

## Intro to public lecture / Roger Beachy / Oct 22, 2007

Prof. Steve Strauss, OSU

Together with Professor Mary Jo Nye, the series co-organizer, it is our pleasure to welcome you to tonight's lecture, the first in our year-long series on history, technology, and gastronomy of food and related agricultural issues. The lecture series is co-sponsored by the Horning Endowment in the Humanities and the OSU Outreach in Biotechnology Program, with support from the Wait and Lois Rising Lectureship Fund. It continues the two separate lecture series that these programs have put on at OSU for several years on the history, technology, and societal reactions to new forms of science and technology—particularly in the biological and agricultural sciences.

The next lecture in the series will be on November 8th, when we will hear from Professor Rachel Ankeny of the University of Adelaide in Australia talk on the new forms of “molecular gastronomy.” On November 15th Professor Gary Marchant from Arizona State will discuss the daunting challenges to national and international legal systems in trying to regulate the fast evolving food biotechnologies.

We are extremely fortunate to have Dr. Roger Beachy speaking to us tonight. We have been trying to get him here for nearly two years, and his extraordinary speaking and travel schedule, which includes many international trips to Africa and elsewhere, has made scheduling a visit extremely difficult. I cannot tell you how many emails it took to get it all settled.

Dr. Beachy got his PhD at Michigan State University, did postdoctoral work at Arizona and Cornell, and has held academic positions at Washington University in St. Louis, and at The Scripps Research Institute in La Jolla, California where he was co-founder of the International Laboratory for Tropical Agricultural Biotechnology. He has published more than 200 peer reviewed scientific publications, and more than 50 invited book chapters. He is a member of the U.S. National Academy of Sciences, and has received a number of scientific awards, including the Wolf International Prize in Agriculture.

Dr. Beachy is internationally known for his work in molecular virology and development of transgenic plants that are resistant to virus infection. His early research is credited with leading to the development of the world's very first genetically modified food crop, a virus-resistant tomato.

Dr. Beachy is the current and founding president of the non-profit Danforth Plant Science Center in St. Louis. The mission of the Danforth Center is no less than “to improve the human condition.” Research at the Danforth Center focuses on “enhancement of the nutritional content of plants to improve human health, [and to] increase agricultural production to create a sustainable food supply...” As Director he oversees 18 principal investigators and a total 20 staff. The research there is diverse, and ranges from the fundamental to the applied, such as studies on reduced allergens and nutritionally improved oils, to analyses of the fundamental mechanisms by which plants resist disease and their roots take up nutrients from soil.

The Earth's population continues to grow rapidly in the developing world—putting severe pressure on its ecological systems, particularly its soil, water and climate. The development of genetically improved crops that are rich in carbohydrates, proteins, and vitamins—while also resistant to pests and climatic stresses—is a major tool for improving the economics and sustainability of agriculture. The genetic science, now informed by the ongoing revolutions in genomics and biotechnology, provides many new options for progress that were not conceivable even a short time ago. However, whether the science has the power to significantly help in dealing with the scale and pace of environmental degradation and human need, and whether societies will provide the milieu—including the needed investment and legal environment—to permit the innovations to be employed on a scale that matters, is unclear.

In tonight's lecture, which is entitled: *Fulfilling the Promise of Crop Biotechnology for the Poor in Africa: Challenges for Science & Society*, Dr. Beachy will explore these issues in the context of Africa and its pressing humanitarian and ecological problems.

Please join me in welcoming him to OSU.