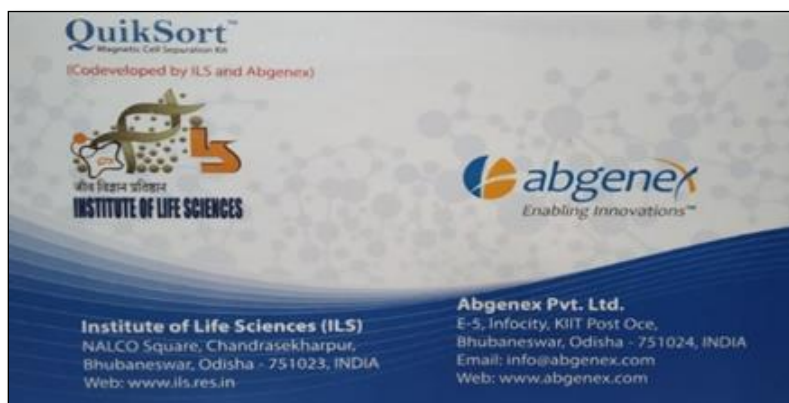


Magnetic Nanoparticle based cell separation kit, QuikSort, and Antibodies for Chikungunya virus developed and commercialized by Institute of Life Sciences (ILS), Bhubaneswar



Magnetic Nanoparticle based Cell Separation Kit ‘QuikSort’

The Institute of Life Sciences (ILS), Bhubaneswar, an autonomous institute of Department of Biotechnology, Government of India has successfully developed and commercialized Antibody for Chikungunya virus and Magnetic Nanoparticle based Cell Separation Kit named ‘QuikSort’ for commercial use.

The QuikSort’ is competitively superior and cheaper when compared to other similar products available in global market. The kit was developed in partnership with Abgenex, a USA based company. Both partners collaborating in developing kit, and its marketing, and now the kit is patented in the USA, Europe, Australia and India.

The QuikSort kit helps in purification of CD3 cells from human peripheral blood mononuclear cell and mouse splenocytes for different research applications. According to ILS, Bhubaneswar Director, Dr Ajay Parid, the indigenously developed magnetic nanoparticles and device for cell separation using its patented technology.

The magnetic nanoparticles are used for several medical applications due to their non-toxicity, biocompatibility and injectability. Use of an external magnet allows high level accumulation of the magnetic nanoparticles in targeted tissues. Currently, magnetic nanoparticles are more in demand because of their potential application in different biomedical applications like cancer drug delivery, hyperthermia as an MRI contrast agent and cell sorting and separation.

Dr Sanjeeb Sahoo, Senior scientist at ILS, Bhubaneswar is the architect of the kit who has tirelessly contributed to the success of the product.



Antibodies for Chikungunya viral (CHIKV) infection

Besides, the institute has entered into a non-exclusive license for product commercialisation after successful development of antibodies against the Chikungunya viral (CHIKV) infection.

The antibodies were developed as an outcome of long time efforts of almost 10 years on CHIKV infection at the ILS laboratory headed by Dr. Soma Chattopadhyay, a senior molecular virologist, who also received Department of Biotechnology's Biotech Product, Process Development and Commercialisation Award for year 2019 for the same product.

The development of such antibodies has a very significant impact on the progress of CHIKV-based research in the country. According to Dr. Chattopadhyay, it has helped researchers to unfold innumerable aspect of viral pathogenesis. With this product, research communities are now a step closer to developing efficacious antivirals and other control strategies against the Chikungunya virus. Her research group was the first to develop and characterize novel, highly sensitive and specific polyclonal antibodies against the non-structural proteins - nsP1, nsP3 and nsP4 of CHIKV. The both cell separation kit and antibodies against CHIKV are receiving remarkable response, and are being purchased by research laboratories across the globe.

Dr. Bilqeesa Bhat
Project Scientist,
bhat.bilqeesa3000@gmail.com