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**SRI LANKAN TWIN REGISTRY BIOBANK: A RESOURCE FOR HUMAN GENETIC RESEARCH IN SRI LANKA**

**Warnakula, L.**<sup>1</sup>, Skandhakumar, R.<sup>1</sup>, Madanayake, R.<sup>1</sup>, Jayaweera, K.<sup>1</sup>, Abeysinghe, M.R.N.<sup>1</sup>, Zunszain, P.A.<sup>2</sup>, Zavos, H.M.S.<sup>3</sup>, Rijdsdijk, F.<sup>4</sup>, Siribaddana, S.<sup>5</sup>, Pariante, C.M.<sup>2</sup>, Sumathipala, A.<sup>1,6</sup>, Hotopf, M.<sup>7</sup>

1. Institute for Research & Development, Sri Lanka
2. Stress, Psychiatry and Immunology Laboratory, Institute of Psychiatry, Psychology & Neuroscience, King's College London, UK
3. Department of Psychology, Institute of Psychiatry, Psychology & Neuroscience, King's College London, UK
4. Social Genetic and Developmental Research Centre, Institute of Psychiatry, Psychology & Neuroscience, King's College London, UK
5. Department of Medicine, University of Rajarata, Sri Lanka
6. Research Institute for Primary Care & Health Sciences, Faculty of Medicine & Health Sciences, Keele University, UK
7. Psychological Medicine Department, Institute of Psychiatry, Psychology, and Neuroscience, King's College London, UK

**Background:** Bio banking is an innovative concept of storing and sharing biological samples for current and future research. Even though it is well established in the western world, it is still in its infancy stage in many parts of the developing world. Sri Lankan Twin Registry Bio bank (SLTR-B) is a unique repository consisting of DNA and serum samples of twins and a matching comparative sample of singletons from Colombo, Sri Lanka.

**Aims/s:** To establish the infrastructure within the country to carry out biomedical and future genetics studies such as genome wide association studies and epigenetics

**Methods:** SLTR-B was established in 2012 as a component of the Colombo Twin and Singleton follow-up study (COTASS-2) conducted by the Institute for Research and Development, Sri Lanka in collaboration with Kings College London. Ethical clearance for this project was obtained from University of Sri Jayewardenepura and Kings College London, UK. Informed written consent was obtained from participants to store their DNA and serum in the bio bank. Whole blood for DNA extraction and serum separation were collected in separate vacutainers. Serum (separated within four hours of collection) and extracted DNA was stored at -80°C freezer conditions. Quality and integrity analysis were done for all extracted DNA samples.

**Results:** 2488 and 872 DNA samples and 2583 and 900 serum samples are available from twins and singletons respectively.

**Conclusion:** SLTR-B is the first of its kind in the region and aims to address gaps in health and genetics research in a low and middle income country. Stored serum and DNA will be used for inflammatory marker research and future genetic studies (genome wide association studies and epigenetics) respectively after obtaining fresh consent from participants for each study. This repository is a valuable resource for future research on complex diseases in the region.

**Email of the Corresponding Author:** lakshanwarnakula@gmail.com