

# Tunisia

## Report on EMF Activities 19<sup>th</sup> International Advisory Committee on EMF 04-05 June 2014

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### Evolution of the legislative and statutory framework

- No new legislation published and the previous projects of ministerial decrees are still under further discussions.

### Research activities related to EMF

- Few research activities related to EMF exposure and health risks are conducted in Tunisia until now. The principal research activities are conducted by the “Laboratoire de Physiologie Intégrée, Faculté des Sciences de Bizerte”. The last publications were:

- **“Effects of olive leave extract on metabolic disorders and oxidative stress induced by 2.45 GHz Wi-Fi signals”**  
Myriam Ben Salah<sup>a,b,\*</sup>, Hafedh Abdelmelek<sup>a</sup>, Manef Abderrabab<sup>a</sup>  
Environmental toxicology and pharmacology 36 (2013) 826–834
- **“Spatial learning, monoamines and oxidative stress in rats exposed to 900 MHz electromagnetic field in combination with iron overload.”**  
Maaroufi K1, Had-Aissouni L, Melon C, Sakly M, Abdelmelek H, Poucet B, Save E.  
Behavioural Brain Research 258 (2014) 80– 89
- **“Effects of combined ferrous sulphate administration and exposure to static magnetic field on spatial learning and motor abilities in rats.”**  
Maaroufi K1, Ammari M, Elferchichi M, Poucet B, Sakly M, Save E, Abdelmelek H.  
Brain Inj. 2013; 27(4):492-9. doi: 10.3109/02699052.2012.750753. Epub 2013 Mar 8.
- **Review Article “Bioeffects of Static Magnetic Fields: Oxidative Stress, Genotoxic Effects, and Cancer Studies”**  
Soumaya Ghodbane, Aida Lahbib, Mohsen Sakly, and Hafedh Abdelmelek  
Hindawi Publishing Corporation  
BioMed Research International  
Volume 2013, Article ID 602987, 12 pages  
<http://dx.doi.org/10.1155/2013/602987>
- **“Whole body exposure to 2.4 GHz Wi-Fi signals: Effects on cognitive impairment in adult triple transgenic mouse models of Alzheimer’s disease (3xTg-AD)”**  
Sana Banaceur\*, Sihem Banasr, Mohsen Sakly, Hafedh Abdelmelek  
Behavioural Brain Research 240 (2013) 197– 201

- The technical committee studying health impacts of NIR at ANCSEP is using the scientific researches provided by national and international agencies and bodies.

### Public concerns

- Base stations (BTS) are still the main focus of public concern in Tunisia. Tunisians complain that BTS threat essentially their health and then, they request to avoid BTS installation on the urban areas. These concerns are due to global mediation of this issue and are enhanced by the scientific uncertainties on potential risks. The number of claims of citizens about BTS

installation has decreased in 2013 to attend less than 100 compared to the situation on 2012. Already, some cases are addressed to courts and many BTS are uninstalled.

- Few complaints also are developed last months against the installation of broadcasting transmitters in urban areas after the freedom of the press and media activities.
- A web site realized by the National Agency of Frequencies (ANF) presents measures near BTS taken at the national territory of Tunisia to inform citizens about their exposure to radiofrequencies ([www.cartoradio.tn](http://www.cartoradio.tn)).
- Execution of the communication program to professionals and citizens with stakeholders and the consumer organization (workshops, press articles, etc.). ([www.ancsep.rns.tn](http://www.ancsep.rns.tn)).
- ANCSEP had published a flyer relative to the rationale use of Mobile Phone.
- ANCSEP had organized a workshop (June the 25<sup>th</sup> 2013). All stakeholders had participated to discuss about a new procedure for installing the radio stations including BTS and Broadcasting transmitters. The recommendations of this workshop are still under negotiation.
- Also, ANCSEP is even invited to participate on many scientific and information workshops and seminars to present the actual scientific knowledge about EMF and health, such as.
  - ✓ The regional training day organized by the Regional Directorate of Health of Zaghuan on June, 19<sup>th</sup> 2013.
  - ✓ The 6 interregional sessions on Habitat Hygiene, organized by the Ministry of Health (Directorate of Hygiene and Environmental Protection) between September and December 2013.
  - ✓ The seminar co-organized by the National Institute of Consumption and the National Instance of Telecommunications on March, 18<sup>th</sup> 2014.
- Furthermore, the year 2013 was marked by the creation of the “Tunisian Association for Ionizing and Non Ionizing Radiation Protection”.

### **Policies and measures regarding the exposure to EMF and EMF risk management**

The ANF is in charge of controlling the levels of the electric field strength (reference levels) on the BTS sites all around the country. The parameter measured is the total average of electric field strength. The measure in one site covered all radiofrequencies between 30 MHz and 3 GHz (HF, FM, PMR, TV, Radar, GSM, DCS, DECT, and UMTS). The total average of electric field strength is then compared with the lowest level of the frequency detected in site (28 V/m). On 2013, ANF had measured 135 sites. All of them are below the exposure limit. The maximum level measured is 13,6 V/m. It is noted that the annual average of measures is increasing every year. This is due to the increasing of the number of BTS, the deployment of the 3G services by the three operators, and the multiplication of the number of FM radio Channels.

Furthermore in June 2013, a master plan for BTS in the municipal territory of La Goulette (*North east of Tunisia, 15 Km far from Tunis the capital*) was concluded between the commune and the three operators of mobile telecommunications. This plan was elaborated by a working group regrouping also, ANCSEP, ANF, civil associations, lawyers, etc. This pilot experience will be replicated in other municipalities in the future.