

**Anneke Levelt-Senger Award
Woman to Science in America
2016**

**InterAmerican Network of Academies of
Sciences (IANAS)
The World Academy of Sciences (TWAS)
Academia Brasileira de Ciencias (ABC)**

**PhD Lianet Monzote Fidalgo
Institute of Tropical Medicine Pedro Kouri
Havana, Cuba**



CURRICULUM VITAE

Degrees

- PhD in Pharmaceutical Science, University of Havana, 2010
- Master in Pharmacology, University of Havana, 2003
- Graduate of Pharmaceutical Sciences, University of Havana, 1999

Fellowships

- Sep 2015: University of Antioquia, Medellin, Colombia.
- Mar 2015 – Jun 2015: Universidad Estadual Paulista Julio de Mesquita Filho, Sao Paulo, Brazil.
- Nov 2013 – Dec 2013: Institute of Tropical Medicine of Antwerp, Belgium.
- Feb 2013 – Apr 2013: University of Veterinary Medicine Vienna, Austria.
- Sep 2010 – Dec 2010: Institute of Tropical Medicine of Antwerp, Belgium.
- Feb 2010 – Mar 2010: Cayetano Heredia University, Lima, Peru.
- Oct 2009 – Nov 2009: Institute of Tropical Medicine of Antwerp, Belgium.
- Nov 2007 - Feb 2008: University of Veterinary Medicine Vienna, Austria.

Research Grants

- Grant from FWF, Austria 2015. (Coauthor)
- Grant of University of Machala, Ecuador 2014. (Coauthor)
- Grant of Ministry of Public Health of Cuba, Cuba-2014. (Author)
- Grant of International Cooperation Program CAPES/MES-CUBA, Brazil-2012. (Coauthor)
- Grant of Finlay Institute, Cuba-2012. (Author)
- Grant of University of Antwerp, Belgium-2012. (Coauthor)
- Grant of Institute of Tropical Medicine of Antwerp, Belgium-2012. (Author)
- Grant of Infectious Diseases, Cuban-2010. (Author)
- Grant of Institute of Tropical Medicine of Antwerp, Belgium-2008. (Co-author)
- Grant of Infectious Diseases, Cuban-2006. (Co-author)
- Grant of Institute of Tropical Medicine of Antwerp, Belgium-2003. (Co-author)

Publications - 82 total published articles, 47 of them in Pubmed, 42 author and 40 coauthor (listed only the last 5 years)

1. **Monzote L**, Perera WH, García M, Piñón A, Setzer WN. *In-vitro* and *In-vivo* Activities of Phenolic Compounds against Cutaneous Leishmaniasis. Rec Nat Prod 2016;10(3):269-76.
2. **Monzote L**, Lackova A, Staniek K, Cuesta-Rubio O, Gille L. Parasitology 2015;1:1-10.

3. Pastor J, García M, Steinbauer S, Setzer WN, Scull R, Gille L, **Monzote L**. Acta Tropica 2015;145:31-8.
4. Al-Sokari SS, Ali NA, **Monzote L**, Al-Fatimi MA. Biomed Res Int. 2015;2015:938747.
5. Pulivarthi D, Steinberg KM, **Monzote L**, Piñón A, Setzer WN. Nat Prod Commun 2015;10(7):1229-30.
6. Leliebre-Lara V, García M, Nogueiras C, **Monzote L**. Emirates J Food Agricult 2015;27:1-4.
7. Sifontes S, **Monzote L**, Castañedo N, Montalvo AM, López Y, Mollineda N, Infante JF, Pérez O, Meneses A, Escario JA, Cabrera MA. Mem Inst Oswaldo Cruz 2015;110(2):166-73.
8. Cuesta-Rubio O, Oubada A, Bello A, Maes L, Cos P, **Monzote L**. Phytother Res 2015 (Accepted) doi: 10.1002/ptr.5506.
9. **Monzote L**, Piñón A, Setzer WN. Medicines 2014;1:32-55.
10. **Monzote L**, Piñón A, Scull R. Nat Prod Commun 2014;9(12):1799-804.
11. **Monzote L**, Pastor J, Scull R, Gille L. Phytomed 2014;21(8-9):1048-52.
12. **Monzote L**. Curr Clin Pharmacol 2014;9(4):181-6.
13. García M, Scull R, Cuesta O, Boulet G, Maes L, Cos P, **Monzote L**. J Coastal Life Med 2014;2(6):484-9.
14. García M, **Monzote L**. Curr Clin Pharmacol 2014;9(4):258-70.
15. Sariego I, **Monzote L**, Rojas L. Curr Clin Pharmacol 2014;9(4):283-7.
16. Oubada A, García M, Bello-Alarcón A, Cuesta-Rubio O, **Monzote L**. Emir J Food Agric 2014;26(9):807-12.
17. **Monzote L**, Staniek K, Scull R, Cuesta O, Gille L. Rev Cub Farmacia 2014;48(Sup1):30
18. Montrieux E, García M, Perera W, Maes L, Cos P, **Monzote L**. Parasitol Res 2014;113(8): 2925-32.
19. Manzano P, García M, Mendiola J, Fernández-Calienes A, Orellana T, Miranda M, Peralta E, **Monzote L**. Pharmacol Online 2014;1:1-6.
20. **Monzote L**, García M, Scull R, Cuellar A, Setzer WN. Phytother Res 2014;28(5):753-8.
21. **Monzote L**, García M, Pastor J, Gil L, Scull R, Maes L, Cos P, Gille L. Exp Parasitol. 2013;136C:20-26.
22. Lugones Y, Blanco O, Faure R, **Monzote L**. Chemotherapy 2013;59:247-250.
23. Frión Y, Díaz A, Rodríguez H, Ruiz J, **Monzote L**, Morier L, Setzer W. AJEONP 2013;1(1):112-117.
24. Frión Y, Díaz A, Rodríguez H, Ruiz J, **Monzote L**, Morier L, Setzer W. AJEONP 2013;1(3):19-23.
25. **Monzote L**, Rodríguez M, Alfonso Y, Cox R. Rev Med Trop Sao Paulo 2013;55(1):65-7.

26. **Monzote L**, García M, Scull R, Maes L, Cos P. Rev Cub Farmacia 2012;46(supl. 1):1-8.
27. **Monzote L**, Cuesta-Rubio O, Campo M, Márquez I, Fraga J, Pérez K, Kerstens M, Maes L, Cos P. Mem Inst Oswaldo Cruz 2012;107(8):978-84.
28. **Monzote L**, Hill GM, Cuellar A, Scull R, Setzer WN. Nat Prod Commun. 2012;7(11):1531-4.
29. García M, **Monzote L**, Scull R, Herrera P. ISRN Pharmacology 2012;2012:1-7.
30. García M, **Monzote L**, Castañeda O, García N, Pérez A. Rev Cub Med Trop 2012;64(1):61-4.
31. Lugones Y, Blanco O, Faure R, **Monzote L** Biocnología Aplicada 2012;29:35-37
32. Cuéllar A, Scull R, Martínez Y, Fernández-Calienes A, **Monzote L**. Rev Colombiana Cienc Anim 2012;4(2):364-76.
33. Montalvo AM, Fraga J, **Monzote L**, García M, Fonseca L. Rev Cub Med Trop 2012;64(2):75-89.
34. García M, **Monzote L**, Montalvo AM. Res Complementary 2011;18:351-353.
35. **Monzote L**, Stamberg W, Rosenau T, Maes L, Cos P, Gille L. Chem Res Toxicol 2011;24(10):1678-85.
36. Hermans V, **Monzote L**, Van den Sande B, Mukadi P, Sopheak T, Gillet P, Jacobs J. Malaria J 2011;10:331.
37. **Monzote L**, Gille L. Pharm Res 2011;28:2758–70.
38. García M, Perera WH, Scull R, **Monzote L**. Asian Pacific J Trop Med 2011;4(10):836-40.
39. Blanco O, Lugones Y, Díaz E, **Monzote L**. Rev Inst Med Trop Sao Paulo 2011;53(4):235-8.
40. **Monzote L**, Siddiq A. Open Med Chem J 2011;5:1-3.
41. **Monzote L**, Nance MR, García M, Scull R, Setzer WN. Nat Prod Commun 2011;6(2):281-6.
42. **Monzote L**, Cuesta-Rubio O, Matheussen A, Van Assche T, Maes L, Cos P. Pythoter Res 2011; 25(3):458-62.
43. **Monzote L**. Recent Pat Antiinfect Drug Discov. 2011;6(1):1-26.
44. **Monzote L**, Sariego I, García M, Cuesta-Rubio O, Campo M, Márquez I. Nat Prod Commun. 2011;6(7):973-6.
45. Alfonso Y, **Monzote L**. Open Med Chem J 2011;5:40-50.
46. Coro J, Pérez R, **Monzote L**, Rodríguez H, Suárez M. Open Med Chem J 2011;5:51-60.
47. Blanco O, Lugones Y, Díaz E, **Monzote L**. Rev Inst Med Trop Sao Paulo 2011;53(4):235-8.
48. Fernández-Calienes A, Pellón R, Docampo M, Fascio M, D'Accorso N, Mendiola J, Rojas L, Cos P, **Monzote L**, Gille L, Maes L. Biomed Pharmacol 2011;65:210-4.
49. Montalvo AM, Fraga J, Montano I, **Monzote L**, Marín M, Van der Auwera G, Dujardin JC, Vélez ID, Muskus C. Tran R Soc Trop Med Hyg 2010;104(5):364-7.

50. Montalvo M, Fraga J, **Monzote L**, Montano I, Doncker S, Dujardin JC, Van der Auwera G. Parasitology 2010 5:1159-1168.
51. García M, **Monzote L**. Rec Prog Med Plant 2010;30(2):25-35.
52. García M, **Monzote L**, Montalvo AM, Scull R. Pharm Biol 2010;48(9):1053-8.
53. Garcia M, **Monzote L**, Mendiola J, Montalvo AM, Valdés O. Rev Med Trop Sao Paulo 2010;52(2):89-93.
54. **Monzote L**, García M, Montalvo AM, Scull R, Miranda M. Rev Mem Oswaldo Cruz 2010;105(2):168-173.
55. **Monzote L**, Gille L. Curr Clin Pharmacol 2010;5:55-66.

Patents

Pharmaceutical compositions containing nitrovinylfuran derivatives for the treatment of leishmaniasis and trypanosomiasis (WO/2007/033616 - 29.03.2007). Castañedo NR, Sifontes S, **Monzote L**, López Y, Montalvo AM, Infante JF, Olazabal EE.

Reviewer of International Journals – 14 different journals

Education – 53 post-graduate courses

Scientific Meetings – 85 presentations in national and international scientific meetings

Awards

- 2 Awards from Cuban Academic of Science (1 Author and 1 Coauthor), 2015.
- 1 Award of National Public Health (Coauthor) 2015.
- 6 Awards of Science and Technical Science (3 Author and 3 Coauthor) 2004, 2005, 2010, 2012 and 2015.
- 9 Scientific Relevant Results, obtained at IPK and Chemistry-Pharmaceutic Center (4 Author and 5 Coauthor) 2000, 2003, 2004, 2006, 2009, 2010, 2012 and 2014.

Teaching

- 9 courses coordinated at national or international level carried out in our institute.
- 11 thesis promoted.
- 2 thesis co-promoter.
- 8 member jure of Master and PhD thesis.
- 14 teaching in different courses

PERSONAL BIBLIOGRAPHY

Miss Monzote was born in Havana, Cuba in 1977 (38 years old). She is the mother of a 10-year-old girl. Monzote obtained her PhD degree in Pharmaceutical Science in 2010 and is currently working at Parasitology Department, Institute of Tropical Medicine Pedro Kouri, Havana, Cuba.

Her research tasks started by standardizing a number of procedures in the laboratory in order to screen products from different origins (natural and synthetics) with potential activity against *Leishmania* and other protozoan parasites of medical relevance. These assays concern the *in vitro* / *in vivo* evaluation of the products, the determination of their effect on host-parasite interaction, the study of molecular mechanism of action responsible of antiprotozoal and toxic effects, as well as the design and evaluation of final pharmaceutical formulations. The standardized methods covered different areas of pharmacology of antileishmanial compounds. In parallel, they could bring also the opportunity to support projects in this field during the last 15 years for the evaluation of Cuban potential products and from other countries. At the same time, experiences and knowledge have been transferred to students in conferences, practical sessions and thesis as promoter.

She had received 53 post-graduate courses, attended to 85 scientific meetings of national and international level. Miss Monzote is a young professor of Parasitology Master Course at IPK, and she has organized and taken part as professor in different national and international courses related to parasitology, pharmacology and quality systems management. In this sense, one of the higher competences was shown as promoter of foreign students from prestigious centers such as University of Havana (Cuba), University of Antwerp (Belgium) and University of Queretaro (Mexico). Her most relevant contribution to scientific research has been the publication of scientific articles in peer-review journals (see CV), which have increased the level of her laboratory, its visibility and facilitates the collaboration with international partners, including: Veterinary University of Vienna (Austria), University of Huntsville (USA), University of Antwerp (Belgium), Universidade Federal do Rio de Janeiro (Brazil), Kerman University of Medical Sciences (Iran), Complutense University of Madrid (Spain), Technical University of Machala and Biotechnology Research Center of Ecuador. Recently, two awards from Cuban Academy of Science were received.

STUDY TO PRESENT IN THE ANNUAL MEETING OF BRASIL ACADADEMY OF SCIENCE

Title: *Chenopodium ambrosioides* ingredients as potential antileishmanial therapeutic alternative.

Abstract:

Leishmaniasis is one of the serious health problems of the world that have been classified as a "neglected tropical diseases". To date, there are no vaccines against *Leishmania* and chemotherapy remains the mainstay for the control. The drugs currently used for leishmaniasis therapy are significantly toxic, expensive and result in a growing frequency of refractory infections. In this study, we evaluated the antileishmanial potentialities of an essential oil (EO) from *Chenopodium ambrosioides* compared with pure main compounds in *in vitro* and *in vivo* models, study the mechanism of action, design and test a formulation based in nanoparticles and screen the EO and pure compounds against other microorganisms. *Chenopodium*-oil demonstrated *in vitro* activity against promastigotes and intracellular amastigotes of *L. amazonensis*, with higher selectivity index compared with pure compounds. Antileishmanial effect after intralesional and oral administration was evident, which was higher than treatment with pure compounds in the model of cutaneous leishmaniasis. Then, two formulations displayed antileishmanial potentialities: a natural formulation based on nanoparticles (cholesterol-EO) and a combination of two pure compounds (ascaridole-carvacrol) identified in the EO that showed synergism. Mechanism of action of *Chenopodium*-oil and main compounds was correlated with mitochondrial dysfunction, particularly complex III or bc1 inhibition from electron transport mitochondrial chain. Finally, EO also demonstrated higher effect on *Plasmodium falciparum* and *Trypanosoma brucei*; while no activity was observed against bacteria and fungi. These new products could represent a future alternative as antileishmanial agent.



**INSTITUTO DE MEDICINA TROPICAL
"PEDRO KOURÍ"**

Ministerio de Salud Pública

**Centro Auspiciado por la UNESCO
Centro Colaborador de la OMS/OPS**

Para el adiestramiento e investigaciones en Malacología Médica
y control biológico de Vectores y huéspedes intermediarios
Para el estudio de las Enfermedades Víricas
En Tuberculosis y Micobacterias



**INSTITUTO
PEDRO KOURÍ**

Havana, December 7th, 2015

From: Dr. Lázara Rojas (PhD)
Head of Parasitology Division
Institute of Tropical Medicine "Pedro Kourí"

I would like to express my approval and the deep interest of our Institute and Department regarding the postulation of PhD Lianet Monzote Fidalgo in application for Anneke Levelt-Senger Award, Woman to Science in America, 2016.

The researcher has been working at the *Leishmania* laboratory of the Parasitology Branch with excellent results. She is a highly motivated researcher. She is working in the introduction and develops of screening of new therapeutic alternatives against *Leishmania* and other protozoa parasites. The results of her work have been published in 82 scientific articles, have attended to 53 post graduated courses and have also participated on 85 scientific meetings of national and international level.

On the other hand, is of a great interest for our Institution and especially for our Department, promote early excellent career of our professionals. We feel honoured to have the possibility that one of our co-workers can apply to this call. I strongly recommend her application and highly appreciate you evaluate her as a candidate to mentioned award.

Sincerely yours,

Dr. Lázara Rojas (PhD)
Head of Parasitology Division
Institute of Tropical Medicine "Pedro Kourí"

