LRI PROGRAM BEACON

ICCA-LRI: A Global Program Addressing Key Issues in Chemical Management

The innovative research program of the International Council of Chemical Associations' Long-Range Research Initiative (ICCA-LRI) is designed to improve the quality of chemical safety assessments. Although societal and political drivers vary around the world, the three regional LRI programs in Europe, the US and Japan identify common scientific topic areas that industry regards as important to form the core of the global ICCA-LRI program. The program targets the science-policy interface to modernize and improve chemical management. The 2010 ICCA-LRI research portfolio, 21st Century Approaches to Risk Sciences, *represents nearly a $12 million investment in research that encompasses three priority areas: emerging technologies, exposure science, and translation relevant to health and environment. Much of this investment is leveraged through collaboration with publicly funded projects that can maximize project value up to five times. Through a rigorous governance structure involving CEOs and Director Generals from the three LRI regions, strategic alignment, complementarity, efficient use of financial resources, and effective dissemination of research results are achieved. The ICCA-LRI is recognized as a brand that demonstrates industry engagement within Responsible Care®, provides early warning on emerging issues, achieves outreach to opinion leaders through its network, and supports capacity building within industry to ensure knowledge-based decision-making by companies and by public policy-makers.*

The three priority areas for the 2010 ICCA-LRI research portfolio are summarized below. Support for scientific research among the three LRI regions for these priority areas is intentionally designed to focus on complementarity without redundancy. Effective communication and coordination among the regions are the basis for developing and implementing the LRI research program. The program often involves collaborations and partnerships that increase knowledge networks and leverage industry funding with existing publicly funded projects. Such partnerships enhance the quality of the science, increase its visibility and dissemination as well as its investment value, and improve the interface between science and policy.

2010 ICCA-LRI Research Portfolio – Priority Areas

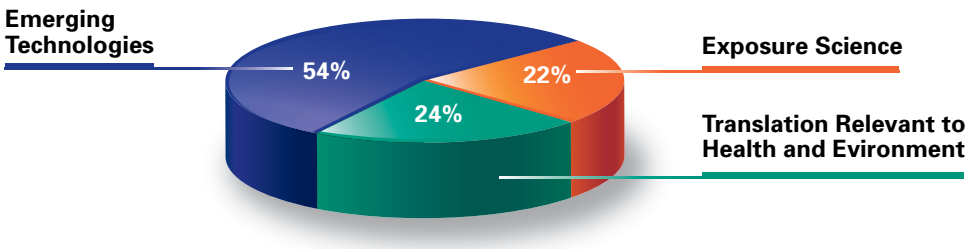
21st Century Approaches to Risk Sciences

- **Emerging Technologies** – Assessing innovative tools, approaches, and data for robust evaluations of chemicals as well as new technologies, such as nanotechnology
- **Exposure Science** – Improving the tools to quantify everyday and incidental exposures to consumer chemicals and to guide intelligent testing
- **Translation Relevant to Health and Environment** – Developing approaches and tools to improve understanding of links between exposures to chemicals and human health and environmental effects

The International Council of Chemical Association's Long-Range Research Initiative (ICCA-LRI) is a partnership that facilitates collaboration among the independently managed LRI research programs of the American Chemistry Council (ACC), the European Chemical Industry Council (Cefic), and the Japan Chemical Industry Association (JCIA). More information about ICCA-LRI and its supporting organizations can be found at www.icca-chem.org.

ICCA INTERNATIONAL COUNCIL OF CHEMICAL ASSOCIATIONS

LRI Project Funding 2008 – 2010



	ACC Portfolio	JCIA Portfolio	Cefic Portfolio
Emerging Technologies	• Bioinformatics and Data Interpretation • High-Throughput Testing and Application to Risk Assessment	• Alternatives to Animal Testing • Genomics Approaches to Understanding Disease	• Intelligent Testing Strategies • Acceptance of New Products and Technologies
Exposure Science	• Application of Biomonitoring to Exposure Assessment • Improving Frameworks for Linking Exposure and Human Health Effects	• Ecological Impacts of Chemical Exposures • Relating Exposure to Dose for Risk Assessment	• Indoor Air Assessment Framework • Aggregate Exposures
Health and Environment	• Advancing Human Health Risk Assessment Methods • New Tools for Interpreting Biomonitoring Data	• Sick Building Syndrome and Immune Responses • Assessment and Application of Human Health Risk Assessment	• Children's Health • Endocrine Disruptors and Human Health • Real Life Exposure, Cumulative Exposure and Modeling

The pie chart in the figure above illustrates how ICCA-LRI funding is distributed by percentage among the three priority areas for the years 2008 to 2010. As detailed in the figure text, although each LRI region funds research in all three priority areas, emphasis on particular research topics within these priority areas varies among the regions; this approach adds both depth and texture to the overall ICCA-LRI portfolio.

In the area of ***emerging technologies***, JCIA (Japan Chemical Industry Association) has the lead in application of technologies to understand how chemicals act on biological systems; ACC (American Chemistry Council) has a focus on developing new bioinformatic tools to interpret the data and apply it to risk assessment; and Cefic (European Chemical Industry Council) leads in the development of predictive models and decision frameworks that can guide intelligent testing strategies as well as in acceptance of new product areas, such as nanotechnology.

With regard to ***chemical exposures***, ACC has a program to link exposure to hazard assessment and improve chemical safety and risk assessments; JCIA's research program has a focus on ecological impacts of chemical exposures and on exposure-dose relationships for risk assessment; and Cefic has a program in real life exposures and modeling and developing assessment frameworks for exposures from multiple sources, including chemical mixtures.

For ***translation relevant to health and environment***, Cefic has a focus on children's health, including relevance of clinical indicators and improved assessment methods to reduce uncertainty, as well as on emerging issues, such as animal welfare and endocrine disruptors; ACC's research program addresses methods and models for improving human health risk assessment; and JCIA's research program addresses sick building syndrome and immune responses as well as assessment and application of human health risk assessment.

Since 2005, the ICCA-LRI has also sponsored annual workshops on topics such as human biomonitoring and 21st century methods for risk assessment. These workshops provide dynamic forums that foster interactions among industry and academic researchers, governmental agencies, non-governmental organizations and regulatory decision-makers regarding areas of mutual interest in chemical management. They stimulate discussions that can improve the scientific basis for pragmatic policy-making and support consensus building that can advance risk and safety assessments for chemicals.

Governance of the ICCA-LRI is led by company CEOs as well as Director Generals from the three LRI regions who ensure optimal return on industry's investment. In addition, the ICCA-LRI Planning Group, which includes senior managers from the three regions, is responsible for program management, efficient delivery of content, and dissemination of the research results.

In summary, the ICCA- LRI, the quality and contributions of its research, and its effective outreach to opinion leaders all facilitate translation of scientific innovations into a basis for globally robust and reliable knowledge-based chemical management, better inform decisions about safe use of chemicals, and lead to improved public confidence in our products.