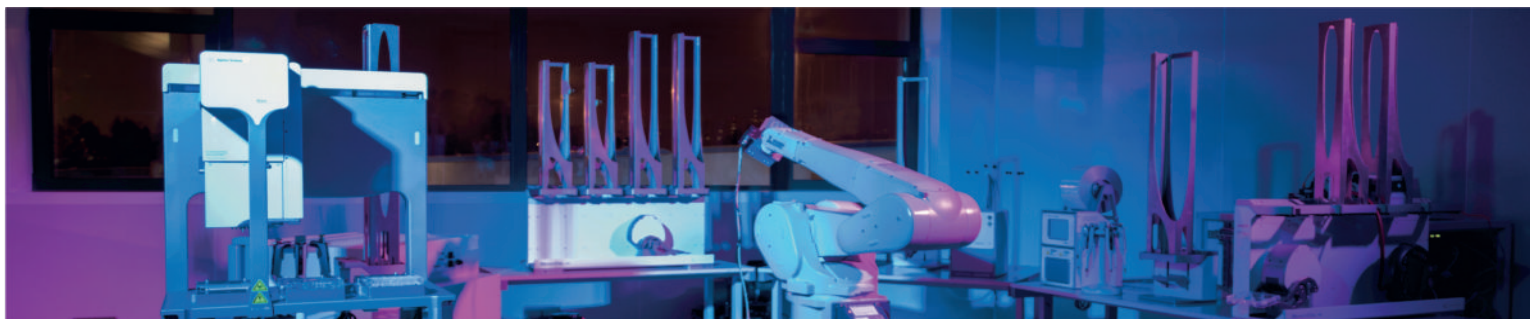


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PROJECTS

Reference Project 1

The EPICELL project is carried out within the framework of a strategic Polish governmental program for finding new opportunities in regenerative medicine (STRATEGMED program). The main scope of EPICELL is determination of the epigenetic small molecule cocktails (cell media formulations) for reprogramming the myoblasts derived from myocardial post-infarction patients into iPSC and next toward cardiomyocytes. This research was supported by the National Centre for Research and Development (NCBR), Poland (STRATEGMED1/233624/5/NCBR/2014).

Reference Project 2

The PLANTVIR project is aimed at the plant biotechnology data mining and optimization of the bioprocesses by automatic search for optimal physicochemical conditions for transient viral expression in liquid bioreactor plant cultures. The obtained models will find application in molecular research on viral infection for using *Agrobacterium*, expression systems as well as in the production of recombinant proteins in bioreactor plant cultures. This project was financed by National Science Centre (NCN) of Poland under grant no. DEC 2013/09/D/NZ1/03364.

THE SOFTWARE

We developed closed-loop high-throughput combinatorial system for solving different biological problems. HTS robotics supported by genetic algorithms have been used, as they offer efficient exploring multidimensional search space and a realistic possibility of determining key factors and exploring their mutual interactions.

THE FUTURE

We will implement artificial intelligence system into the high-throughput combinatorial screening protocols and develop multiplexing imaging probes and assays for more reliable monitoring of biological activity in animal and plant cell models.

