

**Danika L. LeDuc**

*Department of Chemistry and Biochemistry  
California State University, East Bay  
Hayward, CA 94542  
(510) 885-3463  
[danika.leduc@csueastbay.edu](mailto:danika.leduc@csueastbay.edu)*

***Education***

Ph.D. Chemistry 2000

*University of California, Berkeley, Berkeley, CA*

“Structural and Functional Characterization of a Minimal Membrane Fusion  
Machinery of Influenza Hemagglutinin”

Advisor: Professor Yeon-Kyun Shin

B.S. Chemistry 1996

7. Meija, J., M. Montes-Bayon, D.L. LeDuc, N. Terry, and J.A. Caruso. 2002. Simultaneous monitoring of volatile selenium and sulfur species from Se accumulating plants (wild-type and genetically modified) by GC-MS and GC-ICP-MS using SPME for sample introduction. *Analytical Chemistry*. 74:5837-5844.
8. LeDuc, D.L. and N. Terry. 2003. Physiological and environmental significance of selenium. In *Sulfur Transport and Assimilation in Plants. Regulation, Interaction, and Signaling*. Eds. J.-C. Davidian, D. Grill, L.J. De Kok, I. Stulen, M. J. Hawkesford, E. Schnug, and H. Rennenberg. pp. 79-89. Backhuys Publishers, Leiden, The Netherlands.
9. Montes-Bayon, M., D.L. LeDuc, N. Terry, J.A. Caruso. 2002. Selenium speciation in wild-type and genetically modified Se accumulating plants with HPLC separation and ICP-MS/ES-MS detection. *Journal of Analytical Atomic Spectrometry* 17:872-879.
10. Montes-Bayón, M., Meija, J., LeDuc, D. L., Terry, N., Caruso, J.A., and Sanz-Medel, A. 2003. HPLC-ICP-MS and ES-Q-TOF analysis of biomolecules induced in *Brassica juncea* during arsenic accumulation. *Journal of Analytical Atomic Spectrometry* 19:153-158.
11. Terry, N., Sambukumar, S.V., and LeDuc, D.L. 2003. Biotechnological approaches for enhancing phytoremediation. *Acta Biotechnologica* 2-3:281-288.
12. van Huysen, T., Abdel-Ghany, S., Hale, K.L., LeDuc, D., Terry, N., and Pilon-Smits, E.A.H. 2003. Overexpression of cystathionine -synthase enhances selenium volatilization in *Brassica juncea*. *Planta* 218:71-78.
13. Grant, T.D., Montes-Bayón, M., LeDuc, D., Fricke, M.W., Terry, N., and Caruso, J.A. 2004. Identification and characterization of Se-methyl selenomethionine in *Brassica juncea* roots. *Journal of Chromatography A* 1026:159-166.
14. LeDuc, D.L., Tarun, A.S., Montes-Bayón, M., Meija, J., AbdelSamie, M., Wu, C.P., Malit, M.F., Chang, C.-Y., Tagmount, A., de Souza, M., Neuhierl, B., Böck, A., Caruso, J., and Terry, N. 2004. Overexpression of selenocysteine methyltransferase in *Arabidopsis thaliana* and *Brassica juncea* increases selenium tolerance and accumulation. *Plant Physiology*. 135:377-383.
15. Bañuelos, G., Terry, N., LeDuc, D., Pilon-Smits, E.A.H., and Mackey, B. 2005. Field trial of transgenic Indian mustard plants shows enhanced phytoremediation of selenium-contaminated soil. *Environmental Science & Technology*. 39:1771-1777.
16. LeDuc, D.L. and Terry, N. 2005. Phytoremediation of Toxic Trace Elements in Soil and Water. *Journal of Industrial Microbiology and Biotechnology*. 32:514-520.
17. LeDuc, D.L. and Terry, N. 2005. Genetic engineering stress tolerant plants for phytoremediation. In: *Abiotic Stress Tolerance in Plants*. Eds. A.K. Rai and T. Takabe. Springer, Dordrecht, The Netherlands.
18. LeDuc, D.L., AbdelSamie, M., Móntes-Bayon, M., Wu, C.P., Reisinger, S.J., and Terry, N. 2006. Overexpressing both ATP sulfurylase and selenocysteine methyltransferase enhances selenium phytoremediation traits in Indian mustard. *Environmental Pollution* 144:70-76.
19. Navaza, A.P., Montes-Bayon, M., LeDuc, D.L., Terry, N., and Sanz-Medel, A. 2006. Study of phytochelatins and other related thiols as complexing biomolecules of As and Cd in wild type and genetically modified *Brassica juncea* plants. *Journal of Mass Spectrometry* 41:323-331.
20. Bañuelos, G., LeDuc, D., Pilon-Smits, E.A.H., and Terry, N. 2007. Transgenic Indian mustard overexpressing selenocysteine lyase or selenocysteine methyltransferase exhibit enhanced potential for selenium phytoremediation under field conditions. *Environmental Science & Technology* 41(2):599-605.
21. Kubachka, K.M., Meija, J., LeDuc, D. L., Terry, N., and Caruso, J.A. 2007. Selenium volatiles as proxy to the metabolic pathways of selenium in genetically modified *Brassica juncea*. *Environmental Science & Technology* 41(6):1863-1869.

22. Pilon-Smits, E.A.H. and LeDuc, D.L. 2009. Phytoremediation of selenium using transgenic plants. *Current Opinions in Biotechnology* 20:207-212.
23. Verbruggen, N. and LeDuc, D.L. 2009. Potential of plant genetic engineering for phytoremediation of toxic trace elements. In: Encyclopedia of Life Support Systems, Ed. Tomas Vanek, Developed under the Auspices of the UNESCO, Eolss Publishers, Oxford, UK [<http://www.eolss.net>].
24. Bañuelos, G.S., LeDuc D., and Johnson, J. 2010. Evaluating the tolerance of young hybrid

2.

8. "Nutrition in Space" NASA Liftoff, August 13, 2009.
9. "Classification of Matter" ACES, August 19, 2009.
10. "Recycling Water: Lessons from Earth and Space" NASA Liftoff, February 6, 2010.
11. "Chemistry in NASA" NASA Liftoff, May 15, 2010.
12. "Teaching LARGE Classes" Office of Faculty Development, CSUEB, May 17, 2010.
13. "The Search for Water: What? How? Why?" NASA Liftoff, July 19, 2010.
14. "Detecting Elements and Molecules Using Spectral Fingerprints" NASA Liftoff, July 22, 2010.
15. "STEM K-8 Curriculum Workshop" Broadcom, Inc. September 10, 2010.
16. "Teaching LARGE Classes" Back to the Bay, September 16, 2010.
17. "STEM K-8 Curriculum Workshop" Broadcom, Inc. December 17, 2011.
18. "STEM K-8 Curriculum Workshop" Broadcom, Inc. March 16, 2011.

*Other* ~~SM~~

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