

## Healthcare industry BW

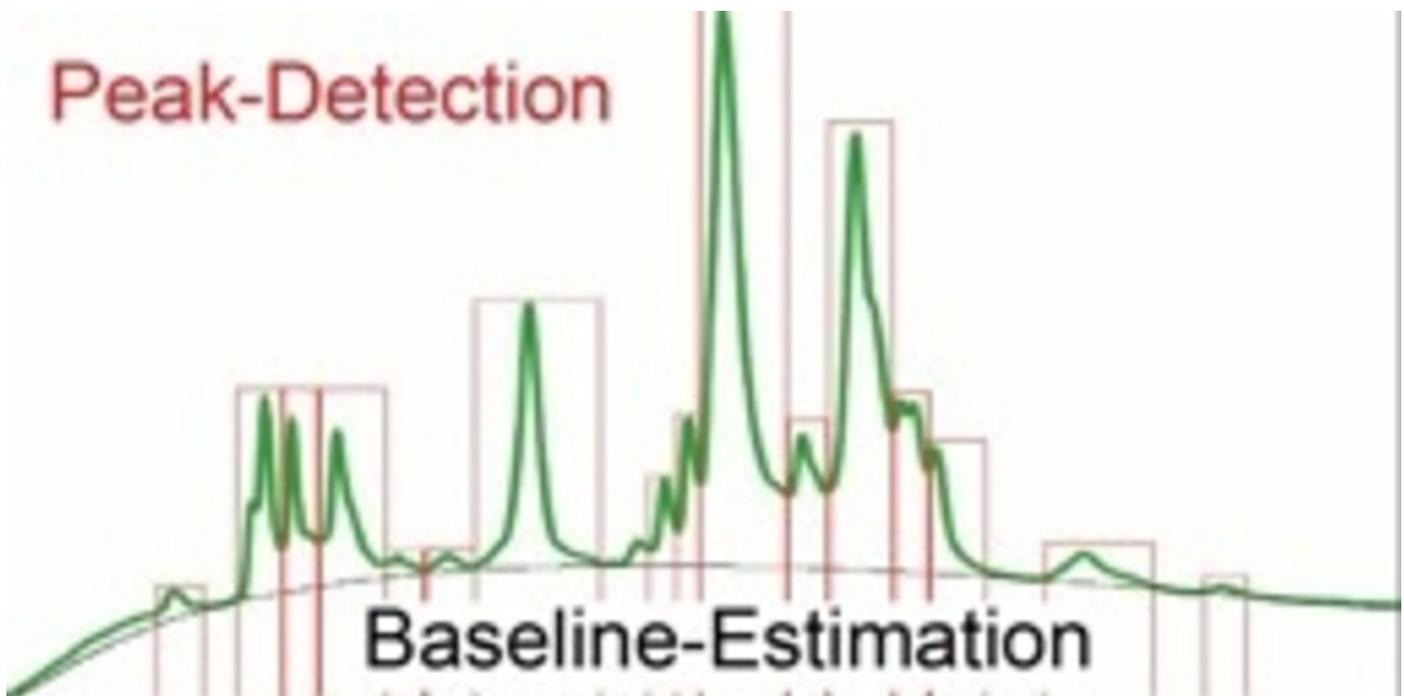
# More effective analysis of chromatograms and electropherograms

**At the International Symposium on the Separation of Proteins, Peptides and Polynucleotides 2008 in Baden-Baden, quantiom bioinformatics will showcase new application software for the detection of peaks and baseline estimation with adaptive methods.**

Chromatography and electrophoresis have become an integral part of chemical analytics and biotechnology. They carry out the elementary task of separating substance mixtures or cellular components that need to be identified and quantitatively determined. This is something the majority of companies working in biotechnology, microbiology, pharmacology, food and environmental chemistry have to deal with on a daily basis.

The constituents of a separated substance mixture are shown as distinct or overlapping peaks in chromatograms or electropherograms. Shape and appearance differ considerably according to the different chromatographic or electrophoretic methods and devices used. That is why the identification and quantification of substances is a very sophisticated mathematical problem for which no overall solution is available. Other problems experienced concern background noise and baseline drift. Background noise makes it difficult to determine the exact peaks, but this can be effectively solved with intelligent filtering methods. Drift leads to incorrect quantity determinations and can be compensated by baseline estimates.

## New solutions with adaptive software



Analysis of chromatograms: peak detection and baseline estimation (Figure: quantiom)

quantiom bioinformatics has developed two tools for correcting drift and noise that enable a very robust analysis. The Peak Detector extracts the peaks at any resolution from the background noise and determines the correct basis for further analyses. The Baseline Estimator determines the hierarchy of possible baselines and selects the best solution. The tools stand out for their user friendliness. Traditional tools often require users to adjust several parameters in a time-consuming process before the desired results can be reached. The Peak Detector and the Baseline Estimator can be adjusted through a single parameter by

flicking a switch between fine and coarse resolution.

## Research funding through Baden-Württemberg

The development of these innovative tools is supported by the Baden-Württemberg Ministry of Science, Research and the Arts. At the ISPPP (International Symposium on the Separation of Proteins, Peptides and Polynucleotides) in Baden-Baden in September 2008, quantiom bioinformatics will present the software to an audience of experts.

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### **Further information:**

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### **Press release**

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