Great Program Ahead

Today

- 2015-16 HESI Achievements & Look Ahead
- A Cross Section of the Scientific Portfolio
- NGO Perspectives on Emerging Health and Environmental Issues
- Poster Session and Reception

Tomorrow

- CITE Session: Reproducibility & Solutions
- Emerging Science
A few statistics

- 9 Countries
- 100 Participants
- 58 Distinct Organizations

- Industry (53%)
- NGO (12%)
- Academe/Research (21%)
- Government (15%)
Let the games begin!

HESI 2016
Annual Meeting
June 7–8, 2016 | Arlington, Virginia
Syril Pettit & Tim Pastoor to Present

State of the Organization
Warmup quiz
“Life, Liberty, and the Pursuit of Happiness”
Thomas Jefferson

“A dog, a toxicologist, and politician walk into a bar....”
Tim Pastoor
HESI Strategic Plan 2016-2020: Create science for a safer, more sustainable world.

Translate knowledge into application via effective multidisciplinary collaboration:
- Create efficient and balanced platforms for integration of diverse scientific perspectives to achieve high impact outputs through HESI’s scientific programs.
- Employ the identification and resolution of novel scientific challenges that will benefit from interdisciplinary input.
- Provide thought-leadership and partnership in the scientific community to optimise the use of multidisciplinary learn science models.
- Enhance the translational value of HESI’s technical and scientific outputs by identifying opportunities for a ‘second harvest’ of HESI’s scientific work products.

Protect humans and the environment through accurate and efficient risk assessment:
- Champion the global use of exposure-driven science for risk assessment through innovative research, methodology development, and educational initiatives.
- Pioneer the development and implementation of novel and best-practice training approaches for risk assessment.
- Improve patient quality of life via enhanced benefit to risk approaches to therapy development.
- Drive the expanded use of public-private scientific partnerships to improve ecological and environmental safety and quality.

Innovate through the use of novel science and technology to benefit human and environmental health:
- Accelerate the efficient evaluation and use of new markers, models, and technologies.
- Provide a trusted resource for expertise in the development and assessment of new approaches.
- Enhance informed access to novel science and technology globally.

Advance HESI’s effectiveness, sustainability, and productivity in meeting its mission:
- Diversify HESI’s current funding model to include additional resource providers.
- Grow HESI’s partnerships and scientific outreach in new global regions.
- Broaden the diversity of organizations represented in HESI’s governance and scientific program competition & leadership.
- Create opportunities for early career scientists to engage in HESI’s collaborative scientific programs and approaches.
CUES FROM OUR FRIEND WILLIAM
2016-2020: Be an essential resource for convening diverse expertise to translate science into application for the protection of human and environmental health.
CONVENE  TRANSLATE  PROTECT

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What it means
How we do it now
How we will grow into the future
How do we do it?

Connecting the best expertise to define needs and solutions.
In the past year...

250 organizations
600 creative minds, dozens of disciplines
5 continents
New topic ideas from 10 countries
Strategic Goal: Strengthen HESI’s Role as a Convener
Raise awareness of HESI as a platform to achieve solutions.

Create more efficient means to connect ideas, funding, and infrastructure.

Survey for fast breaking issues in need of rapid response.

The HESI CITE INCUBATOR will provide an opportunity for rapid, efficient, and resource flexible programs to be launched and completed outside of the 'traditional' HESI committee structure.
How do we do it?

Driving programs that match scientific knowledge with its applications for safety.
- Biomarker development
- Decision-frameworks
- Preclinical-clinical translational studies
- In vitro to in vivo extrapolation approaches
- Non-animal methods development
- Pathway-based approaches
Support for Innovative Cancer Research

Pardee Foundation grants are devoted to cancer research with about $102 million given to nearly 300 different institutions across the United States since 1944. Initially, ongoing research programs at well-known cancer institutes such as Memorial Sloan-Kettering took center stage. By the

Regulatory Science Extramural Research and Development Projects

Extramural Research Funded Through the Broad Agency Announcement (BAA)

To spur innovation in the field of regulatory science, FDA funds extramural research using various contract mechanisms and grants to address broad agency challenges within FDA’s scientific priority areas.
Strategic Goal:
Grow HESI’s Ability to Translate
Focus data on decision-making

Generate transparent and reproducible data

Identify knowledge gaps that limit confident safety assessment

Enhance organizational capacity and capability
Implementing science for a safer, more sustainable world.

How do we do it?
Protection by supporting data driven decisions...In the past year year...

- 30 published manuscripts, 20 workshops
- Hundreds of citations, >10,000 downloads
- Active collaborations through OECD, ICH, etc.
- Active training and case-study development and implementation
Safe food resources and consumer goods

Safe and effective medicines

Sustained environmental quality

Promoting discovery in support of all of these!
Strategic Goal:

**PROTECT**

Enhance HESI’s ability to protect human health & the environment
Train a new generation of applied scientists

Put data in the hands of decision-makers

Support interactive scientific forums

Qualification of a transcriptomic biomarker for de-risking irrelevant positive results in the *in vitro* chromosome damage assay

A Qualification document submitted by:
The Genotoxicity Working Group of the ILSI Health and Environmental Sciences Institute
Technical Committee on Application of Genomics to Mechanism-Based Risk Assessment

Conduct training that links research to real-world scenarios
In closing ....

3 Thoughts
Your Board is Taking Action

Science Mapping
New Funding and Resource Models
New Program Structures
New Opportunities for Member Input
Already a different HESI
You Make The Difference