



## The need to optimise pharmaceutical education and training for a changing Pharma World

Our local pharmaceutical industry has been gradually moving towards a world-class system. Many forward-thinking South African companies have made great strides in introducing newer production technologies, added manufacturing capability, smart procurement initiatives and advancements in other critical aspects of drug product development, registration and regulation. Despite these advancements, there is still a dire need to close the knowledge and skills gap so that as a country we can become more competitive with our international counterparts to industrialise our pharmaceutical sector and locally produce the majority of our medicines and reduce our dependence on medicine imports.

It is important that we take on a needs-based approach to training individuals for our local pharmaceutical industry with particular attention to the competencies needed to produce the desired pharmaceutical workforce of now and the future. Doing this is fundamentally important for us to reach our goal of growing a more robust pharmaceutical manufacturing sector to further drive economic growth and improvement of our health care system.

In response to this need, Wits Pharmacy in partnership with Aspen Pharmacare has put together a unique series of postgraduate course offerings related to industrial pharmaceuticals for individuals who want to further their knowledge and skills in areas of advanced manufacturing, product quality control, the regulatory framework and quality management systems relevant to the pharmaceutical industry of today.

This initiative stems from deliberate and collaborative leadership between academia and industry to pioneer cross-border learning within the Southern African region and develop the human resources needed to service a more industrialised pharmaceutical sector.

A critical component of our country's Universal Healthcare Coverage drive (in terms of medicines access) is for us to produce high quality medicines locally with less reliance on product imports to meet our patient needs. These additional learning initiatives

between Aspen Pharmacare and Wits Pharmacy highlight the need for collaborative building of capacity in optimising the skills needed for a thriving pharmaceutical quality system focused on drug product development. The knowledge and skills learnt by individuals on these new courses at Wits Pharmacy positively impacts on them to lead a fulfilling career in the pharmaceutical industry.

With an increasing number of generic manufacturing companies setting up in South Africa, having a critical mass of individuals skilled in these areas in accordance with the South African Health Products Regulatory Authority (SAHPRA) guidelines is critical. As a country, we need to work diligently on closing key gaps in skills and to ensure we reach global standards of pharmaceutical product development with increased manufacturing capacity.

The course also covers the importance of Technology Transfer, Scale-Up, Process Performance, Product Quality Monitoring Systems, Corrective Action/Preventive Action (CAPA) Systems, Change Management Systems and Management Review as part of the initiative to create a unique learning opportunity for individuals to upskill on product and process development for the pharmaceutical industry. The initiative also integrates the elements of commercial manufacturing in line with Quality-by-Design (QbD) principles.

The extraordinary challenges facing the world today, including shifts in job growth and challenges and opportunities brought on by the COVID-19 pandemic, warrant a disruptive re-imagining of how a relevant pharmacy educational offering can boost our economic growth. Learning initiatives such as these go a long way in producing the critical mass of individuals needed to realise a more industrialised and sustainable future-proof pharmaceutical manufacturing sector in the country.

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