



UK-India Genomic Medicine Alliance (UKIGMA) Indo-UK Genetic Education Forum

Since the sequencing of the human genome, prospects of precise genome level diagnosis and targeted specific therapeutic interventions have become possible. This approach is now practised all over and genomic applications in clinical medicine and healthcare are now increasingly implemented. This is globally acknowledged as one of the most powerful and pertinent development in the history of Medicine. The practice of medicine is now for the first time truly personalized, precise and evidence-based. The hybrid term of Genomic and Precision Medicine is self-explanatory. The need for medical and healthcare professionals getting equipped with essential genomics knowledge and acquiring necessary skills is universally agreed. A number of short term and professional courses for genomic education and training are now available. The successful movement for genetics led medical education steered by the **Indo-UK Genetic Education Forum** has generated much needed enthusiasm and direction across India and neighbouring regions. This forum has set its vision for genomic education and training aimed at medical and healthcare practitioners.

The Genomic Medicine Foundation (UK), offers a unique opportunity for the UK and Indian clinicians and scientists to work together and develop the genomic medicine and healthcare programme through series of genomic education and training courses, raising awareness on genomic applications for health and supporting the necessary infrastructure build up for the benefit of vastly heterogeneous peoples of India. This is appropriately named the '**UK-India Genomic Medicine Alliance**' referred to as **UKIGMA**.

The UKIGMA plans to focus on a number of areas for working together and develop clinical, educational and applied research projects through mutual collaboration. The Alliance plans to focus on the following key areas -

1. Genetic and Genomic Education
2. Birth defects (Congenital Anomalies)
3. Rare genetic diseases including inherited metabolic diseases
4. Cancer genetics and genomics
5. Cardiovascular genetics and genomics
6. Neurological and Psychiatric genetics and genomics
7. Genetic and genomic eye diseases
8. Genetic and genomic kidney diseases
9. Infectious diseases (Tuberculosis, Malaria, Dengue, HIV and other tropical infections)
10. Adult metabolic diseases (Obesity; Hyperlipidaemia; Diabetes Mellitus)
11. Genome diagnosis (Chromosome microarray analysis; Next generation sequencing; Whole exome/genome sequencing; Bioinformatics)
12. Practice of Genomic and Precision Medicine (Personalised pharmacotherapy; 'Ethical-Legal-Social Issues' [ELSI] and 'good practice guidelines')

It is proposed to organise a team of experts from India and abroad led by one internationally renowned expert. Experts for each of the above work stream would prepare core directives for medical applications. In addition, all experts would contribute in planning and organising applied and translational research grant applications.

The main purpose of this new alliance is to strengthen the current genetic genomic facilities through a series of programme based on mutual collaboration and cooperation. Some of the education driven activities are already included in the current **Indo-UK Genetic Education Forum** that continue within the objectives of UKIGMA. Since 2010, many academic Institutions and Hospitals across India and Sri Lanka have participated in this programme. The Forum continues and would remain an integral part of this new Indo- global genomic medicine partnership.

Professional and Scientific links

The UKIGMA has close professional links and continues to develop and maintain close partnership with a number of European, North American, Australasian, South African and Indian organisations. The list is not restricted to any one region. The GMF-UK shall be the main coordinator and facilitator for this all partnerships collaborations. The UKIGMA is self-funded and anticipates that individual organisations and partners shall actively pursue and raise funds for the benefit of UKIGMA.

Membership/ Collaboration

All genetics and genomics organisations, institutions, academic units and laboratories are invited to join the **UKIGMA** as full member or indicate '**expression of interest**' for mutual collaboration and partnership. It is to open to all, voluntary and without any charge. It is anticipated that all members, collaborators and partners will agree to a '**Charter of Aims and Objectives**' of the 'UK India Genomic Medicine Alliance'.

Annexure 1

Template for sharing Individual and Institutional/Organisation information

1. Name of the Unit/ Facility/ Centre
2. Name of the Institution / Hospital
3. Main affiliation- Health Board/ University/ Government Department
4. Web links- Registered site/ URL & other contact information
5. Main contact name- Director or Chief Executive
6. Main activity areas (choose one or more from the following) with designated person's contact information (please addition sheet for details)
 - (a) Genetic and Genomic Education
 - (b) Birth defects (Congenital Anomalies)
 - (c) Rare genetic diseases including inherited metabolic diseases
 - (d) Cancer genetics and genomics
 - (e) Cardiovascular genetics and genomics
 - (f) Infectious diseases
 - (g) Genomic and Precision Medicine
 - (h) Any other- please specify
7. Details on educational and training activities related to Genomic Medicine
 - (a) PhD or DPhil programmes
 - (b) DM in Medical Genetics or Genomic Medicine
 - (c) MSc in Medical Genetics/ Human Genetics/ Genomic Medicine
 - (d) Post graduate Diploma in Clinical Genetics/ Genetic Counselling/ Medical Genetics/ Genomic Medicine
 - (e) Postgraduate Fellowship/ Certificate in Clinical Genetics/ Genetic Counselling/ Medical Genetics/ Genomic Medicine
 - (f) Training courses/ Workshops for Board certification in any of the above, for example American/Canadian/Australian Board of Medical Genetics/ Genetic Counselling OR Diplomate National Board of Examinations, India (DNB in Medical Genetics)
 - (g) Modular courses in any of the above areas
 - (h) Accredited dedicated conferences and scientific meetings with educational content
 - (i) Online lecture series as Webinars or Blogs
 - (j) Any other educational activities not listed above
8. Names of Partner Institutions with contact information
9. Details on collaborative projects related to Medical Genetics / Genomic Medicine
 - (a) Indian Council of Medical Research (ICMR)
 - (b) Council of Scientific and Industrial Research (CSIR)
 - (c) Department of Biotechnology, Ministry of Science and Technology, Government of India
 - (d) Wellcome Trust- DBT India Alliance
 - (e) Indo UK Genetic Education Forum
 - (f) National Institute of Health, USA
 - (g) Howard Hughes Institute
 - (h) Any other not listed above
10. Current funded projects related to medical genetics/ genomic medicine education List all- internal and external funded projects/ courses
11. Recent key publications- original papers, reviews, thesis etc.
12. Honours, Awards & Distinctions

All enquiries and 'application to join or collaborate' or 'expression of interest' to:
genomicmedicine@yahoo.co.uk ; UKIGMA@genomicmedicine.org ; d.kumar@qmul.ac.uk ; kumard1@cf.ac.uk