



Newsletter

2-2024

About this edition:

In this edition of our Newsletter, we present news from our company, highlight our HCP analysis service and current research.

You can meet us at the HUPO World Congress in Dresden and at the BioEurope in Stockholm.

News

We are excited to welcome our new LC-MS/MS system! In April, our Orbitrap Exploris 240 arrived. Coupled with a Vanquish Neo nano-HPLC and an Easy-Spray ion source, it allows us to run highly sensitive protein analyses in a very robust system with little downtimes. So far, "Ophelia" runs like a charm and is busily measuring various samples, both in DDA and DIA mode.



Summer Special Offer

save up to **-50%**
on **Calibration Standards and QconCAT Kits**

Use the promo code "**SUMMER24**" with your next order and receive **high quality** calibration standards and QconCAT Kits at the **lowest price** with this time-limited offer:

-50% on [CoV-MS](#) and [CoV-MS2](#)

-30% on [QCAL](#)

-25% on [CVDQuant](#) and [RePLiCal](#)



Valid for orders until August 31st 2024, while supplies last.

Research Focus

Host cell protein analysis

Biologically produced protein-based pharmaceuticals require sophisticated quality control. Remnant proteins stemming from the production organism, so-called host cell proteins (HCPs), can potentially impact product safety, quality and efficacy. Therefore, regulatory authorities demand tight control of HCP abundances. Even for approved drugs, HCPs need to be routinely monitored and exactly quantified in every production batch of a drug.

To monitor HCP removal during the production process, enzyme-linked immunosorbent assay (ELISA) is the current method of choice, allowing surveillance of total HCP amounts. However, detection and quantification of known HCPs is highly dependent on the quality of the antibodies and gives no detailed information on which proteins have been detected.

Liquid chromatography mass spectrometry (LC-MS/MS) provides a powerful orthogonal method, enabling the unbiased detection of HCPs with high sensitivity and precision without the need for antibodies.

Our PurityQuant workflow combines tools from proteomics, bioinformatics and our proprietary QconCAT technology to detect common and organism-specific HCPs and to routinely identify and quantify critical HCPs during process development.

Being independent of antibodies, our workflows are not limited to standard expression strains, but can be directly applied also to non-common host organisms.

[Contact us](#) for more information.

Current publication:

Integrated strategy for deep profiling of host cell proteins in downstream processing of therapeutic monoclonal antibodies: Novel approach to isolate and digest host cell proteins

Mostafa Zarei, Jérôme Jonveaux, Abbas Razvi, Michael Jahn
[Eur J Pharm Biopharm . 2024 Jun 15:114369.](#)

The number and identities of identified HCPs vary depending on the sample preparation method and MS acquisition techniques.

To overcome these issues, Zarei et al., have developed a novel and reproducible workflow for isolation, digestion, and mass spectrometry detection of HCPs for therapeutic monoclonal antibodies (mAbs). In their study, they combined HCP isolation on an FcγRIIIa affinity column with “single-pot” protein digestion, reducing the analysis time and increasing the number of identified HCPs compared to protein A chromatography.

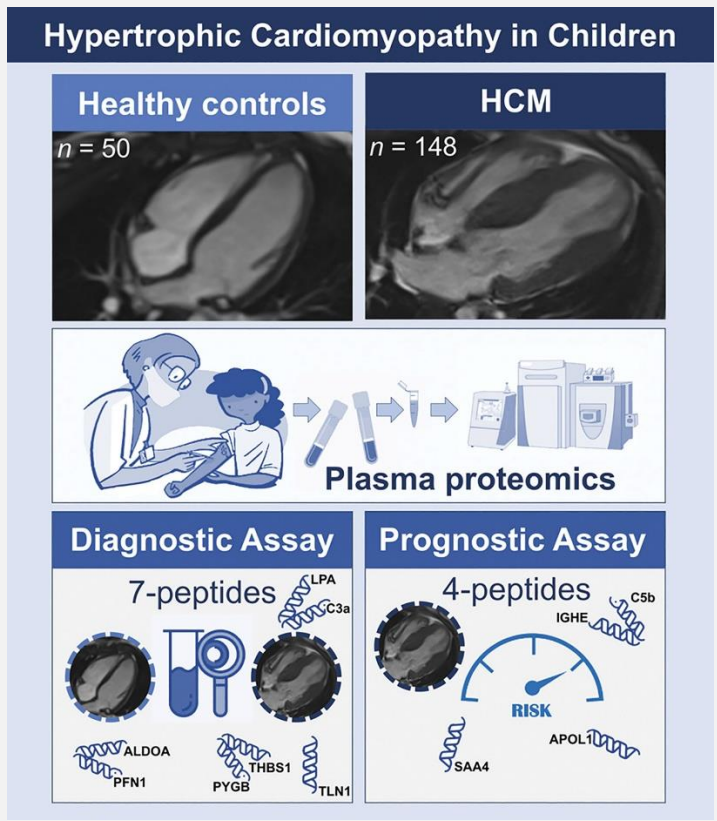


Publication alert:

Novel Multiplexed Plasma Biomarker Panel Has Diagnostic and Prognostic Potential in Children With Hypertrophic Cardiomyopathy

Gabriella Captur, Ivan Doykov, Sheng-Chia Chung, Ella Field, Annabelle Barnes, Enpei Zhang, Imogen Heenan, Gabrielle Norrish, James C Moon, Perry M Elliott, Wendy E Heywood, Kevin Mills, Juan Pablo Kaski
[Circ Genom Precis Med. 2024 Jun;17\(3\):e004448](https://doi.org/10.1093/circgenom/17(3)/e004448)

In their study, Captur et al. examined if a previously published biomarker panel for diagnosis of Hypertrophic Cardiomyopathy (HCM) through adult plasma proteomics could also be used for pediatric HCM. They used targeted liquid chromatography-tandem/mass spectrometry-(LC-MS/MS) and QconCAT reference standards from PolyQuant to confirm the diagnostic 7-biomarker proteomics panel and to identify a 4-biomarker prognostic panel for determining the risk of sudden cardiac death (SCD).



Meet us:

We are looking forward to inspiring talks, workshops and fruitful discussions at the [HUPO World Congress](https://www.huop2024.org/), taking place from **October 20-24, 2024 in Dresden**.

Europe's largest partnering event for biopharma professionals, the [Bio-Europe](https://www.bio-europe.com/), will take place in **Stockholm from November 4th-6th**. We are happy to be part of this event and to connect with other companies in the life science industry.



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