**From:** Leon Yim
**Sent:** Tuesday, May 12, 2015 11:36 AM
**To:** Carter, Sarah
**Subject:** Synthetic Biology policy questions from Taipei American School

Dear Dr. Sarah R. Carter,

We are a high school genetic engineering team from Taipei American School and our team is involved in iGEM, an annual synthetic biology competition. This year, our project aims to design a biological system in the bacteria *E. Coli* to tackle chronic inflammation in arthritis and epithelial wounds by inhibiting a specific enzyme (Granzyme B).

One major criteria for our project at iGEM is participation in a category called "policy and practice", which is a track that aims to stimulate innovative ways of thinking about the policy, economic, social, legal, and philosophical landscape of synthetic biology. Students participating in this track are developing skills and tools that will help them prepare as synthetic biologists for the world they're working in, and help the world decide how it might best make use of synthetic biology in the fields of pharmacy and healthcare.

With your involvement with the National Science Academy Committee on Science, Technology, and Law (CSTL) meetings, your input would be valuable for our policy and practice discussion. Our aim is to investigate how biopharmaceuticals, made via synthetic biology, could become available to a wide variety of the people, at an affordable cost. As a synthetic biology team, we envision the future of biopharmaceuticals to be highly effective and personalized method in treating diseases. We yearn to create a successful product for the maximum amount of people - but we understand that it requires a successful business with a good business model. Therefore, we would like to hear your opinions on the regulatory, R & D, advertising and supply chain aspects of making and distributing biopharmaceuticals. We believe there is a problem with current, traditional pharmaceutical industry because not enough people are able to afford the very best drug treatments on the market.

Would you please take a moment to answer the following questions regarding making biopharmaceuticals available to a wide range of people compared to traditional chemical pharmaceuticals.

1) What more should the government be doing to encourage the development of synthetic biology and biopharmaceuticals?

2) What are the main obstacles to getting biopharmaceutical treatments to market, and what, if any policy changes should be made to the regulatory environment to get these treatments to market?

3) What, if anything, should the government do to increase the accessibility of biopharmaceutical treatments to the public?

4) To what extent is a supply gap impending for biopharmaceutical treatments? And what, if any steps should governmental, academic and corporate actors take to insure that supply meets demand?

5) Given recent public concerns regarding issues of consuming GMO's, what if any steps should corporations, universities, and governments take to make syn bio treatments more attractive to the public?

Thank you for your time and consideration,

Sincerely,

Leon Yim
Project Leader
Taipei American School iGEM team