



Hyris fully supports the fight against COVID-19

INTEGRATED SOLUTIONS

COVID-19 test
SARS-CoV-2 T Cells test

JUNE 2022

COVID-19. Global crisis.



The advent of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic has marked a watershed on a global scale, having outlined many structural weaknesses of the traditional diagnostic ecosystems.

Covid-19 is also a major economic issue, as it can quickly disrupt an organization's workflow, affecting its productivity.

With the rise of the Omicron variant of the virus, **testing to identify cases early** has become critical once again.

Beyond **tracking the virus**, we also need to support vaccination campaigns worldwide, to boost population immune response to SARS-CoV-2.

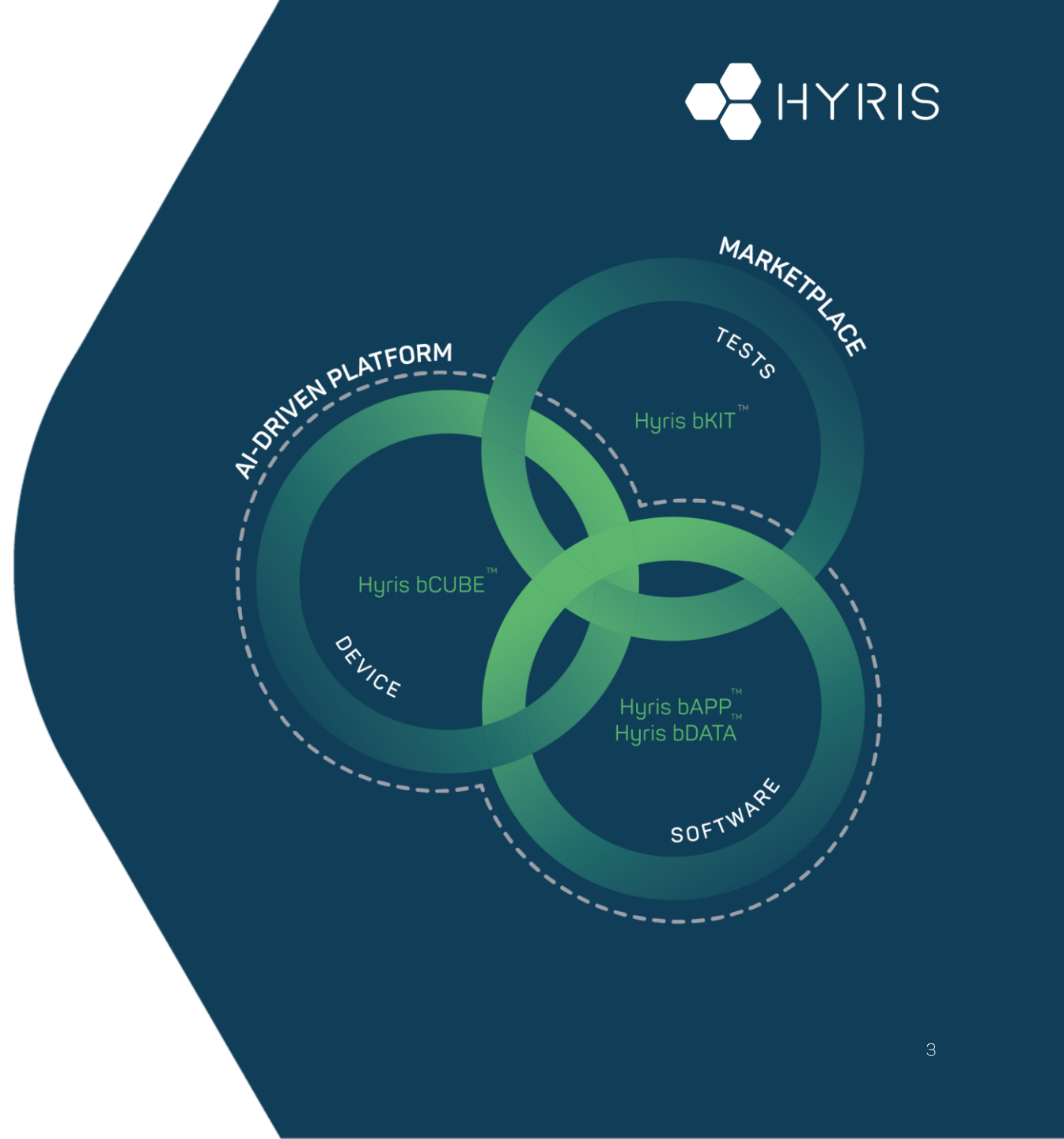
That is why we also need to monitor the **human body's immune response** to the disease.

Hyris System™



Hyris offers an AI-driven technology platform that enables genetic testing of biological samples in **any setting, at any time.**

Hyris System™ is a smart, efficient and effective solution.



Hyris System™: the first multi-market platform able to create real value for the final customer



Simple

SIMPLE ANALYSIS SET-UP; RESULTS READOUT VIA SOFTWARE APP; EASY ONLINE TRAINING;
NO INSTALLATION REQUIRED.

Sustainable

NO UNNECESSARY SEQUENCES /
NO UNNECESSARY ENERGY COSTS
AVOID ANY LOGISTICS COST OF SAMPLES MOVING.

Smart

AI-CLOUD-BASED SOFTWARE PLATFORM;
REAL-TIME ACCESS TO DIAGNOSTIC RESULTS FROM ANY MOBILE DEVICE.
REMOTE MAINTENANCE AND REAL TIME SUPPORT
FOR PLATFORM & REAGENTS.

Portable

ONSITE TESTING MADE POSSIBLE.
ANYWHERE, AT ANY TIME.

Versatile

USABLE FOR A WIDE VARIETY OF DIFFERENT APPLICATIONS AND SECTORS; FROM HEALTHCARE TO MANY INDUSTRIAL SECTORS.

Modular

IT EASILY CAN SCALE TO DIFFERENT LEVELS
OF ANALYSES THROUGHPUT. FROM POCT TO ANY SCALABLE CONFIGURATIONS.

Different tests for a unique solution: **the Hyris System™**

HYRIS ENABLES TWO CE-IVD TESTS TO SUPPORT THE FIGHT AGAINST COVID-19

COVID-19 TEST

CE IVD

T-Cell TEST

CE IVD

COVID-19 Test

HYRIS bKIT™ Virus Finder
COVID-19
// bKTH-SCV2.02
HYRIS bKIT™ Virus Finder
COVID-19 Saliva // bKTH-
SCV2.04



Diagnostical Coverage with the Hyris System™



COVID-19 Human test

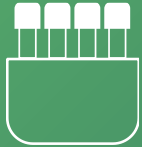
The Diagnostical Coverage of the new Variants of Concern is currently 100%:

- Alfa variant known as B.1.1.7/501Y.V1
- Beta variant known as B.1.351/501Y.V2
- Gamma variant known as P.1/501Y.V3
- Delta variant known as B.1.617
- Omicron variant known as B.1.1.529 and BA.5
- Californian variants known as B.1.429 and B.1.427

Usage and distribution

- Italy
- Switzerland
- Malta
- UK
- Ukraine
- Czech Republic
- Slovakia
- Croatia
- Canada (As one of the few systems approved as POCT)

A simple workflow in direct amplification



PRE-ANALYTICAL STEPS

1

Sample collection
(NPS or saliva)

2

Hyris Cartridge loading



ANALYSIS STEPS AND RESULTS

3

Analysis run on Hyris bCUBE™

4

Interpreted results read-out
on Hyris bAPP™

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Comparative Performance of a New SARS-CoV-2 Rapid Detection System.
Microbiol Spectr. 2021 Oct 31;9(2):e0020521. doi: 10.1128/Spectrum.00205-21.
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Impact of Full Vaccination with mRNA BNT162b2 on SARS-CoV-2 Infection: Genomic and Subgenomic Viral RNAs Detection in Nasopharyngeal Swab and Saliva of Health Care Workers.
Microorganisms. 2021 Aug 14;9(8):1738. doi: 10.3390/microorganisms9081738
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Clin Chem Lab Med. 2022 Jan 18;60(5):766-770. doi: 10.1515/ccIm-2022-0008.

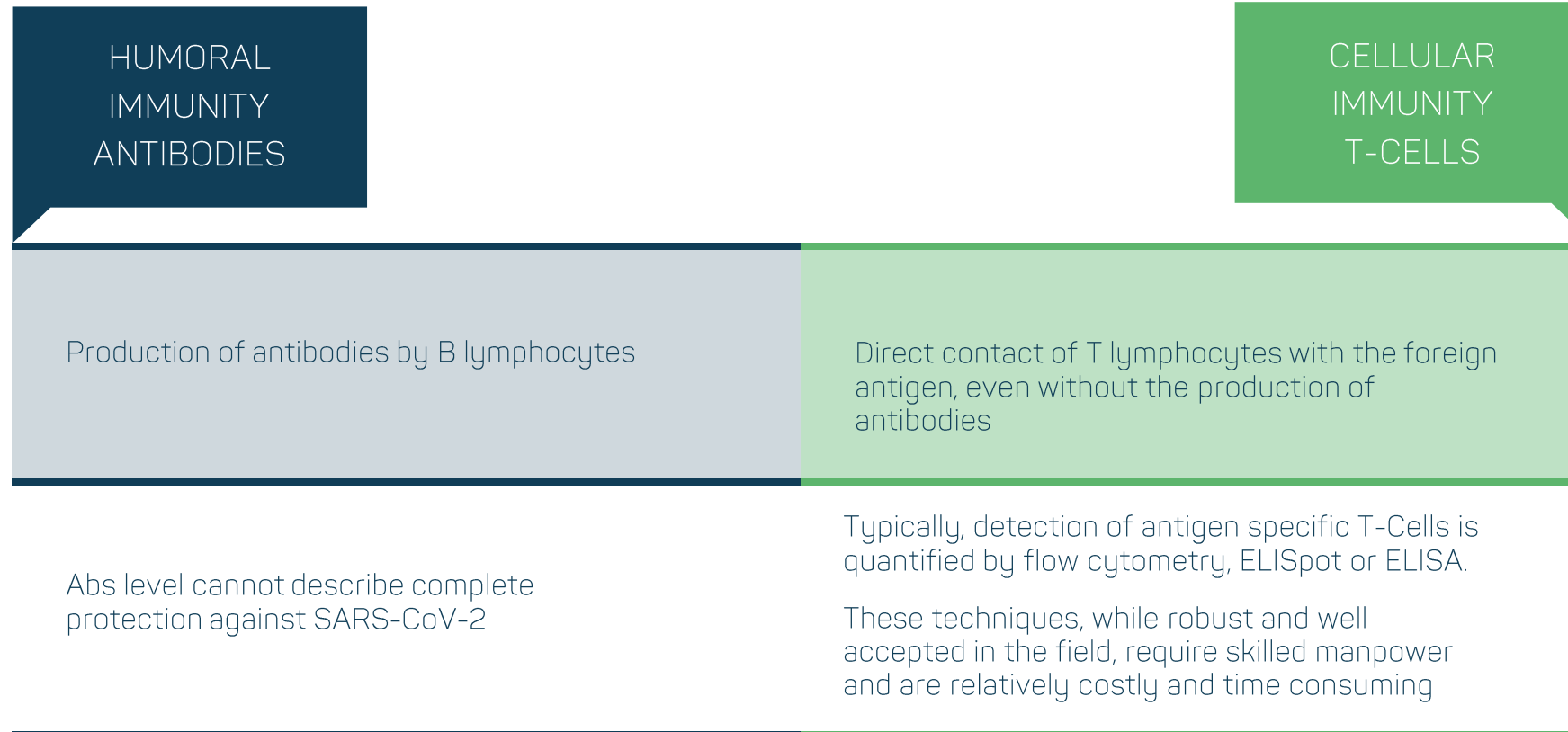
Hyris T-Cell Test

HYRIS bKIT™ SCV2 T Activation
HYRIS bKIT™ Immunofinder dqTACT
MS



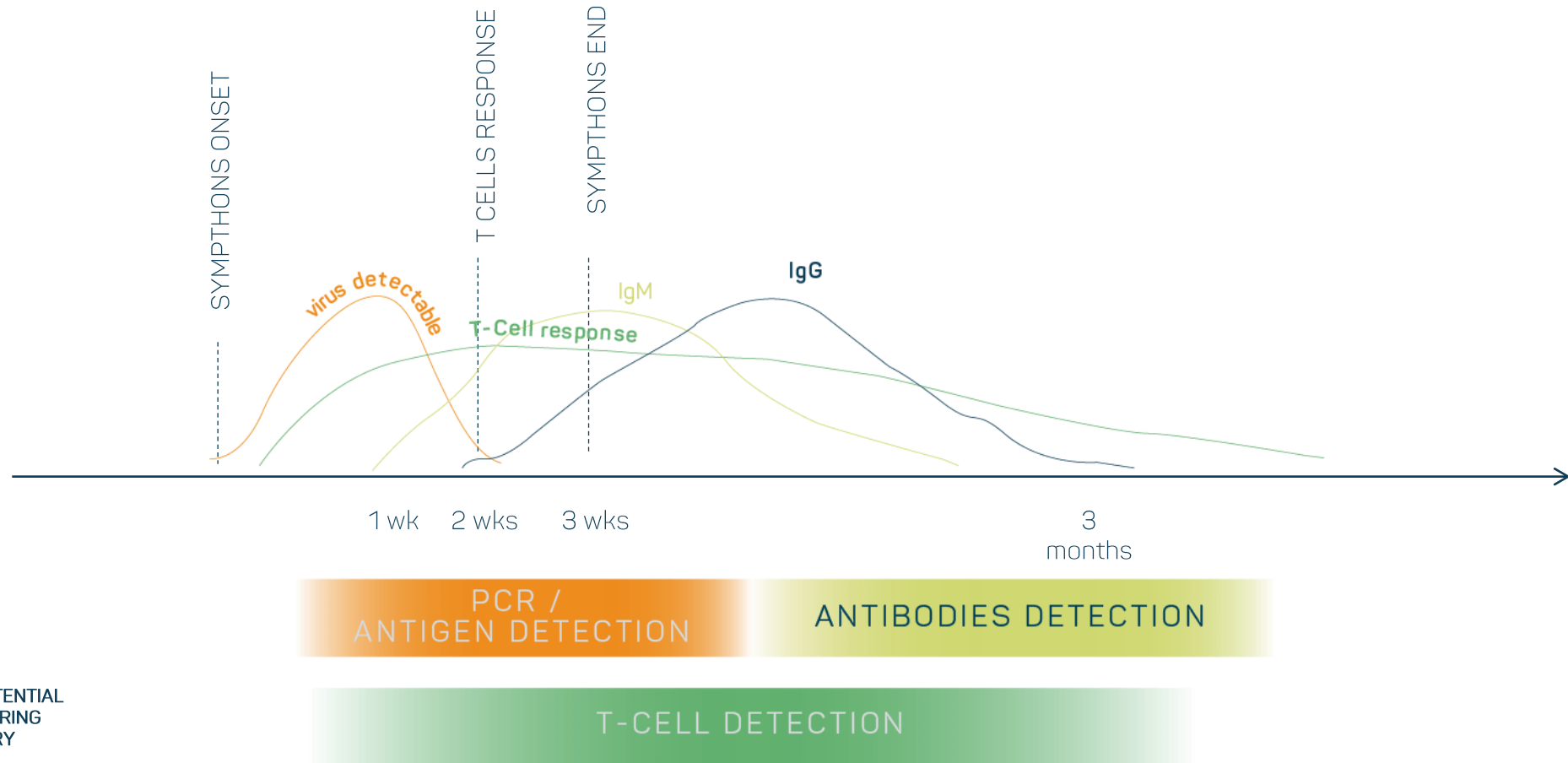
Measuring immune response

The "**overall immune health**" is best described by measuring both pathways of the immune system.



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*EXTRACTED FROM: THE POTENTIAL CLINICAL UTILITY OF MEASURING SEVERE ACUTE RESPIRATORY SYNDROME CORONAVIRUS 2-SPECIFIC T-CELL RESPONSES.
– D. GOLETTI ET AL. 2021.

Hyris
introduces
the new
T-Cells test
that leverages
the power of
Hyris System™

Hyris T-Cell Test



HYRIS DISRUPTIVE STUDY ON
IMMUNE ABILITY IS
PUBLISHED ON
nature biotechnology

CONCEPTUAL

Moving away from an expensive and inefficient approach, in favor of qPCR.

TECHNICAL

Two independent products, one for activation and one for detection in qPCR. Same approach can be applied beyond SARS-CoV-2.

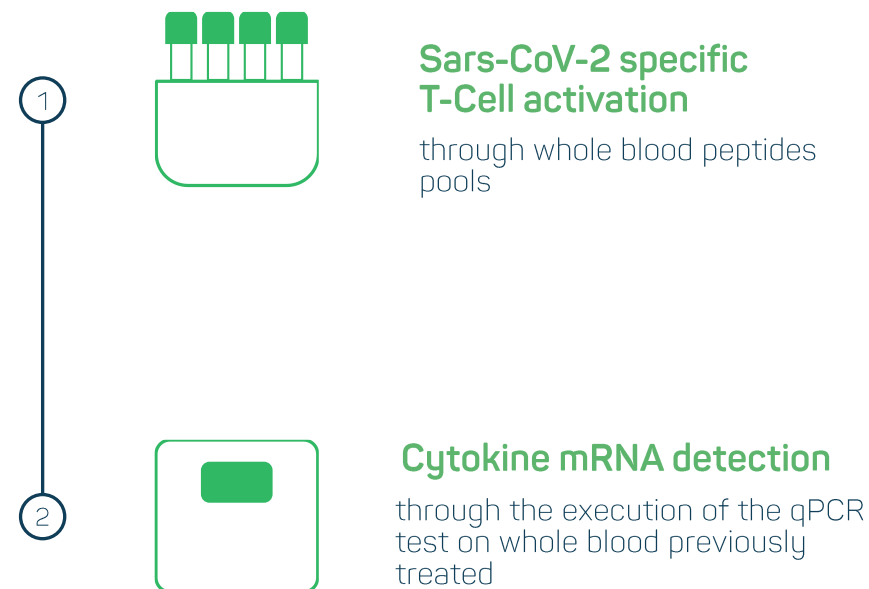
TRANSLATIONAL

Rapid, scalable and modular, leveraging Hyris System™ features.

Hyris T-Cell Test

Product highlights

- Decentralizing test on immune ability is a first case for applying qPCR for local rapid detection of immune ability.
- Our outcome is a low cost, fast, and scalable qtest to quantify antigen specific T cells.
- Test available for SARS-CoV-2 – but the method is expandable to new use cases (other viruses, bacteria, etc...).



CE IVD FULLY PATENTED

Hyris T-Cell Test fully leverages disruption of Hyris System™



CONCEPTUAL.
TECHNICAL.
TRANSLATION.

Simple

qPCR

REDUCED COMPLEXITY AND
WORKFLOW

Faster

DIRECT PCR PROTOCOLS.

SHORTER TESTING CYCLE TIME-SPAN
(24 HOURS)

Modular

FULLY AUTOMATED AND INTEGRABLE
INTO LABS WORKFLOW

COMPLETELY ADAPTABLE FOR SMALL
OR HUGE VOLUMES OF SAMPLES

Smart

AI-POWERED CLOUD-BASED
SOFTWARE

AUTOMATIC RESULT INTERPRETATION
ENABLING DATA MANAGEMENT

Scalable

SCALABLE VOLUMES OF SAMPLES
SEAMLESS DEPLOYABILITY

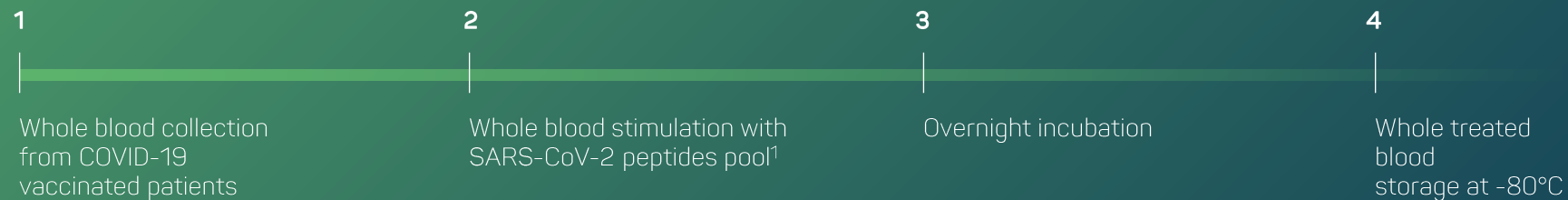
Green

LOW ENERGY CONSUMPTION
SIMPLIFIED SAMPLE LOGISTIC AND
RELATED CO2 FOOTPRINT

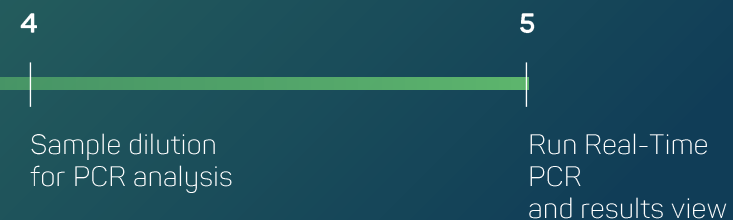
Operative workflow



① T-CELLS ACTIVATION USING XTACT SCV2 T ACTIVATION KIT



② RT-PCR AMPLIFICATION USING BKIT™ IMMUNOFINDER DQTACT MS



- Support vaccine R&D to measure actual individual immune response over time
- Support vaccine strategies definition for health institution and policy makers
- Support healthcare practitioners in protecting immunosuppressed patients
- Detecting individual immunity to SARS-CoV-2, complementing antibody testing

Bibliography

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Thank you.