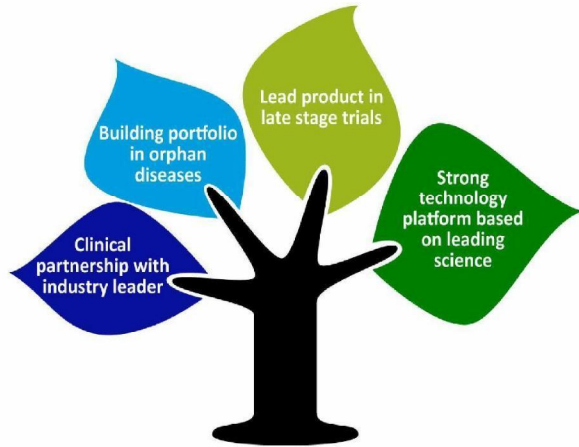




ISA106-CoVx
Life Saving Treatment
for
COVID Induced Pneumonia

May 7, 2020

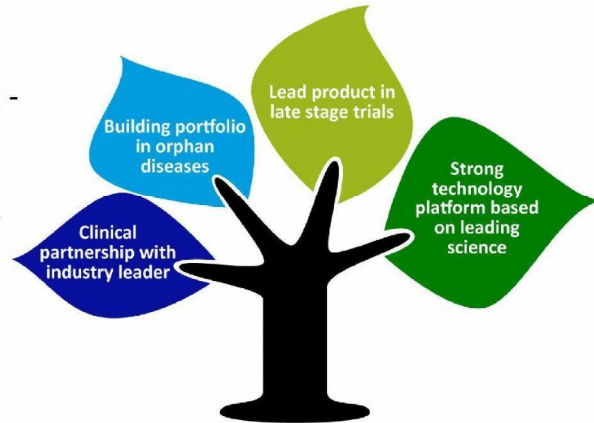
Leaders in Targeted Immuno-Activation



- Prof Dr Cornelis Melief, Chief Scientific Officer
- Dr ██████████ (10)(2e), Chief Medical Officer
- Dr Anton Mat, Director Business Development

Leaders in Targeted Immuno-Activation

- Lead product ISA101b improves overall survival and tumor response rates in HPV16 induced head and neck cancer
- Lead product partnered with Regeneron - fully funded with potential approval by 2023
- Proven activity in HPV16 associated pre-malignant conditions
- ISA SLPs are able to elicit specific and virus targeted T and B cell responses
- Clinical end result is eradication of virus AND virus infected cells



Product Profile of ISA106-SARS-CoVx

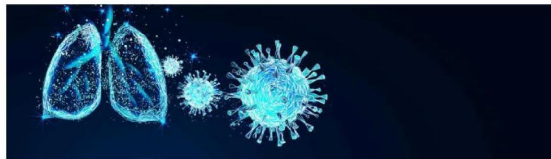


ISA106-SARS-CoVx is:

- A novel, rationally designed, and engineered therapeutic agent
- Specific for SARS CoViruses
- A compound that boosts the all-important T-cells, and provides immunity

ISA106-SARS-CoVx is NOT:

- A prophylactic vaccine
- A small molecule anti-viral drug
- An 'off the shelf' broadspectrum immunostimulant



Strictly confidential and proprietary

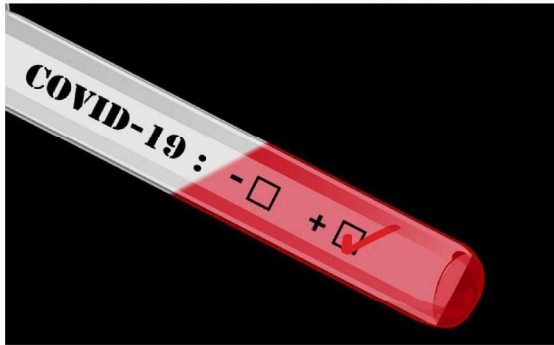
SARS-CoV-2 pneumonia: 'a few home truths'



1. In high risk patients this disease is often fatal
2. TESTING IS KEY (see rRT-PCR)
3. Prophylactic vaccine is not the panacea as coverage may not be > 65%

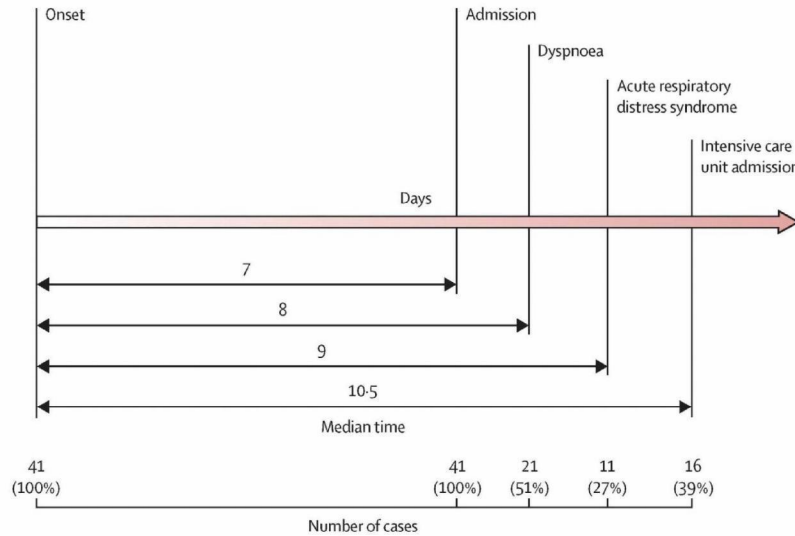
→ A THERAPEUTIC MODALITY THAT BOOSTS T-CELLS IS AN ABSOLUTE MEDICAL NEED

SARS-CoV-2 pneumonia: a fatal disease in high risk patients



- Cancer
- Immunosuppressed
- COPD/ emphysema
- Auto-immune disease
- Cardiovascular disease
- Elderly
- Diabetes/ obesity

Clinical course COVID19 patients- when hospitalized



Strictly confidential and proprietary

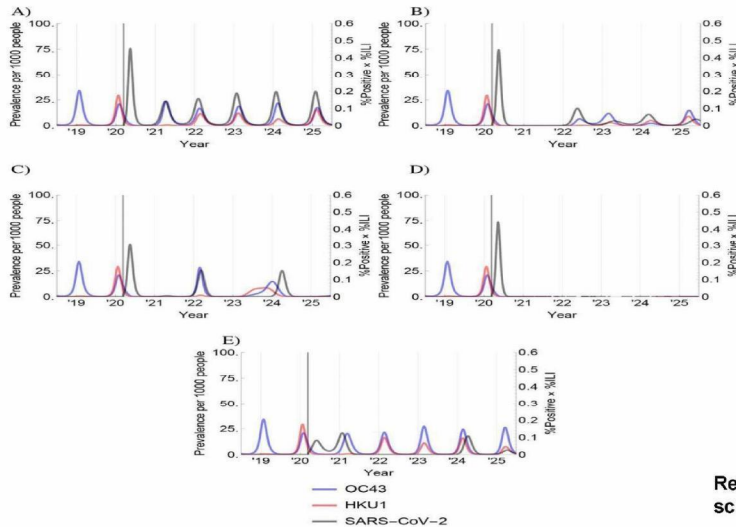
SARS-CoV-2 Associated Pneumonia Predictors of Mortality



- Age > 65 years
- Pre-existing cardiovascular/cerebrovascular disease
- CD8+ T cells ≤ 75 cells/ μ L
- Cardiac Troponin I ≥ 0.05 ng/mL



SARS CoV2 may be with us for longer



Prevalence of SARS CoV2 for 5 pandemic scenarios/ patterns of immunity:

- A Short duration of immunity (40 wks)
- B Longer duration (104 wks)
- C High seasonal variation
- D Long term immunity
- E Intermediate time/ cross immunity

WHEN WILL BE THE 2ND PEAK??

Reference: Stephen M. Kissler et al. Science 2020; science.abb5793

ISA106



Therapeutic aim: avoid respiratory distress



1. Treatment of COVID infection
2. Prevention of development of lower respiratory infection/ pneumonia
3. Avoids the trauma of intubation and mechanical ventilation
4. Prevents RDS and other organ failure
5. SAVES LIVES

ISA106 has a unique design



Synthetic long peptides containing T- and B-cell epitopes to create optimal T-cell responses (T_{helper} & T_{killer}) and long term protection

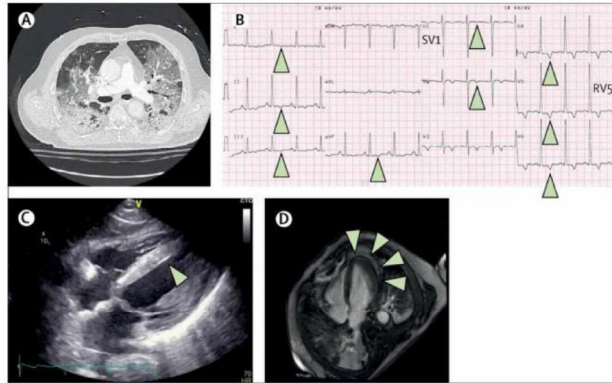
Therapeutic against progression of disease caused by Covid-19 and future SARS corona viruses

ISA106

Therapeutic effects of ISA106-SARS-CoVx



1. Eradicates SARS CoV and SARS CoV infected cells
2. Controls pulmonary inflammation: prevention of lung edema, alveolar collapse, surfactant damage
3. Prevents DIC, hypercoagulability
4. Prevents spread of virus to other organ systems & viremia
5. Provides immunity



ISA106 SARS-CoVx A unique mechanism of action

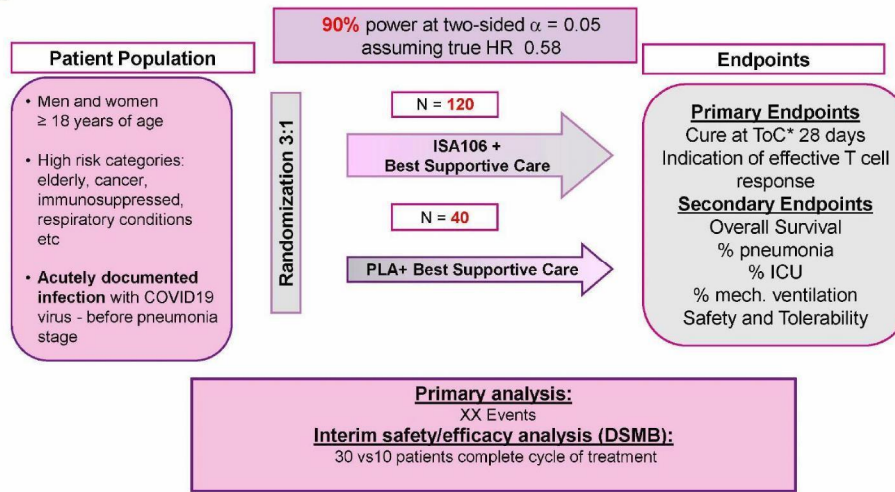


Clonal expansion of T-and B-cells that are specific/ directed against SARS-CoVx

Prevention of Cytokine Release Syndrome (CRS), as well as deregulated overstimulation of innate immune system

Potent post treatment SARS-CoVx directed immunity

ISA106 SARS-CoVx 001: Proposed Study Design



Study will have an adaptive design

Phase 1 study will be embedded in this efficacy phase 1-2 study: * ToC= test of cure

Strictly confidential and proprietary

Timelines and budget



	Timing	Budget
Manufacturing of prototype	May 2020	Accounted for
Immunogenicity in mice	May + June 2020	Accounted for
Transgenic mice experiments	July + August 2020	Accounted for
Manufacturing of product for human testing (small scale)	July – October 2020	(10)(1c)
Manufacturing scale up	October 2020 – March 2021	(10)(1c)
1st clinical trial	Jan – June 2021	(10)(1c)
Manufacturing of product for large scale human testing	April – June 2021	(10)(1c)
Large scale clinical trials	June 2021 onwards	(10)(1c)

ISA106 Summary



ISA seeks funding for:

- Preclinical efficacy testing of ISA106 to be developed for TREATMENT of patients with COVID19 and related infections
- A phase 1-2 clinical trial in high risk patients infected with SARS-CoV2



ISA106 for control of SARS Pneumonias



1. Medical need: substantial ✓
2. Clinical development trajectory: feasibility of studies ✓
3. Fast regulatory trajectory possible ✓
4. Mechanism of action in man ✓
5. Long standing post treatment immunity ✓





ISA106 SARS-CoVx

**THE ONLY SPECIFIC TARGETED
THERAPY TO CONTROL
SARS PNEUMONIAS**