

This prestigious **Vice-Chancellor's Innovation Award** recognises, encourages and celebrates commitment to innovation – with an emphasis on developing and commercialising products or services based on research outputs. The award is made to a team that has developed an innovation to the point that there are tangible prospects of socio-economic impact.

[Choonara](#), [Kumar](#) and (posthumously) [Pillay](#) claimed this research category for their grand innovation WaferMat™: Wafer Matrix Technology for Ultra-Fast Drug Release.

The WaferMat™ has been long in the making and is an innovation that enables drug delivery through an ultrafast wafer that delivers an active pharmaceutical ingredient (API) through various biological membranes. For example, using the WaferMat™ for oral drug dosing in patients can take place without the need for water, chewing or swallowing. This method is beneficial to children, the elderly and other specific patient groups in situations where drugs are unpalatable or difficult to swallow leading to poor compliance with a necessary drug regimen. The WaferMat™ is also beneficial when the API needs to have fast action with predictable and consistent absorption via the mouth as a result of sub-optimal drug efficacy (bioavailability) when given through any other route of administration or a different dosage form.

Pillay, Choonara and Kumar led the development of the innovation at the Wits Advanced Drug Delivery Platform (WADDP) research unit for several years and successfully secured a partner who has international positioning to commercialise the product with applications currently focused on helping patients in areas that include cancer pain, sleep and wound care. The WADDP is a world leading pharmaceutical research entity currently led by Choonara to produce such innovative 21<sup>st</sup> century patient-centric pharmaceutical product innovations as neat solutions for the most challenging unmet therapeutic needs globally. The team focuses on Advanced Drug (or other Bioactive) Delivery Systems either as standalone prototypes or interfaced with Nanomedicine, Tissue Engineering, Regenerative Medicine and supported by first-in-the-world Functional Biomaterials (3D Bio-Inspired). The unit also provides the largest postgraduate and postdoctoral training and research platform in South Africa for researchers with a specific passion to undertake cutting-edge translational pharmaceutical research (bench to bed). With more than 21 patents granted internationally the team currently holds the largest patent portfolio at Wits as a solution shop.