

EDITORIAL

**Prof. Robert Edwards, Nobel Laureate in Medicine
2010 – Tribute of an Indian with Joy and Sorrow****Siddhartha Chatterjee***Calcutta Fertility Mission, 102C Ballygunge Place, Kolkata -700019, India*

The Nobel Prize award in medicine for 2010 to Prof. Robert Edwards, the Pioneer of Modern In-vitro Fertilization (IVF), has made us proud. This was long awaited, and took 32 years for IVF technology to get the highest international scientific recognition. Prof. Edwards, who is now 85, worked since 1950, to develop this programme, and ultimately became successful, when Louise Brown, world's first test tube baby was born on July 25, 1978. In the process of development, Edwards could determine the fertilizing potential of sperm, and in 1969, a human egg was fertilized in a test tube for the first time. Till date, about 4 million babies are born worldwide through this procedure that helped innumerable infertile couples, previously considered to have irreversible and hopeless sterility.

The first test tube baby was the outcome of an egg collected in a natural cycle, fertilized outside the body (in-vitro), developed into a 8-cell embryo, which was subsequently put back into the mother's womb. In India however, around the same time, the second test tube baby of the world and the first in India, "Durga" was born in Calcutta on October 1978 to IVF by Prof. Subhash Mukhopadhyay (Mukherjee); but unlike the accolades received by Edward and his colleague Patrick Steptoe, Prof. Mukherjee received nothing but brickbats and humiliations from his colleagues. Mukherjee committed suicide on July 1981, out of sheer frustration. In this regard, we should take the name of Prof. T. C. Anand Kumar, who till then was recognized as to deliver the first documented test tube baby "Harsha", born on August 1986 in Mumbai, under the collaborative efforts of the Indian Council of Medical Research (ICMR), Institute of Research and Reproduction (IRR) and King Edward Medical (KEM) Hospital. During and after this time, the research on IVF was continued in other cities of India, like Bangalore and Chennai. In 1997, Anand Kumar presented a complete picture of Mukherjee's works, tailoring painstakingly together, the hand notes, publications, other available documents and various missing pieces, in his own effort.

Prof Mukherjee was ahead of his time, because he did few unique, unprecedented procedures, while developing the IVF programme, like, a) the use gonadotrophin for ovarian stimulation, which is a routine now-a-days; b) egg pick-up by posterior colpotomy, which now-a-days is replaced by trans-vaginal sonography guided oocyte recovery; c) the freezing and thawing of human embryos, before transferring them into the uterus in subsequent cycle, which was unthinkable till then. Edwards and Steptoe did their IVF programme in natural cycle, oocyte collection by laparoscopy

and embryo transfer (ET) in the same cycle. According to Prof Anand Kumar, the non-recognition of Prof. Mukherjee led to loss of “our claim to be the first in the world, not only in the fertilization of human egg, but also in successful cryopreservation and thawing of embryo for birth of living normal baby”. Ultimately on **October 3 2003**, the ICMR with other scientific communities accepted Dr. Mukherjee as the “Father of Test Tube Baby programme in India”, at a meeting in Bangalore. This paved the way for resurgence of research in Assisted Reproductive Technologies (ARTs) in this country.

At present, more than 250 IVF clinics are working in India, located not only in the metropolitan cities, but in other small towns as well. ICMR has set up guidelines for functioning of the ART clinics in India. Kolkata started research in IVF in late 70s or early 80s, holding the hands of Prof. Mukherjee, subsequently carried forward by Prof. B. N. Chakravarti and his colleagues. Their leadership has inducted many young gynaecologists and reproductive biologists like us, to carry forward the research not only in IVF, but also in Intra Cytoplasmic Sperm Injection (ICSI). Presently, the effort is to make the programme more safe and cost-effective. In this regard, mild stimulation by less amount of gonadotrophin, with or without oral ovulation inducing agents is becoming more popular.

About Author: Dr.Siddhartha Chatterjee,FRCOG was student and associate of Prof.Subhash Mukhopadhyay (Mukherjee) and latter join Prof. B. N. Chakraborti, an eminent infertility specialist in India as a colleague. Since 1991-92, he engaged himself with as a leader of different Infertility & Fertility Projects in collaboration with Kolkata based institutes/universities and published a number of research articles in this specialty. Dr. Chatterjee is the founder of Calcutta Fertility Mission at Puspanjali Apartment, Flat 102, 102C Ballygunge Place, Kolkata -700019, India . Dr.S.Chatterjee is an Editorial Board Member of *Al Ameen Journal of Medical Sciences*.