

**RESEARCH AND DEVELOPMENT**

**PILOTING AND INDUSTRIAL EXPLOITATION**

**WP2**

**Optimisation of study cases:**

ICRC, GRONINGEN, enGenes, UMG, ETHZ, Naicons, Biosyntia, Enantis

- Task 2.1. Kinetic and mathematical modeling
- Task 2.2. Experimental validation using microfluidic technology
- Task 2.3. Standardisation of the protocol

**WP3**

**Optimisation of cellular operations:**

UGOE, IP, GRONINGEN, enGenes, UMG, ETHZ

- Task 3.1. Construction of a 1stLMCs in B. subtilis
- Task 3.2. Construction of a 1stLMCs in E. coli
- Task 3.3. Iterative loop 1. Modification of cellular operations

**WP4**

**Constructing synthetic bacterial lipid rafts:**

CSIC, UGOE, IP, GRONINGEN

- Task 4.1. Develop a molecular toolbox to engineer synthetic lipid rafts in 1stLMCs
- Task 4.2. Iterative loop 2. Modification of lipid raft architecture
- Task 4.3. Construct and analysis of a 2ndLMCs containing synthetic lipid rafts for Pharma-SC
- Task 4.4. Construct and analysis of a 2ndLMCs containing synthetic lipid rafts for Cosmetics-SC
- Task 4.5. Construct and analysis of a 2ndLMCs containing synthetic lipid rafts for Feed-SC

**WP5**

**Characterisation of the resultant microbial chassis:**

ETHZ, CSIC, ICRC, UGOE, IP, GRONINGEN, enGenes, UMG, ETHZ, Enantis

- Task 5.1. Proteomics
- Task 5.2. Transcriptomics
- Task 5.3. Metabolomics
- Task 5.4. Data integration

**WP6**

**Translating results into industrial conditions:**

Enantist, CSIC, ICRC, IP, GRONINGEN, enGenes, Naicons, Biosyntia, Enantist

- Task 6.1. Basic techno-economic analysis
- Task 6.2. Laboratory scale-up process
- Task 6.3. Scaling up the process to 5L - 30L cultures
- Task 6.4. Process development for Pharma-SC
- Task 6.5. Process development for Cosmetics-SC
- Task 6.6. Process development for Feed-SC
- Task 6.7. Technical and economic evaluation

**WP7**

**Business case and exploitation strategy:**

Naicons, CSIC, ICRC, UGOE, GRONINGEN, IP, enGenes, UMG, ETHZ, Biosyntia, Enantis, Scienseed

- Task 7.1. Protecting IPR
- Task 7.2. Identify the industrial sectors that raft-based technology can make an impact
- Task 7.3. Introduce Pharma-SC, Cosmetics-SC and Feed-SC to the identified segments of the market
- Task 7.4. Making a niche to create a Spin-off company.

**TRAINING, DISSEMINATION & COMMUNICATION ACTIVITIES**

**WP8**

**Training and dissemination activities:**

IP, CSIC, ICRC, UGOE, GRONINGEN, enGenes, UMG, ETHZ, Naicons, Biosyntia, Enantis, Scienseed

- Task 8.1. Management of student training
- Task 8.2. Domestic dissemination of results
- Task 8.3. Academic dissemination of results
- Task 8.4. Industrial dissemination of results

**WP9**

**Communication and engagement activities**

Scienseed CSIC, ICRC, UGOE, GRONINGEN, IP, enGenes, UMG, ETHZ, Naicons, Biosyntia, Enantis

- Task 9.1. Global communication
- Task 9.2. Engagement

- WP1 Task 1.1 Task 1.2 Task 1.3
- WP2 Task 2.1 Task 2.2 Task 2.3
- WP3 Task 3.1 Task 3.2 Task 3.3
- WP4 Task 4.1 Task 4.2 Task 4.3 Task 4.4 Task 4.5
- WP5 Task 5.1 Task 5.2 Task 5.3 Task 5.4
- WP6 Task 6.1 Task 6.2 Task 6.3 Task 6.4 Task 6.5 Task 6.6 Task 6.7
- WP7 Task 7.1 Task 7.2 Task 7.3 Task 7.4
- WP8 Task 8.1 Task 8.2 Task 8.3 Task 8.4
- WP9 Task 9.1 Task 9.2

