

## Angiopietin-2 is a strong predictor in COVID-19 patients

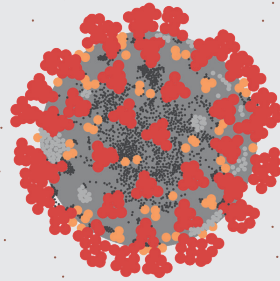
### Angiopietin-2 is a soluble marker of endothelial activation

Angiopietin-2 (ANG2) is an angiogenesis regulator that can be rapidly released by the activated endothelium upon thrombin or inflammatory cytokines.

ANG2 induces inflammation and vascular hyperpermeability and correlates with adverse outcomes in several critical care syndromes<sup>(1)</sup>.

### Angiopietin-2 is a relevant factor to predict transfer to the ICU

In COVID-19 patients, ANG2 was recently reported by *Smadja and colleagues* to be a relevant factor to predict transfer to the ICU as it was associated with poor lung compliance<sup>(2)</sup>. Thus, showing that endothelial activation reinforces the hypothesis of a COVID-19-associated microvascular dysfunction.



**In critically ill COVID-19 patients, recent data show that elevated plasma levels of the proinflammatory cytokine Angiopietin-2, is associated with the risk of organ failure and mortality.**

#### Did you know?

Angiopietin-2 can easily be measured by ELISA

#### Human Angiopietin-2 ELISA kit (cat.no. BI-ANG2)

**RELIABLE** – Rigorously validated according to international quality guidelines

**LOW SAMPLE VOLUME** – 20µl / well

**CONVENIENT** – ready to use standards and controls, optimized for clinical samples

*Developed and manufactured by Biomedica*

### Angiopietin-2 inhibits anticoagulation in critically ill COVID-19 patients

*Hulstrom and colleagues* recently demonstrated that ANG2 levels in critically ill COVID-19 patients correlate with disease severity, hypercoagulation, and mortality.

In addition, the researchers provided novel in vivo evidence for a direct role for ANG2 in coagulation through binding to and inhibition of thrombomodulin-mediated anticoagulation.

The scientists suggest that inhibition of ANG2 might be beneficial for treating critically ill COVID-19 patients, as well as other patients with hypercoagulation<sup>(3)</sup>.

1. Circulating angiopoietin-2 and the risk of mortality in patients with acute respiratory distress syndrome: a systematic review and meta-analysis of 10 prospective cohort studies. Li F et al., *Therapeutic advances in respiratory disease*, 2020; 14, 1753466620905274.
2. Angiopietin-2 as a marker of endothelial activation is a good predictor factor for intensive care unit admission of COVID-19 patients. Smadja DM et al., *Angiogenesis*, 2020;1-10.
3. Elevated Angiopietin-2 inhibits thrombomodulin-mediated anticoagulation in critically ill COVID-19 patients. Hultstrom M et al., *MedRxiv preprint server*, 2021.