

Engineering Life Conference 2015 in Dresden: Synthetic Biology meets Bioinspired Materials

Dresden. The Engineering Life Conference 2015, jointly organized by the B CUBE Center for Molecular Bioengineering at TU Dresden and the Max Bergmann Center of Biomaterials at the Leibniz-Institut für Polymerforschung Dresden together with the Wyss Institute at Harvard University, Cambridge (USA), demonstrated how progress in synthetic biology can redesign biological systems to address major technological challenges.

The symposium aimed to provide a thorough overview of current advances in ‘top-down’ and ‘bottom-up’ synthetic biology, and established a link to the latest developments in the field of materials synthesis for health and other applications.

From 29 September to 1 October, leading researchers from all over the world met in Dresden reporting recent findings and discussing future perspectives of these two highly active research fields. Highlights included, for example, lectures by Matthias Lutolf (EPF Lausanne, Switzerland), who described new options of synthetic cell-instructive hydrogels to direct organogenesis *in vitro*, and Claudia Fischbach-Teschl (Cornell University, Ithaca, USA), reporting models to decipher extracellular matrix cues in tumor formation and metastasis.

Roy Bar-Ziv (Weizmann Institute of Science, Rehovot, Israel) fascinated the audience with programmable on-chip DNA compartments as artificial cells, and Wilfried Weber (University Freiburg) provided impressive insights into the application of smart biohybrid materials at the interface of synthetic biology and chemistry.

The Max Bergmann Center of Biomaterials unifies researchers from the Institute of Materials Science at TU Dresden and the Leibniz-Institut für Polymerforschung Dresden working on biology-inspired materials. B CUBE, Center for Molecular Bioengineering at TU Dresden, is a BMBF Innovation Center (ZIK) focusing on the investigation of living structures on a molecular level, and on translating the ensuing knowledge into innovative technologies.

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