BioSpectrum
the business of Bi
24 years of leveraging the business of Bio
www.biospectrumindia.co

"Abbottâ??s tests are used to screen more than 60% of the worldâ??s blood supply"

15 January 2020 | Interviews

Abbottâ??s Principal Scientist for diagnostics business, Mary A Rodgers is a pioneer in ensuring the safety of the worldâ??s blood supply and the detection of constantly changing viruses



In India there are approximately 2.14 million people living with HIV, with 88,000 new HIV infections and 69,000 deaths occurring due to HIV related causes in 2017. 2,234 persons, including children, got HIV infection between October 2014 and March 2016 due to unsafe blood transfusion across India. In 2018-19, these infections stood at 1342. Nearly 1000 people in Maharashtra have contracted HIV through blood transfusion Government of India has made HIV screening of donated blood mandatory. As per the NACO guidelines, it is mandatory to screen donors/donated blood for transmissible infections of HIV, HBV, HCV, malaria and syphilis. Abbott's Principal Scientist for diagnostics business, Mary A Rodgers is a pioneer in ensuring the safety of the world's blood supply and the detection of constantly changing viruses. Moreover she has been credited with identifying new strains of viruses that threaten the global population, including the first time a new subtype of HIV-1 has been identified in 19 years. In a one to one interaction with BioSpectrum, Mary A Rodgers speaks about the Abbott's partnership with YRF India, research endeavours, and new diagnostic methods for the screening of deadly viruses.

What is the progress on Abbott's collaboration with YRGCARE since 2018?

Our partnership with YRG Care, which commenced in January 2018, aims to study the country's viral diversity to improve accuracy of diagnostic tests. Abbott has provided study protocol and diagnostic equipment, while YRGCARE has helped in screening and sequencing rich patient data from infected populations in India.

Some initial findings from the Abbott and YRG Care Surveillance Program research:

- We are seeing diverse strains of HCV in India. Once we're closer to publishing this research, we can share details about the specific genotypes detected in the region.
- The geographical classification of the HIV and HCV strains identified confirmed that higher levels of viral diversity were present in cities near borders with neighboring countries where drug trafficking routes exist.
- Of note were the HCV strains that predominated in the Northeastern region varied dramatically from those identified in the Northern border. These results support the hypothesis that new strains have been imported to India via the Golden Triangle and Golden Crescent opium trade routes.

Which is the newly discovered strain of HIV by Abbott and the cutting-edge diagnostic method for the identification of this new strain of viruses?

In November 2019, Abbott announced the discovery of a new strain of HIV called HIV-1 Group M, subtype L. This research was published online in the Journal of Acquired Immune Deficiency Syndromes (JAIDS), and marked the first time a new subtype of HIV-1 has been identified in 19 years. This new strain is a part of the major group of HIV, which is responsible for 90% of the pandemic, and has been traced back to the Democratic Republic of Congo (DRC). Abbott's tests are used to screen more than 60% of the world's blood supply. And so part of that comes with a responsibility to make sure that we can detect every type of virus that could be in those samples. Abbott is making this new strain available to the research community to evaluate its impact on diagnostic testing, treatments and potential vaccines. Today, next-generation sequencing technology allows researchers to build an entire genome at higher speeds and lower costs. Abbott scientists had to develop and apply new techniques with next generation sequencing technology to help narrow in on the virus portion of the sample to fully sequence and complete the genome. Abbott's technique lowered the amount of virus needed to get a complete genome. Genomes are the complete set of genes or genetic material present in a cell or organism. Identifying new viruses such as this one is like searching for a needle in a haystack. By advancing our techniques and using next generation sequencing technology, we are pulling the needle out with a magnet. This scientific discovery can help us ensure we are stopping new pandemics in their tracks.

Which are the novel diagnostic product in line in the Abbott's diagnostic business for the screening of viruses?

We are currently offering more sensitive version of tests, in terms of HCV we are also making a version of tests that is a combination of antigen antibody similarly like HIV, these new tests are currently in development. The surface antigen sensitive for HBV has launched and has recently approved in India. The other two like HIV and HCV tests are still in the pipeline.

Provide some insights on the Abbott's Global Surveillance Program.

In 1994, we created the Abbott Viral Surveillance Program to monitor the diversity of HIV and Hepatitis virus globally so our tests can detect them. We have invested in this program because our tests are used to screen over 60% of the world's blood supply. We have partnered with organizations around the world- such as blood centres, hospitals, and academic institutes – to collect samples of HIV and viral hepatitis. Abbott is a leading diagnostics company with such a unique, longstanding, and large scale virus surveillance program