



LABORATORY OF RADIOBIOLOGY

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RESEARCH INTERESTS

Effects of electromagnetic fields
Cellular aging
Molecular radiobiology
Biological Dosimetry

LIST OF PUBLISHED ARTICLES

1. Mercado-Sáenz S., López-Díaz B., Sendra-Portero F., Martínez-Morillo M., Ruiz-Gómez M.J. (2017). Inactivation of *RAD52* and *HDF1* DNA repair genes leads to premature chronological aging and cellular instability. *J. Biosci.*, (In Press)
2. Drexler G.A., Ruiz-Gómez M.J. (2015). Microirradiation techniques in radiobiological research. *J. Biosci.*, 40(3):629-643
3. López-Díaz B., Mercado-Sáenz S., Martínez-Morillo M., Sendra-Portero F., Ruiz-Gómez M.J. (2014). Long-term exposure to a pulsed magnetic field (1.5 mT, 25 Hz) increases genomic DNA spontaneous degradation. *Electromagn. Biol. Med.*, 33(3):228-235
4. Ruiz-Gómez M.J. (2011). Telomere instability caused by subtelomeric Y' amplification and rearrangements in *Saccharomyces cerevisiae* (*ku70 tel1* and *ku70 rad50*) double mutants. *Indian J. Exp. Biol.*, 49(5):324-331
5. Mercado-Sáenz S., Ruiz-Gómez M.J., Morales-Moreno F., Martínez-Morillo M. (2010). Cellular aging: theories and technological influence. *Braz. Arch. Biol. Technol.*, 53(6):1319-1332
6. Ruiz-Gómez M.J., Ristori-Bogajo E., Prieto-Barcia M.I, Martínez-Morillo M. (2010). No evidence of cellular alterations by milliTesla-level static and 50 Hz magnetic fields on *S. cerevisiae*. *Electromagn. Biol. Med.*, 29(4):154-164
7. Ruiz-Gómez M.J., Sendra-Portero F., Martínez-Morillo M. (2010). Effect of 2.45 mT sinusoidal 50 Hz magnetic field on *Saccharomyces cerevisiae* strains deficient in DNA strand breaks repair. *Int. J. Radiat. Biol.*, 86(7):602-611
8. Ruiz-Gómez M.J., Martínez-Morillo M. (2009). Electromagnetic fields and the induction of DNA strand breaks. *Electromagn. Biol. Med.*, 28(2):201-214
9. Ruiz-Gómez M.J., Merino-Moyano M.D., Cebrián-Martín M.G., Prieto-Barcia M.I, Martínez-Morillo M. (2008). No effect of 50 Hz 2.45 mT magnetic field on the potency of cisplatin, mitomycin C and methotrexate in *S. cerevisiae*. *Electromagn. Biol. Med.*, 27(3):289-297



10. Ruiz-Gómez M.J., Ruiz-Gómez A., Martínez-Morillo M. (2006). Stochastic modeling for a better approach of the *in vitro* observed growth of colon adenocarcinoma cells. *Braz. Arch. Biol. Technol.*, 49(2):219-224
11. Ruiz-Gómez M.J., Martínez-Morillo M. (2006). Iron (III) chloride hexahydrate does not enhance methotrexate cytotoxicity on *Saccharomyces cerevisiae*. *Chemotherapy*, 52:226-230
12. Ruiz-Gómez M.J., Martínez-Morillo M. (2005). Enhancement of the cell-killing effect of ultraviolet-C radiation by short-term exposure to a pulsed magnetic field. *Int. J. Radiat. Biol.*, 81(7):483-490
13. Ruiz-Gómez M.J., Prieto-Barcia M.I., Ristori-Bogajo E., Martínez-Morillo M. (2004). Static and 50 Hz magnetic fields of 0.35 and 2.45 mT have no effect on the growth of *Saccharomyces cerevisiae*. *Bioelectrochemistry*, 64(2):151-155
14. Laqué Rupérez E., Ruiz Gómez M.J., de la Peña L., Gil L., Martínez Morillo M. (2003). Methotrexate cytotoxicity on MCF-7 breast cancer cells is not altered by exposure to 25 Hz, 1.5 mT magnetic field and iron (III) chloride hexahydrate. *Bioelectrochemistry*, 60(1-2):81-86
15. Ruiz-Gómez M.J., de la Peña L., Prieto-Barcia M.I., Pastor J.M., Gil L., Martínez-Morillo M. (2002). Influence of 1 and 25 Hz, 1.5 mT Magnetic Fields on Antitumor Drug Potency in a Human Adenocarcinoma Cell Line. *Bioelectromagnetics*, 23(8):578-585
16. Ruiz Gómez M.J., Souviron A., Gil L., Martínez Morillo M. (2001). Verapamil sensitisation to alkaloids on colchicine-selected human colon adenocarcinoma cells. *J. Physiol. Biochem.*, 57(4):343-344
17. Ruiz Gómez M.J., de la Peña L., Pastor J.M., Martínez Morillo M., Gil L. (2001). 25 Hz electromagnetic field exposure has no effect on cell cycle distribution and apoptosis in U-937 and HCA-2/1cch cells. *Bioelectrochemistry*, 53(1):137-140
18. Ruiz Gómez M.J., Souviron A., Martínez Morillo M., Gil L. (2000). P-glycoprotein, glutathione and glutathione S-transferase increase in a colon carcinoma cell line by colchicine. *J. Physiol. Biochem.*, 56(4):307-312
19. Ruiz Gómez M.J., Gil L., Souviron A., Martínez Morillo M. (2000). Multidrug resistance increment in a human colon carcinoma cell line by colchicine. *J. Physiol. Biochem.*, 56(1):33-38
20. Ruiz Gómez M.J., Pastor Vega J.M., de la Peña L., Gil Carmona L., Martínez Morillo M. (1999). Growth modification of human colon adenocarcinoma cells exposed to a low-frequency electromagnetic field. *J. Physiol. Biochem.*, 55(2):79-84
21. Morales J.A., Ruiz Gómez M.J., Gil Carmona L., Souviron A., Martínez Morillo M. (1995). He-Ne laser has no effect on cell cycle phases of human colon adenocarcinoma cells. *Rev. Esp. Fisiol.*, 51(1):43-48