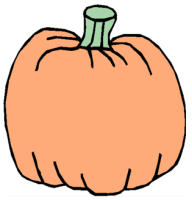

BE NEWSLETTER

• November 2007 •

BE Sports scorecard

B league tennis: Captain James Mutamba
record: 3-2
A league tennis: Captain Hide Saito-Benz
record: 4-1-1; First in the league!
grad league football: Captain Ty Thomson
record: 1-2
B league soccer: Captain Robbie Barbero
record: 1-1

Upcoming Events

Nov 14: BATS: Philip Dextras
Nov 15: BE Seminar: Brian Duling
Nov 20: ISS: Alexis Borisy, CombinatoRx
Nov 28: BATS: Michael Murrell, Mikhail Shapiro
Nov 30: Wine Tasting TGIF @ Tech Square
Dec 5: BATS: Paul Huang, Eileen Higham
Dec 6: BE Seminar: Gavin MacBeath
Dec 12: Paul Kopesky
Dec 14: Holiday Party @ MIT Museum

• Meet the first years! •

Stephen Goldfless

Hometown: Boston, MA

MS and BS in biochemistry, Brandeis University

Research interests: Metabolic engineering, synthetic biology, industrial biotechnology, microbiology

Hobbies: Cooking, baking, eating, zymurgy, oenology, softball, racquet sports

Bryan Owens

BS MIT, Mechanical Engineering

Research Interests: Tissue Engineering, Cell Signaling, Systems Biology

Hobbies: Triathlon Training, Independent Films, Traveling

Rachel Hillmer

Hometown: Atlanta, GA / Urbana, IL

BS Physics, University of Illinois at Urbana-Champaign

Research Interests: Molecular chemistry and Information theory as relevant to Systems & Synthetic biology; developing new measurement tools for biology, (among many other interests).

Hobbies: Skydiving, Painting

• 2007-2008 BE Board •

Back row: Jamie Spangler, Sonia Timberlake, Scott Carlson, Robbie Barbero, Chris Pirie, Ta Hang, Shan Wu, Venky Soundararajan, Luke Robinson. Front row: Rachel Miller, Lorenna Lee-Houghton, Ranjani Krishnan, Alice Lo, Robin Prince.

Recent Science News:

--New analysis of 25-year-old blood samples indicates that HIV reached the United States in about 1969, 12 years before AIDS was first formally described.
--Two species of small, little-known rain forest mammals may be primates' closest living relatives.
--The ability of newts to regenerate severed limbs depends crucially on a protein released by the insulating sheath around nerves.
--A special type of French clay smothers a diverse array of bacteria, including antibiotic-resistant strains and a particularly nasty pathogen that causes skin ulcers.
--An immense volume of ice-rich material may underlie a formation that extends about one-quarter of the way around Mars' equator.
--Manipulation of receptors on blood vessels may help combat sepsis, an often fatal condition.
--Two new fossil discoveries and an analysis of ancient teeth challenge traditional assumptions about ape and human evolution.
--Cheaper than a typical hydrogen fuel cell, a new, platinumfree cell runs on a "green" liquid fuel.

adapted from : Science News Online.

--DNA analysis indicates that some Neandertals may have had a gene for pale skin and red hair.
--An innovative printing scheme makes three-dimensional photonic crystal structures that could be used to control the flow of light.
--In experiments that created the heaviest isotope yet of magnesium, an unexpected isotope of aluminum also showed up.
--The discovery of a black hole almost 16 times as massive as the sun, and the possible discovery of an even heavier one, challenge theories of how such black holes form.
--A new polymer membrane that efficiently separates carbon dioxide from methane could greatly ease the processing of natural gas.
--Loss of nitric oxide from donated blood that's been stored for as little as 3 hours could impair its ability to flow through a recipient's blood vessels.
--Children whose stomachs carry the bacterium Helicobacter pylori are at lower risk for asthma than children who don't have the bug.
--Common songbirds such as starlings may be able to carry and spread avian influenza.
--Snippets of RNA that regulate gene activity play a role in muscle-wasting diseases such as muscular dystrophy.

The **2007 International Genetically Engineered Machines Competition** culminated in the iGEM Jamboree held at MIT's Stata Center November 3-4. Over fifty teams from around the world presented a diverse and amazing range of projects, where the only restriction was the use and engineering of DNA parts (BioBricks). The 2007 MIT team (composed of 5 MIT freshmen and 1 sophomore) worked towards developing a bacterially-based filter which detects and removes mercury from contaminated water. The team was advised by a number of BE grad students as well as professors Drew Endy and Tom Knight. Other amazing systems presented at iGEM involved bacterial blood (UC Berkeley), HIV defense (Slovenia), multicellular bacteria (Paris), and even self-flavoring yoghurt (Edinburgh). The overall grand prize went to Peking University for their systems which allow bacteria to both count and function as a bistable switch. For more information on the 2007 iGEM competition see www.igem2007.com

Undergrads:
Aditya Kohli (BE)
Bernice Huang (BE)
Jessica Ho (BE/Phys)
Semmie Kim (BCS)
Alex Lue (BE)
Toan Tran-Phu (EECS)

BE Grad Advisors:
Robbie Barbero
Brian Cook
Rana Ghosh
Hyung-Do Kim
Eric Krauland
Laure-Anne Ventouras
(with lots of help from members of the Endy Lab!)

Faculty Advisors:
Drew Endy
Tom Knight

get informed and get involved! www.openwetware.org/wiki/BE_Board