

## Creating a successful facility for large-scale extraction of DNA, an example from the Swedish Biobank initiative BBMRI.se

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Driven by the needs of several large population cohorts, the Biobanking and BioMolecular Resource Infrastructure of Sweden (BBMRI.se) has established, and now operates, a large-scale facility for the rapid purification of high quality DNA from human whole blood at the KI Biobank. The facility has a throughput of up to 1000 whole blood samples per day on two parallel automated systems. Automation and modern extraction chemistry has given many benefits, and since starting the operation in May 2011, we

have extracted DNA from over 100 000 individuals. Our early experience clearly demonstrated the potential of the new systems in speed and cost. But we also experienced several difficult challenges with the approach. Genotyping and NGS platforms are very sensitive to DNA quality parameters. After gaining significant process improvements we now see study designs that use genotyping and NGS delivering results that promise to transform healthcare.