The Time is Ripe

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Blockbuster drugs from the golden era of drug discovery are coming off patent. The so-called “patent expiration cliff” has arrived and an estimated $250 billion in sales is at risk to the generics business from now to 2015. Hardly a day goes by that a major product loses patent protection and revenues deteriorate seemingly overnight due to generic competition. The cost of innovative drug discovery and development is ever increasing and even if an innovative drug does make it to market there is no guarantee that returns will offset the huge upfront investments made. Low research and development (R&D) productivity, in part due to a lack of novel druggable molecular targets and high drug safety regulatory hurdles, has over the years driven major pharmaceutical companies to adopt aggressive merger and acquisition strategies to bolster in-house pipelines and access new areas of growth. In retrospect, this has been a distraction to internal research activities. With heavy investment in R&D spending under scrutiny the drive is away from me-to-drugs to areas of unmet medical need. The consequence, higher risk of failure.

Japan’s healthcare system has contributed significantly to the outstanding health of the Japanese. However the rapidly ageing society has put upward pressure on expenditure. Healthcare reform measures include increase in the use of generic drugs and restructuring of the hospital sector without loss of quality. Access to innovative and effective new medicines (drug lag approval) is also a high priority. As it is ever more difficult to discover new medicines, innovator pharmaceutical companies are reorganizing. Many companies have started to diversify into the generics market. For example, Norvatis set up its own generic unit Sandoz in 2003 and Daiichi Sankyo recently acquired India’s Ranbaxy. There is also increasing pressure on pharmaceutical companies to outsource drug discovery and development.

The quality of science and technology in Japan is outstanding. Still, academia and industry in Japan has yet to foster a relation that meaningfully brings together the creative capabilities of both sectors. The socio-economic need for health reform coupled with the lack of delivery of innovative new medicines by the pharmaceutical sector is a clear statement that academia and industry must proactively explore new ways to partnership. The ultimate goals of academia and industry are perceived to be different; knowledge and human resource vs. profit respectively. The traditional model of academia providing the seeds for the pharmaceutical industry’s needs is something of the past.

This Journal, the Journal of Synthetic Organic Chemistry, Japan, is a portal to information on creative organic chemistry. The development of newer synthetic methodologies provides the medicinal chemist with the tools to access novel molecules that could potentially become valuable therapeutics. The complexity of drug design warrants that academia and industry align strategies and forge a partnership that translates into improved patient care. The time is ripe for academia (Japanese chemists’) to play an increasingly important role in drug discovery.