



BioBricks
FOUNDATION

SB5.0: The Fifth International Meeting on Synthetic Biology

Stanford University, June 15 – 17, 2011

The SBx.0 Series

The BioBricks Foundation envisioned the SBx.0 international conference as an event that would bring together the then-nascent community of biological engineers who were utilizing DNA to build biological systems and bringing engineering principles to bear on biological problems. Inaugurated with SB1.0 in 2004 at MIT, the series was followed by SB2.0 at University of California, Berkeley, SB3.0 at ETH, Zurich, and SB4.0 at Hong Kong University of Science and Technology.

Over 1,500 researchers from more than 18 countries attended the four previous conferences, which included presentations of cutting-edge biotechnologies and discussions to place the research within its current and future social context, including

issues of biosafety, biosecurity, bioethics, and intellectual property.

The series uniquely connects academic, government, and industrial researchers and students from a variety of disciplines, including engineering, molecular biology, computer science, biochemistry, biophysics, industrial biotechnology, biosecurity, environmental sciences, public policy and bioethics. This interdisciplinary gathering facilitates interactions between the researchers and others in support of the work and continues to build the community of biological engineers.



BioBricks Foundation

The non-profit BioBricks Foundation is a global community of engineers and scientists who believe that synthetic biology is pivotal to solving many pressing problems facing mankind. Engineering biology using traditional research conventions and protocols is unnecessarily complex and expensive, taking decades to yield solutions. By making it easier, safer, and more affordable, we can accelerate the pace of innovation, collapse development timelines and speed time-to-market of inventive synthetic biology-based solutions. To achieve this, the fundamental building blocks of synthetic biology must be freely available for open innovation so biotechnologists can easily tap into existing tools, exploit known technologies, and collaborate with others to build inventive solutions with greater speed and efficiency. Our pioneering focus on standardizing biological parts is producing results even at our embryonic stage: BioFab, one of our early key programs, is now producing the first standard biological parts.

A model enabled by a sophisticated infrastructure of programs and initiatives and a highly engaged global community of biotech professionals with common values and shared goals is a revolutionary concept in biotechnology. We're essentially infusing biotech research with an engineering mindset: Instead of developing one solution for one particular near-term application, we're encouraging the development of foundational tools that can be used to develop solutions for myriad applications. This solutions-driven research model is optimized for efficiency, scalability and cost advantages.



We're also the only organization actively developing industry standards for biotechnology, and with the success of SBx.0, have staged the world's first professional conference solely dedicated to synthetic biology.

We support non-profit and for-profit development activity. We believe that making the world a better place AND making money don't have to be mutually exclusive.



We cherish integrity, honesty and inclusiveness. While these core values inspire big thinking and a healthy cross-fertilization of ideas, we believe they are absolutely imperative for engineering biology to be conducted ethically and safely.

BBF Vision

To ensure that the engineering of biology is conducted in an open and ethical manner to benefit people and the planet.

BBF Mission

We are dedicated to advancing synthetic biology to benefit people and the planet. To achieve this, we must make engineering biology easier and more affordable. We'll do this in the following ways: by ensuring that the fundamental building blocks of syn-

thetic biology are freely available for open innovation; by creating community, common values and shared standards; and by promoting biotechnology in the public interest.

Conference Chair Drew Endy

As one of the leaders in the field of synthetic biology, Drew Endy's work continues to shape and drive development of the field, both in the creation of BioBricks standard parts and on the human side of the field. Drew earned degrees in civil, environmental, and biochemical engineering at Lehigh and Dartmouth. He studied genetics and microbiology as a postdoc at UT Austin and UW Madison. From 1998 through 2001 he assisted with development of the Molecular Sciences Institute, an independent not-for-profit biological research lab in Berkeley. In 2002, he became a junior fellow in the Department of Biology and the Biological Engineering Division at MIT; he joined the MIT faculty in 2004. Drew co-founded the MIT Synthetic Biology working group and the Registry of Standard Biological Parts, and organized the First International Conference on Synthetic Biology. With colleagues he taught the 2003 and 2004 MIT Synthetic Biology labs that led in 2004 to the organization of iGEM, the international Genetically Engineered Machine competition; student teams from 130 schools worldwide competed in iGEM 2010. In 2004 he co-founded Codon Devices, Inc., a venture-funded startup that is working to develop next-generation DNA synthesis technology. In 2005 he co-founded the BioBricks Foundation. In 2008, he became an assistant professor in the Department of Bioengineering at Stanford University. Drew's research interests are the engineering of integrated biological systems and error detection and correction in reproducing machines. Drew was recently named to the NAS/NAE/IOM Committee on Science, Technology, and Law.



Sponsors

SB5.0 is sponsored in part by DSM, New England BioLabs, and SynBERC. Additional sponsorship opportunities are available.

SB4.0 sponsors included Bioneer, the Croucher Foundation, CMEA Ventures, Codon Devices, and many more.



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Visit <http://sb5.biobricks.org> for additional information about the conference schedule, speakers, registration and lodging.

For more information, contact us at sb5-info@biobricks.org