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Laurie J Heyer* (l^ahey^er@davidson.edu), Box 6959, Davidson, NC 28035-6959, and **A. Malcolm Campbell**, Box 7118, Davidson, NC 28035. *Computing with Bacteria: The New Wave of Synthetic Biology*. Preliminary report.

A new and rapidly growing subfield of biology known as synthetic biology advocates an engineering approach to understanding and designing biological systems. Interdisciplinary teams of undergraduates present their work in this field in the international Genetically Engineered Machines competition at MIT each November. Davidson College has competed for two years, designing and modeling an E. coli based digital display and a simple computer to solve a variation of the pancake problem posed by Jacob Goodman in the American Mathematical Monthly in 1977. (Received September 19, 2006)