

**EDUCATION COMMITTEE MEETING**  
**Tuesday, June 14, 2005**

**In Attendance:** Doug Auld, Debbie Chachra, Helen Donis-Keller, John Dunlop, Richard Eglen, Ralph Garippa, Kat Harrison, Meina Liang, Richard Miller, Christian Parker and Terry Riss

**Not in Attendance:** Lisa Minor

Agenda:

- Welcome and introductions to the faculty of Franklin W. Olin College of Engineering
  - Overview of Olin' college interest in developing educational modules in drug discovery
  - Overview of Survey results and strategies
  - Discussion on possible collaborations
- Review of Action Items from last meeting
  - Introduce database
  - Kinase focused course
- SBS 6<sup>th</sup> course

Discussions in the order they were held...

Welcome and introductions to the faculty of Franklin W. Olin College of Engineering

Overview of Olin' college interest in developing educational modules in drug discovery  
SBS meeting with Olin College is a result of Dr. Bojanic's visit. Olin College is unique because engineering is great preparation for all careers, there's no tenure, there are full merit scholarships, there are no academic report cards, etc. 2006 will be the first class of Olin College with 300 students. The average SAT score of a student is 1500, it's 50 % female and 50% male, a lot of the graduates have already taken their MCATS and are interested in life sciences so will pursue Med School.

Overview of SBS

Gave an overview of the SBS meetings, not just screening – Drug Discovery, etc. The Education Committee is fairly new this year and they are looking to provide a curriculum.

Overview of Survey results and strategies

SBS Members of Academia and Pharma brought together with similar studies. The results show that Label Free is emerging, the classic courses are still popular: Bio Chem Assays and other Assays, Patents and Data, etc. Consider how to put a curriculum together with given information. Kinase is a key interest to build a curriculum around. Find a way to present the whole Drug Discovery process from early phase technologies and methodologies. They are in the early phases right now with ideas for developing short courses, day courses, etc.

Discussion on possible collaborations

Olin's mission is to produce students with bachelor's degree and to either continue their education or get jobs. What do engineers need to know about life science? All students are currently required to take bioscience. Engineers have the same applied sciences courses as physics. The difference between the two are the questions they ask themselves – engineers ask why not as opposed to why. There will be a shift in Olin to prepare with a deeper understanding of literature and life sciences; they're looking for advice from outside people for courses to build in.

Some suggestions from SBS about early liquid phase are important in Drug Discovery, especially working with engineers. HTS is an important part as well for bio. Some intro courses to detections, liquid handlers and technology to develop – course would be great for bio engineers, ideally hands on, which are not typically offered. Gave a brief overview of NIH.

Discussed the hiring process of bachelor level people that come with a solid understanding of biomolecular bio, but no exposure to HTS. Not many academics have this exposure, though NIH is only just beginning with an intro course that is very useful. Offered the idea of a field trip for students to be able to see the equipment, even hands on would be a great opportunity.

Olin has been thinking about collaborating with bio, since most of their students haven't taken a course in biology since 9<sup>th</sup> grade. They'd like to try and introduce some into their courses, guest lectures, or field trips.

SBS recommends speakers or visiting companies with engineers like Solomics. Guest lecturers could speak on areas such as:

- Introduction to HTS

- DNA and Protein chip-based assays

- System biology

- Maintenance and handling of cells

- Introduction to HTS automation/robotics

- Computational (*e.g.* databases, cheminformatics) issues in HTS

- Invite engineers/scientists who have started companies (*e.g.* Richard Archer, Peter Coassin, others) for perspective on the field.

Question posed about acquiring SBS directory. Easiest way would be someone from Olin to become a member. Kat offers copies of Virtual Seminars if they do as well as CDs from the annual conference, which will be available 4 weeks after the conference. Suggest Olin networking with SBS, because many pharma companies get rid of machines and sell to academic places to further the foundation of their coursework. If Olin invests in guest lecturers they could video tape them and SBS could use in archives. Suggest holding a Regional Meeting at Olin to get an idea of what they'd be doing and faculty could advance their programs. It is suggested that LRIG (Laboratory Robotics Interest Group) to see the automation equipment and a lot of vendors that SBS works with.

Review of Action Items from last meeting/Introduce database

Add names to database and make notes of contacts.

### Kinase focused course/SBS 6<sup>th</sup> course

Suggested to put together the best collection of courses and maybe offer a certificate. Discussed future compound management course (storage retrieval, library management, rational vs. random library design). As for the 6<sup>th</sup> course two out of the 5 short courses already being offered are cell based. Michelle was trying to pursue a 6<sup>th</sup> course in compound screening and stats, but it didn't work out. So it is decided it's too short notice to do a 6<sup>th</sup> course this year, but to give Michelle any ideas on who or what for next year. It is suggested not to hold the free workshops at the same time as the short courses.

### Action Items

- *Fill out matrix below for kinase course for discussion next TC.*

### Kinase Focused course

Speaker	Overview kinase drug discovery pharmacology	Target ID	Assay Dev.	Cell-based	Biochemical	Chemical Libraries/ infrastructure	Primary Screening	Lead Opt. Profiling	Clinical Trials
Michael Yaffe (MIT)		X	X						
Dave Diller (PCOP)						X			
Paul England	X								
D. Fabio (Novartis)	X	X							
Salvatore V. Russello				X				X	
J.Tsai (Plexxikon)						X			

- *Once completed think about how to implement online into full course, etc.*
- *Think of ideas of additional modulars, etc.*