

In vitro Pharmacology: Assays on Clinical Samples

The extraordinary complexity of a diseased state makes it frequently very challenging to mimic disease pathology *in vitro*. Therefore, besides using common *in vitro* assays, whenever possible Fidelta performs assays on diseased tissue samples.

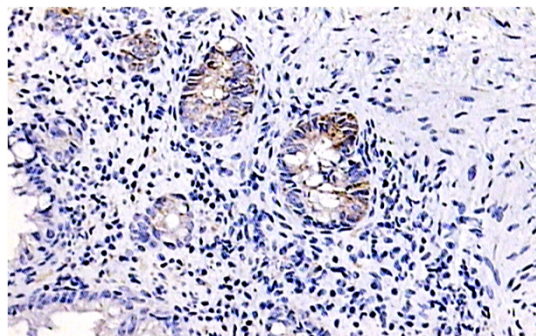
Patient tissue samples are an invaluable material in target validation and compound efficacy studies, as well as in creating translational strategies to enable a smooth transition of candidate molecules into the clinic.

Human biological samples are managed in line with the highest standards and policies for acquisition, transfer and disposal of human biological material.

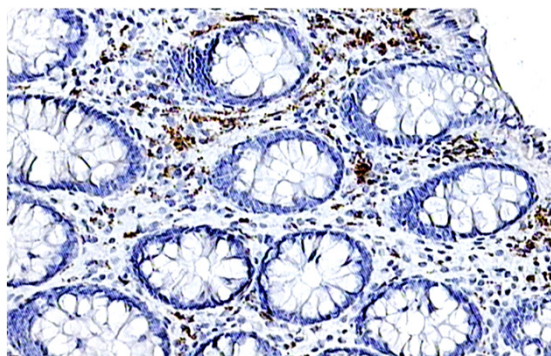
Fidelta develops targeted assays tailored to each client product. Some of the examples are given below.

Target expression in colon biopsy samples from patients with ulcerative colitis

- Colon tissue from the Archival tissue repository of the University Hospital Centre Zagreb, Department of Pathology and Cytology



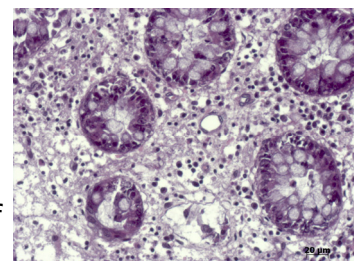
Confirmation of target expression in enterocytes of patients with active UC



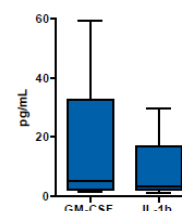
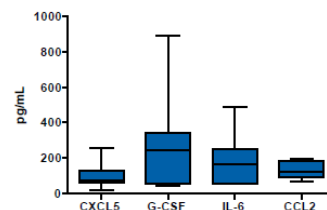
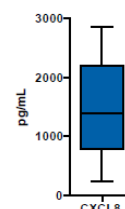
Confirmation of target expression on granulocytes in lamina propria of patients with active UC

Inflammatory cytokine production in colon biopsy samples from patients with ulcerative colitis

- Inclusion criteria: patients with an established diagnosis of UC 18-65 years old; undergoing a diagnostic endoscopic assessment of any segment of the colon; active colon inflammation without ulcerations; informed consent.



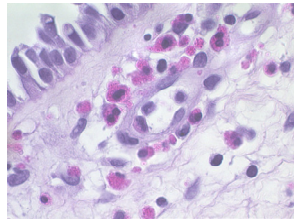
- Colony biopsy samples were processed within 2 h from collection; washed in culture medium, blotted on filter paper, weighed and placed in tissue culture plates containing culture medium and incubated. Cytokine concentrations were determined in supernatants and tissue homogenates



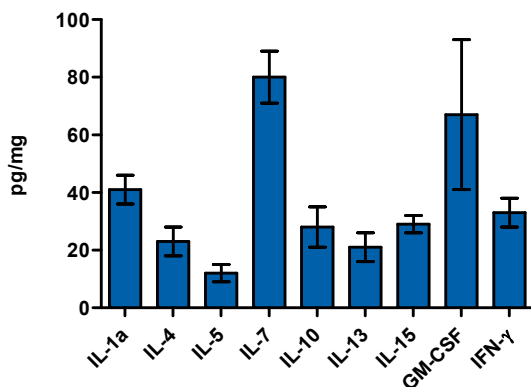
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Inflammatory cytokine production by sinus mucosa and nasal polyps from patients with chronic rhinosinusitis

- Inclusion criteria: Patients with moderate to severe CRS, with or without nasal polyps, who underwent endoscopic sinus surgery; informed consent



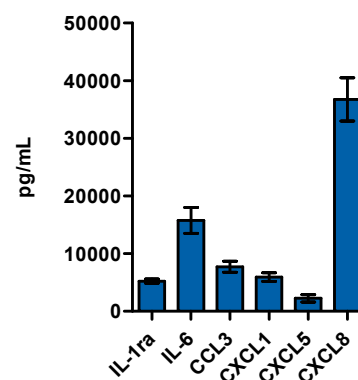
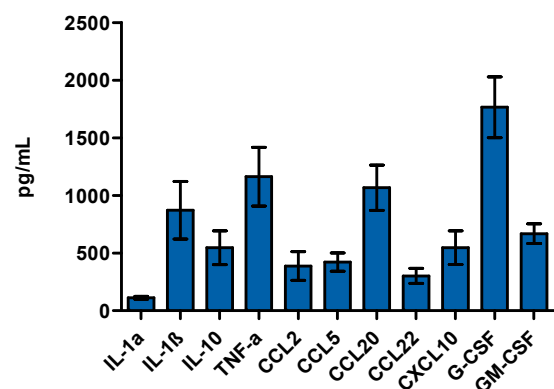
- Cytokine concentration was determined in supernatants and tissue homogenates



Inflammatory cytokine production by sputum cells from patients with chronic obstructive disease

- Inclusion criteria: Subjects diagnosed with COPD (GOLD stages II–IV), who had not received any corticosteroid treatment within the previous 3 months; informed consent

- Spontaneously produced sputum was processed within 1 h after expectoration. Sputum was separated from expectorate and homogenized by use of DTT. Isolated cells were incubated in cell culture medium and cytokine concentration was determined in cell supernatants



References

- Marjanović et al. 2011, Pharmacol Res 63(5):389
Parnham et al. 2005, Eur J Pharmacol 517(1-2):132