Introducing VitroScreen research platform
VitroScreen is a privately owned, independent, international CRO.

VitroScreen aims to identify the most predictive in vitro testing strategy in each development stage of Pharmaceuticals, Medical devices, Cosmetics, Food supplements, Biocides, Plant Protection Products, Engineered nanomaterials, Chemicals & Mixtures.

VitroScreen has a quality-oriented approach to research studies and it is a flexible partner open to innovation challenges.

VitroScreen is a GLP testing facility for in vitro toxicology, pharmacokinetics, toxicokinetics & ADME studies.

VitroScreen is investing every year more than 25% of its revenues in research and has developed a large set of experimental models to assess safety and efficacy of ingredients and products.

VitroScreen boosts a robust laboratory know-how, an experienced team and a dedicated molecular biology platform.

History
- Farmacia Meloni opens in 1890 starting a story of science and innovation
- 2001: VitroScreen is founded by Marisa Meloni, PhD, PharmD, a pioneer in the use of living 3D human tissue models in life sciences
- 2002: VitroScreen’s first laboratory is established at Padua University, Department of Tissue Engineering
- 2007: VitroScreen research laboratories open in Milan
- 2010: First GLP certification
- 2013: A new, expanded office opens with a laboratory dedicated to tissue reconstruction and colonized tissue models production

Company profile

Mission: the reason for in vitro excellence
- To provide our customer with the best in vitro approach. Our technology platform and expertise are dedicated to increasing the predictive power and relevance of each in vitro assay and model.
- To implement validated alternatives in compliance to GLP and to introduce biologically relevant, reproducible and predictive in vitro models in life sciences.
- To apply Quality Assurance principles throughout each study and research project guaranteeing secured information management and providing in-depth reporting documents.

Technology platform and leading edge expertise
- 3D human reconstructed tissues models based on air lift technology
- Co-culture customized models
- Human cells isolation and culturing (monolayer and scaffold free microtissues)
- Colonized human tissues (class II bacteria)
- Histology, Immunohistochemistry, Immunofluorescence, Confocal Microscopy and Scanning Electron Microscopy
- Transcriptomics (Real Time PCR) and Proteomics (Western blot)
- Bioanalytical (partnered: HPLC-UV/DAD/MS Triple quadrupole, GC-MS, UPLC-MS Triple quadrupole); standard biochemical and immuno assays
- Scientific advisory services to identify the best in vitro testing approach, assuring in vitro excellence in research (FTE), testing services, patent applications, scientific publications and marketing needs

Pharmaceutical science: a family asset

Farmacia Meloni opens in 1890 starting a story of science and innovation. VitroScreen aims to identify the most predictive in vitro testing strategy in each development stage of Pharmaceuticals, Medical devices, Cosmetics, Food supplements, Biocides, Plant Protection Products, Engineered nanomaterials, Chemicals & Mixtures. VitroScreen has a quality-oriented approach to research studies and it is a flexible partner open to innovation challenges. VitroScreen is a GLP testing facility for in vitro toxicology, pharmacokinetics, toxicokinetics & ADME studies. VitroScreen is investing every year more than 25% of its revenues in research and has developed a large set of experimental models to assess safety and efficacy of ingredients and products. Vitroscreen boosts a robust laboratory know-how, an experienced team and a dedicated molecular biology platform.
Innovation in pharmaceutical science

VitroScreen offers reliable, innovative and robust in vitro standard and customized experimental models. These are applicable from drug discovery (medium throughput screening) to R&D needs, pre-clinical and regulatory studies.

- Dermatology and photo-dermatology
- Drug delivery
- Ophthalmology
- Respiratory
- Gastrointestinal tract
- Gynaecology
- Inflammation
- Wound healing
- Infectious diseases
- Side effects on body barriers and mucosae (systemic and topical exposure)
- Medical Devices (Class I, II, III) registration

A passion for skin health and beauty

VitroScreen’s team has more than 30 years of experience in the cosmetics industry. Based on 3D human living tissues and scaffold free micro-tissues, an ever increasing number of experimental models are developed to reach a mechanistic understanding of the skin’s biological response to product treatment.

VitroScreen’s experimental models give a predictive answer to the main targets of the cosmetics industry: skin barrier impairment and repairing, waterflux in homeostasis and stress conditions, photo-ageing, oxidative stress and photo-protection, atrophy and striae prevention, inflammation, immuno-response, skin’s microflora.

VitroScreen runs a safety screening based on the Multiple Endpoint Approach (MEA). The team has tested more than 500 products to confirm the relevance of MEA as a robust screening tool to achieve a predictive safety assessment on finished products, in compliance with the new European Cosmetics Regulation.
Mechanism of action of food supplements based on scientific evidence

The ‘mechanism based protocols’ developed by VitroScreen represent a unique tool to investigate the mechanisms of action of food supplements: to maintain the homeostasis and reduce risk factors. This preliminary mechanistic understanding of how food acts at the target organ can help designing the proper clinical investigations and substantiating patent applications.

VitroScreen identifies the mechanism of action of ingredients and mixture through its unique expertise in the use of intestinal models and 3D scaffold-free microtissues technology. They include: 3D μ-cartilage, μ- adipose, μ-bone, μ-liver, μ-dermis, immunocompetent gut model, intestinal inflammation and intolerance models.

Plants Protection Products

VitroScreen is part of AgriAlliance, a network of 6 GLP testing facilities offering a complete package of studies suitable to support the PPP registration dossier. AgriAlliance offers a novel approach to the market, based on centralized project management through a unique reference team, ethical and confidential approach, proven experience, optimization of the cost for project management, respect of the report delivery times and capability to provide real-time answers.

www.Agrialliance.net

Regulatory toxicology in GLP for ingredients classification

The regulatory framework in Europe (2010/63/UE) suggests a shift from animal testing to alternative approaches, including in vitro testing. This is particularly the case in Cosmetics (1223/2009/EC) and Chemicals regulations (REACH and CLP), and in the recent regulations on Plant Protection Products (1107/2009/EC) and Biocides (528/2012/EU).

VitroScreen is committed to in vitro science since 2001 and aims to be a partner to companies approaching in vitro alternatives to identify the most suitable and predictive in vitro testing strategy.

VitroScreen laboratories perform in compliance with GLP the following Replacement alternatives:

<table>
<thead>
<tr>
<th>END-POINT</th>
<th>EU VALIDATED REPLACEMENT ALTERNATIVES</th>
<th>TEST GUIDELINES</th>
<th>REGULATORY CLASSIFICATION</th>
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<tbody>
<tr>
<td>PHOTOXOTIC</td>
<td>OECD TG 432</td>
<td>OECD TG 432</td>
<td>PHOTOTOXIC</td>
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<tr>
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<td>OECD TG 431</td>
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<td>CORROSIVE</td>
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<td>IRRITANT</td>
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<tr>
<td>SKIN SENSITIZATION</td>
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<td>SENSITIZER</td>
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<td>OECD TG 438</td>
<td>OECD TG 438</td>
<td>EYE IRRITANT/SEVERE IRRITANT</td>
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<tr>
<td>EYE CORROSIVE</td>
<td>OECD TG 439</td>
<td>OECD TG 439</td>
<td>EYE CORROSIVE/SEVERE IRRITANT</td>
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<tr>
<td>PERCUTANEOUS ABSORPTION</td>
<td>OECD TG 440</td>
<td>OECD TG 440</td>
<td>DERMAL TOXICITY/PENETRATION</td>
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<td>CHEMICALS ACUTE ORAL LD50 &gt; 2000 MG/KG</td>
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"Le fils de l’homme" R. Magritte - 1964

"Arbre de vie tree" K. Haring - 1984