The newly funded ConCO2rde (www.conco2rde.eu) project is a Marie Skłodowska Curie Innovative Training Network (EJD). ConCO2rde aims to develop processes for the utilization of renewable resources by CO2-fixing microorganisms. The ConCO2rde EJD will train 11 ESRs in cutting edge research projects on

- the combination of synthetic biology approaches with metabolic and process engineering to create an efficient route from CO2 fixation to the production of chemicals,
- H2/CO2/O2-based fermentation and process intensification in order to optimize commercially relevant processes together with industry,
- defining a road-map for the industrial implementation of autotrophic biotransformations.

The ConCO2rde consortium consists of one translational institute, six universities, nine industrial partners and one cluster, providing the ideal environment to foster complementary expertise in synthetic biology, metabolic engineering, biocatalysis, process engineering and analytics. As a double degree program, the EJD allows 11 ESRs to explore two of these disciplines in-depth and collaborate with scientists from the other fields, which would be very difficult to realize otherwise. ConCO2rde thus provides a critical mass and a carefully selected consortium for a successful innovative implementation of processes utilizing H2 as energy-source for (bio)catalytic reactions, and CO2 as exclusive carbon source, which will stimulate progress on the way to improve sustainability implementing ‘Green Chemistry’ in the chemical industry, a key sector in Europe.

This pioneering EJD program will train the first generation of scientists in autotrophic biotransformations with skills in synthetic biology, enzyme catalysis and process engineering to address the development of most advanced gas-driven whole-cell reactions for chemical manufacturing at large scales.

Following positions are offered at INSA Toulouse (France):

- **ESR8: Impacts of high pressure for efficient biomolecules production from CO2: from reactor design to microbial physiology (WP3)**
  1st Supervisor: Prof. Dr. Stéphane Guillouet
  2nd Supervisor: Prof. Lars M. Blank
  Location: INSA Toulouse, France

- **ESR9: Impact of gas delivering membrane systems on the production of biomolecules from CO2: from reactor design to microbial physiology (WP3)**
  1st Supervisor: Prof. Dr. Stéphane Guillouet
  2nd Supervisor: Dr. Regina Kratzer
  Location: INSA Toulouse, France

- **ESR10: Dynamic analysis of subpopulation distributions of engineered C. necator for biomolecules production from CO2: determination of the strain robustness under the constraints of gas fermentation (WP3)**
  1st Supervisor: Prof. Dr. Nathalie Gorret
  2nd Supervisor: Prof. Robert Kourist
  Location: INSA Toulouse, France

Please contact Stéphane Guillouet (guillouet@insa-toulouse.fr) for informations.