

## *Tunisia*

### *Report on EMF Activities*

*20th International Advisory Committee on EMF (04-06 May 2015)*

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#### **1. Research activities related to EMF health**

Few research activities related to EMF exposure and health risks are conducted in Tunisia until now. The principal research activities are cited above :

- **Second-Harmonic Generation in Vertically Coupled InAs/GaAs Quantum Dots with a Gaussian Potential Distribution: Combined Effects of Electromagnetic Fields, Pressure, and Temperature**

R. Ben Mahrsia, M. Choubani, L. Bouzaïene, H. Maaref:  
Journal of Electronic Materials, April 2015

- **Effects of Static Magnetic Field Exposure on Plasma Element Levels in Rat**

Lahbib A, Ghodbane S., Elferchichi M., Sakly M., Abdelmelek H. :

Biological Trace Element Research ; 5 June 2014.

- **Vitamins and glucose metabolism: The role of static magnetic fields**

Lahbib A, Ghodbane S., Elferchichi M., Sakly M., Abdelmelek H. :

International Journal of Radiation Biology. December 2014, Vol. 90, No. 12 , Pages 1240-1245(doi:10.3109/09553002.2014.930537)

<http://informahealthcare.com/doi/abs/10.3109/09553002.2014.930537>

- **Electromagnetic wave propagation in anisotropic metamaterial waveguides**

Wyssem F., Hedi S., Taoufik A.:

International Journal of Numerical Modelling: Electronic Networks, Devices and Fields. 17 OCT 2014: DOI: 10.1002/jnm.2029.

- **Vitamin E prevents glucose metabolism alterations induced by static magnetic field in rats**

Soumaya G., Salem A., Aida L., Karim L., Abdullah S., Mohsen S., Hafedh A. :

Environmental Science and Pollution Research: November 2014, Volume 21, Issue 22, pp 12731-12738: 27 Jun 2014

- **Analysis and modeling of the magnetic near fields emitted by an IGBT and by a power diode generic radiating model for active components**

Labiedh W., Ben Hadj Slama J.:

Electrical Sciences and Technologies in Maghreb (CISTEM), Nov. 2014, 6 pages  
DOI:10.1109/CISTEM.2014.7076992 .

#### **2. New policies and legislations regarding EFM exposure**

- A Circular of the Tunisian Health Ministry No. 87 of 20th November 2014 about a new procedure for installing mobile phone base transceiver stations (BTS) is published
- The previous projects of ministerial decrees are under publication.

### **3. Area and Public concerns and national responses**

The people who are living near mobile phone base transceiver stations (BTS) antenna, considered to be the population with the highest risk of exposure.

The ad hoc working group charged for review complaints filed regarding the installation of mobile phone base stations was met six times in 2014 and has treated 70 cases. The ad hoc working group suggests that cellular phone BTS antenna should not be sited closer than 100 m to sensitive institutions (schools, kindergartens, hospitals, creches...) to minimize exposure of neighbors.

The national technical committee on Non-Ionizing Radiation health impact (NIR) provides scientific advice and guidance on the health and environmental effects of non-ionizing radiation (NIR) to protect people and the environment from NIR exposure by referring to relevant international organizations opinions. As such he is responsible for advice to health and environmental authorities on any health problem related to NIR.

The work of the technical committee on Non-Ionizing Radiation impact (NIR) in 2015 led to the following recommendations:

- 1) Approval of the report contents on the measures taken at national level to control potential health risks of electromagnetic fields, which was introduced in the work of the International Advisory Committee of the World Health Organization (4 and 5 June 2014 in Geneva).
- 2) Examine the effect of radio stations near livestock barns animals and places on beekeeping and formation of national experts group to inspect this type of site mobile phone base transceiver stations (BTS) antenna, in order to support the opinion of the Technical Committee.
- 3) Conduct a survey campaign to risk exposure assessment of electromagnetic fields (EMF) through a comparative analysis of animal productivity in agricultural areas exposed to EMF and unexposed animals in a similar area (with the same conditions).
- 4) Start a descriptive study on childhood leukemia and exposure assessment to magnetic fields of high voltage electricity lines, by coordination with National Institutes of Health.
- 5) Provide new information about work environment and expected levels of exposure in a wide range of jobs to identify the most highly exposed job categories.

### **4. New public information public**

For every mobile phone base transceiver stations (BTS) antenna in Tunisia, the synthesis of electromagnetic field measurement results and the conclusions (electric field levels compared with limit values), are available on the website <http://www.cartoradio.tn>.