**Supplement 3. Induction of Heat shock proteins (HSP) for protein repair**

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| --- | --- |
| Static/ELF EMF | Akan et al. (2010) (human monocytic leukemia cell line, 50-Hz, increased HSP-70);  [Alfieri](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Alfieri+RR&cauthor_id=16392967)et al. (2006) (endothelial cells, 50-Hz, stabilize HSP-70); [Bernardini](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Bernardini+C&cauthor_id=17080460) et al. (2007) (porcine aortic endothelial cells, 50-Hz, increased HSP-70); Chen et al. (2015) (hepatoma cell lines, 50-Hz, increased HSP-27); Del Re et al. (2006) (E. Coli, 50-Hz, increase and decrease in DnaK (HSP-70) and GroEL (HSP-60) respectively, after sinusoidal or pulsed-wave exposure); Garip et al. (2010) (K562 human leukemia cells, 50-Hz, increased HSP-70 with a decrease in apoptotic cells; oxidative-stressed cells had opposite effects); Groiss et al. (2021) (human leukemic cells, increased HSP-70 and apoptosis);  [Isaković](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Isakovi%C4%87+J&cauthor_id=31044584),  [Gorup](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Gorup+D&cauthor_id=31044584), and [Mitrečić](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Mitre%C4%8Di%C4%87+D&cauthor_id=31044584), (2019) (microglia-astrocyte, increased HSP-70); Kimura et al. (2008) (C. elegans, static magnetic field, increased HSP-12 and HSP-16); Li et al. (2013) (male Drosophila melanogaster, 50 Hz, HSP-22); Lin et al. (1998) (HL-60 cells, 60-Hz, increased HSP-70); Malagoli et al. (2004) (Mytilus galloprovincialis immunocytes, 50-Hz, increased HTP-70 and HSP-90); Miyakawa et al. (2001) (C. elegans, 60-Hz, increased HSP-16); Zhang et al. (2016) (Drosophila melanogaster, 50 Hz, increased HSP-22, HSP-26, and HSP-70). |
| RFR | Bourdineaud et al. (2017) (Eisenia fetida, 900 MHz RFR, increased HSP-70 gene expression); Czyz et al. (2004) (pluripotent embryonic stem, pulse modulated 1710 MHz RFR, increased HSP-70 mRNA); Daniells et al. (1998) (C. elegans, 750 and 300 MHz, HSP gene induction, lower power tended to have larger response); [Leszczynski](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Leszczynski+D&cauthor_id=12076339) et al. (2002) (human endothelial cells, 900 MHz GSM, increased HSP-27); López-Furelos et al. (2016) (rat cerebrum and cerebellum, 900 and 2450 MHz, increased HSP-70 and HSP-90); [López-Martín](https://www.sciencedirect.com/science/article/abs/pii/S0040816620306364?via%3Dihub#!) et al. (2021) (rat thyroid parafollicular cells, 2450 MHz, decreased HSP-90); Misa Agustiño et al. (2012) (rat thyroid gland, 2450 MHz, decreased HSP-70 and HSP-90); Misa Agustiño et al. (2015) (rat thymus gland, 2450 MHz, decreased HSP-90); Ohtani et al. (2016) (rat cerebrum and cerebellum, 2140 MHz, increased HSP and heat shock transcription factor); Yang et al. (2012) (rat hippocampus, 2450-MHz, increased HSP-27 and HSP-70). |

**References**

[Akan](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Akan+Z&cauthor_id=20809504), [Z](https://pubmed.ncbi.nlm.nih.gov/20809504/#affiliation-1)., B. [Aksu](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Aksu+B&cauthor_id=20809504), A. [Tulunay](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Tulunay+A&cauthor_id=20809504),  [S. Bilsel](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Bilsel+S&cauthor_id=20809504), and A. [Inhan-Garip](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Inhan-Garip+A&cauthor_id=20809504). 2010. Extremely low-frequency electromagnetic fields affect the immune response of monocyte-derived macrophages to pathogens. *Bioelectromagnetics* 31:603-12.

[Alfieri](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Alfieri+RR&cauthor_id=16392967),R.R.,  [M.A. Bonelli](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Bonelli+MA&cauthor_id=16392967), G. [Pedrazzi](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Pedrazzi+G&cauthor_id=16392967), S. [Desenzani](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Desenzani+S&cauthor_id=16392967), M. [Ghillani](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Ghillani+M&cauthor_id=16392967) M, C. [Fumarola](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Fumarola+C&cauthor_id=16392967),  [L. Ghibelli](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Ghibelli+L&cauthor_id=16392967),  [A.F. Borghetti](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Borghetti+AF&cauthor_id=16392967), and [P.G. Petronini](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Petronini+PG&cauthor_id=16392967). 2006. Increased levels of inducible HSP70 in cells exposed to electromagnetic fields. *Radiat. Res* 165:95-104.

[Bernardini](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Bernardini+C&cauthor_id=17080460), [C](https://pubmed.ncbi.nlm.nih.gov/17080460/#affiliation-1).,  [A. Zannoni](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Zannoni+A&cauthor_id=17080460), M.E. [Turba](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Turba+ME&cauthor_id=17080460), M.L.  [Bacci](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Bacci+ML&cauthor_id=17080460), M. [Forni](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Forni+M&cauthor_id=17080460),  [P. Mesirca](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Mesirca+P&cauthor_id=17080460), D. [Remondini](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Remondini+D&cauthor_id=17080460),  [G. Castellani](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Castellani+G&cauthor_id=17080460), and F. [Bersani](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Bersani+F&cauthor_id=17080460). 2007. Effects of 50 Hz sinusoidal magnetic fields on Hsp27, Hsp70, Hsp90 expression in porcine aortic endothelial cells (PAEC). *Bioelectromagnetics* 28:231-7.

[Bourdineaud, J.P](https://www.ncbi.nlm.nih.gov/pubmed/?term=Bourdineaud%20JP%5BAuthor%5D&cauthor=true&cauthor_uid=28665795)., M. [Šrut](https://www.ncbi.nlm.nih.gov/pubmed/?term=%C5%A0rut%20M%5BAuthor%5D&cauthor=true&cauthor_uid=28665795), A. [Štambuk](https://www.ncbi.nlm.nih.gov/pubmed/?term=%C5%A0tambuk%20A%5BAuthor%5D&cauthor=true&cauthor_uid=28665795), M. [Tkalec](https://www.ncbi.nlm.nih.gov/pubmed/?term=Tkalec%20M%5BAuthor%5D&cauthor=true&cauthor_uid=28665795), D. [Brèthes](https://www.ncbi.nlm.nih.gov/pubmed/?term=Br%C3%A8thes%20D%5BAuthor%5D&cauthor=true&cauthor_uid=28665795), K. [Malarić](https://www.ncbi.nlm.nih.gov/pubmed/?term=Malari%C4%87%20K%5BAuthor%5D&cauthor=true&cauthor_uid=28665795), and G.I.V. [Klobučar. 2017.](https://www.ncbi.nlm.nih.gov/pubmed/?term=Klobu%C4%8Dar%20GIV%5BAuthor%5D&cauthor=true&cauthor_uid=28665795) Electromagnetic fields at a mobile phone frequency (900 MHz) trigger the onset of general stress response along with DNA modifications in Eisenia fetida earthworms. [*Arh. Hig. Rada. Toksikol*](https://www.ncbi.nlm.nih.gov/pubmed/28665795) 68:142-52.

[Chen](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Chen+Z&cauthor_id=24856871), Z.,  [J. Wen](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Wen+J&cauthor_id=24856871), H. [Ju](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Ju+H&cauthor_id=24856871), and Z. [Fang](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Fang+Z&cauthor_id=24856871). 2015. Magnetic nano-Fe3O4 particles targeted gathering and bio-effects on nude mice loading human hepatoma Bel-7402 cell lines model under external magnetic field exposure in vivo. *Electromagn. Biol. Med* 34:309-16.

[Czyz](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Czyz+J&cauthor_id=15114639), [J](https://pubmed.ncbi.nlm.nih.gov/15114639/#affiliation-1)., K. [Guan](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Guan+K&cauthor_id=15114639),  [Q. Zeng](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Zeng+Q&cauthor_id=15114639), T. [Nikolova](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Nikolova+T&cauthor_id=15114639), A. [Meister](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Meister+A&cauthor_id=15114639), F. [Schönborn](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Sch%C3%B6nborn+F&cauthor_id=15114639), J. [Schuderer](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Schuderer+J&cauthor_id=15114639), N. [Kuster](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Kuster+N&cauthor_id=15114639),  [and A.M. Wobus](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Wobus+AM&cauthor_id=15114639). 2004. High frequency electromagnetic fields (GSM signals) affect gene expression levels in tumor suppressor p53-deficient embryonic stem cells. *Bioelectromagnetics* 25:296-307.

[Daniells](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Daniells+C&cauthor_id=9635489), [C](https://pubmed.ncbi.nlm.nih.gov/9635489/#affiliation-1)., [I. Duce](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Duce+I&cauthor_id=9635489), [D. Thomas](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Thomas+D&cauthor_id=9635489), [P. Sewell](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Sewell+P&cauthor_id=9635489), [J. Tattersall](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Tattersall+J&cauthor_id=9635489), and [D. de Pomerai](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=de+Pomerai+D&cauthor_id=9635489). 1998. Transgenic nematodes as biomonitors of microwave-induced stress. *Mutat. Res* 399:55-64.

[Del Re](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Del+Re+B&cauthor_id=16464648), [B](https://pubmed.ncbi.nlm.nih.gov/16464648/#affiliation-1)., F. [Bersani](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Bersani+F&cauthor_id=16464648), P. [Mesirca](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Mesirca+P&cauthor_id=16464648), and G. [Giorgi](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Giorgi+G&cauthor_id=16464648). 2006. Synthesis of DnaK and GroEL in Escherichia coli cells exposed to different magnetic field signals. *Bioelectrochemistry* 69:99-103.

[Garip](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Garip+AI&cauthor_id=20519170), [A.I](https://pubmed.ncbi.nlm.nih.gov/20519170/#affiliation-1)., and Z. [Akan](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Akan+Z&cauthor_id=20519170). 2010. Effect of ELF-EMF on number of apoptotic cells; correlation with reactive oxygen species and HSP. *Acta Biol. Hung* 61:158-67.

[Groiss](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Groiss+S&cauthor_id=34574442), [S](https://pubmed.ncbi.nlm.nih.gov/34574442/#affiliation-1)., R. [Lammegger](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Lammegger+R&cauthor_id=34574442), and D. [Brislinger](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Brislinger+D&cauthor_id=34574442). 2021. Anti-oxidative and immune regulatory responses of THP-1 and PBMC to pulsed EMF are field-strength dependent. *Int. J. Environ. Res. Pub. Health* 18:9519.

 [Isaković](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Isakovi%C4%87+J&cauthor_id=31044584), [J](https://pubmed.ncbi.nlm.nih.gov/31044584/#affiliation-1).,  [D. Gorup](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Gorup+D&cauthor_id=31044584), and D. [Mitrečić](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Mitre%C4%8Di%C4%87+D&cauthor_id=31044584). 2019. Molecular mechanisms of microglia- and astrocyte-driven neurorestoration triggered by application of electromagnetic fields. *Croat. Med. J.* 60:127-40.

Kimura, T., K. Takahashi, Y. Suzuki, Y. Konishi, Y. Ota, C. Mori, T. Ikenaga, T. Takanami, R. Saito, E. Ichiishi, S. Awaji, K. Watanabe, and A. Higashitani. 2008. The effect of high strength static magnetic fields and ionizing radiation on gene expression and DNA damage in Caenorhabditis elegans *Bioelectromagnetics* 29:605-14.

[Leszczynski](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Leszczynski+D&cauthor_id=12076339), [D](https://pubmed.ncbi.nlm.nih.gov/12076339/#affiliation-1)., S. [Joenväärä](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Joenv%C3%A4%C3%A4r%C3%A4+S&cauthor_id=12076339), J. [Reivinen](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Reivinen+J&cauthor_id=12076339), and R. [Kuokka](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Kuokka+R&cauthor_id=12076339). 2002. Non-thermal activation of the hsp27/p38MAPK stress pathway by mobile phone radiation in human endothelial cells: molecular mechanism for cancer- and blood-brain barrier-related effects. *Differentiation* 70(2-3):120-9.

[Li](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Li+HJ&cauthor_id=23570913), [H-J](https://pubmed.ncbi.nlm.nih.gov/23570913/#affiliation-1).,  [L-M. Guo](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Guo+LM&cauthor_id=23570913), L-L. [Yang](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Yang+LL&cauthor_id=23570913), Y-C. [Zhou](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Zhou+YC&cauthor_id=23570913),  [Y-J. Zhang](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Zhang+YJ&cauthor_id=23570913), J. [Guo](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Guo+J&cauthor_id=23570913), X-J. [Xie](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Xie+XJ&cauthor_id=23570913), and G-Z. [Guo](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Guo+GZ&cauthor_id=23570913). 2013. Electromagnetic-pulse-induced activation of p38 MAPK pathway and disruption of blood-retinal barrier. *Toxicol. Lett* 220:35-43.

[Lin](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Lin+H&cauthor_id=9548565), [H](https://pubmed.ncbi.nlm.nih.gov/9548565/#affiliation-1)., [M. Head](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Head+M&cauthor_id=9548565), [M. Blank](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Blank+M&cauthor_id=9548565), [L. Han](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Han+L&cauthor_id=9548565), [M. Jin](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Jin+M&cauthor_id=9548565), and [R. Goodman](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Goodman+R&cauthor_id=9548565). 1998. Myc-mediated transactivation of HSP70 expression following exposure to magnetic fields.  *J. Cell. Biochem* 69:181-8**.**

[López-Furelos](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=L%C3%B3pez-Furelos+A&cauthor_id=27589837), [A](https://pubmed.ncbi.nlm.nih.gov/27589837/#affiliation-1).,  [J.M. Leiro-Vidal](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Leiro-Vidal+JM&cauthor_id=27589837),  [A.Á](https://pubmed.ncbi.nlm.nih.gov/27589837/#affiliation-3). [Salas-Sánchez](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Salas-S%C3%A1nchez+A%C3%81&cauthor_id=27589837),  [F-J. Ares-Pena](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Ares-Pena+FJ&cauthor_id=27589837), and M.E. [López-Martín](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=L%C3%B3pez-Mart%C3%ADn+ME&cauthor_id=27589837). 2016. Evidence of cellular stress and caspase-3 resulting from a combined two-frequency signal in the cerebrum and cerebellum of Sprague-Dawley rats. *Oncotarget* 7:64674-89.

[López-Martín](https://www.sciencedirect.com/science/article/abs/pii/S0040816620306364?via%3Dihub#!), E., F.J. [Jorge-Barreirob](https://www.sciencedirect.com/science/article/abs/pii/S0040816620306364?via%3Dihub#!), J.L. [Relova-Quinteroc](https://www.sciencedirect.com/science/article/abs/pii/S0040816620306364?via%3Dihub#!), [A.A. Salas-Sánchezde](https://www.sciencedirect.com/science/article/abs/pii/S0040816620306364?via%3Dihub#!), and F.J. [Ares-Penad](https://www.sciencedirect.com/science/article/abs/pii/S0040816620306364?via%3Dihub#!). 2021. Exposure to 2.45 GHz radiofrequency modulates calcitonin-dependent activity and HSP-90 protein in parafollicular cells of rat thyroid gland. [*Tissue Cell*](https://www.sciencedirect.com/journal/tissue-and-cell)[68](https://www.sciencedirect.com/journal/tissue-and-cell/vol/68/suppl/C): 101478.

[Malagoli](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Malagoli+D&cauthor_id=14984706), [D](https://pubmed.ncbi.nlm.nih.gov/14984706/#affiliation-1)., M. [Lusvardi](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Lusvardi+M&cauthor_id=14984706),  [F. Gobba](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Gobba+F&cauthor_id=14984706) and E. [Ottaviani](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Ottaviani+E&cauthor_id=14984706). 2004. 50 Hz magnetic fields activate mussel immunocyte p38 MAP kinase and induce HSP70 and 90. *Comp.* *Biochem. Physiol. C Toxicol. Pharmacol* 137:75-9.

[Misa Agustiño](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Misa+Agusti%C3%B1o+MJ&cauthor_id=23213477) [M.J](https://pubmed.ncbi.nlm.nih.gov/23213477/#affiliation-1)., J.M. [Leiro](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Leiro+JM&cauthor_id=23213477),  [M.T.J. Mora](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Jorge+Mora+MT&cauthor_id=23213477), J.A. [Rodríguez-González](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Rodr%C3%ADguez-Gonz%C3%A1lez+JA&cauthor_id=23213477),  [F.J.J. Barreiro](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Jorge+Barreiro+FJ&cauthor_id=23213477), F.J. [Ares-Pena](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Ares-Pena+FJ&cauthor_id=23213477), and E. [López-Martín](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=L%C3%B3pez-Mart%C3%ADn+E&cauthor_id=23213477). 2012. Electromagnetic fields at 2.45 GHz trigger changes in heat shock proteins 90 and 70 without altering apoptotic activity in rat thyroid gland. *Biol. Open* 1:831-8.

[Misa-Agustiño](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Misa-Agusti%C3%B1o+MJ&cauthor_id=25731700), [M.J](https://pubmed.ncbi.nlm.nih.gov/25731700/#affiliation-1)., J.M. [Leiro-Vidal](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Leiro-Vidal+JM&cauthor_id=25731700), J.L. [Gomez-Amoza](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Gomez-Amoza+JL&cauthor_id=25731700), M.T. [Jorge-Mora](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Jorge-Mora+MT&cauthor_id=25731700), F.J. [Jorge-Barreiro](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Jorge-Barreiro+FJ&cauthor_id=25731700), A.A. [Salas-Sánchez](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Salas-S%C3%A1nchez+AA&cauthor_id=25731700), F.J. [Ares-Pena](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Ares-Pena+FJ&cauthor_id=25731700), and E. [López-Martín](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=L%C3%B3pez-Mart%C3%ADn+E&cauthor_id=25731700). 2015. EMF radiation at 2450 MHz triggers changes in the morphology and expression of heat shock proteins and glucocorticoid receptors in rat thymus. *Life Sci* 127:1-11.

[Miyakawa](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Miyakawa+T&cauthor_id=11424156)[T](https://pubmed.ncbi.nlm.nih.gov/11424156/#affiliation-1)., [S. Yamada](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Yamada+S&cauthor_id=11424156), [S. Harada](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Harada+S&cauthor_id=11424156), [T. Ishimori](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Ishimori+T&cauthor_id=11424156), [H. Yamamoto](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Yamamoto+H&cauthor_id=11424156), and [R. Hosono](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Hosono+R&cauthor_id=11424156). 2001.

Exposure of Caenorhabditis elegans to extremely low frequency high magnetic fields induces stress responses. *Bioelectromagnetic* 22:333-9.

[Ohtani](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Ohtani+S&cauthor_id=27665775), [S](https://pubmed.ncbi.nlm.nih.gov/27665775/#affiliation-1)., A. [Ushiyama](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Ushiyama+A&cauthor_id=27665775), M. [Maeda](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Maeda+M&cauthor_id=27665775), K. [Hattori](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Hattori+K&cauthor_id=27665775), N. [Kunugita](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Kunugita+N&cauthor_id=27665775),  [J. Wang](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Wang+J&cauthor_id=27665775), and K. [Ishii](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Ishii+K&cauthor_id=27665775). 2016. Exposure time-dependent thermal effects of radiofrequency electromagnetic field exposure on the whole body of rats. *J. Toxicol. Sci* 41:655-66.

[Yang](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Yang+XS&cauthor_id=22513040), [X-S](https://pubmed.ncbi.nlm.nih.gov/22513040/#affiliation-1).,  [G-L. He](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=He+GL&cauthor_id=22513040), Y-T. [Hao](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Hao+YT&cauthor_id=22513040), Y. [Xiao](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Xiao+Y&cauthor_id=22513040), C-H. [Chen](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Chen+CH&cauthor_id=22513040), G-B. [Zhang](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Zhang+GB&cauthor_id=22513040),  [and Z-P. Yu](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Yu+ZP&cauthor_id=22513040). 2012. Exposure to 2.45 GHz electromagnetic fields elicits an HSP-related stress response in rat hippocampus. *Brain Res. Bull* 88:371-8.

[Zhang](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Zhang+ZY&cauthor_id=27611438), Z., J. [Zhang](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Zhang+J&cauthor_id=27611438),  [C-J. Yang](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Yang+CJ&cauthor_id=27611438), H-Y. [Lian](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Lian+HY&cauthor_id=27611438), H. [Yu](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Yu+H&cauthor_id=27611438), X-M. [Huang](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Huang+XM&cauthor_id=27611438), and P. [Cai](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=Cai+P&cauthor_id=27611438)[.](https://pubmed.ncbi.nlm.nih.gov/27611438/#affiliation-1) 2016. Coupling mechanism of electromagnetic field and thermal stress on Drosophila melanogaster. *PLoS One* 11:e0162675.