

Q-Sera puts snake venom to blood collection use

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Q-Sera is a start-up firm that has put the lethal property of coagulation present in snake venom to good commercial use. The technology behind Q-Sera involves coating blood collection tubes with a naturally occurring coagulation agent, isolated from the venom of certain Australian snakes to accelerate the clotting of blood.

The Australia-based firm, which emerged from the University of Queensland (UQ), in April 2012, developed the high quality serum preparation tubes that clot blood more efficiently than the present conventional methods and is even capable of rapidly clotting samples from patients taking anticoagulants, such as warfarin or heparin, to produce high quality serum for subsequent biochemical analysis. These benefits translate into cost reductions for healthcare systems and mitigates against the risk of misdiagnosis.

The Q-Sera technology is based on the research of Dr Paul Masci, UQ School of Medicine; Professor Martin Lavin, UQ Center for Clinical Research; Professor John de Jersey, UQ School of Chemistry and Molecular Biosciences; and Dr Goce Dimeski of the Princess Alexandra Hospital. Q-Sera is built upon more than 25 years' of venom research initiated by Dr Paul Masci at the university.

The university's technology commercialization company UniQuest worked with the research team over a number of years in the identification of the project, early development, market analysis and protection of the intellectual property. UniQuest also worked with the team to develop a commercialization plan and then to prepare material for investment proposal, including those that were prepared for Uniseed Commercialization Fund; Medical Research Commercialization Fund (which is also a

co-investor), and also for presentations to potential licensees.

Q-Sera secured funding worth \$945,990 (A\$900,000) as a syndicated investment from Uniseed and the Medical Research Commercialization Fund (MRCF). Q-Sera is the 18th investment Uniseed has made in technology that has originated from UQ. Dr John Kurek, investment manager, Uniseed Ventures (who is also the mentor overlooking the development of Q-Sera), while speaking about the factors that led Uniseed to fund Q-Sera, said that, "Before making an investment to develop the technology, Uniseed assessed the Q-Sera opportunity against a number of criteria including technology and competitive edge, target market, intellectual property position and commercialisation pathway."

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Q-Sera is looking to undertake a development program in the future, focussing on the production of a prototype tube. Q-Sera would also conduct a proof-of-concept clinical study to demonstrate the superiority of the Q-Sera tube as compared to the current commercial tubes using blood from different cohorts of patients. This will also include difficult to clot blood samples such as those from patients taking anticoagulants such as warfarin or heparin. Presently, Q-Sera is contracting out its R&D work to third party providers. This enables the company to be flexible and also allows for effective capital management.

The blood collection tube industry comprises a small number of large companies, who dominate the sales and marketing of tubes, needles, syringes and related products. While speaking in this regard, Dr Kurek, said that, "The market is highly commoditised with little differentiation between product lines and in most cases market share is influenced by pricing and brand awareness as the products perform very similar to one another. Thus a new type of tube with clinical advantages may attract a higher price depending on how it is positioned and what blood tests it is used for and provide an opportunity to take market share from one or more of the existing blood collection tubes."

The technology pioneered by Q-Sera has demonstrated swift and successful clotting of even the most un-coagulable blood samples, thus providing a higher degree of confidence around patient diagnosis and patient care. Let us hope that this will yield good quality serum for further effective analysis of a patients blood.