



CarbaZymes: Enzymatic C-C bond formation with a sustainable and economic industrial focus

On the 2nd and 3rd of June 2016, the Autonomous University of Madrid (Spain) hosted the **Progress Meeting** of the H2020 **CarbaZymes** project (www.carbazymes.com). Altogether, 40 researchers representing 6 innovative SME's, 1 industry leader in specialty chemicals and 7 outstanding academic and research organizations from 5 European countries participated.

CarbaZymes is developing advanced methods of biocatalysis using enzymes and microorganisms to catalyze organic synthetic reactions under mild and more sustainable reaction conditions. Carbon-carbon bond forming reactions are key steps in various industrial processes that construct molecules of high value. With a focus on innovation, application and scalability, **CarbaZymes** has a genuine practical vision. Its goal is to produce much in demand Active Pharmaceutical Ingredients (API's) and bulk chemicals, up to the level of demonstration activities planned for large-scale synthesis implementations under industrial settings. The CarbaZymes outcomes will make a significant social and economic impact, by responding efficiently to the needs of an increasing and aging population and by addressing markets worth billions. Moreover, the **CarbaZymes** project aims to strengthen the global competitiveness of European biotechnology.

During the meeting, successful results were discussed, with outcomes such as the identification of novel enzymes, the optimization of biocatalytic reactions, or the set-up of enzymatic cascades for potential applications. The Consortium's cutting-edge approach was also demonstrated by three **CarbaZymes** partners, including The Spanish National Research Council (CSIC), the Technical University of Darmstadt and the SME Sustainable Momentum SL, who have already filed a patent application for a process that is valuable for industrial production. Likewise, other partners are proceeding with patenting of further processes as well. Once IP is secured for future exploitation and value generation, dissemination activities of **CarbaZymes** come into play. Several publications of the consortium are also in preparation and will be published shortly in high-ranked scientific journals.