

Exploitation of microbial biodiversity for the discovery and development of novel cosmeceutical agents

The "MICROSMETICS" project

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In the framework of the newly funded FP7 Marie Curie Program "MICROSMETICS", an innovative scientific and technological platform has been built aiming to the discovery of novel cosmeceuticals originating from global biodiversity using emerging and state of the art technologies in the field of biotechnology, natural products chemistry and applied microbiology. More specifically, MICROSMETICS scientific concept involves the discovery of novel natural products originating from global microbial biodiversity. Already existing culture collections will be exploited incorporating modern high throughput platforms (*in silico* & *in vitro*) for the rational and targeted selection of the most promising strains. Advanced analytical approaches and techniques are applied for the efficient, accelerated and advantageous isolation and identification of natural constituents, as well as the quality assessment of the lead products. A broad spectrum of bioassays and novel analytical approaches are incorporated for the evaluation of anti-ageing, more specifically anti-oxidant, skin-protecting, and skin-whitening activity, of all derived products. Attention is given to the selection and optimisation of fermentation technologies used for the production of final products in order to ensure sustainability. Within this frame, core scientific knowledge and lead compounds for further development are expected to be produced creating valuable synergies.

