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## **Boosting mass spectrometry-based analytics for biopharma**

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## **Boosting mass spectrometry-based analytics for biopharma**

1. Intact and top-down approaches decrease the risk of introducing unintended modifications and provide a more accurate picture of the proteoform variability. (this thesis)
2. Biotechnologically produced proteins and their natural forms can differ enormously with respect to their proteoforms and, in consequence, to their functionality. (this thesis)
3. Multidimensional liquid chromatography has the potential to bridge the gap between manual and robotic sample preparation and analysis. (this thesis)
4. Affinity capillary electrophoresis hyphenated with mass spectrometry is a highly flexible tool, able to study affinity in a proteoform-specific manner, provides very detailed (higher-order) structural information and requires minute amounts of antibody and receptor. (this thesis)
5. Publishing in a suitable lower impact factor journal may help to better disseminate the results to the target audience than publishing in a non-suitable higher impact factor one.
6. While most conventional cancer immunotherapies allow only an extension of patients' lifetime, new antibody formats or therapies could hopefully allow to cure them.
7. If one or two dimensions are not enough, we should think in more dimensions.
8. Is capillary electrophoresis better than liquid chromatography or vice versa? I would say none is better, but they are complementary to each other.
9. Actively working on any machine/instrument increases the risk of damage.
10. Similarly, cleaning an instrument does not guarantee a better performance afterwards.
11. Collaboration between different groups can result in an excellent outcome, but that requires someone who keeps track of what everyone does.
12. Science is like hiking; every small step brings you closer to the tip from where you can enjoy the big picture and be proud of all the effort you made.