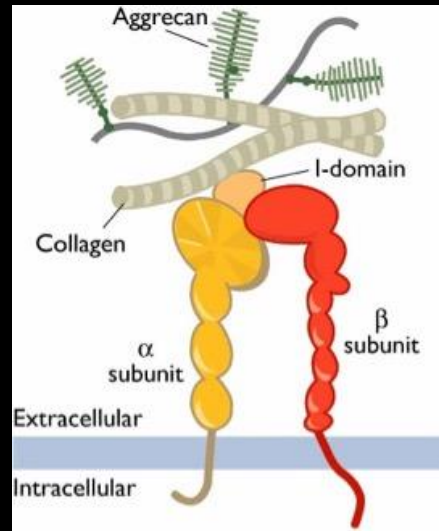# xintela

Evy Lundgren-Åkerlund

CEO/CSO

Medicon Valley, November 2, 2020

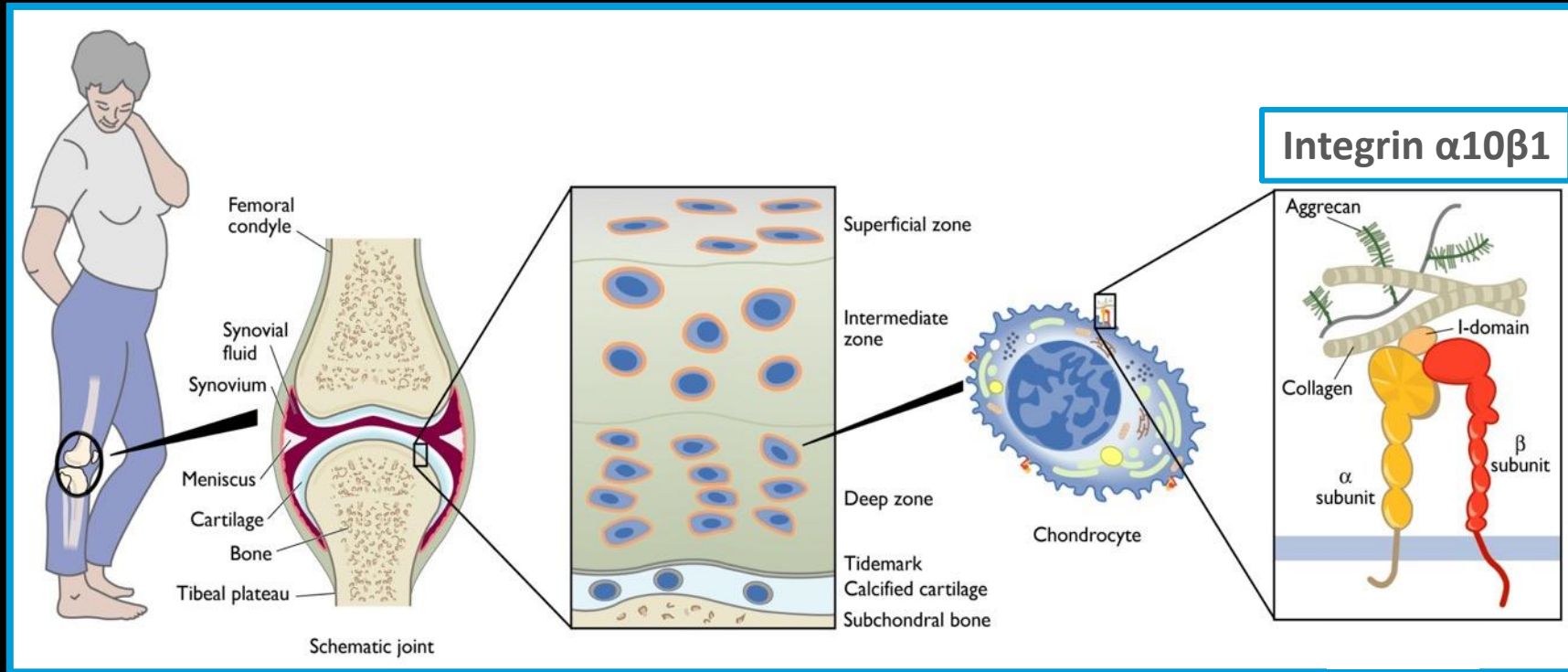# Xintela's Business

Research and development is based on the integrin marker technology platform XINMARK®

Current focus is stem cell therapies for osteoarthritis and antibody therapies for aggressive cancers

Integrin α10β1

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Xintela's Integrin marker:
Found on the surface of key cell types

Integrin α10β1

Chondrocytes: *Camper et al, JBC 1998*
Mesenchymal Stem Cells (MSCs): *Varas et al, Stem Cell Dev 2007*
Cancer cells: *Thorén et al, Cancers 2019*

Xintela develops stem cell therapy for humans and animals

XSTEM®

Xintela's stem cell platform

MSCs from adipose tissue

MSC-selection using integrin α10β1

Current indication focus:
Osteoarthritis
COVID-19 related ARDS

XSTEM produced in our GMP facility

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Osteoarthritis – a huge and growing problem

In OA the cartilage is gradually degraded –painful and debilitating

Globally, 15% of all adults 60+ is estimated to have OA

The global market for OA drugs is estimated to grow from 6,8 billion USD (2019) to 10,1 billion USD (2024)*

*Global Data

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Osteoarthritis – there is no treatment

Today, pharmaceuticals only treat the symptoms of OA by relieving pain and reducing inflammation

Over 1 million joint replacements are performed yearly in EU
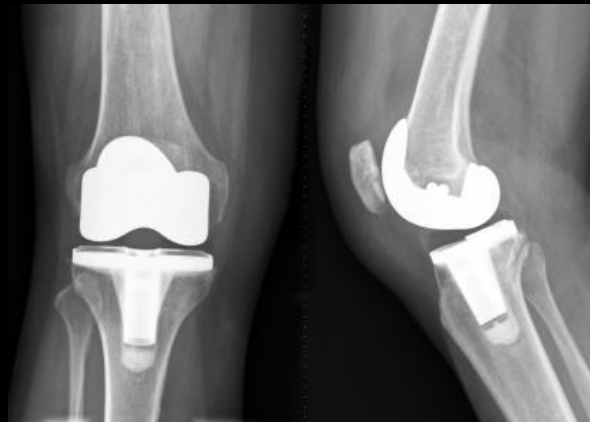
A safe and effective allogeneic stem cell therapy for OA

- Stop further development of osteoarthritis

- Regenerate and heal the cartilage
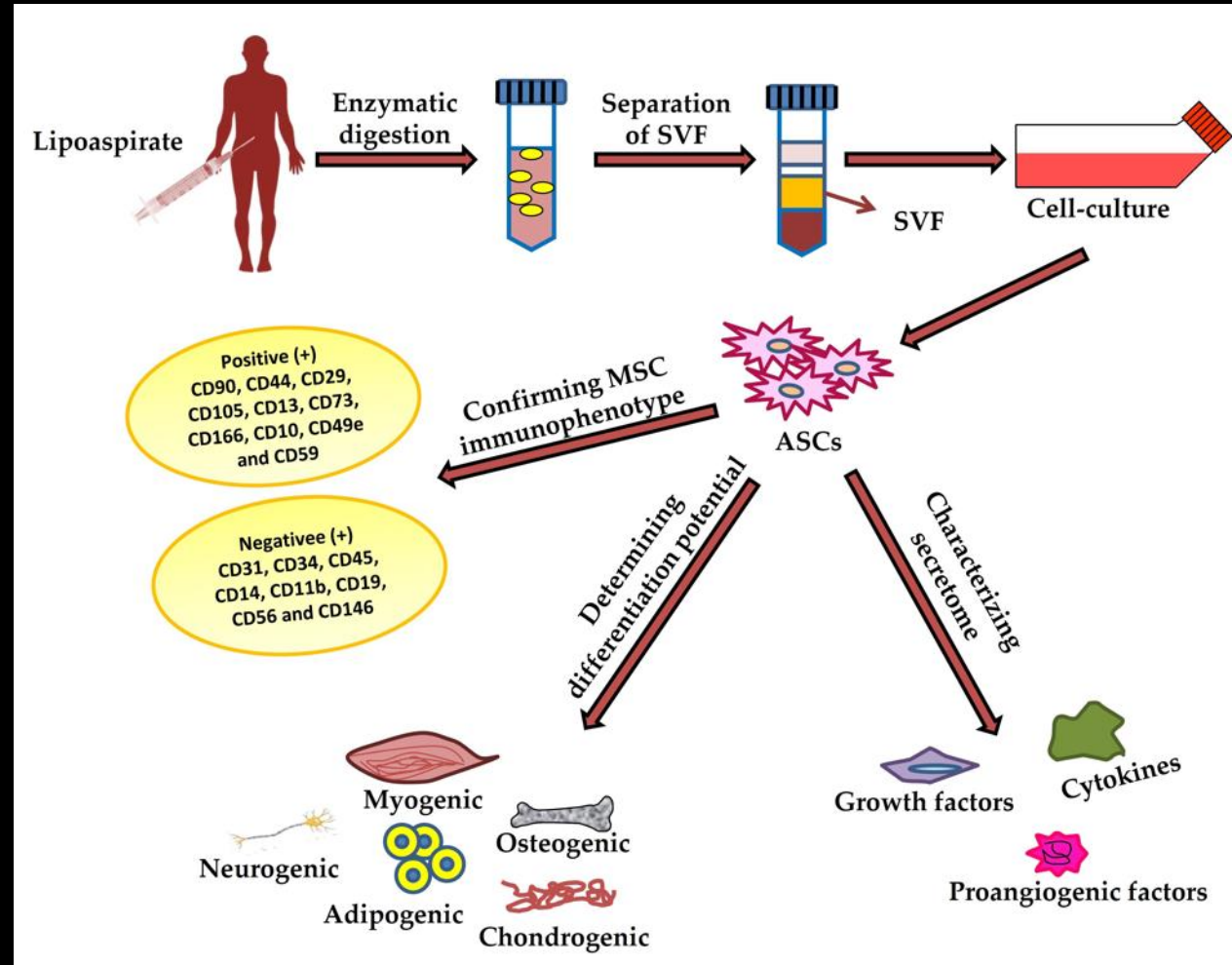
- Reduce the need for joint replacement surgery

Injection of the stem cells into the OA joint
One-step procedure

Stem cells from one donor can treat many patients – cost effective

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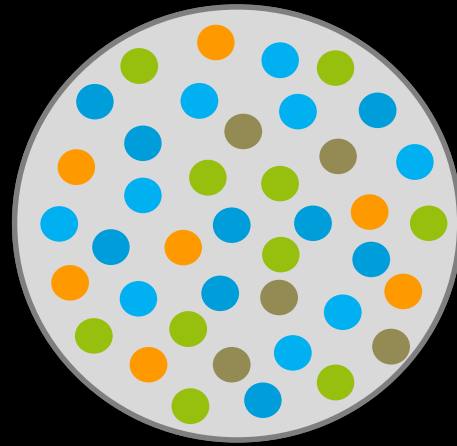# Xintela develops Stem Cells from donated adipose tissue

From: *Kumar Dubey et al. Int. J. Mol. Sci.* **2018**, *19(8), 2200*
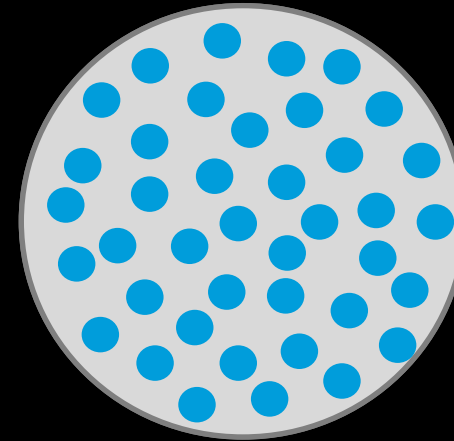
Both functional and regulatory advantages of integrin α10-selected MSCs, XSTEM®

- Homogenous and high quality stem cell preparations

- Consistent quality between donors

- High differentiation capacity

- Improved homing to damaged tissue

- High immunomodulatory capacity

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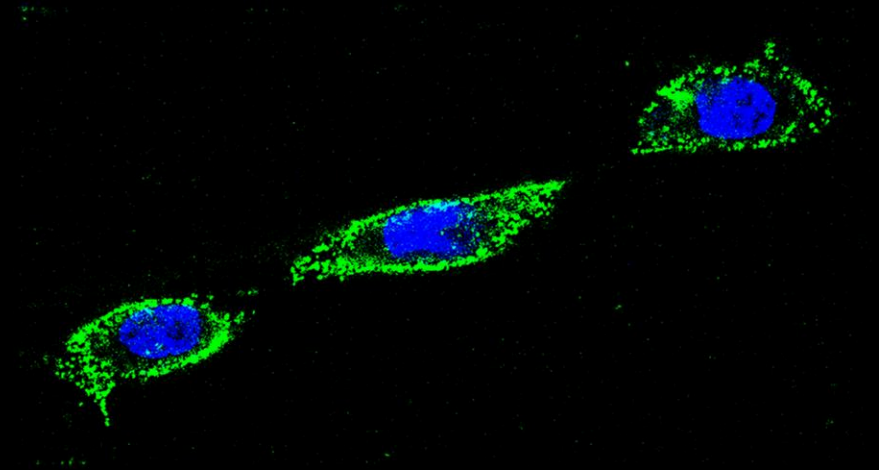
Important milestones reached with XSTEM®

✓ **Developed** and **patent protected** the stem cell platform XSTEM®

✓ **First product XSTEM-OA** ready for clinical studies.
Pre-clinical studies completed: Safety, efficacy and homing

✓ **Planned First-in-Human study** on knee OA patients, start 2021

✓ **GMP facility** and **production process ready:** Application to MPA during **Q4 2020**

✓ **Promising results** from **XSTEM in** preclinical study **ARDS/COVID-19**
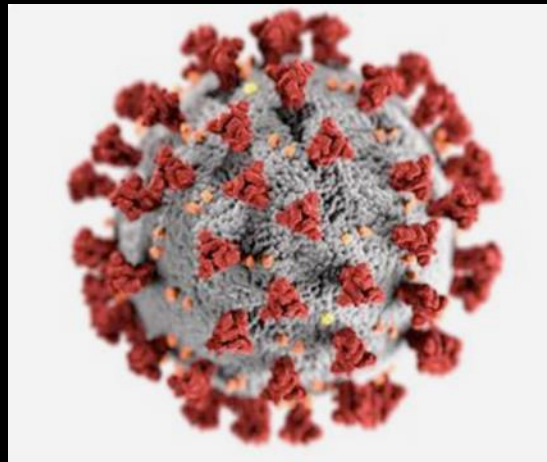
Horse study published: The American Journal of Sports Medicine, 2020, 1–12

XSTEM produced in our GMP facility

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The COVID-19 (SARS-CoV-2) pandemic

Numbers at a glance

45 140 131
Confirmed cases

Last update: 31 October 2020, 09:34 am CET

1 182 747
Confirmed deaths

Last update: 31 October 2020, 09:34 am CET

219
Countries, areas or territories with cases

Last update: 31 October 2020, 09:34 am CET

Source: www.who.int
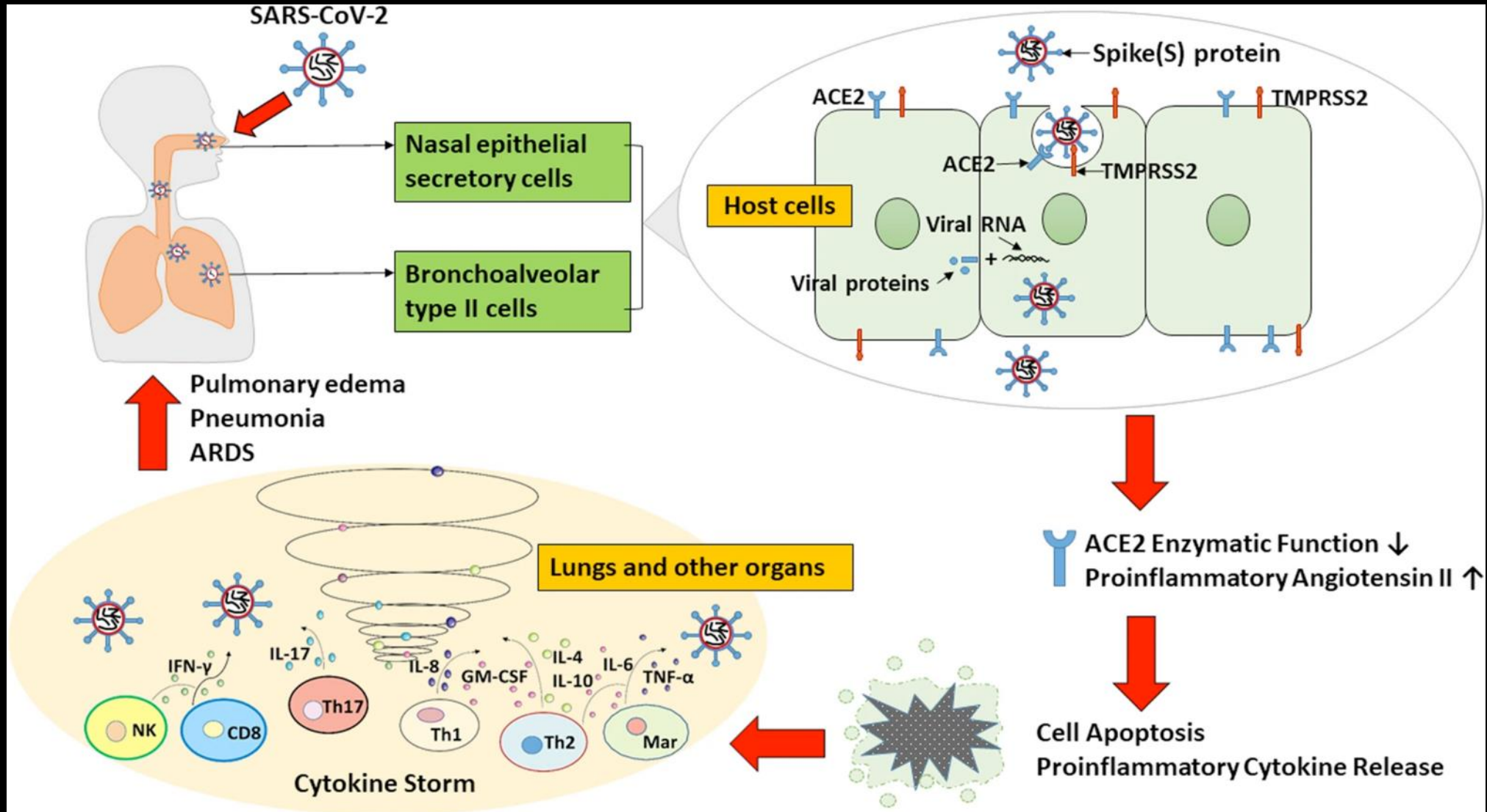
COVID-19 is a respiratory virus affecting the respiratory tract and lungs

Complications leading to death may include: respiratory failure, acute respiratory distress syndrome (ARDS), sepsis and septic shock, thromboembolism, and/or multiorgan failure, including injury of the heart, liver or kidneys

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COVID-19 related ARDS

- **ARDS - Acute Respiratory Distress Syndrome** - respiratory complication caused by a variety of medical conditions including COVID-19

- Fluid leaking from the small blood vessels into the lungs and causing severe shortness of breath, difficulty breathing, organ failure and death

- No effective or approved therapies for ARDS

- ARDS treatment includes oxygen, respiratory support, treatment of any underlying disorders and supporting the patient's failing organs with various interventions

- Very high mortality reported

Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet. 2020;395:497–506.

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How COVID-19 causes ARDS

Xiao, K., Hou, F., Huang, X. *et al.* Mesenchymal stem cells: current clinical progress in ARDS and COVID-19. *Stem Cell Res Ther* **11,** 305 (2020)
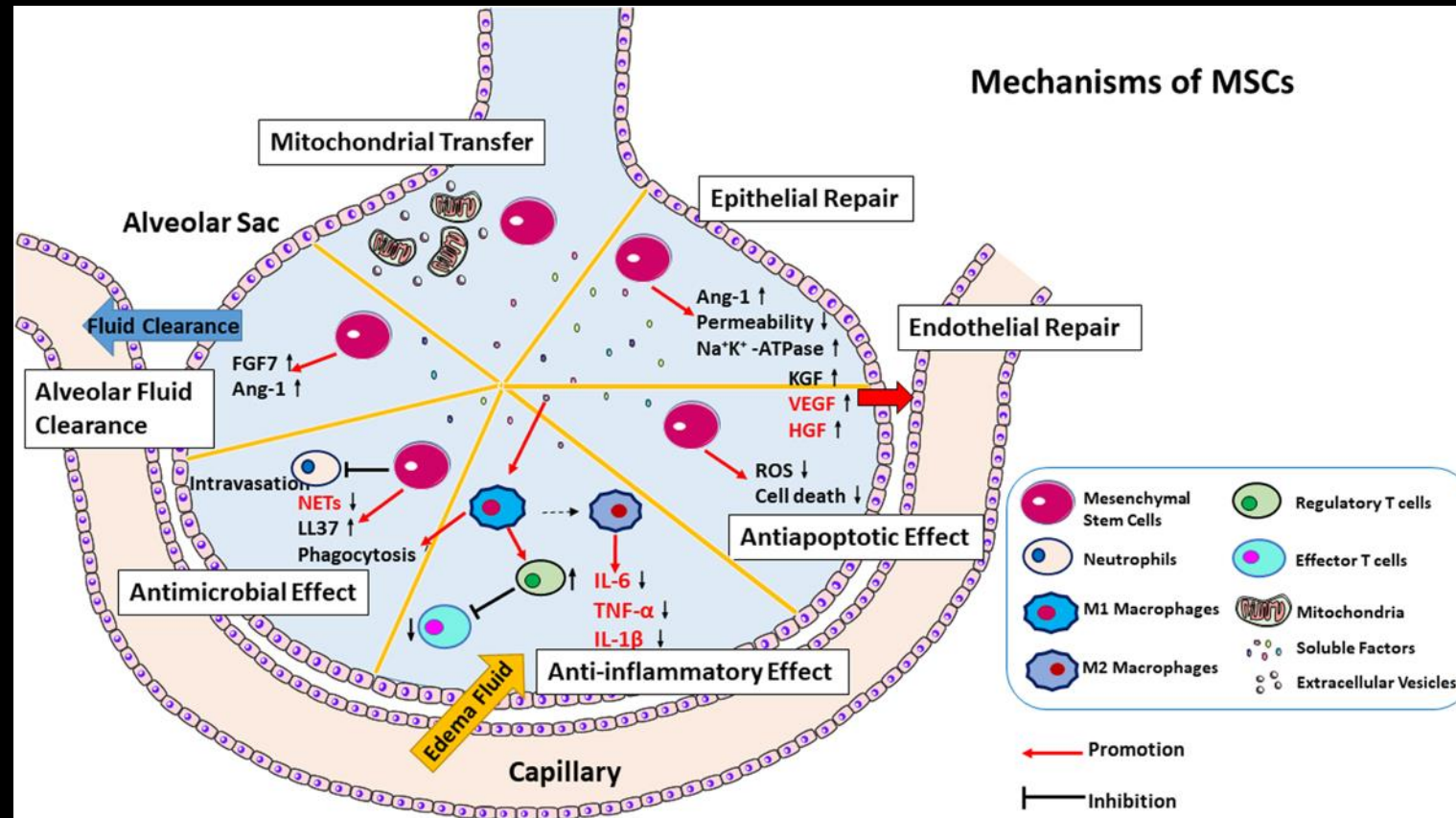
MSCs has the potential to treat COVID-19 related ARDS

MSCs have several biological actions including: regulation of immune cells, tissue repair, regulation of endothelial permeability and increased alveolar fluid clearance

Xiao, K., Hou, F., Huang, X. *et al.* Mesenchymal stem cells: current clinical progress in ARDS and COVID-19. *Stem Cell Res Ther* **11,** 305 (2020)

Several clinical trials ongoing for treatment of COVID-19 ARDS

Many organisations and companies are looking towards cell therapy as a potential solution

Currently 22 clinical trials ongoing to develop MSC based therapies

Xintela's approach to COVID-19 ARDS

PRESS RELEASE

MAY 8, 2020

Xintela granted 1 million SEK from Vinnova

#Regulatory

Lund, Sweden, May 8, 2020 - Xintela has been granted 1 million SEK from Vinnova in the call for " Innovations in the wake of the crisis - Restructuring of society, operations and production in the wake of the corona epidemic.". The grant concerns the funding of a preclinical study to evaluate Xintela's stem cells for the treatment of Covid-19 patients with the fatal disease condition ARDS (Acute Respiratory Distress Syndrome).

- **Pre-clinical testing** of Xintela's selected MSCs, XSTEM, in a **validated animal model of ARDS**

- Collaboration with Cardio-thoracic surgery clinic, **Skåne University Hospital, Lund**

- XSTEM-ARDS produced in Xintela's **GMP-ready manufacturing facility**

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Promising results in the ongoing ARDS study

PRESS RELEASE

OCTOBER 26, 2020

Xintela's stem cells show promising results in preclinical ARDS study

#Regulatory

Lund, Sweden, 26 October 2020 - Xintela announces today that the company's selected human stem cells XSTEM® show a therapeutic effect in ARDS (Acute Respiratory Distress Syndrome) in an ongoing preclinical study in pigs. ARDS is a life-threatening lung complication that may affect severely ill covid-19 patients.

Reversal of the critical ARDS condition:

Improvement in the lungs' ability to oxygenate blood and stabilization of the blood circulatory system

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Xintela receives 'intention to grant' decision from European Patent Office for stem cell product XSTEM

#Regulatory

Lund, Sweden, 29 October 2020 - Xintela announced today that the European Patent Office (EPO) has issued an "Intention to grant" decision for the patent application covering the company's stem cell product XSTEM®, consisting of integrin α10-selected mesenchymal stem cells.

Thank You!

More information: www.xintela.se