

PERSONAL DATA

Name: Rafael Montiel
Position: Researcher CINVESTAV 3-C (SNI II)
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STUDIES

Ph.D. (Biology). Universidad Autónoma de Barcelona (Spain), February 2001. With Mention of European Ph.D.

Major in Biology, Universidad Autónoma Metropolitana (Mexico), February 1991.

ACADEMIC ACHIEVEMENTS

74 Publications:

10 book chapters
48 articles in international indexed journals (*h-index*: 16)
6 articles in national journals
10 articles in congresses' proceedings

125 Contributions to congresses:

47 oral communications
78 posters

Participation in 33 funded projects

5 international level
12 national level
12 regional level
4 funded by special programs/funding agencies

Direction/co-direction of 6 Ph.D. theses

MAIN ARTICLES

· **Montiel, R.***, Malgosa, A., Francalacci, P. 2001. Authenticating ancient human mitochondrial DNA. *Human Biology*. **73(5)**: 689-713. ISSN: 0018-7143.

· **Montiel R.***, García, C., Cañadas, M.P., Isidro, A., Guijo, J.M., Malgosa, A. 2003. DNA sequences of *Mycobacterium leprae* recovered from ancient bones. *FEMS Microbiology Letters*. **226(2)**: 413-414. ISSN: 0378-1097.

· **Montiel, R.***, Bettencourt, C., Silva, C., Santos, C., Prata, M.J., Lima M. 2005.

Analysis of Y-chromosome variability and its comparison with mtDNA variability reveals different demographic histories between islands in the Azores Archipelago (Portugal). *Annals of Human Genetics*. **69(Pt2)**: 135-144. ISSN: 0003-4800.

· Santos, C., **Montiel, R.**, Sierra, B., Bettencourt, C., Fernandez, E., Alvarez, L., Lima, M., Abade, A., Aluja, M^a.P. 2005. Understanding differences between phylogenetic and pedigree derived mtDNA mutation rate: A model using families from the Azores Islands (Portugal). *Molecular Biology and Evolution*. **22(6)**: 1490–1505. ISSN: 0737-4038.

· **Montiel, R.***, Lucena, M.A., Medeiros, J., Simoes, N. 2006. The complete mitochondrial genome of the entomopathogenic nematode *Steinernema carpocapsae*: Insights into nematode mitochondrial DNA evolution and phylogeny. *Journal of Molecular Evolution*. **62(2)**: 211-225. ISSN: 0022-2844.

· Bettencourt, C., **Montiel, R.**, Santos, C., Pavão M.L., Viegas-Crespo A.M., Lopes, P.A., Lima, M. 2006. Polymorphism of the ApoE locus in the Azores Islands (Portugal). *Human Biology*. **78(4)**: 509-512. ISSN: 0018-7143.

· Neto, D., **Montiel, R.**, Bettencourt, C., Santos, C., Prata, M.J., Lima, M. 2007. The African Contribution to the present-day population of the Azores Islands (Portugal): Analysis of the Y chromosome haplogroup E. *American Journal of Human Biology*. **19(6)**: 854-860. ISSN: 1042-0533.

· Santos, C., **Montiel, R.**, Arruda, A., Alvarez, L., Aluja, M^a.P., Lima, M. 2008. Mutation patterns of mtDNA: empirical inferences for the coding region. *BMC Evolutionary Biology*. **8**: 167. ISSN: 1471-2148.

· Hao, Y-J., **Montiel, R.**, Nascimento, G., Toubarro, D., Simões, N. 2008. Identification, characterization of functional candidate genes for host-parasite interactions in entomopathogenic nematode *Steinernema carpocapsae* by suppressive subtractive hybridization. *Parasitology Research*. **103(3)**: 671-683. ISSN: 0932-0113.

· Santos, C., Martínez, M., Lima, M., Hao, Y-J., Simoes, N., **Montiel, R.*** 2008. Mitochondrial DNA mutations in cancer. A review. *Current Topics in Medicinal Chemistry*. **8(15)**: 1351-1366. ISSN: 1568-0266.

· Hao, Y-J., **Montiel, R.**, Nascimento, G., Toubarro, D., Simões, N. 2009. Identification and expression analysis of the *Steinernema carpocapsae* elastase-like serine protease gene during the parasitic stage. *Experimental Parasitology*. **122(1)**: 51-60. ISSN: 0014-4894.

· Hao, Y-J., **Montiel, R.**, Abubucker, S., Mitreva, M., Simões, N. 2010. Transcripts analysis of the entomopathogenic nematode *Steinernema carpocapsae* induced *in vitro* with insect haemolymph. *Molecular and Biochemical Parasitology*. **169(2)**: 79-86. ISSN: 0166-6851.

· Hao, Y-J., **Montiel, R.**, Huang, Y. 2010. Endothelial nitric oxide synthase (eNOS) 894 G>T polymorphism is associated with breast cancer risk: a meta-analysis. *Breast Cancer Research and Treatment*. **124(3)**: 809-813. ISSN: 0167-6806.

- Hao, Y-J., **Montiel, R.**, Li, B., Huang, E., Zeng, L., Huang, Y. 2010. Association between androgen receptor gene CAG repeat polymorphism and breast cancer risk: a meta-analysis. *Breast Cancer Research and Treatment*. **124(3)**: 815-820. ISSN: 0167-6806.
- Hao, Y-J. , **Montiel, R.**, Lucena, M.A., Nascimento, G., Costa, M., Simoes, N. 2012. Genetic diversity and comparative analysis of the gene expression between *Heterorhabditis bacteriophora* AZ29 and AZ36 isolates: uncovering candidate genes involved in insect pathogenicity. *Experimental Parasitology*. **130(2)**: 116-125. ISSN: 0014-4894.
- **Montiel, R.**, Solórzano, E., Díaz, N., Cañadas, M.P., González, M., Álvarez-Sandoval, B.A., Simões, N., Isidro, A., Malgosa, A. 2012. Neonate human remains: a window of opportunity to the molecular study of ancient syphilis. *PLoS ONE*. **7(5)**: e36371. ISSN: 1932-6203.
- Cunha, L., **Montiel, R.**, Novo, M., Orozco-terWengel, P., Rodrigues, A., Morgan, J.A., Kille, P. 2014. Living on a volcano's edge: Genetic isolation of an extremophile terrestrial metazoan. *Heredity*. **112(2)**: 132-142. [Epub en 2013 doi: 10.1038/hdy.2013.84]. ISSN: 0018-067X.
- Álvarez-Sandoval, B.A., Manzanilla, L.R., **Montiel, R.*** 2014. Sex determination in highly fragmented human DNA by High-Resolution Melting (HRM) analysis. *PLoS ONE*. **9(8)**: e104629. ISSN: 1932-6203.
- Simón, M., **Montiel, R.**, Smerling, A., Solórzano, E., Díaz, N., Álvarez-Sandoval, B.A., Jiménez-Marín, A.R., Malgosa A. 2014. Molecular analysis of ancient caries. *Proceedings of the Royal Society B-Biological Sciences*. 281(1790). [Epub doi: 10.1098/rspb.2014.0586]. ISSN: 0962-8452.
- Álvarez-Sandoval, B.A., Manzanilla, L.R., González-Ruiz, M., Malgosa, A., **Montiel, R.*** 2015. Genetic evidence supports the multiethnic character of Teopancasco, a neighborhood center of Teotihuacan, Mexico (AD 200-600). *PLoS ONE*. **10(7)**: e0132371. ISSN: 1932-6203.
- Vallebuena-Estrada, M., Rodríguez-Arévalo, I., Rougon, A., Martínez-González, J., García-Cook, A., **Montiel, R.***, Vielle-Calzada, J.P.* 2016. The earliest maize from San Marcos Tehuacán is a partial domesticate with genomic evidence of inbreeding. *PNAS*. **113(49)**: 14151–14156. [Epub doi: 10.1073/pnas.1609701113]. ISSN: 0027-8424.
- Rougon-Cardoso, A., Flores-Ponce, M., Ramos-Aboites, H.E., Martínez-Guerrero, C.E., Hao, Y-J., Cunha, L., Rodríguez-Martinez J. A., Ovando-Vázquez, C., Bermúdez-Barrientos, J.R., Abreu-Goodger, C., Chavarria-Hernández, N., Simões, N., **Montiel, R.*** 2016. The genome, transcriptome, and proteome of the nematode *Steinernema carpocapsae*: evolutionary signatures of a pathogenic lifestyle. *Scientific Reports*. **6**: 37536. ISSN: 2045-2322.
- Flores-Ponce, M, Vallebuena-Estrada, M., González-Orozco, E., Ramos-Aboites, H.E., García-Chávez, J.N., Simões, N., **Montiel, R.*** 2017. Signatures of co-evolutionary host-pathogen interactions in the genome of the entomopathogenic nematode *Steinernema carpocapsae*. *BMC Evolutionary Biology*. **17**: 108. ISSN: 1471-2148.