

Medical/biological study (experimental study)

# Extremely low-frequency electromagnetic fields do not affect DNA damage and gene expression profiles of yeast and human lymphocytes med./bio.

By: *Luceri C, De Filippo C, Giovannelli L, Blangiardo M, Cavalieri D, Aglietti F, Pampaloni M, Andreuccetti D, Pieri L, Bambi F, Biggeri A, Dolara P*

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## Aim of study (acc. to author)

To study the effects of [extremely low frequency electromagnetic fields](#) on [peripheral human blood lymphocytes](#) and [yeast](#).

## Endpoint

- [genotoxicity/mutation: DNA](#) damage

## Exposure

- [50/60 Hz](#), [magnetic field](#), [low frequency](#).

Exposure	Parameters
Exposure 1: 50 Hz	<a href="#">magnetic flux density</a> : 0.1 $\mu$ T
Exposure duration: continuous for 18 hours	<a href="#">magnetic flux density</a> : 1 $\mu$ T
	<a href="#">magnetic flux density</a> : 10 $\mu$ T
	<a href="#">magnetic flux density</a> : 100 $\mu$ T

Extended view

Exposed system:

intact [cell/cell culture](#)

[yeast](#) ([Saccharomyces cerevisiae/strain](#) DBY747)

## Methods

Endpoint/measurement parameters/methodology

- [genotoxicity/mutation: DNA](#) damage ([strand breaks](#)) and [oxidized bases](#) ([comet assay](#))
- [molecular biosynthesis: gene expression](#) profiles ([microarray](#))

Investigated system: [DNA/RNA](#), intact [cell/cell culture](#)

Time of investigation: after exposure

## Main outcome of study (acc. to author)

After [exposure](#) to the [electromagnetic field](#), an increase in the amount of [strand breaks](#) or [oxidated DNA bases](#) relative to controls or a variation in [gene expression](#) profiles were not observed. The data suggest that [extremely low frequency electromagnetic fields](#) do not induce [DNA](#) damage or affect [gene expression](#) in these two different [eukaryotic cell](#) systems.

Study character: medical/[biological](#) study, experimental study, [full/main study](#)

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