
HESI's Role in Translational Science via CITE



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Institute

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What is CITE?



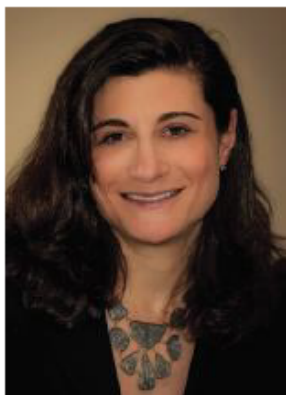
CITE

**Combined Interdisciplinary
and Translational Expertise**

- Inaugurated by a workshop in December, 2012, entitled 'Towards New Science for Public Health'
- Broad sector/discipline participation
- Consensus on value
- Explored mechanisms of collaboration, funding, and training



POLICY



Syril D. Pettit is Executive Director of the International Life Sciences Institute (ILSI) Health and Environmental Sciences Institute (HESI), a global nonprofit organiza-

From Silos to Multilingual Science

TRANSLATION—THE PROCESS OF MOVING SCIENCE FROM DISCOVERY TO application—has become a mantra of collaborative science initiatives worldwide. It extends from the drug and medical device development arena, to chemical safety, agricultural research, environmental sustainability, and beyond. These efforts are set against a backdrop of complex challenges in the prevention and treatment of emerging and chronic diseases and increasing environmental impacts associated with population growth and industrialization. Undoubtedly, there is a critical need for multidisciplinary scientific initiatives that move research from the pages of a journal to the promotion of public health (1, 2). Basic researchers, clinicians, regulators, industrial scientists, and entrepreneurs are all strongly invested in the “why” and “what” of translational science. But what about the “how”?

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“Basic researchers, clinicians, regulators, industrial scientists, and entrepreneurs are all strongly invested in the ‘why’ and ‘what’ of translational science. But what about the ‘how’?”

“...we must do more to enhance the “how” with relevant training, experience, and incentives.”

What's the fit for HESI? It's our Mission



ILSI Health and Environmental
Sciences Institute

Creating Knowledge for a Healthier, Sustainable World

Since 1989, the Health and Environmental Sciences Institute (HESI) has engaged scientists from academia, government, industry, research institutes and NGOs to identify common health and environmental concerns and develop scientific knowledge leading to a healthier, more sustainable world.

Shared Challenges, Shared Solutions

HESI's multi-sector, multidisciplinary stakeholders are passionate about working together to answer pressing scientific questions.

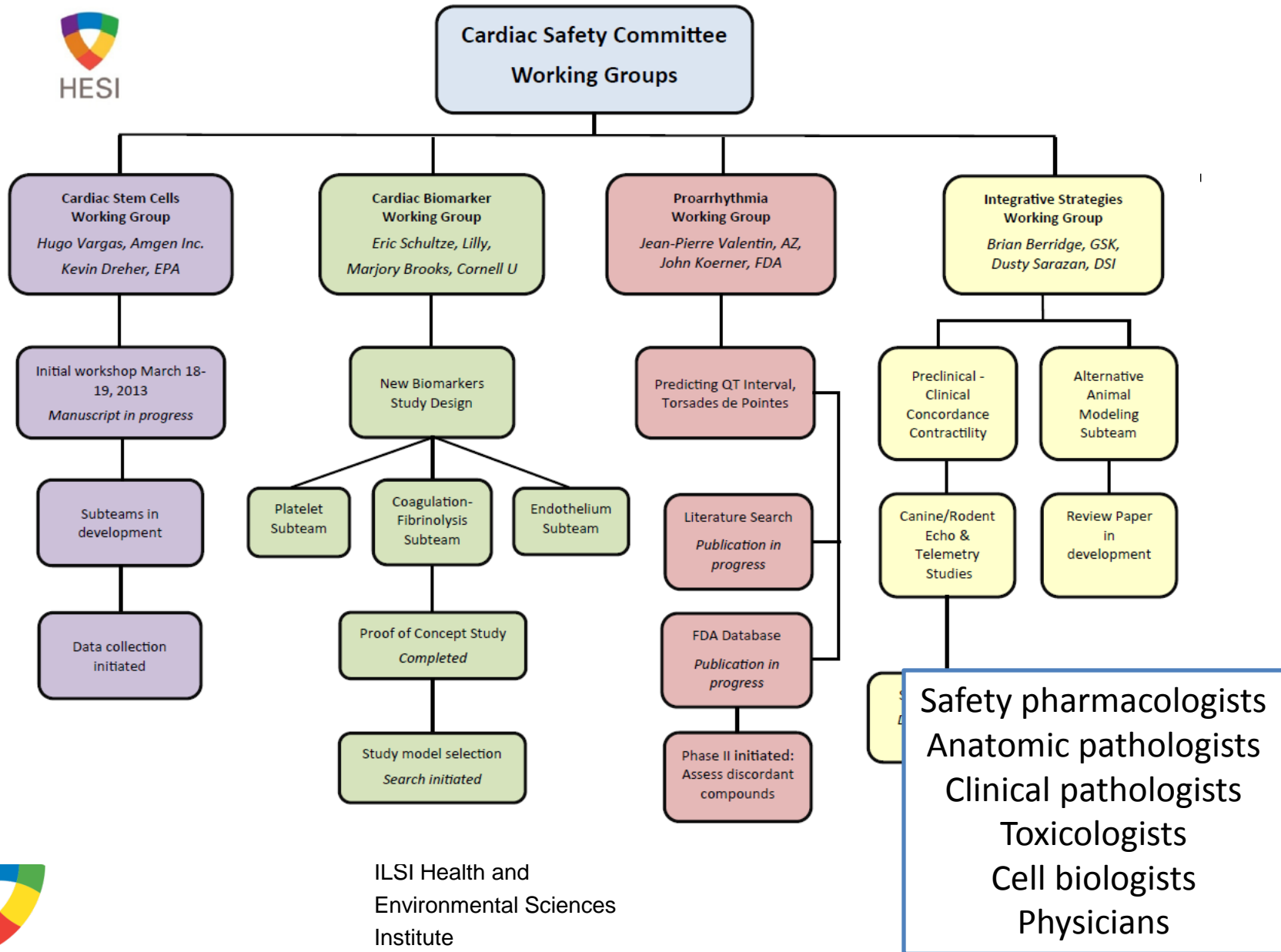
Quick HESI Facts

Non-profit scientific organization
Global reach and involvement
Human and environmental health science focus
25 years of expertise in public-private collaborations

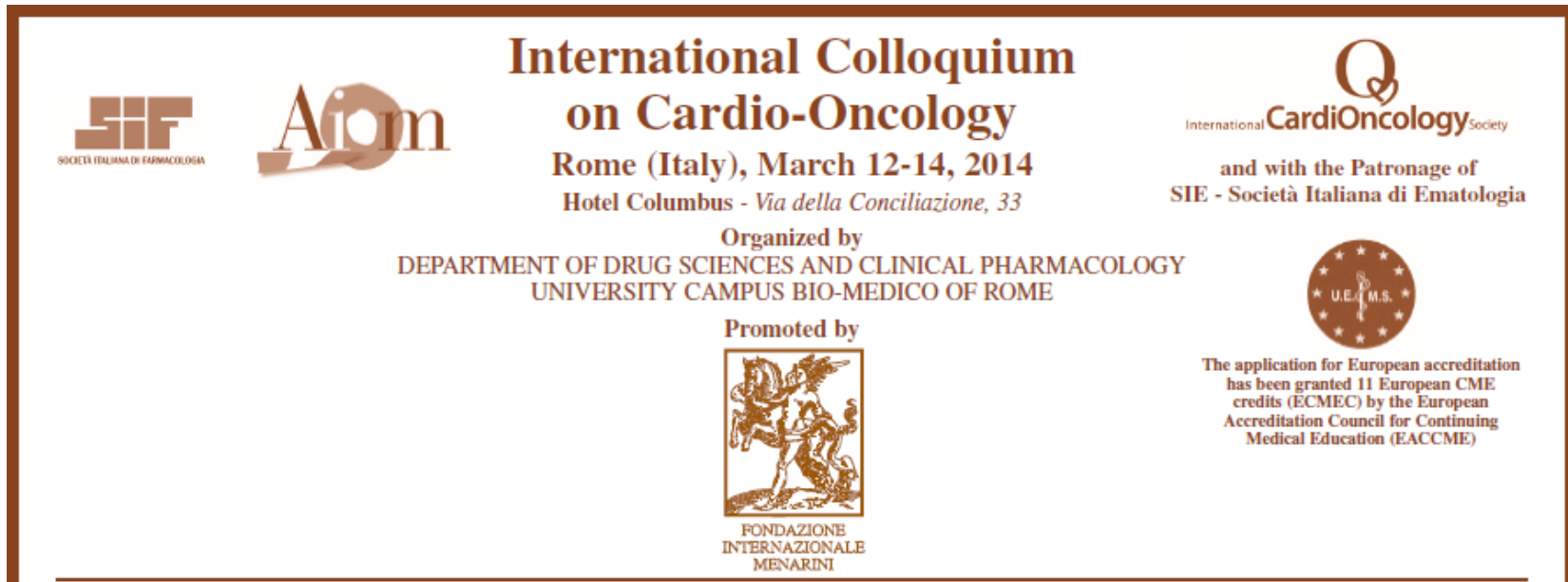


ILSI Health and
Environmental Sciences
Institute

How does that manifest in our committees and working groups?





Committees pushing the envelope- Bridging disciplines in cardio-oncology





**International Colloquium
on Cardio-Oncology**
Rome (Italy), March 12-14, 2014
Hotel Columbus - Via della Conciliazione, 33

Organized by
DEPARTMENT OF DRUG SCIENCES AND CLINICAL PHARMACOLOGY
UNIVERSITY CAMPUS BIO-MEDICO OF ROME


Promoted by

FONDAZIONE
INTERNAZIONALE
MENARINI


SOCIETÀ ITALIANA DI FARMACOLOGIA


AIOM


International **CardiOncology** Society

and with the Patronage of
SIE - Società Italiana di Ematologia


U.E.C.M.S.

The application for European accreditation
has been granted 11 European CME
credits (ECMEC) by the European
Accreditation Council for Continuing
Medical Education (EACCME)



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Draft 28 May 2014 – Presubmission, Do not cite

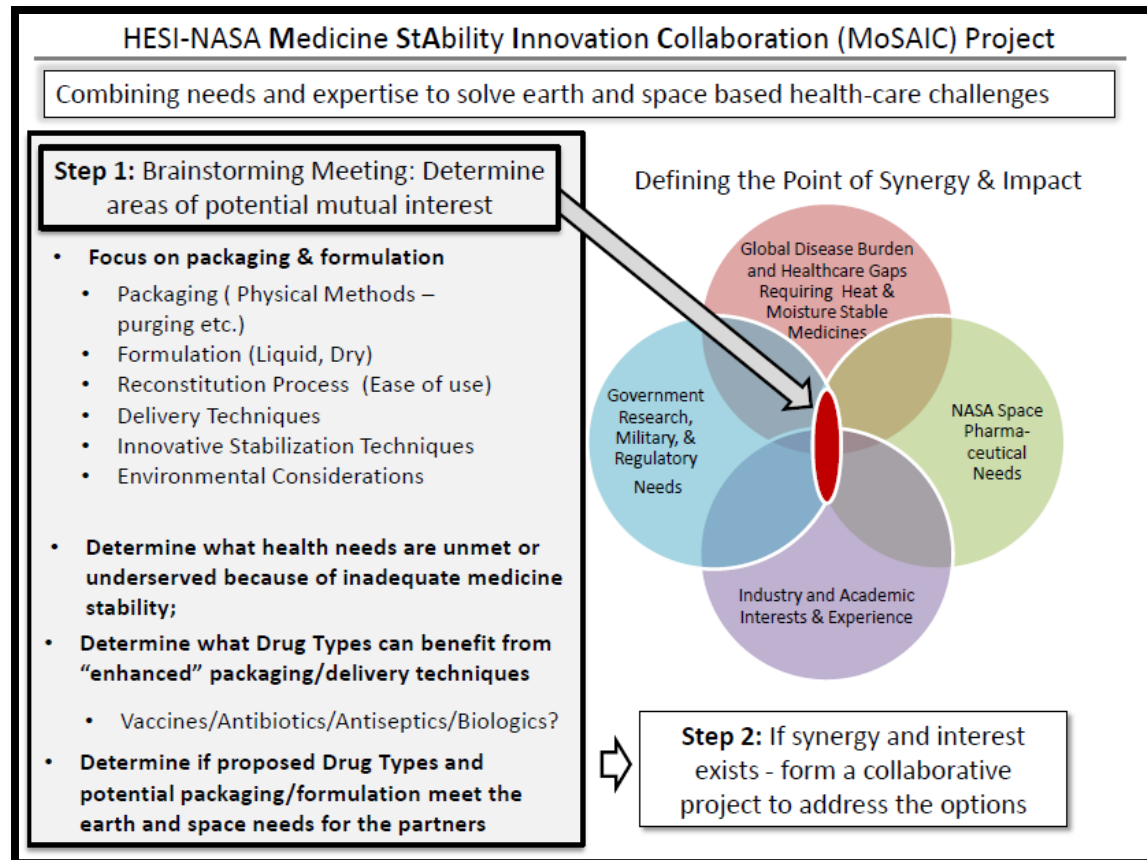
**Opportunities to Meet Clinical Cardio-Oncology Needs with New Approaches to
Nonclinical Safety Assessment**

Berridge¹, B. R. , Pettit, S². and Sarazan³, R. D.

Interesting Conversations

NASA Human Health Challenges

- Markers of health, disease and therapy
- In-flight bio-sample analysis
- Non-invasive imaging
- Drug delivery
- PK capabilities
- **Drug stability**
- Cell/tissue/animal models
- Sterilization systems



Interesting Partnership Opportunities

- Home
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GlaxoSmithKline (GSK) and McLaren Group announce innovative strategic partnership

Issued: Thursday 15 September 2011, London UK

GlaxoSmithKline (GSK) today announced that it has formed a long term strategic partnership with McLaren Group. The partnership, which will run initially until 2016, brings together two UK companies focused on innovation and high-tech research.



Not a HESI effort; used as an example

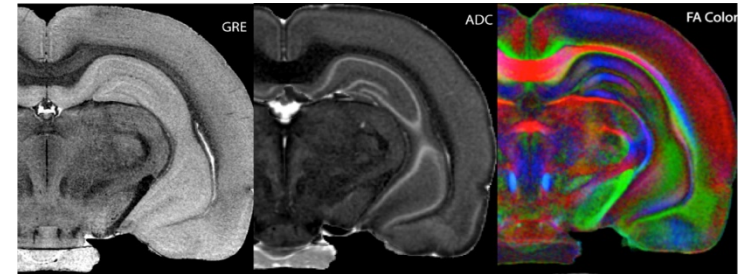
Potential for Re-inventing Approaches to Health and Therapeutics



3D Tissue printing



Miniaturization



Advanced Imaging

fitbit flex Features Gallery Raves Specs FREE 018

ONLINE AND MOBILE DASHBOARD

TRACK YOUR SLEEP

TRACK YOUR PROGRESS

Make fitness a lifestyle with Flex™.

FLEX™ WIRELESS ACTIVITY AND SLEEP WRISTBAND

This slim, stylish device is with you all the time. During the day, it tracks steps, distance, and calories burned. At night, it tracks your sleep quality and wakes you silently in the morning. Just check out the lights to see how you

Biomonitoring

<p>Liver Chip</p> <p>50 μm</p> <p>Sinusoid Barrier Liver Cells</p>	<p>Kidney Chip</p> <p>35 mm culture dish</p> <p>Porous Membrane Kidney Cells</p>	<p>Lung Chip</p> <p>Lung Alveolar Cells Capillary Cells</p>	<p>Body Chip</p> <p>Plastic cover ECM gel Cancer Cells</p>
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Novel testing platforms

PhysioTel HD

Enabling New Research Possibilities

Realizing the Potential

- Technology is not a limitation!
- Recognizing opportunity is not a limitation!
- Putting the two together is a challenge
- Requires intent, expertise and resource
- HESI uniquely positioned to facilitate

