



27-28 January 2012  
Trivandrum, India



# Indo-Swiss Symposium

## Cohorts and Biobanks

with special reference to chronic non-communicable diseases

### COORDINATORS

Prof K Radhakrishnan, Sree Chitra Tirunal Institute for Medical Sciences & Technology (SCTIMST), India  
Prof Mitchell G. Weiss, Swiss Tropical and Public Health Institute (Swiss TPH), Switzerland

### SYMPOSIUM OBJECTIVES

- Consider the value and priority of cohorts and biobanks to explain vulnerability and risk factors, and to guide policy.
- Review Indian and Swiss experience and the approach to establishing and managing various cohorts.
- Clarify cross-cutting implications and prospects for cohort planning in India and Switzerland, and for particular chronic disease priorities.
- Examine ethical issues that design and planning for cohort study and biobanking must address

### INVITED SPEAKERS FROM SWITZERLAND

**Ignazio Cassis**, Commission for Social Security and Health, SGK Ticino • **Martin Strub**, Swiss Embassy, New Delhi • **Robert Gehrig**, EMPA • **Dennis Hochstrasser**, University Hospital Geneva • **Nino Kuenzli**, Swiss TPH • **Brian Martin**, Institute of Social and Preventive Medicine, Zürich • **Harish Phuleria**, Swiss TPH • **Martin Preisig**, Centre Hospitalier Universitaire Vaudois (CHUV) • **Nicole Probst-Hensch**, Swiss TPH • **Thierry Rochat**, University Hospital Geneva • **Marcel Tanner**, Swiss TPH • **Peter Vollenweider**, Centre Hospitalier Universitaire Vaudois (CHUV) • **Penelope Vounatsou**, Swiss TPH

### INVITED SPEAKERS FROM INDIA

**V Katoch**, Indian Council of Medical Research (ICMR) • **Sanjay Mehendale**, National Institute of Epidemiology (NIE) • **Raman Kutty**, SCTIMST • **Mohan D Gupte**, NIE • **AC Mishra**, National Institute of Virology, Pune • **K Mohandas**, Kerala University of Health Sciences, Thrissur • **M Radhakrishna Pillai**, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram • **K Ramdas**, Regional Cancer Centre, Thiruvananthapuram • **R Thara**, Schizophrenia Research Foundation, Chennai • **CS Yajnik**, KEM Hospital and Research Centre, Pune

The symposium is sponsored by the Swiss State Secretariat for Education and Research (SER) and the Department of Science & Technology (DST), Govt. of India in the framework of the Indo Swiss Joint Research Programme (ISJRP).

For more information and for registration, please contact Dr K. R. Thankappan: [thank@sctimst.ac.in](mailto:thank@sctimst.ac.in)

## PROGRAMME

### Friday, 27 January 2012

Keynote address (Cohorts): Experience in India and prospects for cohorts and biobanks

Session 1: Establishing community based cohorts: approaches, methods and challenges

Session 2: Lessons learned in cohort studies

Session 3: Importance of Cohorts for Research and Policy Partnerships (Panel)

### Friday, 28 January 2012

Keynote address (Biobanks): Value of biobanks for explaining the complexity of chronic diseases

Session 4: Motivation and experience in establishing and maintaining biobanks

Session 5: Role of mental health in cohort studies and biobanking

Session 6: Ethical issues

Session 7: Breakout sessions and discussion: Interests, needs and partnership prospects for Indian mega-cohorts and biobanks

Session 8: Valedictory

## MOTIVATING INTERESTS

Chronic non-communicable diseases—including cardiovascular diseases, cancers and chronic pulmonary obstructive diseases—accounted for nearly 70% of deaths globally in 2005. Mortality due to non-communicable diseases in India is expected to increase by 17% in the next ten years. Preventing and treating them have become major challenges for all health care systems. For a better practical understanding of these disorders, many countries, mostly high-income countries, are setting up large-scale prospective cohorts and biobanks that recruit more than 100,000 persons from the healthy population, making it possible to study environmental, biological and social contexts, and the premorbidity, onset and course of chronic diseases.

Large cohort studies with inherent technological challenges are required to identify complex patterns of risk, involving environmental, lifestyle and genetic components that predispose individuals to various diseases. In addition, subjects who develop specific diseases can be followed up to clarify patterns of care and economic impact. The ultimate goal of such multidisciplinary research, assessing data and biospecimens collected in these cohorts, is to extend the life-years without disease-related disabilities. Setting up these cohorts is timely, because they are the only means by which recent progress in imaging and "-omic" technologies (genomics and proteomics) can be applied to improve the health of people.

This symposium will examine the benefits and practical interests of employing transferable methodologies in different settings—India and Switzerland—and of developing prospects for joint cohort studies that will ultimately answer the following key research questions:

- What is the role of lifestyle (e.g., diet, physical activity, tobacco use and alcohol use) and features of the social and cultural environment in causing diabetes, heart disease, stroke, cancers, COPD and mental health problems?
- How do genetic factors in Indian and Swiss populations influence the occurrence of the diseases mentioned above?
- What is the role of various environmental factors, especially indoor and outdoor air pollution and environmental noise exposures, in causing these diseases?
- How do genetic, environmental and lifestyle interactions influence occurrence, course and outcome of diabetes, heart disease, stroke, cancers, COPD and mental health problems?