Dr Sumit Raniga is a subspecialist orthopaedic shoulder and elbow surgeon scientist who has recently joined MQ Health on a full-time basis after completing three years of dedicated clinical and research fellowships in world-renowned centres of excellence in shoulder and elbow surgery.

He is the first Fellow of the Royal Australian College of Surgeon’s to complete a one-year fellowship at the world-famous Department of Orthopaedics and Traumatology, at the Bern University Hospital in Switzerland, where he was awarded the prestigious Charles S. Neer Award in 2016 by the Orthopaedic Shoulder and Traumatology, at the Bern University Hospital in Switzerland.

He is also the first Fellow of the Royal Australian College of Surgeon’s to complete a one-year fellowship at the world-famous Department of Orthopaedics and Traumatology, at the Bern University Hospital in Switzerland, where he was awarded the prestigious Charles S. Neer Award in 2016 by the Orthopaedic Shoulder and Traumatology, at the Bern University Hospital in Switzerland.

During the first year, researchers will complete 3D computer modelling studies of normal and pathological shoulders to better understand variations in capsular and humeral anatomy that can lead to different shoulder pathologies with a focus on improved implant design. They will also build the cadaveric simulator and start biomechanical testing using the custom-designed simulator to enhance and improve the process of implant design and long-term survivorship and functionality. The Shoulder Program will also explore the use of robotics and other advanced methods for improving the accuracy and reliability of joint replacement surgery – including the use of enhanced reality platforms.

“The new laboratory and shoulder program are aligned with the MQ Health model of ‘heal, learn, discover,’ and will see research translated into clinical practice, and allow the next generation of surgeons involved in innovation through basic sciences research,” said Dr Raniga. “With this grant we will be in position to develop a centre of excellence in shoulder research.”

Brenton Hamdorf, Director of Academics and Research Partnerships at MQ Health, said that the program was an outstanding example of MQ Health’s core goals.

“It is through collaborations with exceptional companies like Mathys, in this instance, and with proactive clinicians like Dr Raniga that dramatic improvements in patient outcomes can be achieved,” he said. “Such progress is built on rigorous scientific and clinical evidence, strong partnerships and the commitment and focus of everyone involved. It is a very exciting opportunity and look forward to the continued growth and expansion of biomechanics at Macquarie University.”

Professor Patrick McNeil, Deputy Vice-Chancellor (Medicine and Health) said: “This initiative is a great example of the values of MQ Health in action – ambition, innovation, and engagement – where partnering with industry and with other Faculties increases the power of the research we do.”

For more information:
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