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For the past half-century or more, India has made valuable contributions in the generic drugs industries. It has the second global rank in the number of DMFs and ANDA filings and has the third rank in the number of FDA approved manufacturing facilities. It currently supplies nearly 40% of generic drug sales in the US, the world's largest pharmaceutical market. In January 2005, India enacted an amendment to India's Patent Law, which allowed for global patent protection under WHO's Trade-Related aspects of Intellectual Property Laws ("TRIPS"). This change gave rise to investment in India's pharmaceutical sector for new drug discoveries but the results of such efforts to date have failed to impress the global pharmaceutical industry.

With the above backdrop, there have been growing trend of collaborations between global pharmaceutical and Contract Research Organizations ("CROs") to discover new drug development candidates. Such collaborations have focused on leveraging the large talented academic scientists in India to form a close relationship with the "drug hunters" of the top global innovators from US and Europe. As quoted in an article in ChemMedChem2014, Vol 9, in the recent years from the 25 collaborations with the Indian CROs, there have been 71 publications, out of which 60 are patents applications. Such synergistic combinations are being further strengthened with the help of academic and biomedical institutions joining such global collaborations.

A case study will be presented to exemplify this trend involving a collaboration between Hoffman La Roche and TCG Lifesciences Ltd. in the area of Type 2 diabetes. This joint research study led to the identification and synthesis of a novel and potent series of pyrazolo[3,4-d]pyrimidine as a GPR119 agonist – showing reduction of post-prandial glucose level in mice. GPR119 is expressed in pancreas, stomach, and intestine and is involved in the secretion of insulin and the incretin hormone GLP-1, both of which serve to regulate glucose homeostasis.