Building on the Success of fCAL turbo…

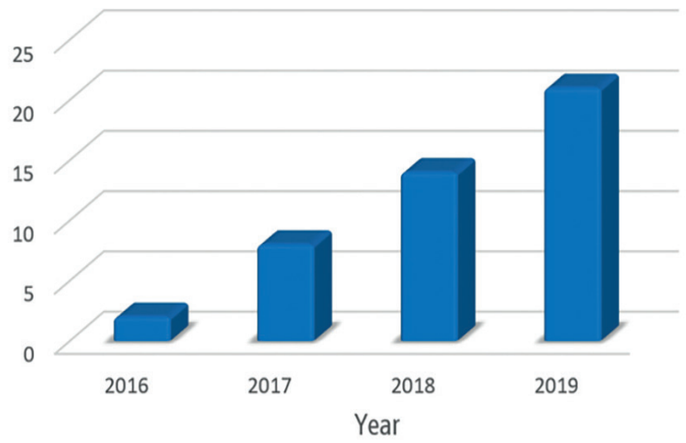
CALEX® Cap Brings Improved Workflow and New Multi Assay Functionality

As you may have seen from the NEQAS reports, the BÜHLMANN fCAL® turbo calprotectin assay is proving very popular, and its use has grown significantly over the last few years [Figure1].

Some of these laboratories were already existing BÜHLMANN calprotectin assay users that have switched technologies from the Quantum Blue® rapid test or the fCAL ELISA. However, a significant proportion are users who have transferred over to BÜHLMANN from other manufacturers kits due to the improved workflow solution that the BÜHLMANN CALEX extraction device combined with the fCAL turbo assay provides.

One such user is Mark Busbridge, Lead Biomedical Scientist, Northwest London Pathology, Charing Cross Hospital who shares his experience:

Figure 1 : Number of routine BÜHLMANN fCAL turbo users on the November NEQAS scheme.



"We have been analysing faecal samples for calprotectin in-house since 2011. As with most large multi-site NHS Trusts we have seen a significant increase in calprotectin workload during this period, with the Trust currently processing 70-80 samples per day.

Our principle methods have been the Phadia EliA I/II on the ImmunoCAP 100/250 analysers. However, with the increasing sample workload we were struggling to maintain the TAT with our current method, due to prolonged assay time (2 hours), significant ImmunoCAP 250 maintenance downtime and the lengthy sample extraction process.

So in 2018 we began investigating alternative methods. The BÜHLMANN fCAL® turbo calprotectin assay was selected, as this can be run on one of our principle analysers (Abbott Architect C8000). The BÜHLMANN CALEX extraction device process is simple and straightforward for staff to follow, resulting in a much improved workflow compared to the previous method, allowing more staff flexibility in this section.

Since going 'live' with the method in late 2019, we have noted improved precision in our inter batch re-extracted patient QC samples, good sample linearity and excellent repeatability and we are currently observing good agreement with our EQA method mean group."

Mark Busbridge, Lead Biomedical Scientist, Northwest London Pathology, Charing Cross Hospital

NHS North West London Pathology

C S case study

Many laboratories are using the fCAL turbo on main stream clinical chemistry analysers (Abbott, Beckman, Roche and Siemens). There are also stand-alone options available which give laboratories the flexibility to choose how and where they want to run their assays. All sites in the UK are using the assay in conjunction with the CALEX extraction device as this offers the best workflow solution in today's busy laboratories.

Faecal Pancreatic Elastase

Building on the success of the fCAL turbo assay, BÜHLMANN is launching its new fPELA assay for faecal pancreatic elastase. This will enable patients and pathways to benefit from the same workflow improvements that calprotectin has. With protocols available for many standard clinical chemistry analysers the BÜHLMANN fPELA is set to revolutionise faecal elastase testing.

Pancreatic Insufficiency

Pancreatic insufficiency is the reduction of production or transportation of the pancreatic enzymes. This results in the inability to properly digest fats, proteins or carbohydrates. It causes patients to suffer from a range of gastric symptoms including abdominal pain, weight loss, diarrhoea and loss of appetite. These symptoms can be confused with a variety of other gastric complaints; so performing a simple stool test to determine the level of pancreatic elastase helps with the diagnosis of this condition. Clinicians then just need to determine the cause……

Pancreatic insufficiency really is just another symptom but the cause is almost always pathogenic, resulting from conditions such as chronic pancreatitis, cystic fibrosis, diabetes mellitus, Crohn's disease, pancreatic cancer, as well as a variety of other conditions.

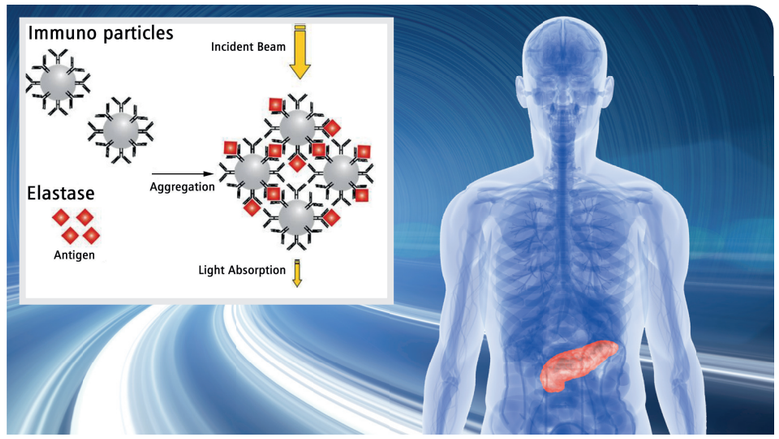
Pancreatic elastase is fairly stable in stool samples and so the levels of this are used as a marker to determine pancreatic activity as a whole.

Multiple Assays from a Single Sample Extraction

The new BÜHLMANN fPELA assay utilises the same CALEX extraction device as the fCAL turbo calprotectin assay, so it is possible to run both tests from a single tube. The CALEX is loaded straight onto the analysers without further diluting or decanting of the sample.

Fast Turnaround

With a time to first result of 10 minutes and further results following every few seconds thereafter, it is certainly one of the fastest faecal elastase assays available.



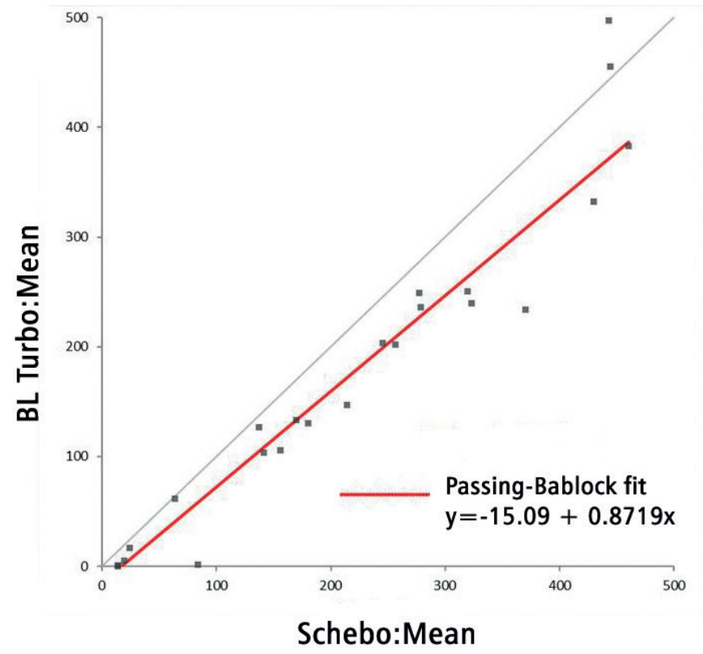
Combine this with random access and no requirement for specific batch sizes you can easily see how this can improve the elastase service that is provided to clinicians, helping to quickly diagnose and support patients with pancreatic insufficiency.

The assay has a standard range of 10 – 500μg/g, although the sample can be diluted to give values up to 5000μg/g if you want to find the best functioning pancreas!
There is no interference with the results from Pancreatic Enzyme Replacement Treatments (PERT), so there is no need for patients to alter their therapy/diet before a test.

Calibration is stable for around two months and reagents have an open on-board stability of about 2 months. The kits contain enough material for approximately 100 tests, however, this will be analyser dependent. Data from historic NEQAS samples shows the new BÜHLMANN fPELA gives comparable results to the current ELISA based methods [Figure 2]

If you would like to evaluate the new BÜHLMANN fPELA Faecal Pancreatic Elastase assay then please contact senior product manager Amanda Appleton (**aappleton@alphalabs.co.uk)** or your local Key Account Manager who can arrange this for you.

Figure 2 : NEQAS data shows the new BÜHLMANN fPELA gives comparable results to the current ELISA based methods.



Find out more about the BÜHLMANN range of calprotectin assays and CALEX extraction device at **www.calprotectin.co.uk**