 2018. Blood pressure, hypertension and lead exposure. Environ Health. 2018 Feb 19;17(1):16	Letter to the editor	Open access	Available here
ILHE-11: Prospective Medical Surveillance Study	2018	Yang, W-Y., Zhang, Z-Y., Mujaj, B., Thijs, L., and Staessen, J.A. 2018. Environmental exposure to lead: old myths never die. Lancet Public Health 3(8):e362.	Letter to the editor	Open access	Available here

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
ILHE-11: Prospective Medical Surveillance Study	2018	Lanphear, B.P., Hornung, R.W., Auinger, P., and Allen, R. 2018. Environmental exposure to lead: old myths never die - Authors' reply. Lancet Public Health 3(8):e363.	Reply to letter to editor	Open access	Available here
ILHE-11: Prospective Medical Surveillance Study	2019	Yu, C-G., Wei, F-F., Yang, W-Y., Zhang, Z-Y., Muja, B., Thijs, L., Feng, Y-M., and Staessen, J.A. 2019. Heart rate variability and peripheral nerve conduction velocity in relation to blood lead in newly hired lead workers. Occup Environ Med. 76(6):382-388.	Journal article	Open access	Available here
ILHE-11: Prospective Medical Surveillance Study	2019	Yu, C-G., Yang, W-Y., Saenen, N., Wei, F-F., Zhang, Z-Y., Mujaj, B., Thijs, L., Feng, Y-M., Nawrot, T.S., and Staessen, J.A. 2019. Neurocognitive function in relation to blood lead among young men prior to chronic occupational exposure. Scand J Work Environ Health 45(3):298-307.	Journal article	Open access	Available here
ILHE-11: Prospective Medical Surveillance Study	2019	Yu, C-G., Wei, F-F., Yang, W-Y., Zhang, Z-Y., Mujaj, B., Thijs, L., Feng, Y-M., Boggia, J., Nawrot, T.S., Struijker-Boudier, H.A.J., and Staessen, J.A. 2019. Central hemodynamics in relation to blood lead in young men prior to chronic occupational exposure. Blood Press. 28(5):279-290.	Journal article	Open access	Available here
ILHE-11: Prospective Medical	2020	Yu, Y-L., Yang, W-Y., Thijs, L., Melgarejo, J.D., Yu, C-G., Wei, D.M., Wei, F-F., Nawrot, T.S., Zhang, Z-Y., and Staessen, J.A. 2020. Two-Year Responses of Office and Ambulatory Blood Pressure to First	Journal article	Open access	Available here

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Surveillance Study		Occupational Lead Exposure. Hypertension. 76(4):1299-1307.			
ILHE-11: Prospective Medical Surveillance Study	2020	Yu, Y-L., Thijs, L., Yu, C-G., Wen-Yi Yang, W-Y., Melgarejo, J.D., Wei, D-M., Wei, F-F., Nawrot, T.S., Verhamme, P., Roels, H.A., Staessen, J.A., and Zhang, Z-Y. Two-Year Responses of Heart Rate and Heart Rate Variability to First Occupational Lead Exposure. Hypertension. 2021 May 5;77(5):1775-1786	Journal article	Open access	Available here
ILHE-11: Prospective Medical Surveillance Study	2021	Yu, Y-L., Thijs, L., Saenen, N., Melgarejo, J.D., Wei, D-M., Yang, W-Y., Yu, C-G., Roels, H.A., Nawrot, T.S., Maestre, G.E., and Staessen, J.A. Two-year neurocognitive responses to first occupational lead exposure. Scand J Work Environ Health. 2021 Apr 1;47(3):233-243.	Journal article	Open access	Available here
ILHE-11: Prospective Medical Surveillance Study	2022	Yu, Y-L., Thijs, L., Yu, C-G., Melgarejo, J.D., Wei, D-M., Wei, F-F., Yang, W-Y., Roels, H.A., Nawrot, T.S., Zhang, Z-Y., and Staessen, J.A. Two-Year Responses of Renal Function to First Occupational Lead Exposure. Kidney Int Rep. 2022 Mar 26;7(6):1198-1209.	Journal article	Open access	Available here
ILHE-11: Prospective Medical Surveillance Study	2023	Yu YL, Yang WY, Hara A, Asayama K, Roels HA, Nawrot TS, Staessen JA. Public and occupational health risks related to lead exposure updated according to present-day blood lead levels. Hypertens Res. 2023 Feb;46(2):395-407.	Journal article	Open access	Available here

Publications and Reports from ILA Science Research for Environment and Health

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
ILHE-11: Prospective Medical Surveillance Study	2023	Yu YL, An DW, Yang WY, Verhamme P, Allegaert K, Nawrot TS , Staessen JA. Blood Pressure and Renal Function Responses in Workers Exposed to Lead for up to Six Years. J Clin Hyperten, 2023 Dec; 25 (12): 1086 – 1095.	Journal article	Open access	Available here
ILHE-11: Prospective Medical Surveillance Study	2023	Yu YL, An DW, Chori BS, Nawrot TS, Staessen JA. Blood pressure and hypertension in relation to lead exposure updated according to present-day blood lead levels. Kardiol Pol. 2023;81(7-8):675-683.	Journal article	Open access	Available here
ILHE-23: Contribution of Ingested vs. Inhaled Lead in the Workplace	TBD	Ongoing health research study to update research and literature pertaining to inadvertent ingestion vs. inhalation exposure to lead in the workplace. To assist member companies in understanding and controlling inadvertent lead ingestion.	Report and Journal article	TBD	Ongoing study
ILHE-24: Evaluation of the Air Lead/Blood Lead Relationship in Workers	2017	Petito Boyce. C., Sax, S.N., and Cohen, J.M. 2017 Particle size distributions of lead measured in battery manufacturing and secondary smelter facilities and implications in setting workplace lead exposure limits, J Occup Environ Hyg. 14(8):594-608.	Journal article	Available online	Available here
ILHE-26: Neurological Effects of	2013	Crump, K.S., Van Landingham, C., Bowers, T.S., Cahoy, D., and Chandalia, J.K. 2013. A statistical reevaluation of the data used in the Lanphear et al.	Journal paper	Available online	Available here

Program # and title	Year	Program Publication Title and Author	Publication type	Availability	Remarks
Lead in Adults and children		(2005) pooled-analysis that related low levels of blood lead to intellectual deficits in children. Crit Rev Toxicol. 43(9):785-799			
ILHE-26: Neurological Effects of Lead in Adults and children	2020	Staessen, J.A., Thijs, L., Yang, W-Y., Yu, C-G., Wei, F-F., Roels, H.A., Nawrot, T.S., and Zhang, Z-Y. 2020. Interpretation of Population Health Metrics: Environmental Lead Exposure as Exemplary Case. Hypertension 75(3):603-614.	Journal article	Open access	Available here
ILHE-26: Neurological Effects of Lead in Adults and children	2020	Cox, L.A., Jr. 2020. Implications of nonlinearity, confounding, and interactions for estimating exposure concentration-response functions in quantitative risk analysis. Environ Res. 187:109638.	Journal article	Open Access	Available here
ILHE-26: Neurological Effects of Lead in Adults and children	2020	Cox, L.A., Jr. 2020. Using Bayesian networks to clarify interpretation of exposure-response regression coefficients: blood lead-mortality association as an example. Crit Rev Toxicol. 2020 Aug;50(7):539-550.	Journal article	Available online	Available here
ILHE-26: Neurological Effects of Lead in Adults and children	2020	Van Landingham, C., Fuller, W.G., and Schoof, R.A. The Effect of Confounding Variables in Studies of Lead Exposure and IQ. Crit Rev Toxicol. 2020 Oct;50(9):815-825.	Journal article	Open access	Available here