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Glycoproteomics assays for prostate cancer biomarker discovery

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Glycoproteomics assays for prostate cancer biomarker discovery

1. Mass spectrometry is a powerful analytical tool for the identification and characterization of complex glycan structures, larger glycoproteins and glycoconjugates. (*this thesis*)
2. New aspects of the human glycome can be discovered if you are open to expect the unexpected. (*this thesis*)
3. Urine-derived PSA presumably exhibits healthy-type glycosylation signatures. Hence, studying PSA glycosylation from paired plasma and urine samples has potential for personalized PCa diagnosis, prognosis and treatment. (*this thesis*)
4. TMT multiplexing is an attractive strategy for reliable relative quantification of glycopeptides. It allows simultaneous analysis of multiple samples in one measurement and reduces technical variation. (*this thesis*)
5. Heavy isotope-labeled internal standards allow absolute quantification of glycoproteoforms of target protein in biological specimen.
6. The role of glycosylation in medicine is expanding as new technologies advance our understanding of glycan structures and their functions.
7. Do not be afraid to look outside your comfort zone (technological expertise): By integrating a variety of approaches, a more comprehensive understanding of the targeted analyte can be achieved.
8. Glycomics is currently not receiving enough attention in multiomics studies, which prohibits a comprehensive understanding of biological mechanisms and conditions.
9. Finding a biomarker candidate is just the first step; there is still a long way ahead before patients can benefit from it.
10. Collaborations harness knowledge from different perspectives, making the most out of a joint effort. It allows ordinary people to achieve the extraordinary.

11. There is an inherent playfulness in the practice of science (Roel Snieder). You can do it well but only if you enjoy doing it.
12. Excellence is the result of high intention, sincere effort, and intelligent execution (Aristotle). Everyone can be excellent in one way or another.