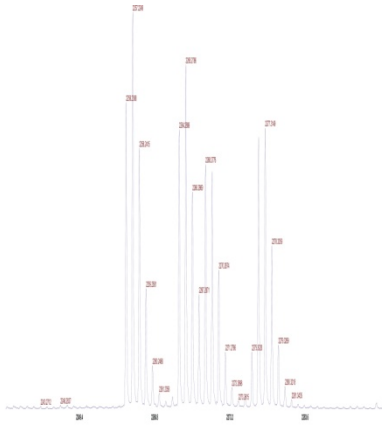
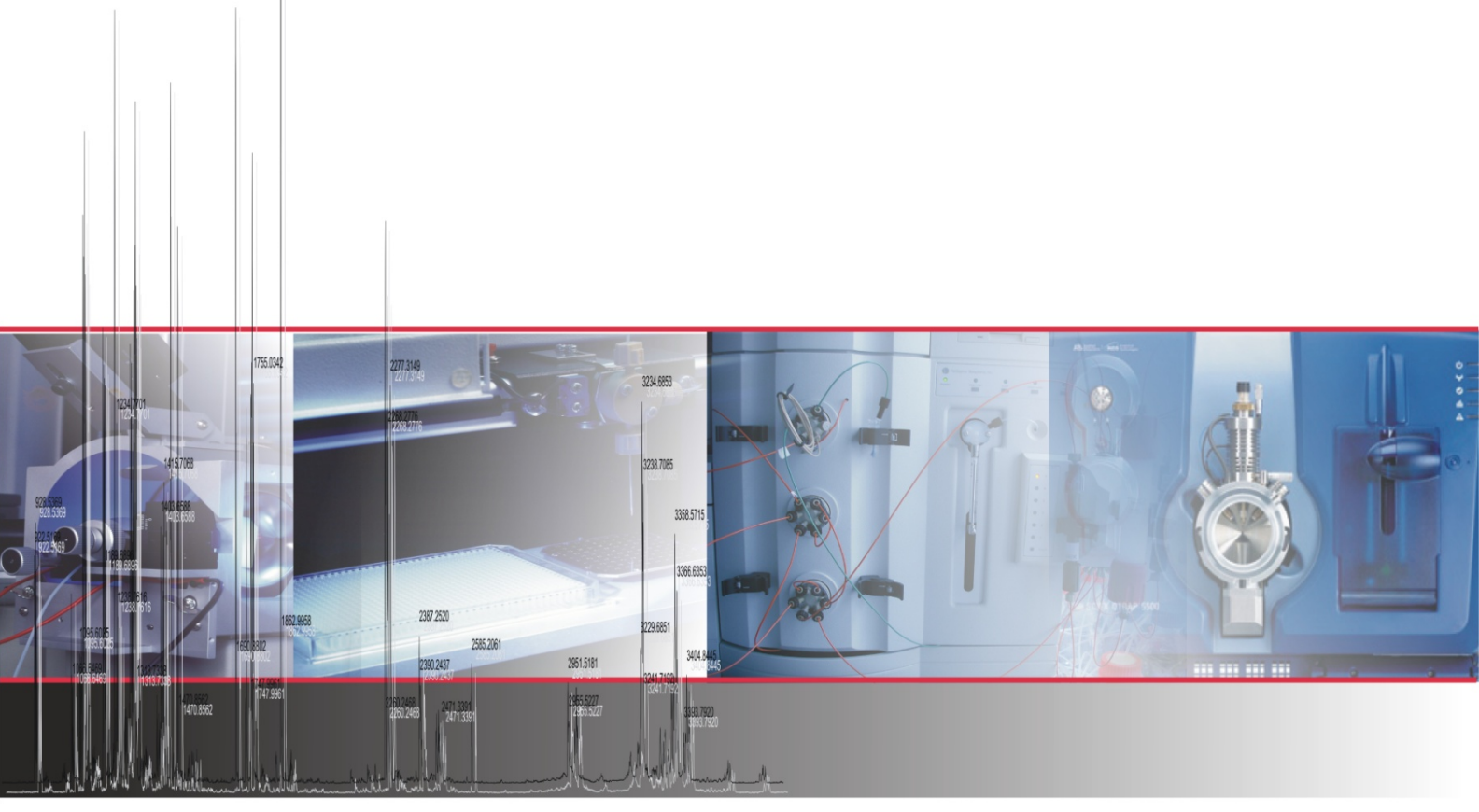


ICPL™ *Quadruplex*
ICPL™ *Quant*

- *Stable isotope labeling of intact proteins*
- *Multiplexing of four biological samples*
- *Quantification of your data without MS/MS*



SERVA
Electrophoresis

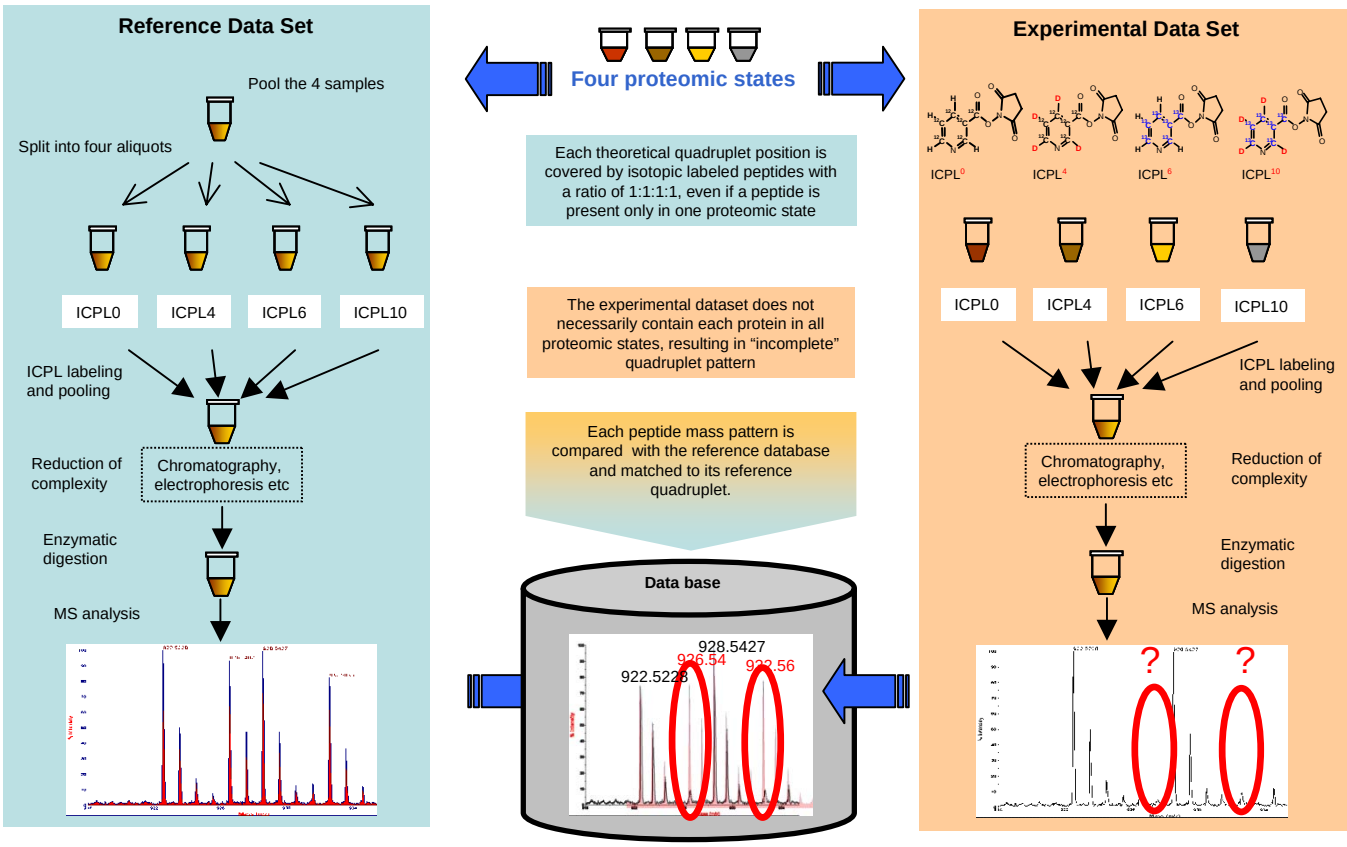
Quantitative Comparison of Different Proteomic States

In-depth analysis of proteomes is challenged by the extreme dynamic range of protein abundance and vast complexity. To enable the quantitative analysis of even low abundant proteins, it is indispensable to reduce complexity on the level of proteins by several fractionation steps. To compensate for these time consuming steps and to avoid non reproducible loss of protein species isotope labeling with **ICPL™ Quadruplex** is the method of choice to achieve confident results.

ICPL™ Quadruplex allows for:

- Isotopic labeling on protein level
- Multiplexing of four samples
- Quantification without MS/MS
- Data analysis with ICPL*Quant* software

Experimental setup of a 4-plex proteomic analysis with ICPL™

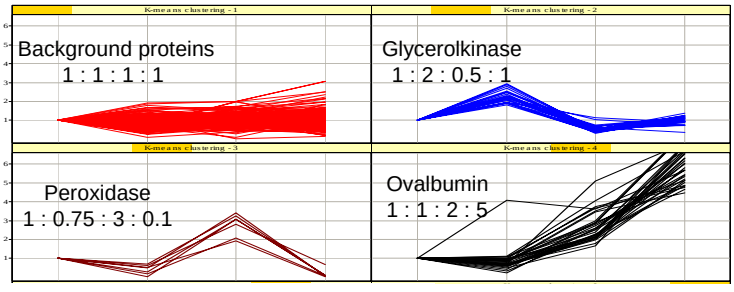


The efficiency of the **ICPL-Quadruplex** labeling in combination with the **ICPL*Quant*** software is demonstrated by the comparative analysis of four mixtures with different ratios of three proteins (Ovalbumin, Horseradish Peroxidase and Glycerolkinase) spiked into a moderate complex protein background.

After labelling the four proteomes, mixing and enzymatic cleavage, peptides were separated by nano-LC and analyzed by mass spectrometry.

Quantification is done on the level of MS spectra. For data generation each kind of ionization technique can be used (MALDI, ESI).

The graph shows the peptide ratios of the proteome background (1:1:1:1) and the peptide ratios of the spiked proteins.



References:

Schmidt,A., Kellermann,J. & Lottspeich,F. A novel strategy for quantitative proteornics using isotope-coded protein labels. *Proteomics* **5**, 4-15 (2005).

Brunner A., Keidel E., Dosch D., Kellermann J., Lottspeich F. ICPL*Quant* – a software for non-isobaric isotopic labeling proteomics. *Proteomics* (in press)

http://www.biochem.mpg.de/en/rg/lottspeich/technologies/ICPLQuant/index.html