



Strategic Planning Session

Washington, D.C.

June 11-12, 2015

AGENDA

Introductions

Setting Strategic Direction – Review Overview of Strategic Planning Process

Summary Highlights of January Session

Affirm Assumptions about the Future – Review Key Drivers of Change

Affirm Core Ideology – Core Purpose and Core Values

Affirm Mission Statement

Big Audacious Goal (Vision) and Envisioned Future Description

Development of Goals and Objectives

Discussion of Mega Issues

Development of Strategies and Prioritization of Strategies

Next Steps for Implementing a Successful Strategic Planning Process

Adjournment



HESI STRATEGIC PLANNING SESSION

Thursday, 11 June 2015 (8:30 AM TO 5:00 PM)
Friday, 12 June 2015 (9:00 am to 12:00 pm)

**Washington Ballroom
Westin Georgetown Hotel
Washington, DC 20037**

ANTICIPATED ATTENDEES

Dr. Mudher Albassam	Hoffmann-La Roche, Inc.
Prof. Herman Autrup	University of Aarhus
Prof. Diana Banati	ILSI Europe
Dr. Marcy Banton	LyondellBasell
Dr. Norman Barlow	Janssen, Johnson & Johnson
Dr. Scott Belanger	The Procter & Gamble Company
Mrs. Mariela Berezovsky	ILSI Brasil
Mr. Oscar Bermudez	HESI
Dr. Brian Berridge	GlaxoSmithKline
Ms. Beth-Ellen Berry	ILSI HESI
Dr. Matthew Bogdanffy	Boehringer Ingelheim Pharmaceuticals, Inc.
Prof. Alan Boobis	Imperial College London
Dr. David Brewster	Vertex Pharmaceuticals
Mr. Ron Brown	US FDA
Dr. Connie Chen	HESI
Dr. Samuel Cohen	University of Nebraska Medical Center
Dr. Jon Cook	Pfizer Inc
Dr. Myrtle Davis	National Cancer Institute, NIH
Dr. Dennis Devlin	Exxon Mobil Corporation
Dr. Yvonne Dragan	DuPont
Dr. Michal Eldan	Luxembourg Industries Ltd.
Dr. Michelle Embry	HESI
Ms. Brianna Farr	HESI
Dr. Roberto Flores	National Cancer Institute
Dr. Shoji Fukushima	Japan Bioassay Research Center, Japan Industrial Safety and Health Association
Prof. Timothy Gant	Public Health England
Ms. Teyent Getaneh	HESI
Ms. Melissa Gilden	HESI
Dr. Andrew Glickman	Chevron Corporation
Dr. Daniel Goldstein	Monsanto
Dr. George Gray	George Washington University
Dr. Patrick Guiney	University of Wisconsin
Dr. Peggy Guzzie-Peck	Janssen, Johnson & Johnson
Dr. Laurie Hanson	Pfizer, Inc.
Dr. Ernie Harpur	Newcastle University, The Medical School
Prof. Toshihisa Ishikawa	NGO Personalized Medicine & Healthcare
Dr. Robert Johnson	Novartis Pharmaceuticals
Dr. Segenet Kelemu	International Centre of Insect Physiology and Ecology (icipe)

Prof. James Klaunig	Indiana University
Dr. James Kramer	ChanTest, A Charles River Company
Dr. Tobias Landmann	International Centre of Insect Physiology and Ecology (icipe)
Dr. Serrine Lau	University of Arizona
Dr. Lois Lehman-McKeeman	Bristol-Myers Squibb Company
Mrs. Carolyn Lugbill	Tecker International LLC
Dr. José Manautou	University of Connecticut
Dr. Donald Marsh	Merck Research Laboratories
Dr. Morven McLean	ILSI Research Foundation
Dr. Charlene McQueen	US Environmental Protection Agency
Dr. Donna Mendrick	US Food and Drug Administration/NCTR
Dr. Gary Minsavage	ExxonMobil Biomedical Sciences, Inc.
Dr. Terrence Monks	University of Arizona
Prof Angelo Moretto	University of Milan, Italy
Dr. Derek Muir	Environment Canada
Dr. Peyton Myers	US Food and Drug Administration
Dr. Raegan O'Lone	HESI
Dr. Stan Parish	HESI
Dr. Timothy Pastoor	Syngenta
Mrs. Syril Pettit	HESI
Prof. Martin Philbert	University of Michigan School of Public Health
Mrs. Jennifer Pierson	HESI
Dr. Alan Poole	ECETOC
Dr. Kausa Begam Riaz Ahmed	US Food and Drug Administration
Prof. Ruth Roberts	AstraZeneca
Dr. Craig Rowlands	The Dow Chemical Company
Dr. Keiichiro Sato	Takeda Pharmaceutical Company
Dr. Kathleen Shelton	DuPont Company
Dr. William Shingleton	GE Healthcare
Mr. Michael Shirreffs	ILSI
Prof. Lewis Smith	University of Leicester
Dr. James Stevens	Lilly Research Laboratories
Mr. Shawn Sullivan	HESI
Ms. Ayako Takei	ICaRuS Japan Limited
Dr. Jennifer Tanir	HESI
Mr. Glenn Tecker	Tecker International, LLC
Dr. Karol Thompson	US Food and Drug Administration
Dr. Scott Thurmond	US Food and Drug Administration
Prof. Ronald Tjalkens	Colorado State University
Dr. Ian Toma	The George Washington University
Dr. Willy Tonui	National Biosafety Authority Kenya
Dr. Akira Unami	Astellas Pharma Inc.
Dr. Martin van den Berg	Utrecht University, Institute for Risk Assessment Sciences
Dr. Sue Yi	Syngenta Crop Protection, LLC
Prof. Dr. Flavio Zambrone	IBTox
Dr. Hal Zenick	Office of Research and Development, U.S. EPA (RET)
Dr. Jiwen Zhang	GE Healthcare



**HESI Strategic Planning Session
Environmental Scan 'Binned Categories'**

What may influence HESI in future years?

***Note:** These categories are collated summaries from an interactive break-out session moderated by the Tecker group and involving the HESI Board of Trustees in January 2015. Participants were asked to consider what environmental influences (societal, economic, scientific, business environment, regulatory environment, etc.) might be anticipated to impact the way HESI operates as well as the human/environmental health science fields in general in the coming years.*

A. Shifts in resource availability and funding models

- a. Reduction in research funding
- b. Consolidation of companies with associated increase in outsourcing
 - i. Increased importance of CROs and Universities
- c. Rise of economies (and R&D spend) in developing countries
- d. Mix of Public, Private and Philanthropic funding

B. Changing Role of Technology

- a. More technology driven research and reliance on new technologies
- b. Emphasis on technology-based research funding
- c. Younger generation more knowledgeable about technology
- d. Big data; data mining; bioinformatics

C. New opportunities for harnessing technical expertise

- a. Crowdsourcing
- b. Consultant pool
- c. New geographic markets (e.g. India, China, Brazil)

D. Greater globalization and a more global economy

- a. Emerging markets
- b. International harmonization
 - i. Implications of research and practices worldwide
 - ii. Regulatory
- c. Greater natural resources pressure with growing world population



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E. Shift in health care practices, priorities, and concerns

- a. New epidemics
- b. Bioterrorism
- c. Aging world population
 - i. Increasing health care costs for the elderly
- d. Non-physician intervention and virtual medicine
- e. Self-diagnosis
- f. Personalized medicine
 - i. Greater patient access to individual/personal health data, as well as to contribute health data
 - ii. Real-time data monitoring

F. Increasing digital communication

- a. Increased speed
- b. Lack of boundaries
- c. Increased utilization of social media
- d. Potential for faster, more widespread communication of information, but also misinformation

G. Changing Educational Needs

- a. Gaps in education linked to social economic gaps
- b. Scientific literacy
- c. Younger generation of scientists more knowledgeable about technology
- d. Lag in development of skills (e.g. in Risk Assessment) in developing countries
- e. More interdisciplinary focus in training



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Environmental Scan 'Binned Categories'**

H. Shifts in approaches to scientific research and innovation

- a. Interdisciplinary science (increased need for collaboration between biological and physical sciences)
- b. Systems Biology approaches
- c. Translation between species, and to humans/clinic
- d. Emphasis on high throughput and robotics approaches
- e. Reduction in animal usage; increased emphasis on in vitro and in silico methods
- f. Intellectual property
 - i. increase in IP issues
 - ii. impact on open-source developments
- g. Crowdsourcing

I. Shifts in research priorities and resources to tackle health and environmental issues

- a. In vitro methods
- b. System based-biology
- c. Epigenetics
- d. Robotics
- e. Climate change
- f. Big data

J. Link Between Regulatory Environment and Public Perception

- a. Emphasis on environmental protection
- b. Emphasis on animal welfare
- c. Risk aversion
- d. Harmonization of approaches internationally
- e. Increased public involvement and communication with regulators and legislators
 - i. Role of digital communications
- f. Increasing mistrust of business agenda (interests and Influences)