

## Emeritus Professor George Yeoh - Interim Report

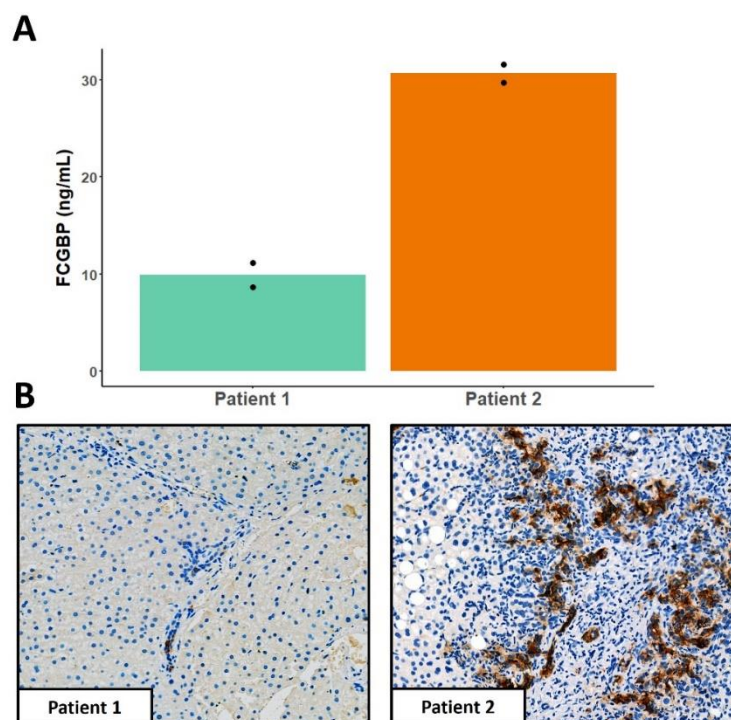
*'Establishing the utility of GCTM-5 as a biomarker for liver pathology in cystic fibrosis patients'*

Thanks to grant funding from Conquer Cystic Fibrosis, we expanded our patient group and are comparing two methods, ELISA and Luminex, for measuring a key liver disease biomarker called FCGBP. We aim to see which method is better at indicating how severe a patient's liver disease is and which correlates with the severity of disease better, according to their medical records. If we can use a blood test to determine disease severity, more patients could avoid risky and invasive liver biopsies. It would also help us monitor how well treatments are working.

In six months, we have increased our patient group from 10 to 60. For 44 patients, we have blood and liver tissue samples, whilst for the remaining 16 we have blood samples only. We successfully used the ELISA method to measure FCGBP levels in all the samples. Most liver biopsies have also been processed to check for cells that shed this biomarker. Currently, we remain "blind" to the liver disease severity for the new patients.

Our near-term goals are 1) finish analysing the tissue samples and 2) correlate ELISA and tissue data. We will then "unblind" the liver disease severity scores to see how well our blood test predicts disease severity. This will help us establish the predictability of our blood test using ELISA, which sets the bar for the potentially more sensitive and specific Luminex method.

**Figure 1:** The results of our serum tests with ELISA and the biomarker analysis from liver tissue for two patients.



**A)** Levels of FCGBP as measured by an ELISA assay.  
**B)** Images of liver tissue from the same patients, stained by immunohistochemistry to display FCGBP positive cells