



## **Nayab Gauhar**

**MS Thesis:** Study for the integration of Flow VPX with TFF and SPTFF for the in-line - concentration measurement

**Author:** Nayab Gauhar is currently pursuing a master's degree in applied biotechnology at the University of Iceland. She completed her thesis at Alvotech, specializing in real-time protein concentration monitoring during Tangential Flow Filtration (TFF) and Single-Pass Tangential Flow Filtration (SPTFF). Nayab also holds a master's degree in Analytical Chemistry, graduated with distinction from GCU Lahore. Last summer, she was awarded a RANNIS grant for the project based on battery simulations. Before

relocating to Iceland, Nayab worked as a Quality Control Manager in the pharmaceutical industry and has experience in Quality Assurance as well. She began her professional journey as a chemistry lecturer.

**Short summary:** In biologics, concentration of protein is one of the important parameters during manufacturing. While developmental process, it is measured via at-line and offline techniques. This research project involved the use of FlowVPX, a process analytical technique for real time monitoring of proteins concentration during single pass tangential flow filtration and traditional tangential flow filtration during ultrafiltration/diafiltration (UFDF) process. The higher concentration of proteins was monitored via FlowVPX during UFDF process, and the concentration processes were also controlled via FlowVPX.