COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

THE EARTH INSTITUTE

CENTER ON GLOBALIZATION
AND SUSTAINABLE DEVELOPMENT

PROGRAM ON SCIENCE, TECHNOLOGY AND GLOBAL DEVELOPMENT

April 22, 2004

Dear Colleague:

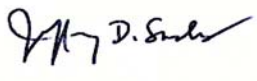
This year Columbia University launched a major new Program on Science, Technology and Global Development, under the leadership of Richard R. Nelson. As an initial result of this effort, we are hosting a major workshop this May 20-21, on the question of how to improve the institutions that govern technology development in pharmaceuticals and agriculture.

We are very pleased to invite you to participate in this important event, which will provide an unusual opportunity to showcase and debate a number of very promising specific proposals for both voluntary initiatives and legislative reforms. A two-page description of the workshop follows, with a full agenda.

The workshop will take place in the Kellogg Center, on the 15th floor of the International Affairs Building at Columbia University, and will run from 8:45 am through dinner on Thursday, May 20th and then 8:45 am – 5:00 pm on Friday, May 21st.

To confirm your participation, please contact our program coordinator, Ben Cahill, at 212- 854-3615 or bcahill@ei.columbia.edu. For program details, please contact Dick Nelson (rrn2@columbia.edu) or Will Masters (wmasters@ei.columbia.edu), at the phone and fax numbers below.

Yours sincerely,



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Announcement of a Workshop on

TECHNOLOGY DEVELOPMENT IN THE LIFE SCIENCES: INTELLECTUAL PROPERTY AND PUBLIC INVESTMENT FOR PHARMACEUTICALS AND AGRICULTURE

Program on Science, Technology, and Global Development
The Earth Institute at Columbia University

Co-sponsored by:
The Alliance Program[1] (New York and Paris)
The Consumer Project on Technology[2] (Washington, DC)

Thursday-Friday, 20-21 May 2004
The Kellogg Center, School of International and Public Affairs (SIPA)
International Affairs Building, 118th St. at Amsterdam Ave. (15th floor)
Columbia University, New York

Motivation

This workshop arises out of increasing concerns about recent trends in the organization, funding and incentives for R&D in the life sciences and the development of new technologies in pharmaceuticals and agriculture. The biosciences now offer unprecedented opportunities to improve public health, nutritional status and human well-being – and the need for institutional change to deliver on this promise has never been greater. Our goal is to respond to this need with one or more specific policy proposals, including legal reforms affecting patent rights, the funding and governance of public laboratories and universities, and the use of prizes to reward public-domain innovations.

With the discovery of DNA fifty years ago, the rise of molecular biology has transformed the process of innovation for both medical and agricultural applications. In many countries part of the policy response has been a significant increase in public funding for basic science in these areas. But public funding has largely been constrained not to support the development of new products. New product development has been assumed to be the province of private firms. The principal public policy vehicle for stimulating the development of products, and final applications more generally has been to offer stronger and broader utility patents, extending private intellectual-property rights to biological processes which under previous rules would have remained in the public domain.

[1] The Alliance (www.alliance-program.org) is a joint venture between Columbia University and the Ecole Polytechnique, Sciences Po and Université Paris I, to promote policy outreach and facilitate collaborative dialogue across the Atlantic.

[2] The Consumer Project on Technology (www.cptech.org) is a non-profit organization that provides technical assistance on intellectual property and innovation policies, with funding from the Rockefeller, Ford, and MacArthur Foundations, the Center for the Public Domain, and the Open Society Institute.

The watershed policy changes underlying the privatization of biological technologies occurred first in the U.S. in 1980 with the *Chakravarty* decision and the Bayh-Dole Act, and then internationally through the TRIPS agreement and other policy changes. A growing body of research argues that this expansion of patent protection is restricting the pace and direction of innovation, causing the neglect of innovations whose benefits cannot be appropriated through product sales. The May 20-21 workshop will help improve our understanding of the current innovation system, and help us to identify one or more particularly-promising new policy initiatives for refinement and implementation.

Part I of the workshop involves three sessions on the current context, which will review recent changes in medical R&D for pharmaceutical technologies, and in agricultural R&D for new seeds and crop chemicals. These presentations will describe the evolution of the division of labor between for-profit firms, universities and public laboratories, the funding mechanisms that support their work and the intellectual-property rules under which their results are disclosed and applied. They will also cover intellectual property and the controversies arising from the recent proliferation of utility patents over biological technologies, with a presentation covering pharmaceuticals and another covering agriculture. Presentations will address funding mechanisms for R&D in the public domain, especially research in universities and public laboratories, giving consideration both to what kind of work is funded publicly, and on the present political constraints on the magnitude and content of public sector research. Much of this discussion will focus on the U.S., but we will also address the international dimensions of R&D among industrialized countries and for developing regions, including particularly free-ridership where spillovers occur and the problem of "orphan regions" where place-specific research is needed.

Parts II and III of the workshop will turn to the identification and assessment of particular proposals. These have been widely circulated prior to the workshop, and call for new institutions to guide and support bioscience-based R&D, including particularly precommitments for vaccine purchase; ex-post prizes for public-domain agricultural technologies; differential enforcement of patent rights; compulsory licensing subject to liability rules; and clearinghouses or public-access commitments for patent-protected technology. The second day of the workshop will be entirely devoted to discussion of these proposals, led by panels of participants representing industry, government and the activist community who can provide a broad spectrum of responses, with respect to the proposals' feasibility and desirability.

In Part I, the current-context sessions will allow twenty minutes per speaker, followed by fifteen minutes of discussion per panel. In Part II, the presentation of proposals will allow up to fifteen minutes per speaker, followed by thirty minutes of discussion per panel. In Part III, the responses to the proposals will allow ten minutes per speaker, followed by twenty minutes of discussion per panel. There will also be open-discussion sessions at the end of each day. We expect the net result to be a remarkable opportunity for participants to engage with each other in substantive dialogue, leading to new insights and perhaps wider agreement on the specific initiatives that are most likely to help the life sciences meet human needs.

Agenda

(this version revised April 22, 2004)

Thursday, 20 May 2004 – Background and Proposals for Reform

8:45-9:00 Welcome and introductions
Jeffrey Sachs (Columbia)

PART I – THE CURRENT CONTEXT *(Chair: Will Masters)*
9:00-10:15 Agriculture
Bob Evenson (Yale) – From the green revolution to the gene revolution
Brian Wright (Berkeley) – Intellectual property rights in agriculture
Phil Pardey (Minnesota) – Funding and effectiveness of agricultural research

10:15-10:30 Break

10:30-11:45 Pharmaceuticals 1
Rebecca Henderson (MIT) – Drug discovery and development
John Barton (Stanford) – Intellectual property rights in pharmaceuticals
Annetine Gelijns (Columbia) – The role of public sector institutions

11:45-1:00 Pharmaceuticals 2
Pierre Azoulaye (Columbia) – Clinical testing and evaluation
Mark Hovde (Hovde Associates) – The cost of clinical trials
Warren Kaplan (Boston University) – Priority setting in the private sector

1:00-2:00 Lunch
Jeffrey Sachs (Columbia) – R&D in the life sciences: Alternatives to patents

PART II – PROPOSALS FOR REFORM *(Chair: Richard Nelson)*
2:00-3:45 Proposals for reform – voluntary initiatives
Michael Kremer (Harvard): vaccine purchase commitments, other pull mechanisms
Will Masters (Columbia): prizes for public-domain innovations in African agriculture
David Zilberman (Berkeley): clearing-houses for IPR: improving access & efficiency
Deborah Delmer (Rockefeller Foundation): update on PIPRA
Anthony So (Duke): enabling conditions for the scientific commons

3:45-4:00 Break

4:00-5:30 Proposals for reform – legislative approaches
Jean Lanjouw (Berkeley): instituting a Foreign Filing License (FFL) for drug patents
Terry Fisher (Harvard Law School): cleaning up patent law for biotechnology
Tim Hubbard (Wellcome Trust): an international treaty on R&D investment
Jamie Love (CPTech): competitive intermediaries and prize mechanisms

5:30-6:00 Open discussion of proposals
6:30- Reception and dinner (at the Kellogg Center)

Friday, 21 May 2004 – Discussion of reform proposals

(Chairs: TBA)

PART III – PANEL DISCUSSIONS OF REFORM PROPOSALS

8:30-9:15 Panel 1. Overview

Richard Nelson (Columbia)
Claude Henry (Polytechnique, Paris)
Vern Ruttan (Minnesota)

9 :15-10:15 Panel 2. Pharmaceuticals – perspectives from the law

Harold Edgar (Columbia Law School)
Hugh C. Hansen (Fordham Law School)
Jerome Reichman (Duke Law School)
Yochai Benkler (Yale Law School)

10:15-10:30 Break

10:30-11:45 Panel 2. Pharmaceuticals – perspectives from economics

Henry Grabowski (Duke)
Bhaven Sampat (Georgia Tech/Michigan)
Shyama Ramani (INRA and Polytechnique, Paris)
Gary Pisano (Harvard Business School)
Luigi Orsenigo (Bocconi, Italy)

11:45-12:45 Panel 3. Pharmaceuticals – perspectives from the trenches

Merrill Goozner (CSPI; Author, *The $800 Million Pill*)
Rachel Cohen (MSF)
Jeffrey Kemprecos (Merck)
Fabio Pammolli (U. of Florence, WHO Commission on IPRs and Public Health)
Dan Ravicher (Public Patent Foundation)

1:00-2:00 Lunch

2:00-3:00 Panel 4. Agriculture – perspectives from the trenches

Anil K. Gupta (IIM and National Innovation Foundation, India)
Eugene Terry (African Agricultural Technology Foundation)
Dana Dalrymple (USAID)
Simeon Ehui (World Bank)

3:00-3:45 Panel 5. Agriculture – perspectives from academia

Carl Pray (Rutgers)
Michel Trometter (INRA and Polytechnique, Paris)
Robert Herdt (Cornell)

3:45-4:00 Break

4:00-5:00 Wrap-up: Where do we go from here?

Richard Nelson and Will Masters (Columbia)