

ELECTROMAGNETIC TECHNOLOGIES FOR HEALTH

Innovative aspects and related benefits | The increasing development and spread of technologies based on electromagnetic fields leads to interesting perspectives for biomedical applications in the areas of clinical diagnostics and therapies (also known as theranostic). ENEA has multi-skill and high specialisation expertise necessary for the development, optimisation and quality control of new products and protocols: from *in silico* modelling to pre-clinical experimentation. Specifically, ENEA has realised an integrated platform (*in silico* tools and experimental systems) for technological development, predictive analysis and testing of electromagnetic devices for biomedical and theranostic applications.

Use |

- Development and testing of electromagnetic devices for biomedical and theranostic applications;
- Support to definition of clinical protocols and treatment planning;
- *In silico* modelling and predictive analysis;
- Pre-clinical experimentation;
- Non-destructive measurements and testing;
- Quality control.

Activities undertaken and in progress | Support to the development and experimental characterization of a novel interstitial antenna for microwave thermal ablation – currently used in several hospitals all around world – in the framework of an industrial research project funded by FILAS-Regione Lazio.

Collaborations with Italian hospitals and biomedical factories for the development of theranostic devices and protocols for treatment planning.

