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Laboratory profile

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Sultan Qaboos University (SQU) was established in 1986. The University started with five colleges; Medicine, Engineering, Agriculture, Education and Science. Several other colleges were later established, including the College of Arts, the College of Commerce and Economics, the College of Law and the College of Nursing.

The Chemistry Department is a part of the College of Science, established in 1986. This department offers a 5-year BSc, a 2-year MSc, and a 3-year PhD program.

After obtaining his PhD in 2007, Dr. Al Lawati established a new research group in the microfluidics area at the Department of Chemistry. The microfluidics group includes: Dr. Haider Al Lawati, Dr. FakhrEldin O. Suliman and Prof. Salma Al Kindy, and Mrs. Gouri B. Varma (Assistant Researcher).

In May 2009, the group successfully obtained His Majesty (HM) Grant for a project entitled "Developing Microfluidic Systems for Routine Analysis of Pharmaceutical Samples" with a budget of $200,000. We were able to establish the first research laboratory in the field of microfluidics at SQU and perhaps in the Arabian Gulf region. Additionally, the grant helped a great deal in creating an excellent research environment and a strong research group. The microfluidics group presented a number of scientific papers at international conferences and published several papers in international journals (*Talanta* [1, 2], *Analytical Methods* [3] and *Luminescence* [4, 5]). Additionally, we participated in the Oman innovation fair in 2011 and received an award for the best innovation at the exhibition. These intensive research activities requested further investment and an extension for a year was granted with a budget of $25,000.

In June 2011, we submitted a new research proposal to The Research Council (TRC) -Sultanate of Oman. The research utilizes microfluidics as an efficient mixing

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From left to right Dr. Fakhr Eldin, Prof. Salma Al Kindy, Dr. Haider Al Lawati, Mrs. Gouri B. Varma.

device in a chemiluminescence detection system for a capillary-HPLC. The mixing device was developed successfully early in the HM funded project. The project was highly appreciated by the referees and based on their comments the TRC accepted to fund the project with a budget of $370,000 for a period of 3 years. (2012–2015). The future plan is to explore the possibility of utilizing a paper based lab on a chip for pharmaceutical and biological analysis using optical detection techniques.

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