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### I. PUBLICACIONES

#### **Publicaciones en revistas indexadas (ISI)**

1. Berasaluce, M., Mondaca, P., Schuhmacher, M., Bravo, M., Sauv e, S., Navarro-Villarroel, C., Dovletyarova, E. A., **Neaman, A.** (2019). Soil and indoor dust as environmental media of human exposure to As, Cd, Cu, and Pb near a copper smelter in central Chile. **Journal of Trace Elements in Medicine and Biology** 54, 156-162; doi: 10.1016/j.jtemb.2019.04.006
2. Lillo, F. Ginocchio, R., Ulriksen, C., Dovletyarova, E.A., **Neaman, A.** (2019). Evaluation of connected clonal growth of *Solidago chilensis* as an avoidance mechanism in copper-polluted soils. **Chemosphere**, 230: 303-307; doi: 10.1016/j.chemosphere.2019.04.199
3. Vargas, G., Verdejo, J., Rivera, A., Su arez, D., Youlton, C., Juan L. Celis-Diez, J.L., Le Bissonnais, Y., Elvira A. Dovletyarova, E.A., **Neaman, A.** (2019). The effect of four calcium-based amendments on soil aggregate stability of two sandy topsoils. **Journal of Plant Nutrition and Soil Science**, 182: 159-166; doi: 10.1002/jpln.201700562
4. Ulloa, M., Bustos, V., **Neaman, A.**, Gaete, H. (2018). Comportamiento de evasi n y reproducci n de la lombriz *Eisenia foetida* en suelos agr colas impactados por actividades mineras. **Revista Internacional de Contaminaci n Ambiental**, 34: 35-43; doi: 10.20937/RICA.2018.34.01.03
5. **Neaman, A.**, Otto, S., Vinokur, E. (2018). Toward an integrated approach to environmental and prosocial education. **Sustainability**, 10: 583-594; doi: 10.3390/su10030583
6. Stowhas, T., Verdejo, J., Y a nez, C., Celis-Diez, J.L., Mart nez, C.E., **Neaman, A.** (2018). Zinc alleviates copper toxicity to symbiotic nitrogen fixation in agricultural soil affected by copper mining in central Chile. **Chemosphere**, 209: 960-963; doi: 10.1016/j.chemosphere.2018.06.166
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***Environmental Science and Pollution Research***, 25: 19114-19121; doi: 10.1007/s11356-018-2116-x

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9. Moya, H., Verdejo, J., Yanez, C., Alvaro, J. E., Sauve, S., and **Neaman, A.** (2017). Nitrification and nitrogen mineralization in agricultural soils contaminated by copper mining activities in Central Chile. ***Journal of Soil Science and Plant Nutrition*** 17, 205-213; doi: 10.4067/S0718-95162017005000016
10. Delgadillo V, J Verdejo, P Mondaca, G Verdugo, H Gaete, ME Hodson & **A Neaman** (2017). Proposed modification to avoidance test with *Eisenia fetida* to assess metal toxicity in agricultural soils affected by mining activities. ***Ecotoxicology and Environmental Safety*** 140: 230-234; doi: 10.1016/j.ecoenv.2017.02.038
11. Mondaca P, J Catrin, J Verdejo, S Sauve & **A Neaman** (2017) Advances on the determination of thresholds of Cu phytotoxicity in field-contaminated soils in central Chile. ***Environmental Pollution*** 223: 146-152; doi: 10.1016/j.envpol.2016.12.076
12. Otto S, **A Neaman**, B Richards & A Mario (2016) Explaining the ambiguous relations between income, environmental knowledge, and environmentally significant behavior. ***Society & Natural Resources*** 29: 628-632; doi: 10.1080/08941920.2015.1037410
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14. Díaz-Sieffer P, **A Neaman**, E Salgado, JL Celis-Diez & S Otto (2015) Human-environment system knowledge: A correlate of pro-environmental behavior. ***Sustainability*** 7: 15510-15526; doi: 10.3390/su71115510.
15. Mondaca P, **A Neaman**, S Sauvé, E Salgado & M Bravo (2015) Solubility, partitioning and activity of copper in contaminated soils in a semiarid zone. ***Journal of Plant Nutrition and Soil Science*** 178: 452-459; doi: 10.1002/jpln.201400349
16. Verdejo J, R Ginocchio, S Sauvé, E Salgado & **A Neaman** (2015) Thresholds of copper phytotoxicity in field-collected agricultural soils exposed to copper

mining activities in Chile. ***Ecotoxicology and Environmental Safety*** 122: 171-177; doi: 10.1016/j.ecoenv.2015.07.026

17. Olivares Y, H Gaete & **A Neaman** (2015) Evaluación de la fitotoxicidad y la genotoxicidad de suelos agrícolas de zonas con actividades mineras de cobre de la cuenca del Río Aconcagua (Chile central). ***Revista Internacional de Contaminación Ambiental*** 31: 237-243.
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19. Vargas C, W Quiroz, M Bravo & **A Neaman** (2015) Stability of arsenic during soil treatment and storage. ***Journal of the Chilean Chemical Society*** 60: 3045-3048
20. Gonzalez I & **A Neaman** (2015) Assessment of copper tolerance of two populations of *Oenothera picensis* Phil. subsp *picensis* (Onagraceae). ***Gayana Botanica*** 72: 240-249.
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22. Norambuena M, **A Neaman**, MC Schiappacasse & E Salgado (2014) Effect of liquid humus and calcium sulphate on soil aggregation. ***Journal of Soil Science and Plant Nutrition*** 14: 701-709; doi: 10.4067/S0718-95162014005000056
23. Barazarte R, **A Neaman**, F Vallejo & P García (2014) El conocimiento ambiental y el comportamiento pro-ambiental de los estudiantes de la enseñanza media, en la Región de Valparaíso (Chile). ***Revista de Educación*** 364: 12-34; doi: 10.4438/1988-592X-RE-2014-364-255
24. González I, **A Neaman**, A Cortés & P Rubio (2014) Effect of compost and biodegradable chelate addition on phytoextraction of copper by *Oenothera picensis* grown in Cu-contaminated acid soils. ***Chemosphere*** 95: 111-115, doi: 10.1016/j.chemosphere.2013.08.046
25. Ginocchio R, V Cárcamo, E Bustamante, E Trangolao, LM de la Fuente & **A Neaman** (2013) Efficacy of fresh and air-dried biosolids as amendments for remediation of acidic and metal-polluted soils: A short-term laboratory assay. ***Journal of Soil Science and Plant Nutrition*** 13: 855-869

26. Olivares D, M Bravo, J Feldmann, A Raa, **A Neaman** & W Quiroz (2012) Development of an analytical method for antimony speciation in vegetables by HPLC hydride generation-atomic fluorescence spectrometry. **Journal of AOAC International** 95: 1176-1182; doi: 10.5740/jaoacint.11-278
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32. Córdova S, **A Neaman**, I González, R Ginocchio & P Fine (2011) The effect of lime and compost amendments on the potential for the revegetation of metal-polluted, acidic soils. **Geoderma** 166: 135-144; doi: 10.1016/j.geoderma.2011.07.022
33. González I, A Cortes, **A Neaman** & P Rubio (2011) Biodegradable chelate enhances the phytoextraction of copper by *Oenothera picensis* grown in copper-contaminated acid soils. **Chemosphere** 84: 490-496; doi: 10.1016/j.chemosphere.2011.03.015
34. Goecke P, R Ginocchio, M Mench & **A Neaman** (2011) Amendments promote the development of *Lolium perenne* in soils affected by historical copper smelting operations. **International Journal of Phytoremediation** 13: 552-566; doi: 10.1080/15226514.2010.495150

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37. Muena V, I González & **A Neaman** (2010) Effects of liming and nitrogen fertilization on the development of *Oenothera affinis* in a soil affected by copper mining. **Journal of Soil Science and Plant Nutrition** 10: 21-32; doi: 10.4067/S0718-27912010000200002
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40. Hausrath EM, **A Neaman** & SL Brantley (2009) Elemental release rates from dissolving basalt and granite with and without organic ligands. **American Journal of Science** 309: 633-660; doi: 10.2475/08.2009.01
41. **Neaman A**, L Reyes, F Trolard, G Bourrie & S Sauve (2009) Copper mobility in contaminated soils of the Puchuncavi valley, central Chile. **Geoderma** 150: 359-366; doi: 10.1016/j.geoderma.2009.02.017
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46. **Neaman A**, CE Martínez, F Trolard & G Bourrié (2008) Trace element associations with Fe- and Mn-oxides in soil nodules: Comparison of selective dissolution with electron probe microanalysis. *Applied Geochemistry* 23: 778-782; doi: 10.1016/j.apgeochem.2007.12.025
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54. **Neaman A**, F Mouele, F Trolard & G Bourrie (2004) Improved methods for selective dissolution of Mn oxides: applications for studying trace element associations. *Applied Geochemistry* 19: 973-979; doi: 10.1016/j.apgeochem.2003.12.002
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### **Libros Editados**

Sadzawka A, MA Carrasco, R Demanet, R Flores, R Grez, M Mora, **A Neaman**, G Romeny & E Zagal (2015) Guía para la validación de los métodos de análisis de lodos y de suelos receptores de lodos. Sociedad Chilena de la Ciencia del Suelo, Universidad de Concepción, Chillán, Chile. Pp. 24.

Sadzawka A, MA Carrasco, R Demanet, H Flores, ML Mora, **A Neaman**, P Hernández & M Sandoval (2015) Métodos de análisis de lodos y de suelos. Sociedad Chilena de la Ciencia del Suelo, Universidad de Concepción, Chillán, Chile. Pp. 114.

Sadzawka A, MA Carrasco, R Demanet, H Flores, R Grez, ML Mora & **A Neaman** (2007) Métodos de análisis de tejidos vegetales. Serie actas INIA N° 40. Instituto de Investigaciones Agropecuarias, Santiago, Chile. Pp 140.

Sadzawka A, MA Carrasco, R Grez, G Mora, H Flores & **A Neaman** (2006) Métodos de análisis recomendados para los suelos de Chile. Serie actas INIA N° 34. Instituto de Investigaciones Agropecuarias, Santiago, Chile. Pp. 164.

### **Otras Publicaciones no indexadas**

**Neaman A** & A Marió (2015) Prosociality and proenvironmentalism as components of sustainable behavior: Toward an integrated approach to sustainability education. *Journal of Natural Resources and Development* 5: 14-16.

Hormazábal C, R Aguilar R, M Cisternas & **A Neaman** (2013) Modelo predictivo de la distribución espacial de cobre en suelos agrícolas de la cuenca del Río Aconcagua. *Investigaciones Geográficas* 46: 79-92.

**Neaman A** & A Marió (2012) New focus of environmental education programs. *Journal of Natural Resources and Development* 3: 121-122.



González I, M Cisternas, U Kelm & **A Neaman** (2010) Metalofitas en El Teniente y su potencial para la remediación de suelos contaminados por cobre. *Ciencia Ahora* 25: 29-35.

## II. EXPERIENCIA EN PROYECTOS DE INVESTIGACION

### *Proyectos con fondos concursables*

2018 - (2020) FONDEF ID17AL0056 Use of amendments for decreasing metal concentrations in vegetables grown in Valparaiso Region

2016 - (2018) PI FONDECYT 1160018. Soil, house dust, locally grown vegetables, and drinking water as environmental media of human exposure to trace elements in Puchuncaví

2015 - (2017) Co-I FONDECYT 1150503. Microbial properties as indicator of quality of metal-contaminated agricultural soil

2013 – (2016) IR FONDECYT 1130041. Ecotoxicological assessment of soil quality: use for legislative regulations concerning metal-contaminated soils.

2012 PI DI - PUCV. Conocimiento ambiental y comportamiento pro-ambiental de los estudiantes de enseñanza media: Estudio exploratorio en colegios de la Región de Valparaíso

2008 – (2011) PI FONDECYT 1085005. In situ metal immobilization and phytostabilization of contaminated soils in the Puchuncaví valley.

2005 – (2008) PI FONDECYT 1050403. Determination of speciation and bioavailability of copper in agricultural soils in Aconcagua River basin: Generating a map of copper toxicity for crops and soil organisms

2005 PI DI – PUCV. The use of zeolites as low-cost soil amendments for mitigation of environmental impact of copper mining

## III. PRESENTACIONES EN REUNIONES CIENTIFICAS

2015 **Neaman A**, J Verdejo, V Bustos, P Mondaca. Thresholds of copper and arsenic toxicity in field-collected agricultural soils exposed to copper mining activities in Chile. International Soil Science Congress, 19-23 de octubre, Sochi, Rusia,

2015 **Neaman A**, P Mondaca, J Verdejo & V Bustos. Ecotoxicological assessment of metal-polluted soils. Simposio Nacional de la Ciencia del Suelo:

- Contaminación y remediación de suelos, 7-9 de octubre de 2015, Santiago, Chile.
- 2015 Ginocchio R & **A Neaman**. Contaminación de suelos con metales y metaloides en Chile y alternativas de remediación. Simposio Nacional de la Ciencia del Suelo: Contaminación y remediación de suelos, 7-9 de octubre de 2015, Santiago, Chile.
- 2014 **Neaman A**, P Mondaca & S Sauvé. Effect of soil organic matter and dissolved organic carbon on copper solubility in semiarid soils. Congreso "Sustancias Húmicas en la Biósfera", 6-9 de octubre, Syktyvkar, Rusia,
- 2014 Rivero JC, **A Neaman**, W Quiroz & M Bravo. Determinación de la biodisponibilidad de As en suelos contaminados de la Región de Valparaíso, utilizando como biosensor a *Eisenia fetida*. VII Congreso Iberoamericano de Física y Química Ambiental, XII Encuentro de Química Analítica y Ambiental, 6-10 de octubre, Viña del Mar, Chile.
- 2014 Gaete H, V Montenegro, M Ulloa & **A Neaman**. Evaluación ecotoxicológica de suelos a través de bioensayos de evasión con *Eisenia fetida* y crecimiento con *Lactuca sativa*. VII Congreso Iberoamericano de Física y Química Ambiental, XII Encuentro de Química Analítica y Ambiental, 6-10 de octubre, Viña del Mar, Chile.
- 2013 **Neaman A** & B Richards. Exploring environmental knowledge and pro-environmental behavior of Chilean adult population. 1st Conference on Natural Resources and Development, 25-28 de noviembre, Viña del Mar, Chile.
- 2013 **Neaman A** & B Richards. Exploring environmental knowledge and pro-environmental behavior of Chilean adult population. 64º Congreso de la Sociedad Agronómica de Chile, 23-26 de septiembre, Viña del Mar, Chile.
- 2013 González I, A Cortés, **A Neaman** & P Rubio. Efecto de un quelante biodegradable sobre la extracción de cobre por *Oenothera affinis* en suelos ácidos contaminados por cobre. 64º Congreso de la Sociedad Agronómica de Chile, 23-26 de septiembre, Viña del Mar, Chile.
- 2011 Rojas C, **A Neaman** & C Yáñez. Caracterización molecular de comunidades bacterianas de suelos contaminados con cobre y bajo remediación. XXXIII Congreso Chileno de Microbiología, 29 de noviembre – 2 de diciembre, Olmué, Chile.
- 2010 Ginocchio R, V Cárcamo, LM de la Fuente, E Bustamante, E Trangolao & **A Neaman**. Fitoestabilización de Suelos Ácidos y Contaminados con Metales en las Cercanías de una Fundición de Cobre en Chile Central: Evaluación de Laboratorio. X Congreso Latinoamericano de Botánica, 4-10 de octubre, La Serena, Chile

- 2010 Córdova MS, R Ginocchio & **A Neaman**. Efecto de la cal y el compost sobre la productividad vegetal bajo condiciones de revegetación asistida y espontánea, en suelos impactados por una fundición de cobre. X Congreso Latinoamericano de Botánica, 4-10 de octubre, La Serena, Chile
- 2010 González MI, **A Neaman** & A Cortes. Variación temporal de la acumulación de cobre en cuatro especies provenientes de un sector afectado por la actividad de la Fundición Ventanas. X Congreso Latinoamericano de Botánica, 4-10 de octubre, La Serena, Chile
- 2010 **Neaman A**, S Córdova, I González & R Ginocchio. The Effect of Lime and Compost on the Revegetation Ability of Soils Affected by Atmospheric Deposition from a Copper Smelter. 4th International Conference on Plants and Environmental Pollution, 8-11 de diciembre, Lucknow, India
- 2010 **Neaman A**, B Richards & A Marió. Environmental education: knowing and acting do not always go hand in hand. 4th International Conference on Plants and Environmental Pollution, 8-11 de diciembre, Lucknow, India
- 2009 Bourrié G, **A Neaman**, L Reyes, S Sauvé & F Trolard. Copper mobility in contaminated soils in Chile. 10th International Meeting on Soils with Mediterranean Type of Climate, 23-26 de junio, Beirut, Líbano.
- 2008 **Neaman A**, G Ávila, H Gaete & S Sauvé. Soil organic matter affects copper toxicity to earthworms in the avoidance test. 5th World Congress of the Society of Environmental Toxicology and Chemistry (SETAC), 3-7 de agosto, Sydney, Australia.
- 2008 Muená V, I González & **A Neaman**. Phytostabilization of contaminated soils in the Puchuncaví valley, central Chile. 5th World Congress of the Society of Environmental Toxicology and Chemistry (SETAC), 3-7 de agosto, Sydney, Australia.
- 2008 **Neaman A**, G Ávila, H Gaete & S Sauvé. Soil organic matter affects copper toxicity to earthworms in the avoidance test. 5th International Symposium of Interactions of Soil Minerals with Organic Components and Microorganisms (ISMOM), 24-28 de noviembre, Pucón, Chile.
- 2008 Muená V, I González & **A Neaman**. Phytostabilization of contaminated soils in the Puchuncaví valley, central Chile. 5th International Symposium of Interactions of Soil Minerals with Organic Components and Microorganisms (ISMOM), 24-28 de noviembre, Pucón, Chile.
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