Meeting minutes
Bootcamp day 1
5/24/10

Stuff to talk about:

Weekly fundraiser:

ideas: T-shirts, Puppy chow, recycling printer cartridges, donate plasma…organs…, car wash, make a band, pizza sales, grilled cheese.

Positions:

keeping track of lab hours: spreadsheet on google docs, input number of hours and at the end of the week, a couple of sentences about what you did that week. Also a sheet of paper in the lab to sign in and sign out.

goals, structure:

weekly meetings with the professors on Friday
be done with decoder by second week of June, have it tested, modeled by end of June.
submit project description by June
submit abstract by August
spend next 2.5 weeks figuring everything out, research, design project. Sequences we'll need for each plasmid in the metals project.
for full timeline, see googledoc.

lab notebooks—record keeping, wiki editing

keeping the notebook: keeping notes in triplicates—in-lab notebook in as much detail as possible. Lab notebook needs EVERYTHING. As much info as possible. Title, procedure, materials, date, time, initial at bottom. Kit used, concentration, etc. Label every lane in the gels. Always take a picture of the gel, put it in the in lab notebook. Save a copy on the computer. In your own notebook, format however you want, general notes. Notes will also be kept on the wiki, daily log. Not very extensive, but general info. Ie: I did a transformation today, it worked, or it didn't work.
wiki: Matt types the info from the in-lab notebook into the wiki.

where we're at with last year's project:

Past iGEM projects:

Metals:
Denmark 2009
cornell 2009—cadmium sensor in bacillus
Groningen 2009—cell that accumulated arsenic, floated when arsenic present.
Newcastle 2009—bacillus cadmium sensing, and gate. Metallothionein binds cationic metal ions.

Seoul 2009—promoters for different metals.
Tokyo Tech 2009—iron oxidizing bacteria. Takes iron ore, brings into cell.
UQ Australia 2009—take a look at this one. Used e. coli to take up mercury. They have the pathway mapped out. Good documentation. Also did something with bioprecipitation.
Virginia 2009—Arsenic accumulation
Imperial 2008
LCG UNAM Mexico 2008
METU Turkey 2008
Prarieview 2008
St. Petersberg 2007
Brown 2007
MIT 2007
Prarieview 2007
Turkey 2007
Edinburgh 2006
Latin America 2006

RNA
British Columbia 2009
Bologna 2009
Victoria BC 2009
Alberta 2008
KLeuven 2008
TUDelft 2008
Virginia 2008
Berkeley 2006

groups: half on decoder, half on metals. Matt, Steve, Francis, Bob on small RNAs. Amanda, Tom, Meagan, Erin on metals.

use transcription factors and small RNAs to make the decoder work.

Other notes:
everyone gets 2 weeks vacation.

synthesizing vs. cloning genes out:
build a schematic of what we want to do.
need transporter protein, metal chelator/sequesterer.
gold and silver—not finding a lot of info. May have to make the pathway ourselves. Expensive
Mercury—past iGEM project
Iron—easy
Nickle

What we did:

came up with things to discuss
read papers (check email for papers)
research on possible metal pathways

In lab procedure:

miniprep—biobrick number on top of tube, date, concentration on the side of the tube. Initials if room.
digestion with restriction enzymes. See online instructions from gingobioworks website. Make sure to add enzymes last.
incubate
ligation—add ligase last.
incubate
transformation (electroporation)
Selection
Assays

Miniprep and colony PCR

Put parts in registry as practice.

Find something to reduce or oxidize a species