

Ludger BioQuant GPEP A2G2S2 glycopeptide standard



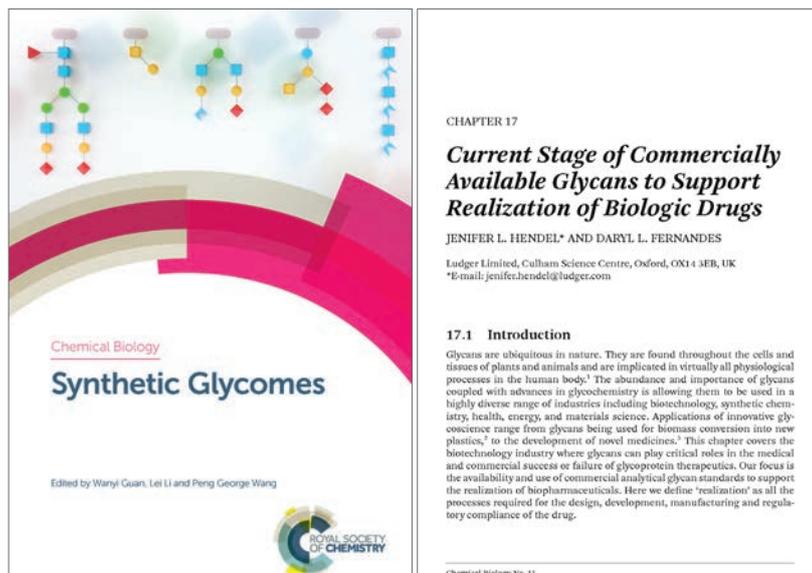
Book Chapter Published In Synthetic Glycomes

Dr. Jenifer Hendel (Senior Scientist, Ludger Ltd) and Dr. Daryl Fernandes (CEO, Ludger Ltd) co-authored a book chapter in the book 'Synthetic Glycomes' published by the Royal Society of Chemistry. The book illustrates and provides a comprehensive review of the current state of the synthetic glycome and introduces the applications of the synthetic glycome. Chapter 17, written by Ludger authors is entitled '**Current Stage of Commercially Available Glycans to Support Realisation of Biologic Drugs**'.

This chapter emphasises the reasons why drug glycosylation is important, by providing case-studies of drug programmes which encountered serious complications that could have been avoided through better glycoanalysis approaches. Furthermore, the chapter summarises the different classes, uses and manufacture of currently available glycan standards for qualitative and quantitative glycoanalysis work.

Finally, the chapter encapsulates how glycochemists could enhance the repertoire of commercially-available glycan standards in order to aid development and manufacturing of safer and more effective biologic drugs.

Please visit our [Glycan standards webpage](#) for more information on the standards we offer at Ludger and how you can use them. And for more information on this chapter visit our [Publications webpage](#).



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NanoCarb

The first annual [NanoCarb](#) consortium event funded by Marie Skłodowska Curie ITN EU project brought together expert principal investigators and early stage researchers (ESRs) to explore applications in advanced nanomedicine using Glyco-Nanoparticles. The event was hosted by Dr. Luigi Ley (University of Milan) and Laura Polito (The Institute of Molecular Science and Technologies).



The event was inaugurated with a session lead by Helen Williamson (Horizons Unleashed) by introducing the ESRs to a leadership framework and career development. A shared symposium with the ITN consortium [GlycoVax](#) over two days allowed speakers from both consortiums to use the opportunity to disseminate their work focusing on nanoparticle technologies and vaccine development. The NanoCarb ESR's were given a platform to present to the consortium about their career journeys so far and the opportunity to summarize the focus of their upcoming projects for the next three years.

For more information on the NanoCarb project and our other collaborations, please visit our [R&D webpages](#).

Publication in Nature Microbiology: On breakdown of complex *N*-glycans by gut Bacteroides

A successful collaboration between Ludger and University of Newcastle through the Glycoenzymes for Bioindustries grant resulted in publishing an article in Nature Microbiology titled “Complex *N*-glycan breakdown by gut Bacteroides involves an extensive enzymatic apparatus encoded by multiple co-regulated genetic loci”.

This research has helped in understanding the breakdown of complex *N*-glycans by prominent Bacteroides species (human gut microbiota). The data revealed that the ability to utilize *N*-glycans is commonplace among gut Bacteroides due to an extensive enzymatic apparatus of specific endoglycosidases and exoglycosidases encoded in these bacteria. Detailed characterization of the *N*-glycan breakdown pathway, based on LC-MS analysis of procainamide labelled substrates provided significant insights into the mechanism of *N*-glycan degradation by key members of the microbiota and provided knowledge for future studies examining the role of this process in gut survival.



Please visit our [Procainamide webpage](#) for more information on how to characterise glycans using LC-MS. And for more information about this article visit our [Publications webpage](#).

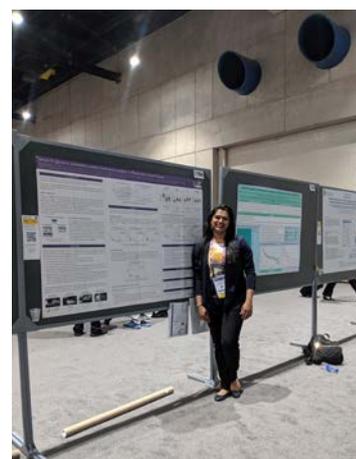
Ludger at Digestive Diseases Week 2019

Archana Shubhakar (Business Development Lead and Senior Scientist, Ludger Ltd) presented a poster titled “Serum *N*-glycomic biomarkers predict treatment escalation in Inflammatory Bowel Disease (IBD)” at the Digestive Diseases Week 2019 in San Diego.

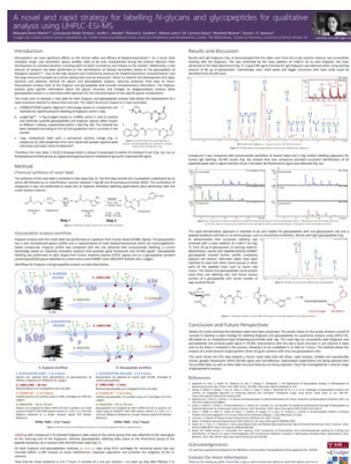
The poster highlights the prediction of future need for surgical intervention or escalation of medical treatment using glycomics biomarkers in IBD patients. The poster presentation was well received and we would like to thank everyone who attended the event.

To view this and any of our other posters, please visit our [Poster webpage](#).

And visit our [R&D pages](#) to view our collaborations and other medical glycomics projects.



Ludger at Young Researcher Symposium 2019



Manuela Amezcua Martin (Marie Skłodowska Curie Early Stage Researcher) recently attended the VI Symposium of Medicinal Chemistry Young Researchers June 21st in Madrid, Spain. She presented a poster entitled “A novel and rapid strategy for labelling *N*-glycans and glycopeptides for qualitative analysis using UHPLC-ESI-MS”.

Glycosylation analysis of released *N*-glycans as well as glycopeptide analysis provide complementary information for glycan characterisation. The *N*-glycan analysis gives specific information about the glycan structure and linkages by using exoglycosidase digestion analysis while glycopeptide analysis is a more favourable approach used for the characterization of site-specific glycan compositions.

This study aims to develop a new label for both *N*-glycan and glycopeptide analysis that allows the development of a rapid analytical method to reduce time and improve cost efficiency.

To view this and any of our other posters, please visit our [Poster webpage](#).

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