National Report: Hungary 2025

International EMF Project, International Advisory Committee Meeting
9-11 June 2026 – Geneva, Switzerland

1) General Research Activities Related to EMF and Health

1.1 *Participation in several Working Packages (WPs) of the GOLIAT EU Horizon Project "5G Exposure, Causal Effects and Risk Perception through Citizen Engagement" (www.projectgoliat.eu)*

- WP1: RF-EMF Exposure Patterns and Levels in Young People and Workers
  - Within Task 1.2 (Spatial Monitoring of RF-EMF Exposure in Young People), the Non-Ionizing Radiation (NIR) Team of the National Center for Public Health and Pharmacy (NCPHP) conducted activity-based microenvironmental surveys in Hungary. Three types of study areas were selected based on population density: a large city (the capital, Budapest), a smaller city, and villages across 87 sites [1,2].
  - Within Task 1.2.2, spectral spot measurements of downlink exposure were performed in different microenvironments (public places, schools, indoor and outdoor environments) at the same sites where the microenvironmental surveys were conducted [3].
  - Within Task 1.3, temporal monitoring of RF-EMF exposure was performed in indoor and outdoor environments in Budapest.
  - The NIR Team also actively participated in uplink near-field exposure monitoring within Task 1.2.3.
- WP4: Brain Function – Biological and Neurophysiological Effects of 5G Exposure
  - Within Task 2.2, in vivo behavioral animal studies on rats were performed by the Translational Neuroscience Research Group at the University of Pécs (UP).
  - Within Task 3.1, human near-field 3.5 GHz and 26 GHz 5G exposure studies were carried out by research teams from UP and NCPHP. During the human studies, EEG, ECG, EDA, and cognitive effects were investigated before, during, and after 5G (FR1 or FR2) RF exposure.

1.2 *Participation in the ANSES CORSICA French–Hungarian Bilateral Research Project*

- In vitro Study on the Combined Effects of Radiofrequency Fields at 26 GHz and Solar UV Radiation on Human Skin and Cornea Models. The aim of the CORSICA project is to investigate, in vitro, the possible effects of a 5G signal at 26 GHz on the two main superficial biological targets at these frequencies: the skin and the cornea of the eye. Using 2D and 3D skin and cornea models, the project evaluates the potential of 5G RF signals at 26 GHz to contribute to oxidative stress, inflammation, and cell death. Additional biological endpoints are also investigated in specific models, such as genotoxicity in skin models and mucin production in cornea models.
- The project is led by the IMS Laboratory of the University of Bordeaux in collaboration with the NIR Team of NCPHP and XLIM, University of Limoges. (https://www.ims-bordeaux.fr/news/research-groups-news/bioelectronics/sane/corsica-project/)

1.3 *Methods for Assessing RF Electromagnetic Exposure Using Drone-Mounted Instruments and Radio Wave Propagation Models*

- This research is led by the Hungarian *National Media and Infocommunications Authority* (NMHH) in collaboration with the NIR Team of NCPHP. The objective of the study is to compare two methods for assessing RF electromagnetic exposure in front of building facades: drone-based measurements and radio wave propagation modeling. The comparison is further supported by reference measurements performed at the windows of educational buildings.

1.4 *Assessment of RF Exposure from a Private Indoor 5G Network Operating in the 3.5 GHz Band: A Case Study in a University Environment*

- This study investigates radio frequency (RF) exposure from a private indoor 5G network operating in the 3.5 GHz band within a university building. Despite the increasing deployment of private 5G networks, limited research has been conducted on RF exposure from such systems.

- The study aims to measure electric field strength from both pico and micro base stations under various operational modes and power levels. In addition, it compares indoor private 5G exposure with outdoor public base station downlink radiation and Wi-Fi signals.
- The research is coordinated by the NMHH in collaboration with the NIR Team of NCPHP.

2) New Policies and Legislation Regarding EMF Exposure

2.1 *Implementation of the 2013/35/EU Directive*

- Directive 2013/35/EU has been implemented into Hungarian legislation through the Ordinance issued by the Ministry of Human Resources (EMMI) in November 2016: 33/2016 (XI.29.) EMMI Ordinance. The Ordinance almost fully adopts the provisions of the EU Directive. No new EMF-related regulations have been issued since that time.

2.2 *Planned Initiatives*

- No planned initiatives.

3) Areas of Public Concern and National Responses

3.1 *Public Concerns*

- Public concern regarding EMF exposure has remained relatively stable over many years. The primary concerns relate to mobile base stations and other wireless communication technologies.

3.2 *Commercialization of PMF Therapy Devices*

- There has been an increasing presence on the market of devices intended for pulsed magnetic field (PMF) therapy, such as beds, mattresses, and pillows, distributed mainly by SMEs. Many of these products are marketed with limited scientific evidence supporting their claimed therapeutic effects.

4) New Public Information Activities

4.1 *The Hungarian 5G Coalition*

- The Hungarian Neumann Technology Platform (NTP), a supporting institution of the Ministry for National Economy, facilitates the creation and operation of platforms and coalitions aimed at developing the ecosystem of priority technologies, with special emphasis on 5G. With the support of internationally recognized Hungarian experts through thematic workshops, the 5G Coalition addresses topics of current societal interest, including the health aspects and safety issues of 5G technology. (https://neum.hu/en/5g/)

4.2 *Presentation of Hungarian Research Results in GOLIAT project*

- In December 2025, during a 5G Coalition workshop organized by the NTP, members of the NIR Team of NCPHP delivered presentations on the GOLIAT EU Horizon project and Hungarian research results at the NTP headquarters in Budapest, Hungary (https://www.linkedin.com/feed/update/urn:li:activity:7404432064814743552/)

4.3 *Public Information on RF EMF Exposure*

- Information for the public regarding RF EMF exposure is available on the website of the Hungarian National Media and Infocommunications Authority (NMHH). (http://emirpub-prod.nmhh.hu/pubrendszer-web/eszmog/eszmogMeresek.jhtml)

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Related publications:

[1] Veludo AF, Stroobandt B, Van Bladel H, Sandoval-Diez N, Deprez K, Aerts S, Chikha WB, Wiart J, Vecsei Z, Necz PP, Thuróczy et al. Assessing radiofrequency electromagnetic field exposure in multiple microenvironments across ten European countries with a focus on 5G. Environ Int. 2025 May 20;200:109540. doi: 10.1016/j.envint.2025.109540.

[2] Stroobandt B, Van Bladel H, Fernandes Veludo, Deprez K , Aerts S, Verloock L, Thuróczy Gy, Politanski P, Polanska K, Tognola G, Parazzini M, Wiart J, Guxens M, Röösli M, Joseph W (2025) Auto-induced uplink 4G and 5G RF-EMF exposure assessment using a network monitoring application in different microenvironments across seven European countries, *Environmental Research* 270 (2025) 121029, https://doi.org/10.1016/j.envres.2025.121029

[3] Deprez K, Stroobandt B, Veludo AF, Vecsei Z, Necz PP, Politański P, Verloock L, Polanska K, Thuróczy G, Röösli M, Plets D, Joseph W. (2025) 5G RF EMF Spectral Exposure Assessment in Four European Countries. Bioelectromagnetics, 2025 Sep;46(6):e70019. PMID: 40831424; PMCID: PMC12365728. https://doi.org/10.1002/bem.70019