

LICENSING OPPORTUNITY:

## Serum based analysis of chronic systemic inflammation

### BACKGROUND INFORMATION

Low level systemic inflammation is associated with an increased incidence of inflammation associated diseases such as cardiovascular diseases (CVD), auto-immune diseases, depression disorder or obesity related metabolic diseases,.... pCRP is a well-known diagnostic marker of inflammation and infection and has been associated with many of the inflammation associated diseases to a certain extent. However, recently it became clear that a monomeric CRP isoform is the pronounced pro-inflammatory isoform of CRP rather than the well-known pentameric pCRP.

mCRP is difficult to measure in a background of pCRP in serum of patients suffering from systemic inflammation. So far no affinity molecules were available that specifically can measure mCRP in a pCRP background.

UHasselt researchers have discovered affinity molecules that specifically bind to the native human mCRP isoform and these molecules can discriminate patients with high pCRP versus high mCRP serum levels. They developed a research diagnostic test, selective for mCRP. This test promises to be of important value in diagnosis, prognosis or therapy response in chronic systemic inflammation.



**UHASSELT**

KNOWLEDGE IN ACTION

### COMPELLING RESULTS

The UHasselt discovered affinity molecules were applied in an **ELISA based assay** to cohorts of patients suffering from different inflammation associated diseases.

Highly significant correlations of **increased mCRP levels were detected for serum cohorts** of

- Rheumatoid Arthritis (n=30;  $p = 1.5 \cdot 10^{-5}$ )
- Major Depression Disorder (n = 35;  $p = 2.7 \cdot 10^{-5}$ )
- Patients with clinically stable COPD (n= 39;  $p < 0.001$ )
- Patients with obesity (n = 28;  $p = 0.018$ )

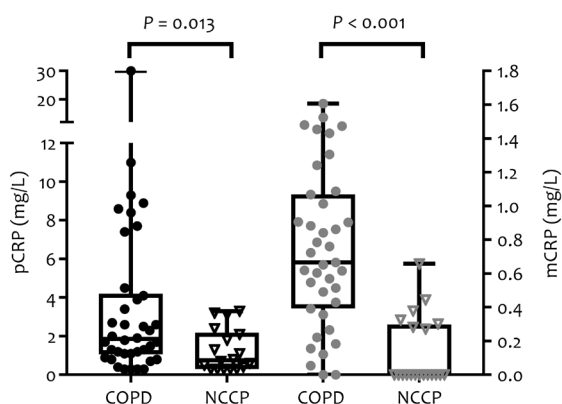


Figure: pCRP and mCRP levels in COPD and Non COPD control persons (NCCP) cohorts

### KEY FEATURES AND ADVANTAGES

Diagnostic value of an inflammation biomarker, **demonstrated** in 4 independent cohorts and 4 different disease indications (n=132).

Research ELISA translated to **ELISA test for mCRP** in serum.

Possibility to detect early systemic inflammation and to monitor therapeutic success.

Hasselt University has a **strong IP protection** for the diagnostic mCRP kit.

### MARKET POTENTIAL

CRP is an acute phase reactant, elevated in response to a broad variety of acute and chronic inflammatory stimuli.

The **CAGR of CRP diagnostics is 1.3%**, partly due to the rising burden of chronic/inflammatory diseases, with CVD accounting for the largest share.

Actual sales for CRP testing are estimated on **\$1.77 billion in 2025**.

However, current CRP diagnostics is based on pCRP testing. Using the UHasselt affinity molecules in an mCRP test, we present a **more adequate marker for chronic systemic (early) inflammation**.

### OUTSTANDING OPPORTUNITY

Patent application is available for licensing.

UHasselt is searching for interested parties to complete further validation and development (possible in collaboration) and commercialization.

### BUSINESS DEVELOPER

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