respectively. Intracellular GSH content was measured spectrophotometrically, by using a commercial enzymatic kit (Calbiochem) and ROS formation was determined by measuring the conversion of 2’7’-dichlorofluoresceine diacetate to dichlorofluoresceine by ROS mediated oxidation (LS50 Fluorimeter, Perkin-Elmer).

Cell cultures were exposed for 30 minutes to RF (900 MHz, continuous wave; exposure in waveguide), at two SAR values (1 and 0.3 W/Kg). To investigate cell growth, cell cycle and MMP changes, cell cultures were exposed immediately after 24 hours of cell treatment with MX 50 µM final concentration. In the case of oxidative stress evaluation, cells were treated for 1 hour with MX (500 and 200 µM final concentration for L929 and NIH3T3, respectively) and exposed during the first 30 minutes of MX treatment.

For each biological endpoint 3 conditions were tested: sham exposures (controls), exposures to RF at SAR of 0.3 W/kg, exposures to RF at SAR of 1 W/kg. For each condition an MX-treated culture was also set up.

RESULTS: Preliminary results seem to indicate absence of effects following the RF exposure, alone and in combination with MX treatment, except for L929 cells where a slightly increase in the depolarisation of mitochondrial membrane was detected in co-exposed samples (SAR 1 W/Kg). Experiments are in progress to evaluate the effects of GSM signal in the same experimental conditions. Research supported by EU -Fifth Framework Programme- CEMFEC, Grant No. QLRT-1999-01129.

INTRODUCTION: Microbial virulence factors are responsible for tissue damage in hosts. Candida albicans is an opportunistic pathogen that constitutes an increasing risk of infection, especially for immunosuppressed or immunocompromised patients.

OBJECTIVE: The objective of this study was to determine the effect of a static non-uniform magnetic field on the phenotype expression of different strains of Candida albicans.

METHODS: The strains of Candida albicans were grown on phospholipase-agar, according to Shimizu et al. (1996) and incubated at 37 °C inside a magnetic field (except the assays used as blank). The magnetic field was generated by two magnetite plates (Figure 1) and standardized as a function of distance versus number of magnetic plates (Figure 2). The magnetic field was of 500 gauss in the central part between the two magnetic plates.

RESULTS: The preliminary results show a visible increase in the halo formed due to phospholipase production, suggesting that the exposition to a magnetic field can enhance the expression of this virulence factor.

![Figure 1- Schematic representation of the experimental set-up to generate the magnetic field.](image-url)
Figure 2 - Magnetic field (gauss) versus distance between magnetic plates (one, two or three in each side).

Reference.

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Sterilization effects of constant electromagnetic wave and instant pulse acting on foods and traditional Chinese medicines pills are introduced in the paper. Their effects of sterilization are compared and discussed. But mechanism of action and biological effects are analyzed.

**OBJECTIVE AND METHODS:** The frequency of constant microwave in study is 2450MHz, the average power density is 520 w/cm². The instant pulse used is produced by pulse discharge tube, the rising time of the pulse is 0.33ns, the peak voltage is 2420v, the average light intensity is 10 candela. The pulse with high peak value and narrow width is produced when the discharge tube is punctured, then energy is radiated into the sterilizer by the antenna. "Yang Rong pill", "Bao He pill" and normal eating sauce were selected as experiment objects. They were sampled weighed (reserved some for reference) and placed into the sterilizer respectively. The samples which have been sterilized by constant microwave and electromagnetic pulse for some time and referential sample were paved on the board in the culture medium prepared previously. Eight paved boards for every sample. At last, culture medium were put into constant temperature of 37°C to culture for 48 hours. Germs will arise ,we made then numerical statistics of the germs number of all the samples.

**RESULTS:** Now, sterilized results of constant microwave and electromagnetic pulse (EMP) acting on several objects discussed upward are listed in the table below.

<table>
<thead>
<tr>
<th>Germ contents/g</th>
<th>Electromagnetic pulse</th>
<th>Constant Microwave F=2450MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiation time</td>
<td>Sauce</td>
<td>Sauce</td>
</tr>
<tr>
<td>0s</td>
<td>2.4*10⁶</td>
<td>2.4*10⁶</td>
</tr>
<tr>
<td></td>
<td>1.7*10⁶</td>
<td>1.5*10⁶</td>
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