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4TU.Binnenhofcolleges

1993



2020



- > 750 employees
- System supplier - R&D - Production
- > 100 M € turnover
- ISO 9001 & ISO 13485



Groningen



Enschede

Münster



Delft



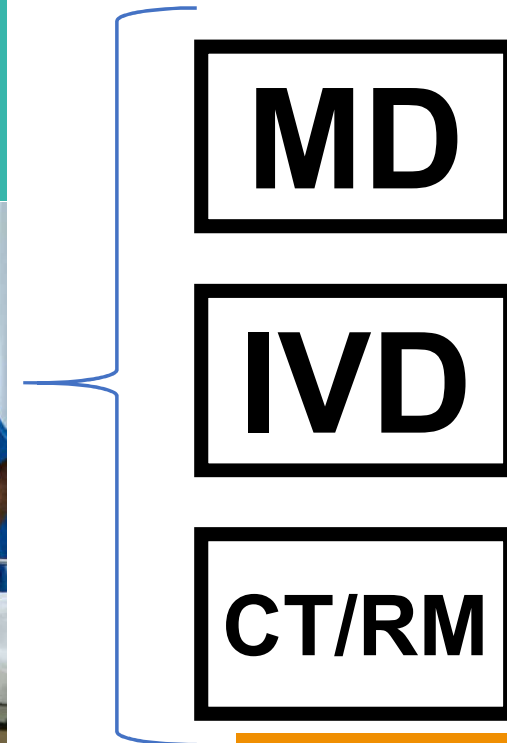
Best



Singapore



We are working on a better future in these areas



PVA: Patient Ventilator Asynchrony one example of problem causes in ICU

Possible causes of PVA, causing very often problems in ICU ventilation

- Delay of triggering and ineffective efforts

- Auto-triggering

- Premature cycling off

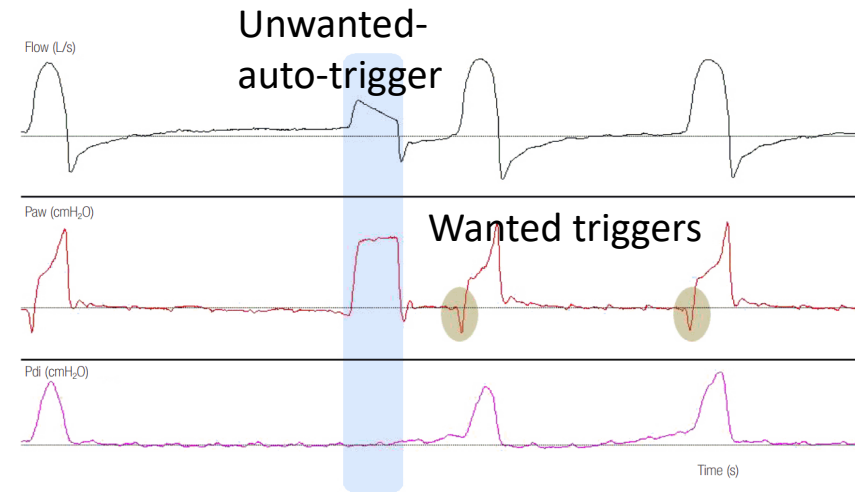
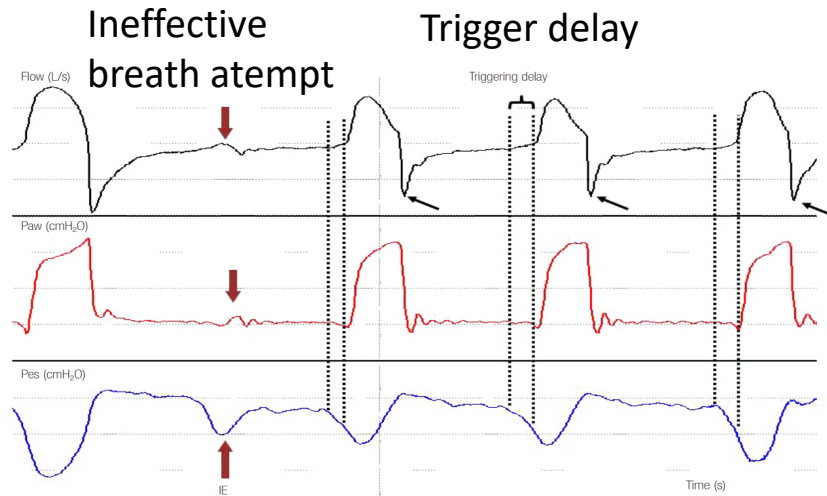
- Delayed cycling off

- Reverse triggering

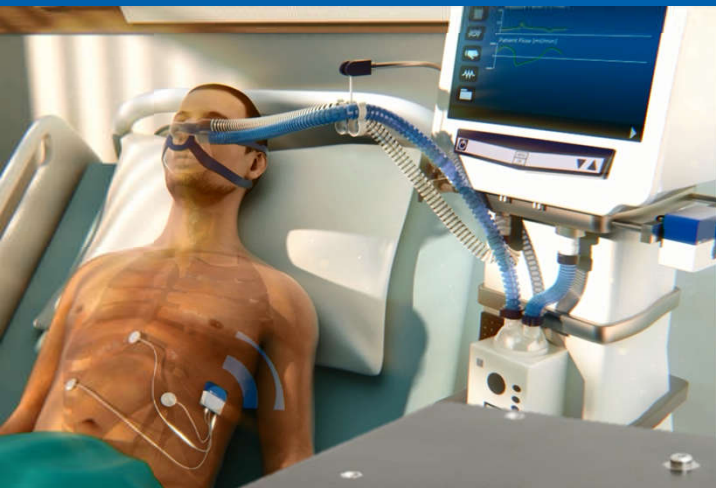
- Asynchronies related to a discrepancy between the needs of the patient and the ventilator assist



Occurs in 20 – 30% of cases with intubated patients, causing prolonged ventilation time and even higher mortality.



Prof. Diederik Gommers of Erasmus MC: "before pandemic I thought we do not need automatic recognition, because we have the experienced people who recognize this, but during pandemic I realized that we urgently need automatic systems based on Artificial Intelligence, because that would have helped us a lot in preventing from problems in ventilation and could have saved precious bedtime ."





- For Dutch government we developed complete ventilator system, based on our respiratory module, for Covid-19 patients
- Ventilator has full CE approval



TECHMED @
UNIVERSITY
OF TWENTE



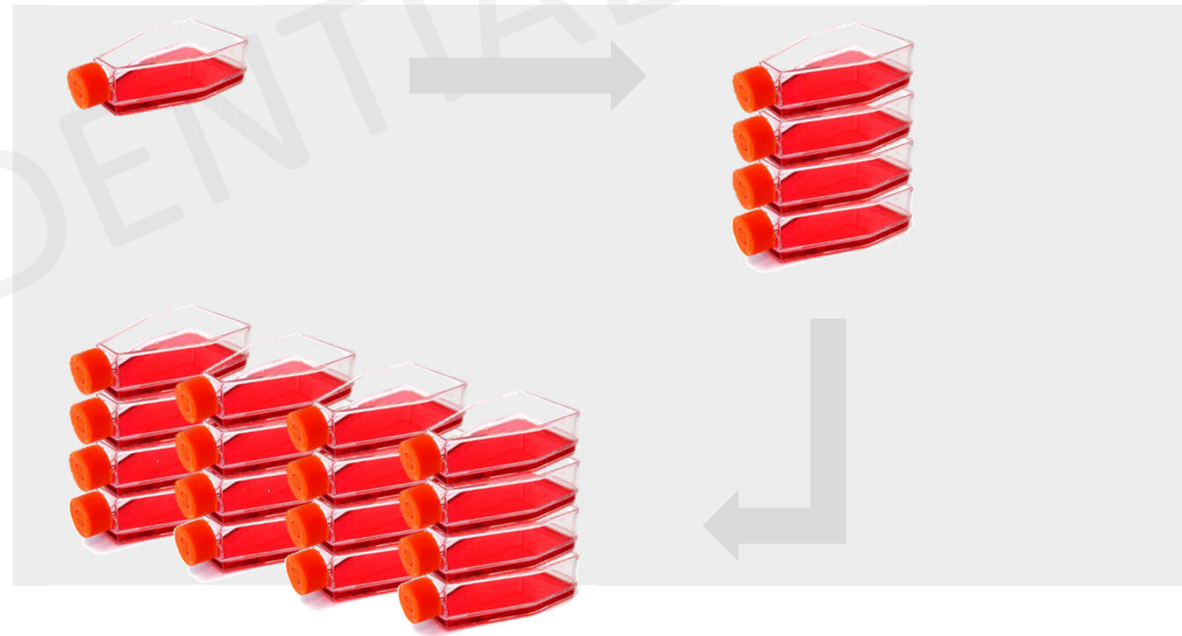
MEDTECHNL
Groefonds

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Traditional autologous cell therapy



First passage
heterogeneous cell population



Third passage + harvest

The Scinus Cell Expansion system

- Closed bioreactor system supporting GMP cell therapy production
- From biopsy to clinically relevant cell numbers
- Cost and labor reduction
- Quality improvement
- Optimal and controlled culture conditions

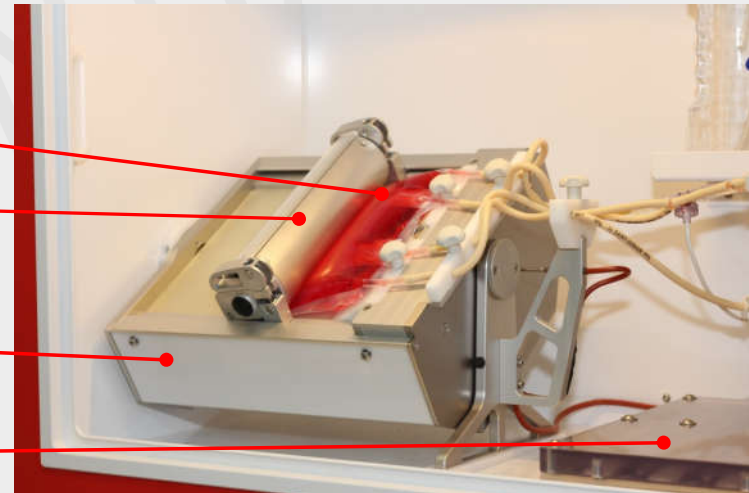
Direct seeding
in bioreactor



Harvest clinically relevant cell
numbers directly from bioreactor

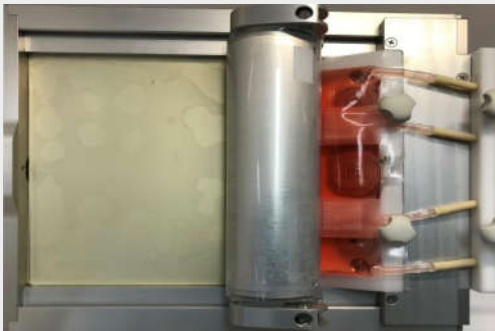
The Scinus Cell Expansion system – Unique features

- Adherent bag
- Expansion Roller
- Rocker platform
- Oxygenator



Unique feature: Expansion Roller

Volume expandable



100 ml



1400 ml

x14

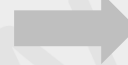
Typical example: MSC expansion from biopsy



Bone marrow
biopsy



RBC depletion /
MSC enrichment

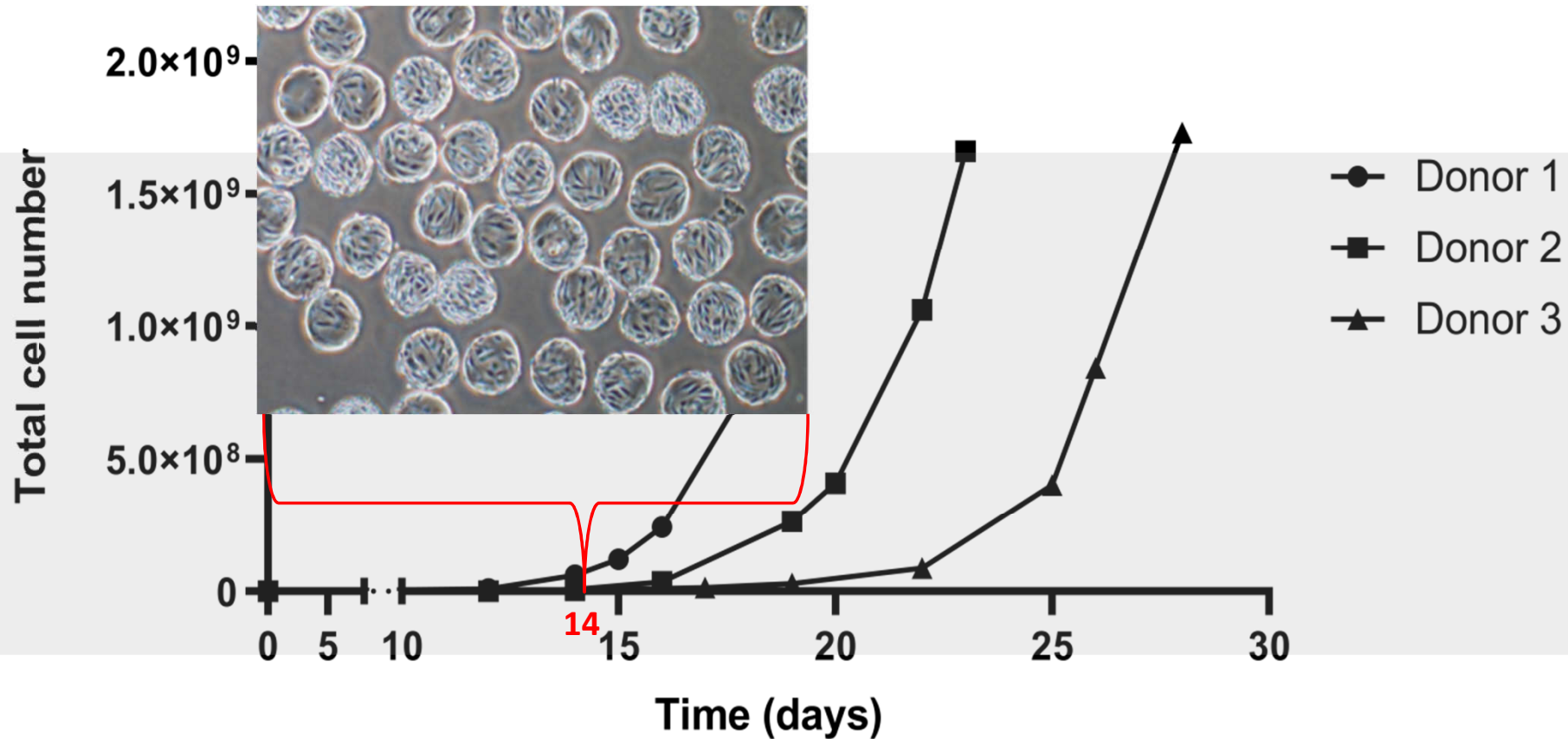


Scinus expansion

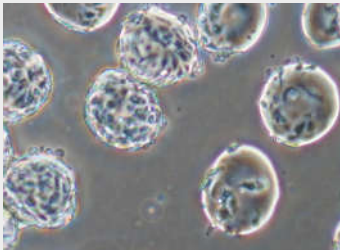
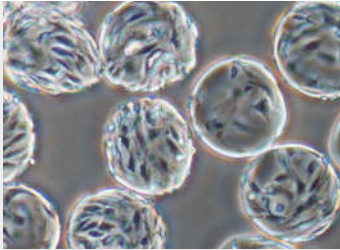
- Biopsy inoculation
- Dissolvable microcarriers
- Controlled culture (T, pH, DO)
- Continuous expansion



Typical example: MSC expansion from biopsy



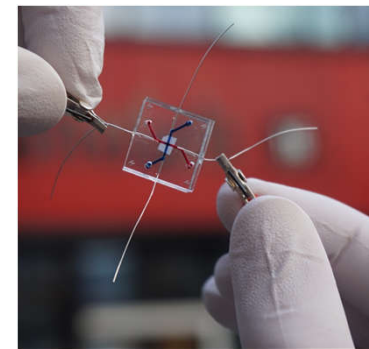
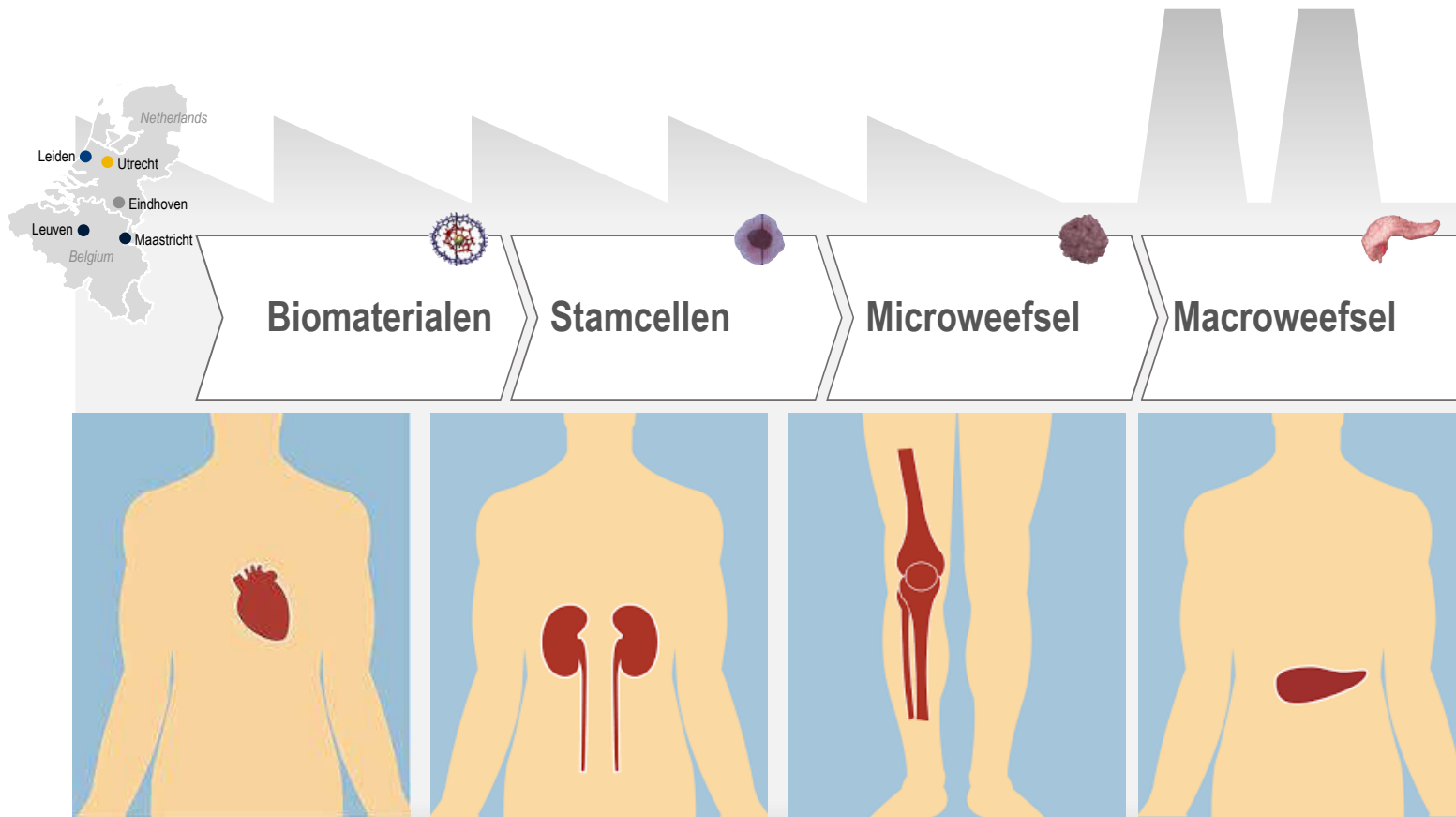
Typical examples adherent cell culture



- Direct culture of bone marrow-derived stem cells (MSCs)
- Direct culture of adipose-derived stem cells (ASCs)
- Projects: MPC, UC, WJ, Exosome / EV production
- Preliminary results of human induced pluripotent stem cells (hiPSCs)
- Suspension bag (R&D version)



Productie technologie, toegang en opschaling is cruciaal voor de sector –
RegMed XB creëert een nationale RG-pilotfabriek



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