

Question & Answers during Webinar:

Prof. von Bergen:

Q: What is your experience on looking at single metabolites in comparison to sums and ratios of metabolites.

A: The question as I see it is: What kind of information do you want to have? The advantage of targeted approaches is that you really can get an exact quantification. This is useful if you want to go into detail with specific pathways. If you want to have a first overview, then untargeted metabolomics is often a good way to go but untargeted approaches so far have severe disadvantages. It is hard to get them done in a reproducible way and you have no chance to obtain a good standardization in terms of quantification. If you want to have a standardization you have to first do the untargeted and then repeat it with a targeted approach with a standard. I guess one needs to have both methods in order to come up with a conclusive result. Sometimes it is good to have an untargeted approach to get a first glimpse and then to go in with a targeted approach to get the accurate quantification. The way the field is developing at the moment is a kind of mixture of both approaches as we see that some kits now come with standards for quite large amounts of metabolites in a targeted way. This is not a simple targeted approach it is rather a way of profiling based on targeted assays in one large assay. This combines the advantages of both: You have a wide overview of entities that can occur combined with accurate quantification of different metabolites in this assay. I would expect that this development might go on and that the standards for metabolites will even increase. Perhaps also the amount of metabolites detected in one experiment or in one LC-MS run will further increase in the future.