



REACHUP

Regulatory services



REACHUP REGULATORY NETWORK ITALY

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On April, 5th 2017 the old Directive has been replaced with EU Regulation 2017/745 on Medical Devices (MD)

This new legislation framework has been proposed to ensure safety, innovation and competitiveness in the market and has introduced new rules.

Regulatory Support

Assistance in planning the best path for the **CE certification** of any Medical Device

- ✓ **Development** of regulatory approaches
- ✓ **Support** to the technical and pre-clinical data collection for regulatory purposes
- ✓ **Technical File** preparation
- ✓ **Administrative** procedures management

Leachables & Extractables

Full-integrated testing strategy together with toxicological assessment and risk analysis for **Extractables and Leachables**

- ✓ **Profiling** of extractables
- ✓ Characterization of extractables (**Screening test**)
- ✓ Primary and secondary leachables **profile**.
- ✓ **Unknown** extractables/leachables tentative identification (if needed).
- ✓ Toxicological evaluation and **risk assessment**.
- ✓ Development and **validation** of targeted methods suitable for the quantification of critical leachables

Efficacy Evaluation

Innovative and **customized** experimental in vitro models using **3D Human Tissues**.

They represent a **predictive** and **robust** alternative before planning the clinical trial in order to confirm and quantify the nature of MD mechanism of action: *superficial action on body barriers, without pharmacological, immunological or metabolic mechanisms.*

In vitro test shall be considered for use in preference of in vivo tests as indicated in the ISOs 10993-2, 2009: 1.

- ✓ **Film forming**
- ✓ **Muco-adhesion**
- ✓ Competition with established resident **flora**/pathogen. Antimicrobial adhesion properties
- ✓ **Re-epithelization** and healing
- ✓ **Moisturing**

The list is not exhaustive.

Toxicological Risk Assessment

The **biological assessment** of any medical material or device intended for use in humans shall be part of a structured biological assessment plan as part of a risk management process in accordance with ISO 14971:2007

This **risk management** process involves the identification of **biological hazards**, the estimation of the associated biological hazards and the determination of their acceptability

- ✓ **Human health risk assessment** and estimation of safe threshold
- ✓ **Toxicological assessment** of extractables and leachables and degradation products
- ✓ Risk assessment following **quality issues**
- ✓ Reviews of published literature of toxicological data and evaluation of **toxicological profiles**
- ✓ **In silico** predictions and **TTC** (Threshold of Toxicological Concern)
- ✓ **Biological evaluation** of medical devices performed according to ISO 10993-1 guidance

In vitro Biocompatibility

In vitro toxicology and **ADME** tests performed in Good Laboratory Practice (**GLP**) in a certificated laboratory since 2010

- ✓ **Toxicity studies**
 - Skin irritation and corrosion: OECD 439, OECD 431
 - Eye irritation: OECD 491, OECD 492
 - Skin sensitization: OECD 442 E, OECD 442D, EpicS -IL-18
 - Phototoxicity: OECD 432, RHE-EPA
 - Acute oral toxicity: OECD 129
- ✓ **Biocompatibility studies**
 - Cytotoxicity and Irritation potential evaluation of medical devices (Class I, IIa, IIb and III) on: Epidermis, Ft-Skin, Epithelia (oral, gingival, corneal, conjunctival, nasal, bronchial bladder, colon, oesophagus, vaginal) and intestinal models.
- ✓ **Pharmacokinetics/ toxicokinetics and ADME studies**
 - Skin absorption: in vitro method (OECD TG 428) and metabolism studies on:
 - Ex-vivo skin explants
 - Reconstructed 3D tissue Models: RHE, FT-SKIN, Epithelial models
 - Reconstructed 3D tissue Models with impaired barrier function
 - Bioavailability and bioequivalence
 - Metabolism and pharmacokinetics



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