

Supplement to Synthetic Biology as a New Opportunity for Multidisciplinary Undergraduate Research

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Table 1: Growth of the iGEM Jamboree since 2004, and examples of undergraduate synthetic biology research projects presented.

Year	Undergraduate Participants	Teams	Countries Represented	Exemplary Projects
2004	30	5	1	University of Texas, Austin unveiled its biological photographic film, an exciting early result that brought publicity to synthetic biology and iGEM (Levskaya, et al, 2005).
2005	100	13	4	ETH Zurich designed a genetic circuit that allows bacteria to count, and the Toronto team designed a “Bacterial Etch-a-Sketch” based on the Lac operon.
2006	400	37	14	Slovenia reprogrammed the response of mammalian immune cells to bacteria, creating a type of artificial immunotolerance that could be useful in the treatment of sepsis. The Edinburgh team built a genetic circuit that enables bacteria to sensitively detect arsenic levels in drinking water.
2007	750	54	19	Princeton University used synthetic biology to direct the differentiation of mouse embryonic stem cells into insulin-producing pancreatic cells. The University of California, Berkeley team worked toward the development of bacteria as a cost-effective replacement for red blood cells.
2008	825	84	21	The Harvard team built an inducible system by which bacteria can produce electrical current. Students from Taipei, Taiwan, designed a “Bactokidney” system that would enable bacteria to attach to the small intestine, clear metabolic waste, and detach.