MaaT Pharma

Microbiota as a Therapy

January 2023

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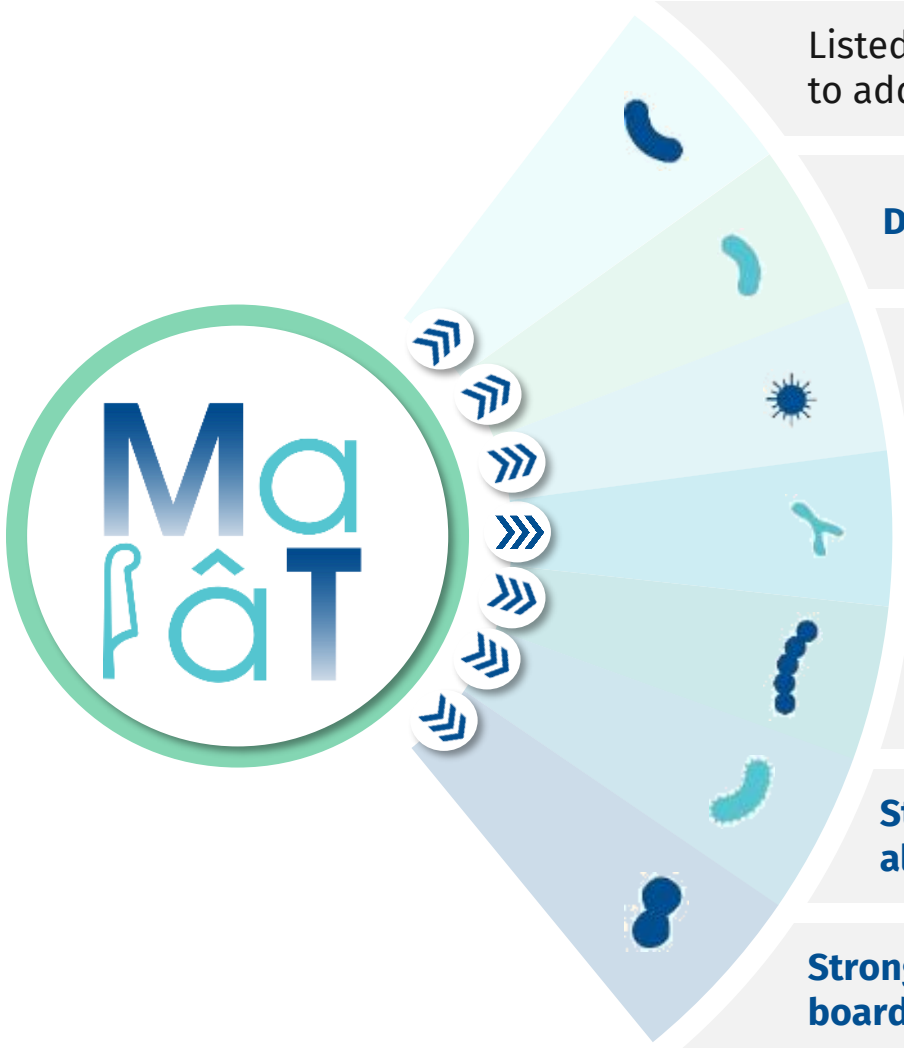
A Uniquely-Positioned Microbiome Company



Listed on **Euronext (MAAT)** pioneering development of **Microbiome Ecosystem Therapies** to address **hematological malignancies and oncology**

Differentiated approach, lead asset in Phase III in aGvHD

Multi-asset clinical and preclinical pipeline with **near-term, value-creating catalysts**

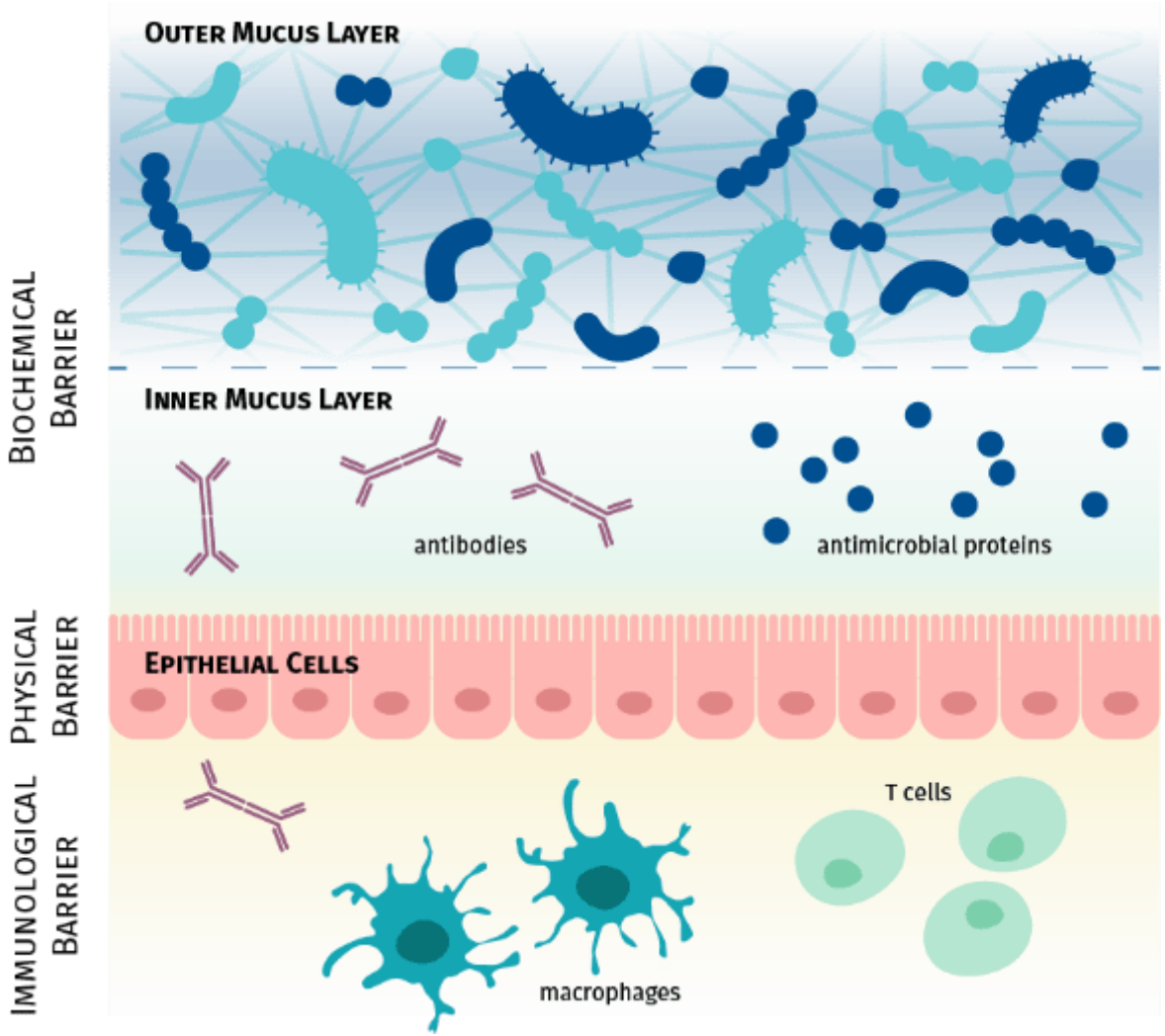
Proprietary gutPrint® metagenomics technology platform driving product candidate generation

European cGMP production facilities supporting versatile product range and optimized positioning

Strong IP portfolio of 14 patent families that **provides protection until 2036-2042 in all major markets**

Strong leadership team with a proven track record and supported by a **scientific advisory board of global experts** and **top tier specialist investors**

Host – Microbiota Interactions are Critical for a Functional Immune System



Cross-section of a healthy gut

A rich and diversified gut ecosystem actively modulates the immune system functionality

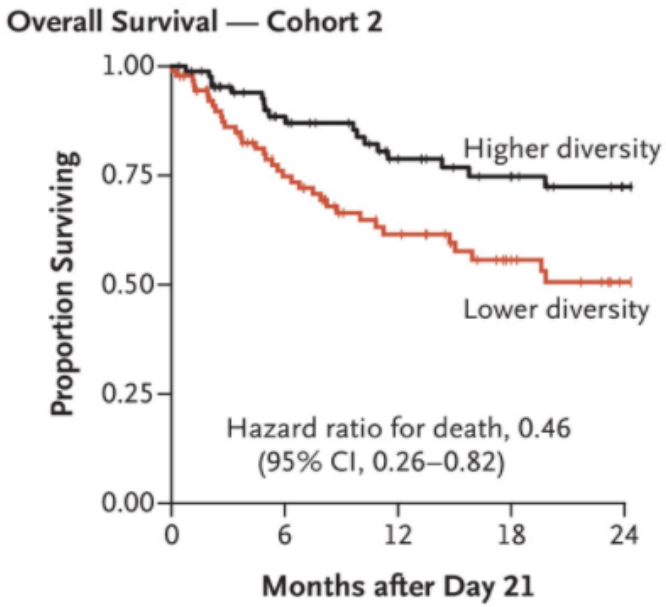
- A diversified microbiome contributes to the education and modulation of our immune system throughout life
- Bacterial richness and mucus layer prevent colonization by pathogens and improve gut barrier

80% cellular host defense localized in the gut

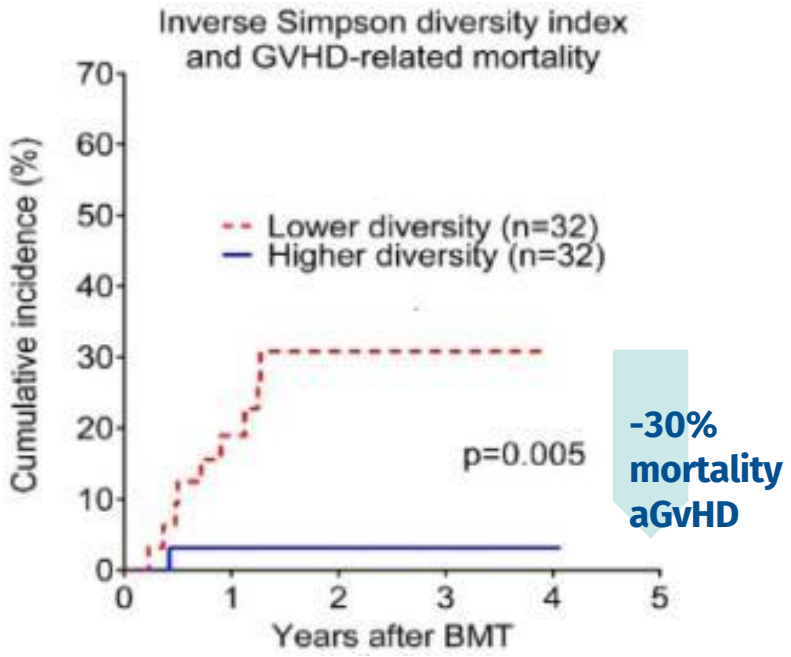
Diversity matters!
Higher gut microbiome diversity is associated with …

Liquid Tumors

Higher survival rate in patients receiving allo-HSCT *,1



Lower incidence and lower mortality from aGvHD*,2

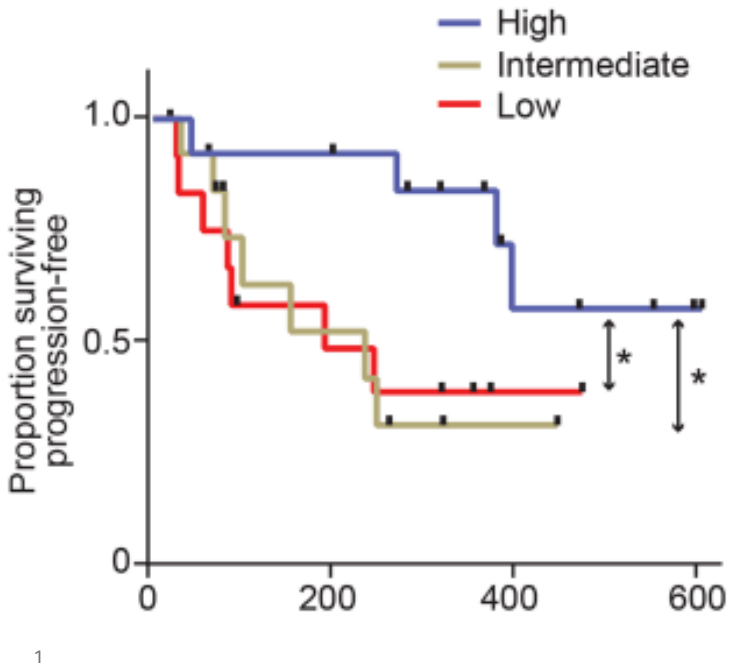


-30% mortality aGvHD

MaaT Pharma MET Inverse Simpson (mean): **24**

Solid Tumors

Higher response rate to ICI* in patients with metastatic melanoma3



1

*allo-HSCT: allogeneic hematopoietic stem cell transplantation; aGvHD: acute Graft-vs-host-Disease; ICI: Immune Checkpoint Inhibitors

[1]Peled, J.U. & al N Engl J Med 2020;382:822-34; [2]Ghani, 2021 ; Jenq RR. et al, Biol Blood Marrow Transplant 21 (2015) 1373e1383; Pamer, Blood, 2014 ; [3]Gopalakrishnan et al., Science, 2017, see also Routy et al, Science, 2018 ; Vetizou et al Science 2015;

MaaT Pharma's Microbiome Ecosystem Therapy (MET) platform has generated a diverse line of product candidates

Microbiome Ecosystem Therapies (MET)

gut Print

cGMP Platform

Native

MaaT013

MaaT033

- ✓ **High diversity**
- ✓ Full ecosystem
- ✓ **Butycore™** (immune balance)

Ongoing Phase 3 aGvHD

Ongoing Phase 2 I/O

Completed Phase 1b Allo-HCT

Co-cultured

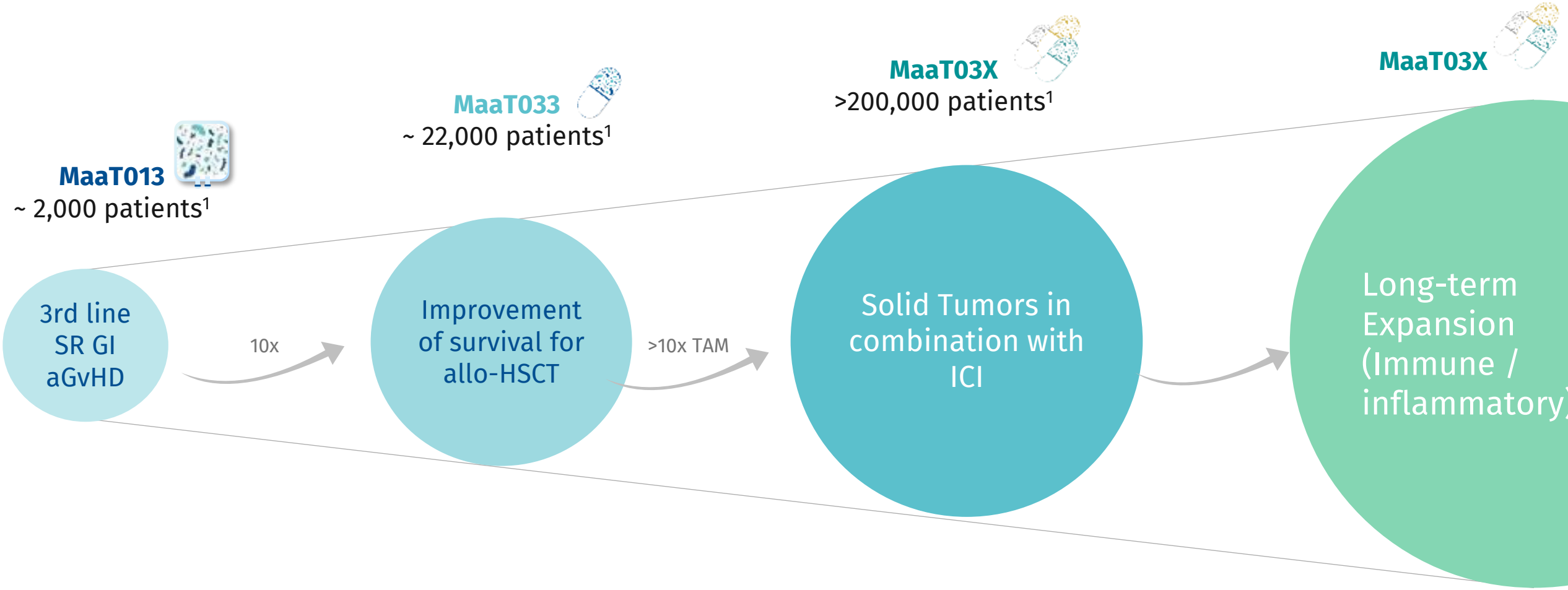
MaaT03X

- ✓ **Indication-specific designed ecosystem** (from clinical data)
- ✓ Innovative **ecosystem co-culture technology**

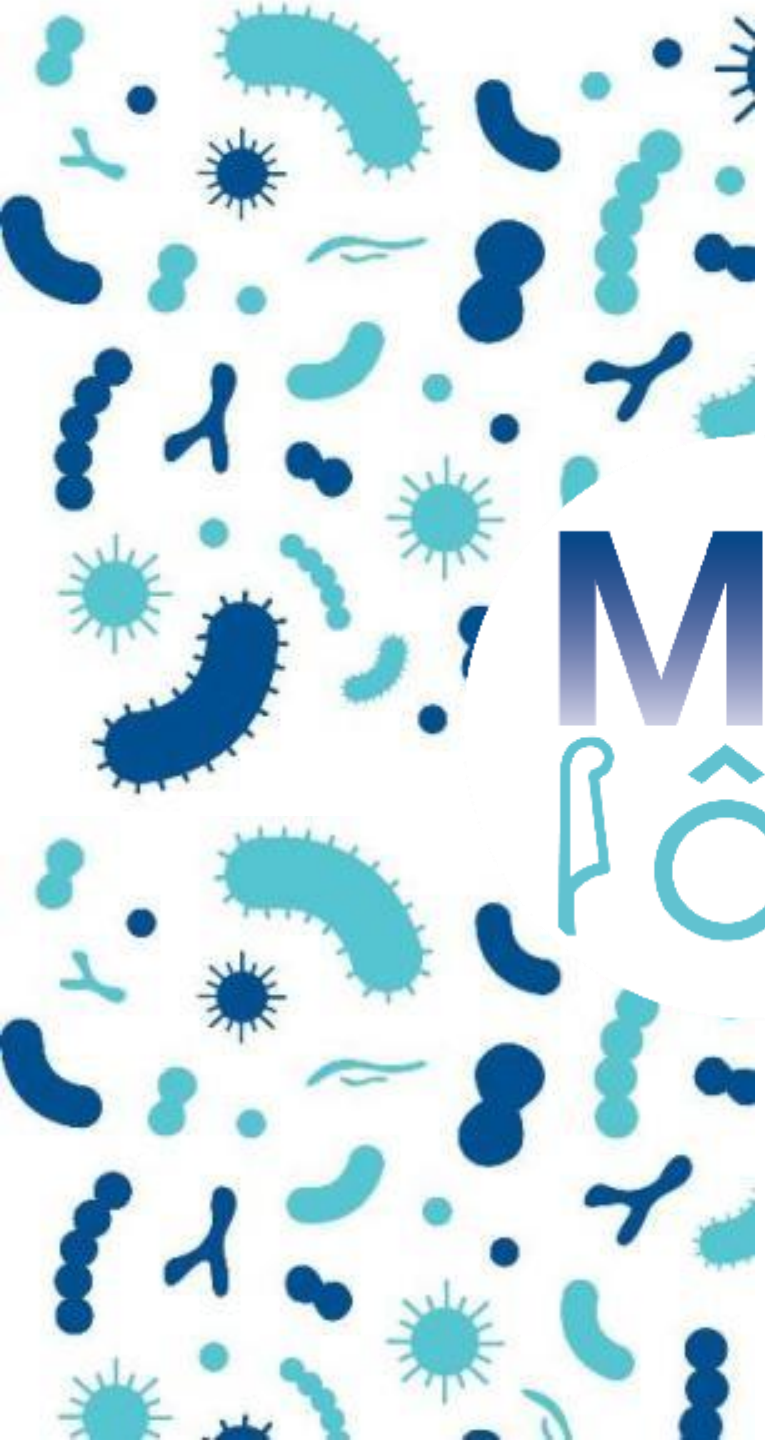
Preclinical Solid Tumors I/O

[1] **Butycore™**: Group of 15 different genera known to produce short-chain fatty acids with anti-inflammatory properties

Looking ahead: addressing growing market opportunities with severe medical need



[1] *EU5, US, and Japan*



MaÎâT

Hemato-Oncology

MaaT013 and MaaT033 aim to restore the gut microbiota to improve survival in patients with liquid tumors

Intestinal dysbiosis is associated with higher mortality in hemato-oncology

Patients with liquid tumors

Chemotherapy
Antibiotics
Irradiation, Immunosuppressors

Loss of diversity (dysbiosis)
- Infections
- Complications

Allogenic Hematopoietic Stem Cell Transplantation (allo-HSCT)

~ 22 000 patients/yr[1]

MaaT033 Prophylaxis

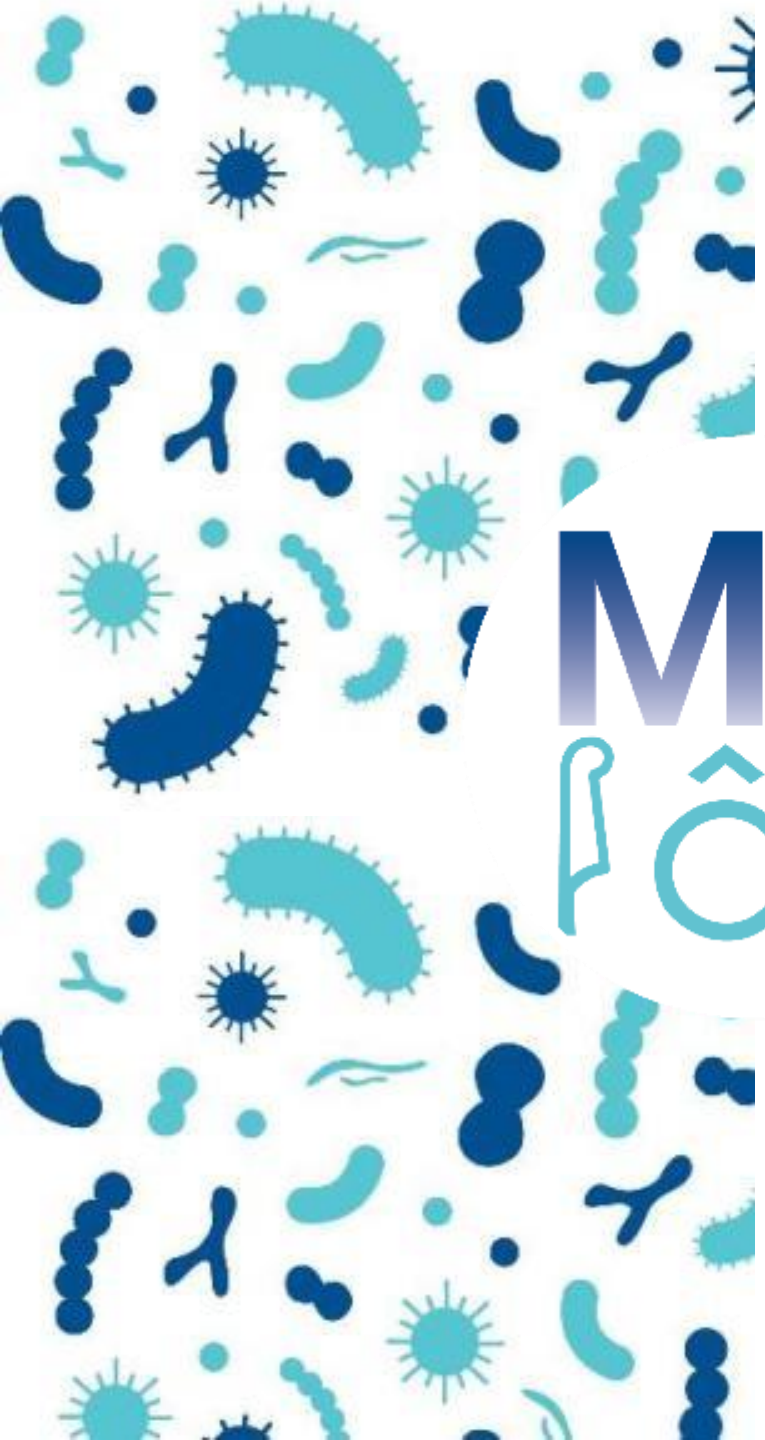
50%

MaaT013 Treatment

Acute Graft-versus-Host Disease (aGvHD)

~ 10 000 patients/yr[2]
~ 50% steroid-resistant[3]
~ **70-90%**[3] 1-yr mortality
~ >70%[3] with GI symptoms in 3rd line

1. EU5 + US : (~ 20 500 primary procedures with an additional 7%-10% recurring), 2. EU5 + US, [3] According to MAGIC database

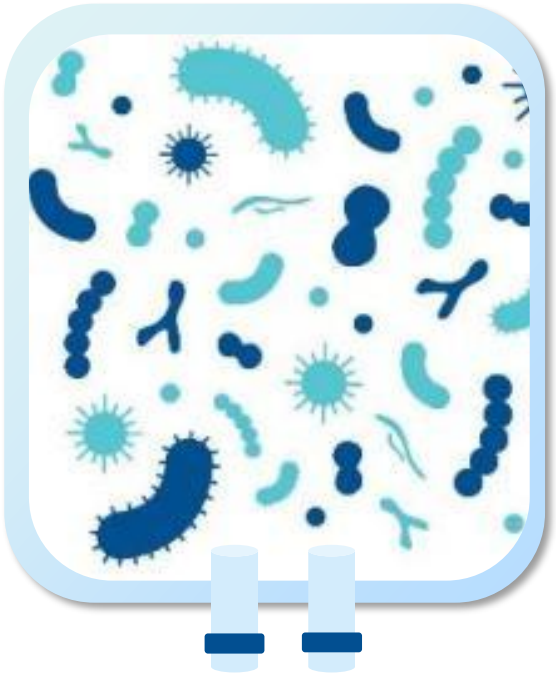


MaîâT

Hemato-Oncology

Treatment of acute Graft-vs-Host-Disease (aGvHD)

MaaT013: restore the microbiome to *cure* gastrointestinal acute Graft vs. Host Disease



Acute, hospital use

Characteristics
Pooled microbiota: a high-richness, high-diversity, full ecosystem, Microbiome Ecosystem Therapy containing Butycore™

Administration
3 doses (*enema bag*)

Available Clinical Data
- ✓ HERACLES Phase 2 Clinical Trial, N=24, 2L
- ✓ Early Access Program, data from N=81, 3L-6L, program still ongoing
- • >160 patients treated to date

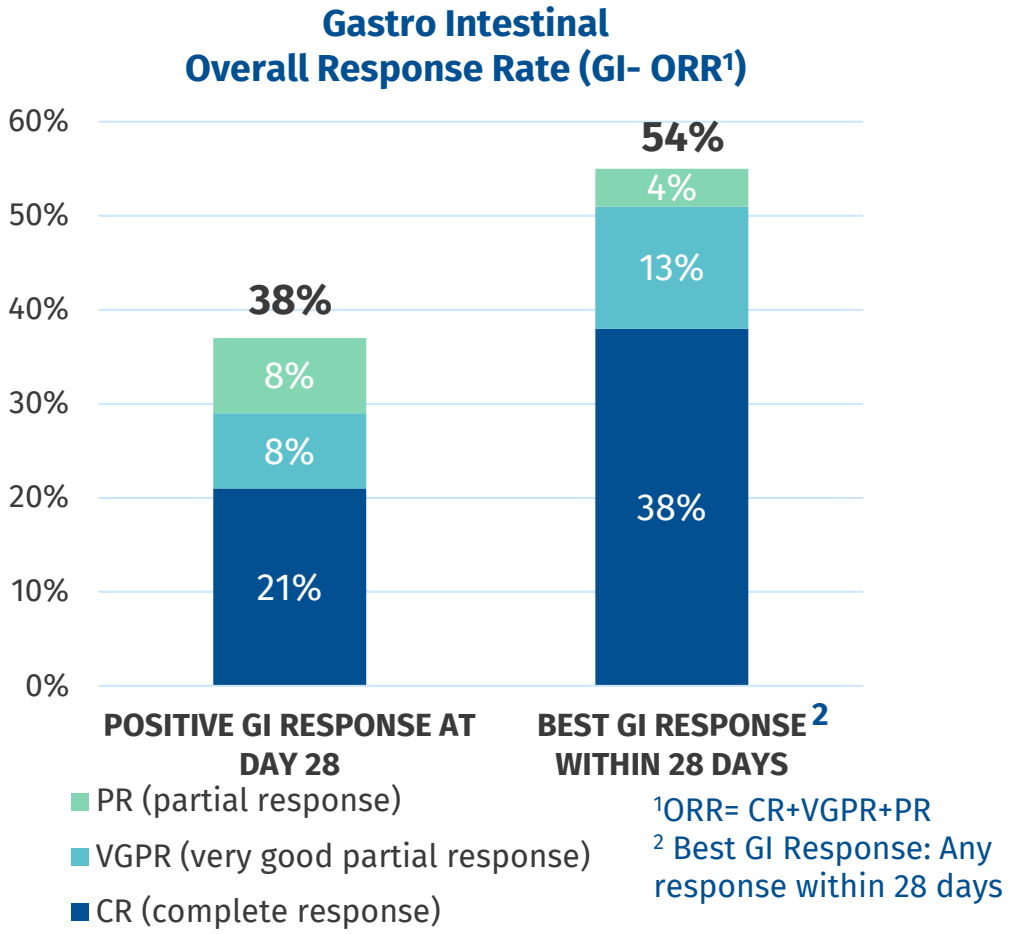
Efficacy evaluation (GI ORR at Day28)
Complete response (CR), Very Good Partial Response (VGPR), Partial Response (PR)

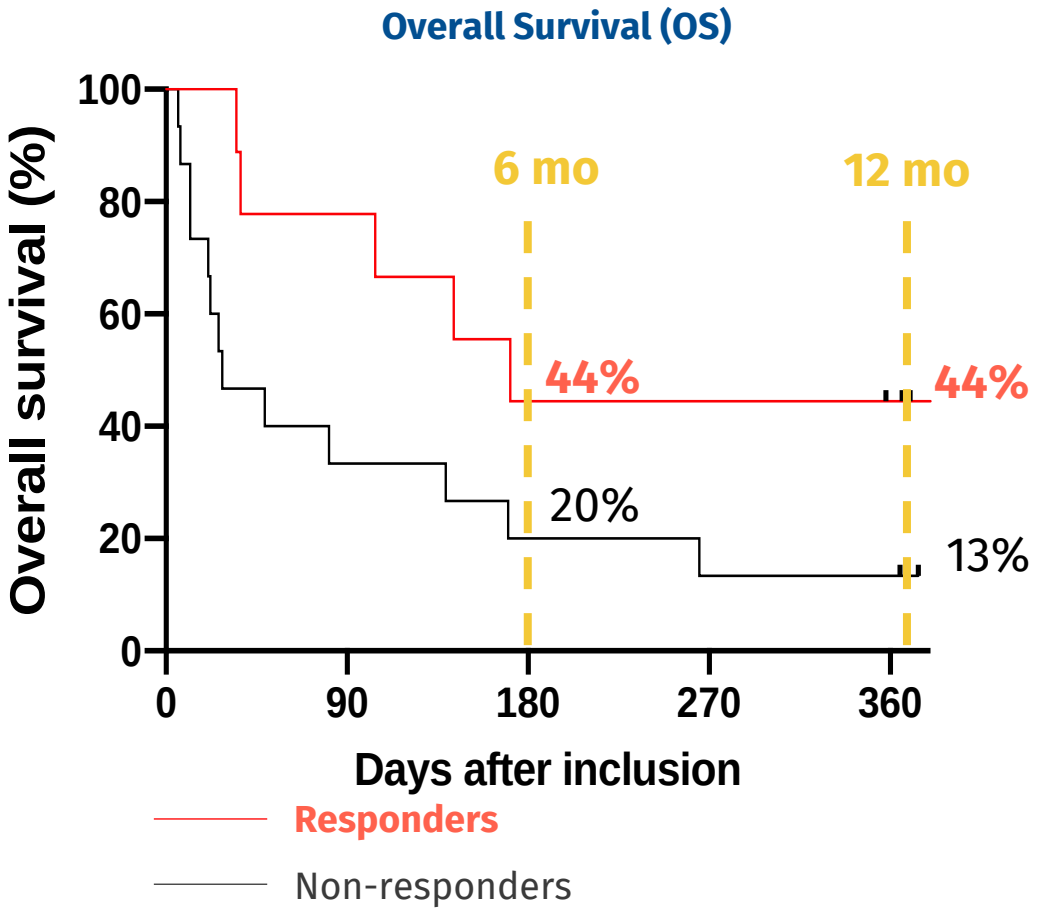
Current indication
Gastrointestinal acute Graft-versus-Host Disease

MaaT013 has received Orphan Drug Designation from FDA and EMA

HERACLES Phase 2 Clinical Trial
Promising results in a very severe (III-IV) GI aGvHD population

- N=24 patients, 96% grade III (4% grade IV), 2nd line (Steroid-resistant)
- Very good safety and tolerability profile
- MaaT013 increases responders' gut microbiome diversity

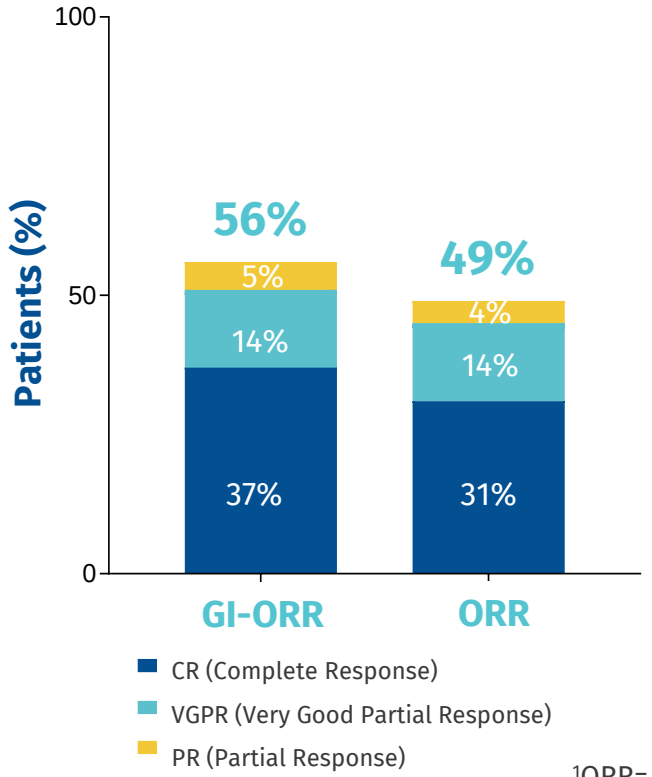




Early Access Program (EAP) is corroborating positive data in an advanced, severe and more diverse GI aGvHD population

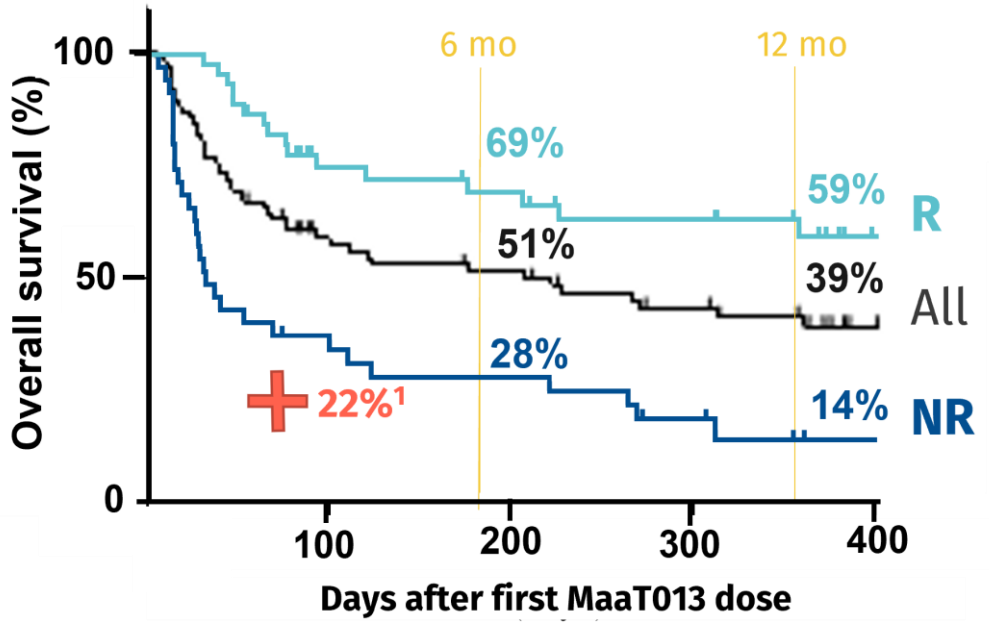
- N=81 84% SR; Grade III (51%) or Grade IV (38%) aGvHD*, Up to 6 lines of prior treatment (median 2; 66/81 received ruxolitinib)
- Good tolerability and safety profile in a fragile population
- Data presented in December 2022 at the 64th Annual Meeting of the American Society of Hematology (ASH)

Gastro Intestinal
Overall Response Rate (GI- ORR[1])



[1]ORR= CR+VGPR+PR

Overall Survival Rate
Responders vs. Non responders

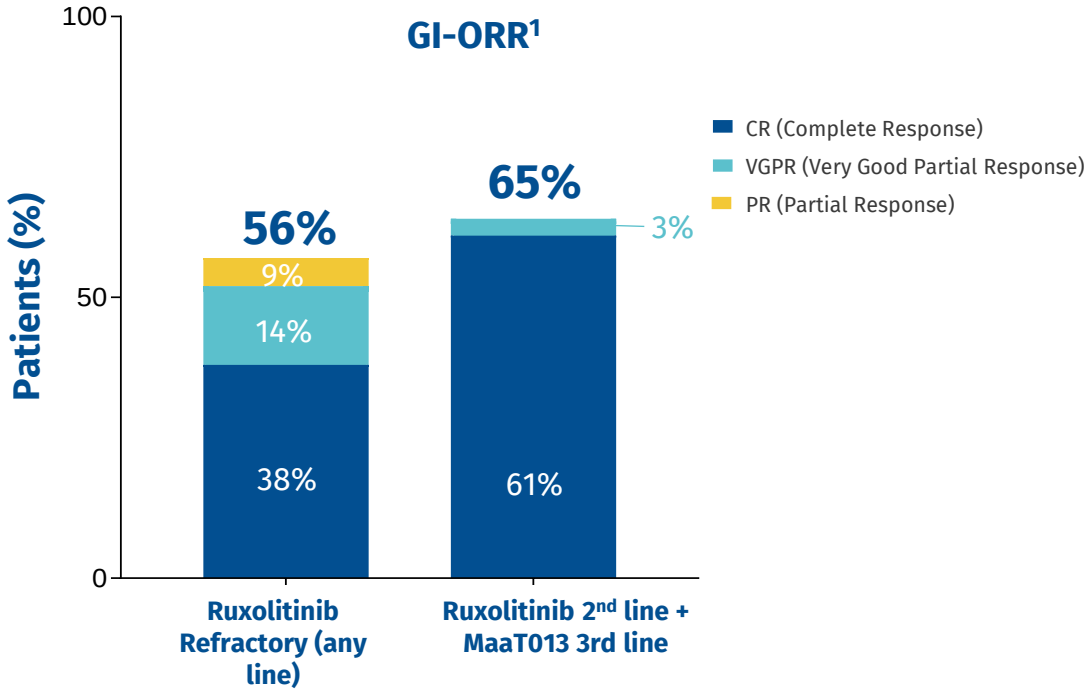


[1]OS expected in ruxolitinib-resistant patients at **2** months (REACH1 study)

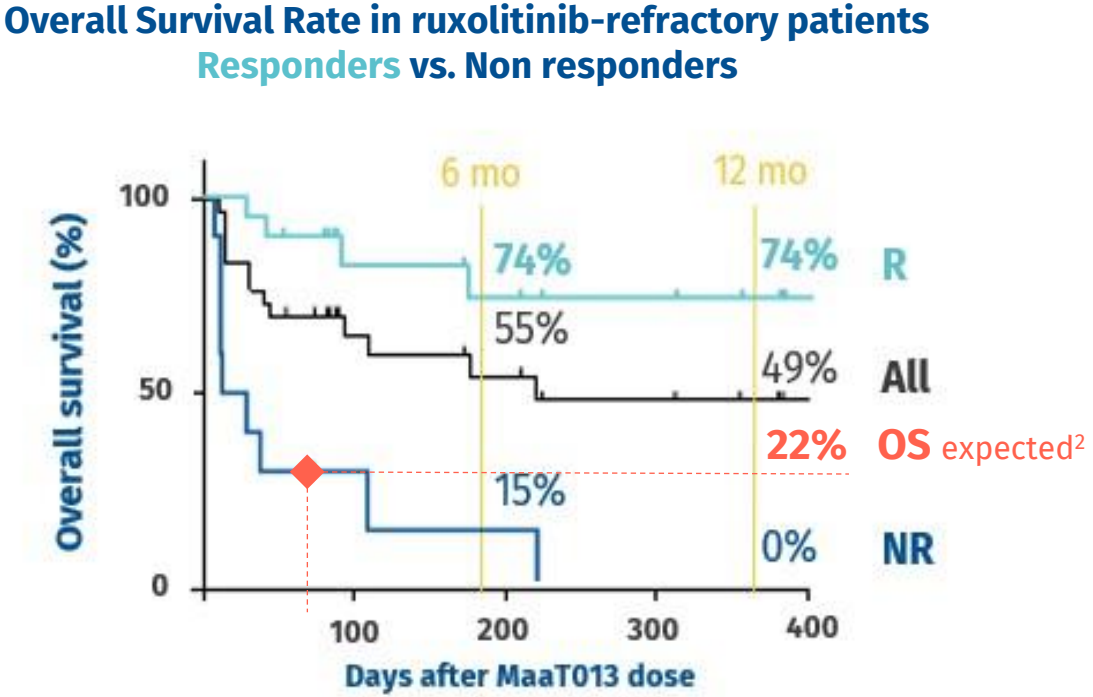
*(MAGIC Classification)

Among 81 patients in EAP, excellent response to MaaT013 was shown in n=31 corticoid and ruxolitinib-refractory patients

- N=31 - Ruxolitinib-refractory in 2nd line, MaaT013 given in 3rd line
- Clinical response to MaaT013 translates to an important increased overall survival
- Data presented in December 2022 at the 64th Annual Meeting of the American Society of Hematology (ASH)



[1]ORR= CR+VGPR+PR



[2]OS at 2 mo in ruxolitinib-resistant patients (REACH1 study)

This patient population resembles the ongoing Phase 3 ARES clinical trial (NCT04769895) being conducted in Europe.

The ARES Phase 3 study is designed to establish MaaT013 as the 3rd line agent in GI aGvHD treatment

- Further investigation currently ongoing in a pivotal single arm Phase 3 trial of MaaT013 as 3rd line
- 75 patients with GI aGvHD who are refractory to both steroids and ruxolitinib
- Primary endpoint: GI-ORR at Day28

EUROPE: ongoing clinical trial

- ✓ First patient dosed in Q1 2022
- ✓ CTA approved in 6 European countries: Austria, Belgium, France, Germany, Italy, Spain.

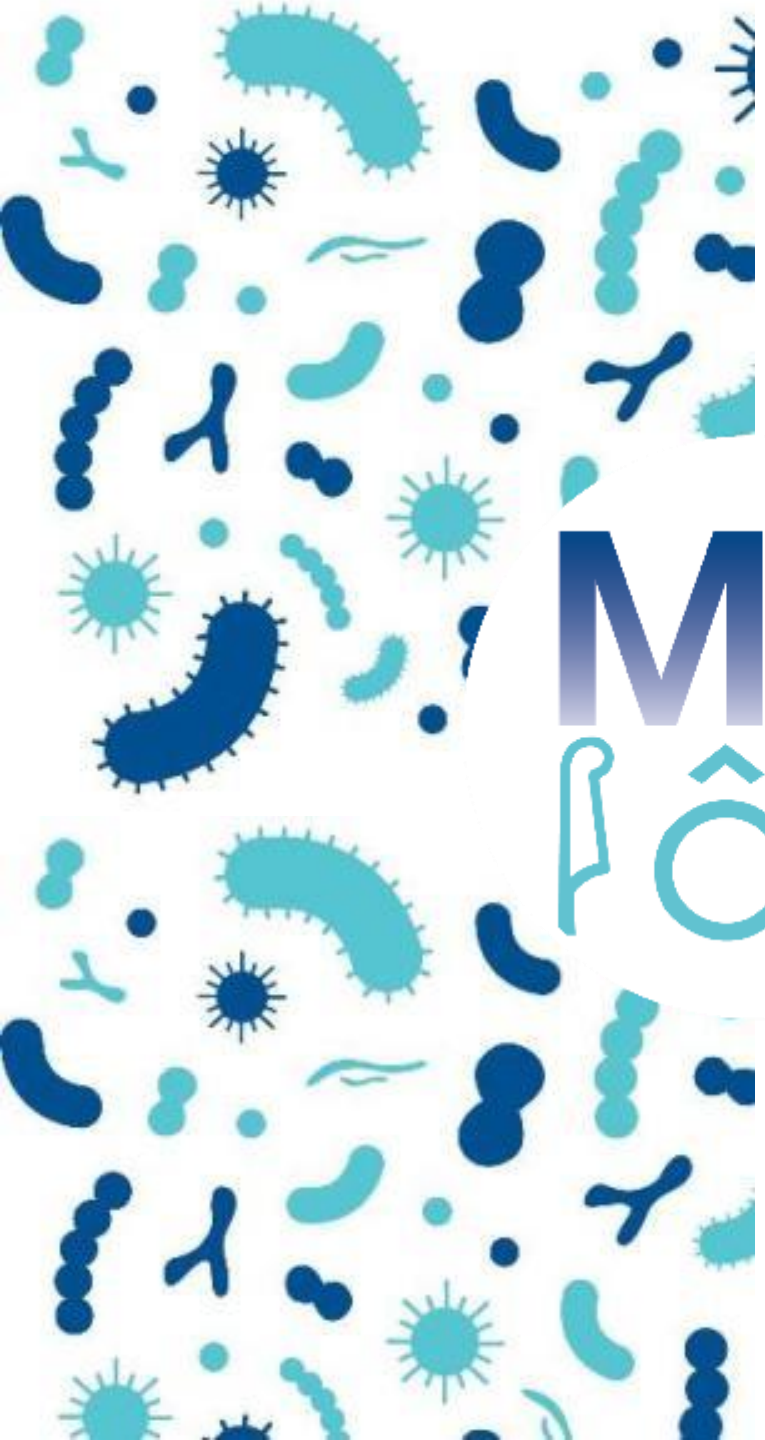
USA: Clinical hold (CH)

- ✓ Complete response submitted to last communication from FDA from August 2022
- ✓ Multiple CMC and clinical concerns were previously resolved
- Principal discussion of the CH regards the pooling technology employed in CMC process. Company response evidences relevance of the pooling strategy and remains committed to seeking a positive resolution/outcome

Targeted Timelines ARES Phase III Trial

ORR: overall response rate ; OS: overall survival ; MAA: Market approval authorization

Clinical trials.gov : NCT04769895



Hemato-Oncology

Improving survival in allogenic Hematopoietic Stem Cell Transplantation patients

MaaT033: An oral capsule to be used as an *adjunctive and maintenance therapy* for patients with hematological malignancies receiving HSCT

ambulatory market,
acute and chronic conditions

Characteristics
Pooled microbiota: high-richness, high-diversity, full ecosystem, Microbiome Ecosystem Therapy containing Butycore™

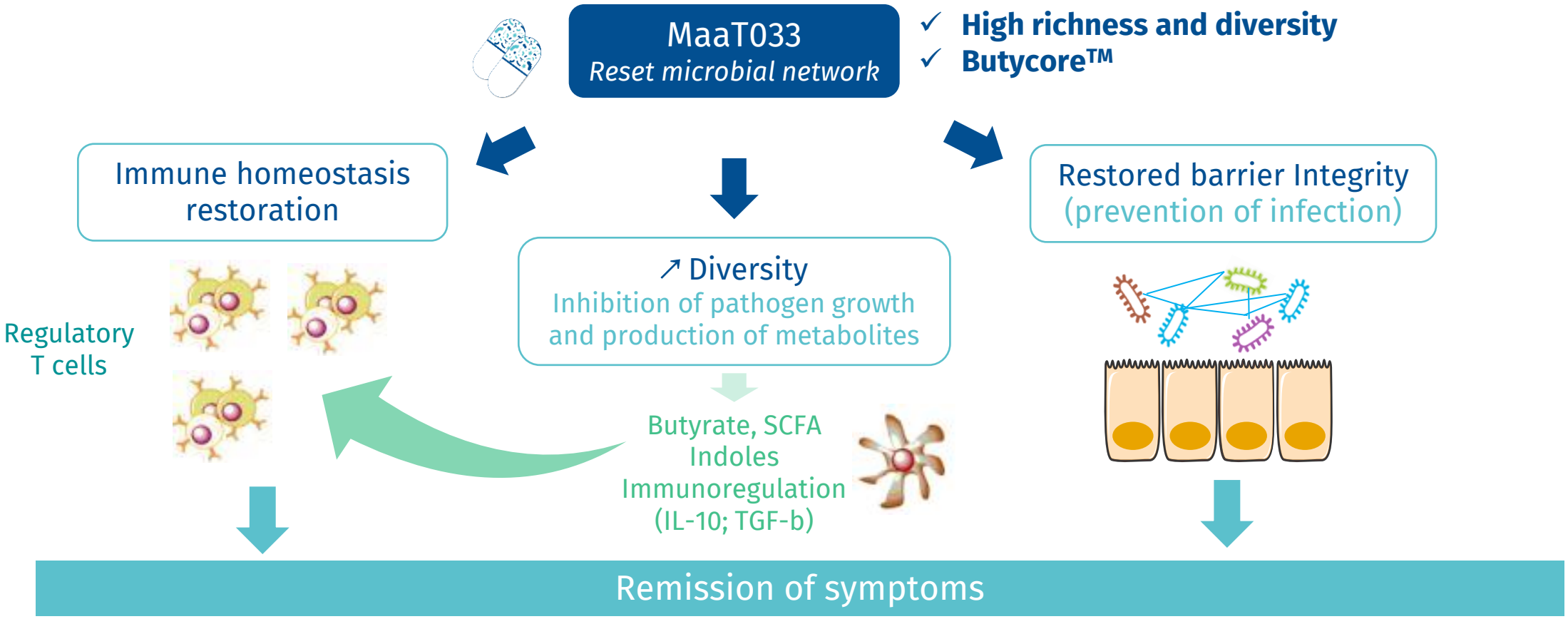
Administration
Oral (a lyophilized capsule)

Clinical program

✓ CIMON Ph1b: Dose-finding study (completed)
→ Planning **Phase 2b trial** to evaluate MaaT033 to improve overall survival in allo-HSCT patients

Indication
To Improve survival of allo-HSCT patients

MaaT033's MOA aims to *restore and protect* the gut microbiota, to improve overall survival in allo-HSCT patients

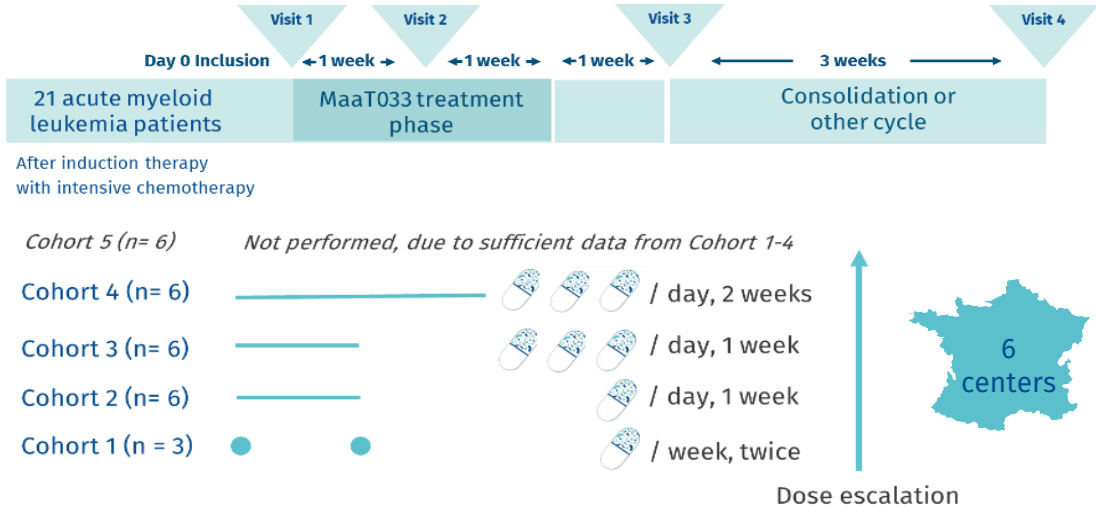


Phase Ib CIMON study: Positive dose ranging study with promising engraftment and safety data

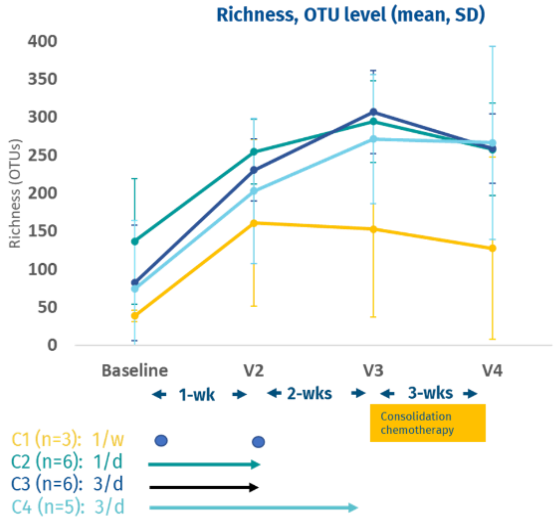
AML Phase 1

Data presented at ASH 2022

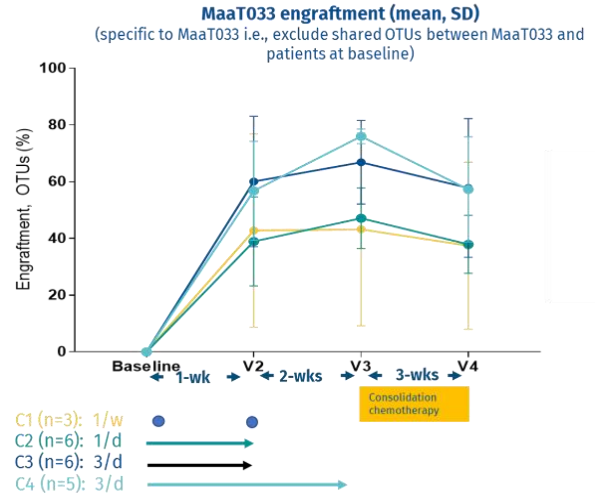
Phase Ib study aimed to determine MaaT033 dose for further clinical development



MaaT033 induces an increased microbiota richness at OTUs level



MaaT033 bacterial engraftment is inversely correlated with patients' baseline microbiota richness



First clinical POC of MaaT033 oral formulation

- ✓ Robust and persistent engraftment
- ✓ Good safety profile:
  - 21 patients exposed, 20 completed.
  - 100% drug compliance.
  - 4/4 positive DSMB meetings
- ✓ Engraftment following MaaT033 treatment correlated with increased anti-inflammatory markers.

→ Dose selected for planned Phase 2b study
→ Study expected to initiate in Q2 2023

CIMON results open an *attractive market opportunity*: Improving survival in patients receiving allo-HSCT

United States

c. 7,800 primary procedures

EU 5

c. 9,600 primary procedures

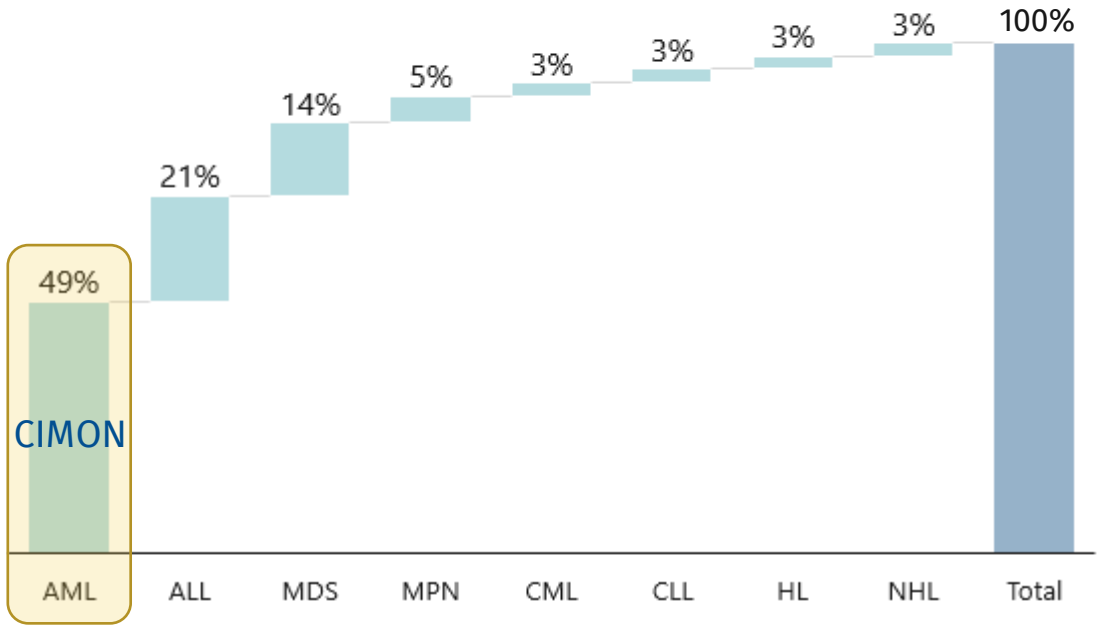
Japan

c. 3,000 primary procedures

Additional 7%-10% recurrent procedures

Approximately 22,500 procedures/year

Hematological Malignancy Patients Receiving Allo-HSCT[1]

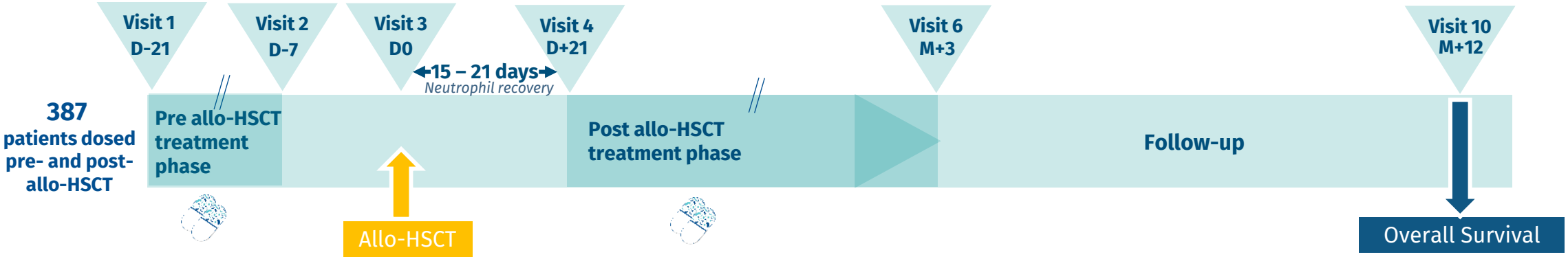


AML : acute myeloid leukemia; ALL : acute lymphoblastic leukemia ; MDS : myelodysplastic syndrome; MPN : myeloproliferative neoplasms ; CML: chronic myeloid leukemia ; CLL : chronic lymphocytic leukemia ; HL: Hodgkin's Lymphoma ; NHL: Non Hodgkin Lymphoma

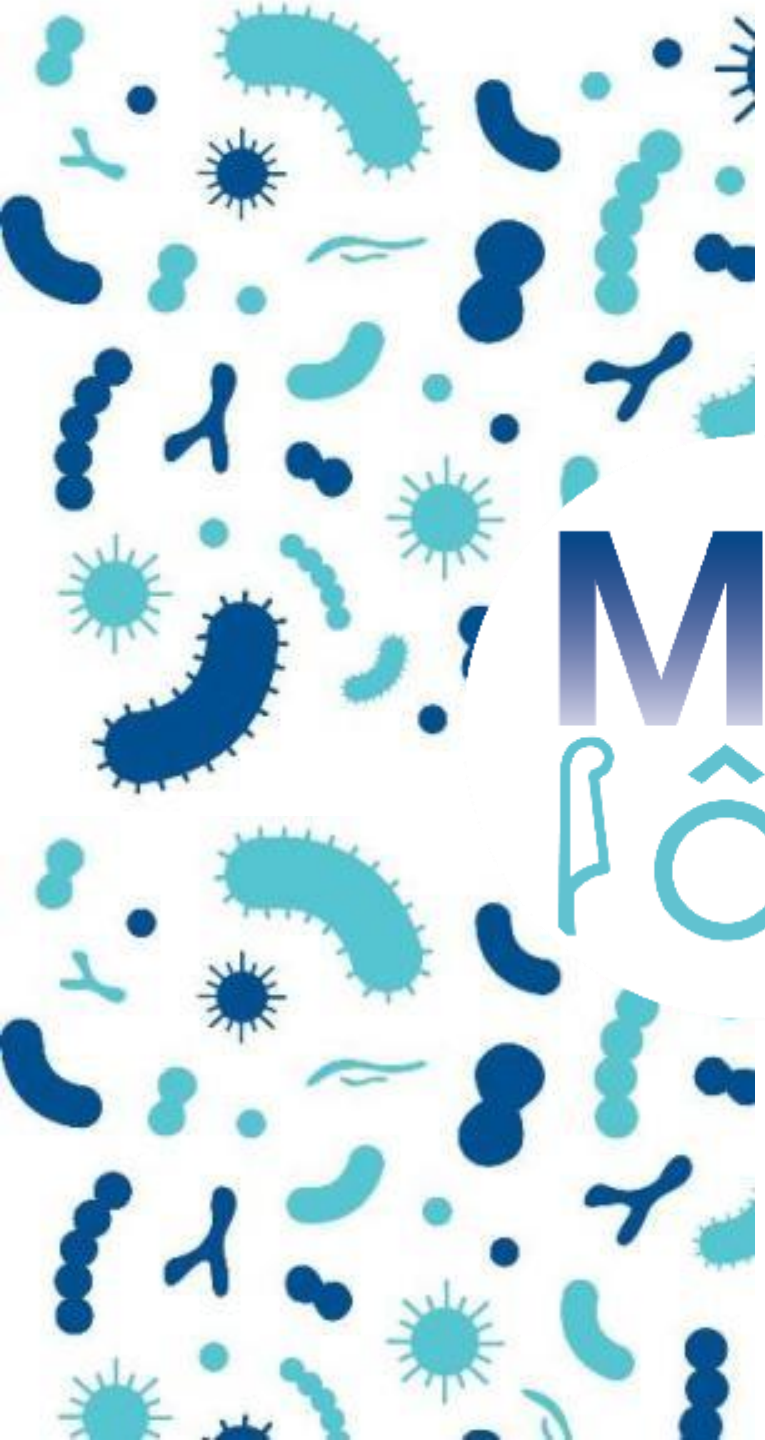
[1]EBMT aHSCT Survey, 2017 (published in Bone Marrow Transplantation (2019) 54:1575–1585), Global Data 2020

The Phase 2b is designed to establish MaaT033 *as an adjunctive and maintenance treatment* for patients with hematological malignancies receiving HSCT

- 387 patients in a randomized, double-blind, placebo-controlled international study
- Primary endpoint: efficacy of MaaT033 in improving overall survival at 12 months
- Study is expected to start in H1 2023, results are expected in H1 2026



[1]*Expansion to US sites subject to ongoing discussion with the FDA for MaaT013 IND;*



MaÎâT

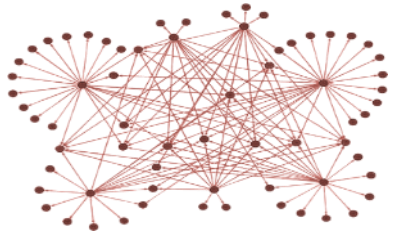
Immuno-Oncology
Solid Tumors

A diverse gut microbiome increases survival in patients receiving immune checkpoint inhibitors (ICI)

FMT from ICI responders to ICI non-responding patients with metastatic melanoma

✓ **6/15**
Non-responders → Responders
(Davar et al, 2021)

✓ **3/10**
Non-responders → Responders
(Baruch et al, 2021)



- Immune check-point inhibitors (ICI) therapies have established themselves as key therapeutic options in solid tumors, but ORR may be as low as 20% in some indications.
- Richness, Diversity and composition of gut microbiome drive survival and ICI toxicity in patients receiving ICI[1,2,3,4]
- FMT from ICI responders (R) could induce response in metastatic melanoma non-responders (NR)[5,6]

→ Leveraging the gut microbiome richness, diversity and its key functional networks may be a game-changer in immuno-oncology in the coming years

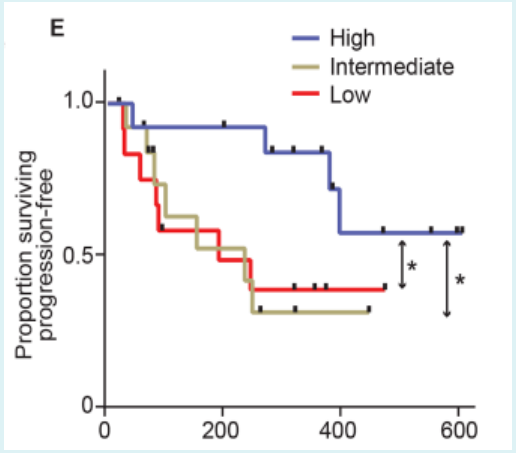
[1.] Gopalakrishnan et al, Science 2018, [2.] Matson, et al Science 2018; [3.] Routy et al, Science 2017;
[4.] Mc Culloch et al, Nat Med 2022; [5.] Baruch et al, Science 2021; [6.] Davar et al, Science 2021

MaaT013 ensures high diversity and contains specific bacterial strains that have been identified to improve ICI response

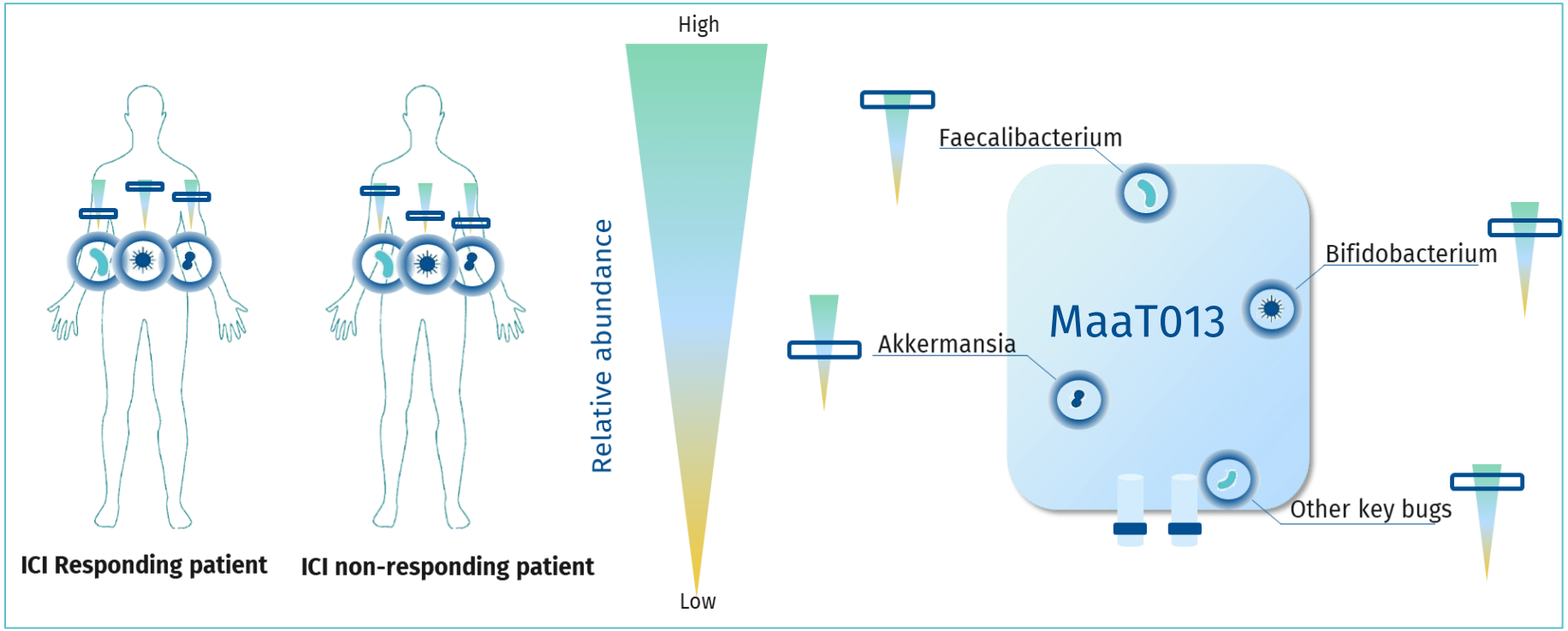
Sponsored by

ASSISTANCE PUBLIQUE HÔPITAUX DE PARIS

Higher microbiome richness → better response rate to ICI in patients with metastatic melanoma



Gopalakrishnan et al, Science 2018



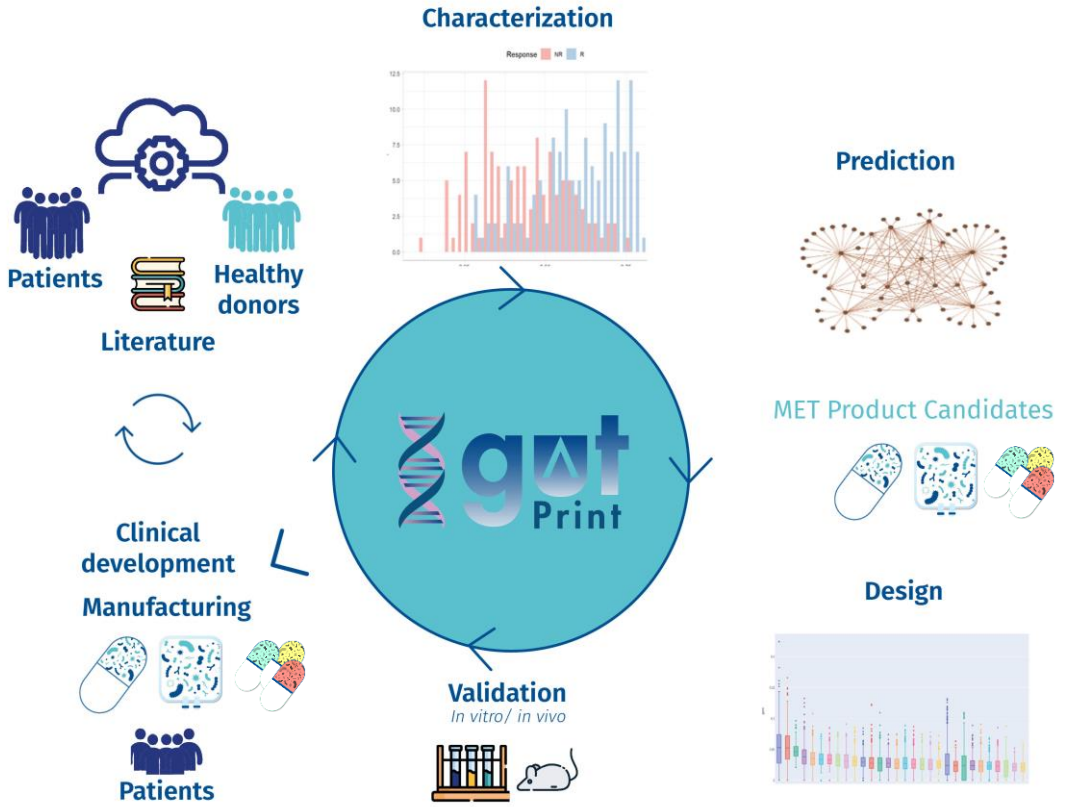
Ongoing Phase IIa PICASSO trial[1], in collaboration with **Assistance Publique - Hôpitaux de Paris** (sponsor).

- ✓ **RCT** [MaaT013 + ICI] vs. [Placebo + ICI] in **60** metastatic melanoma patients
- ✓ **Key study endpoints** after 23 weeks of treatment:
  - MaaT013 safety profile *vs* placebo as add-on treatment to Ipilimumab + Nivolumab
  - MaaT013 best-overall response rate *vs* placebo as add-on treatment to Ipilimumab + Nivolumab

[1] Registered trial #**NCT04988841**

Coordination: GUSTAVE ROUSSY

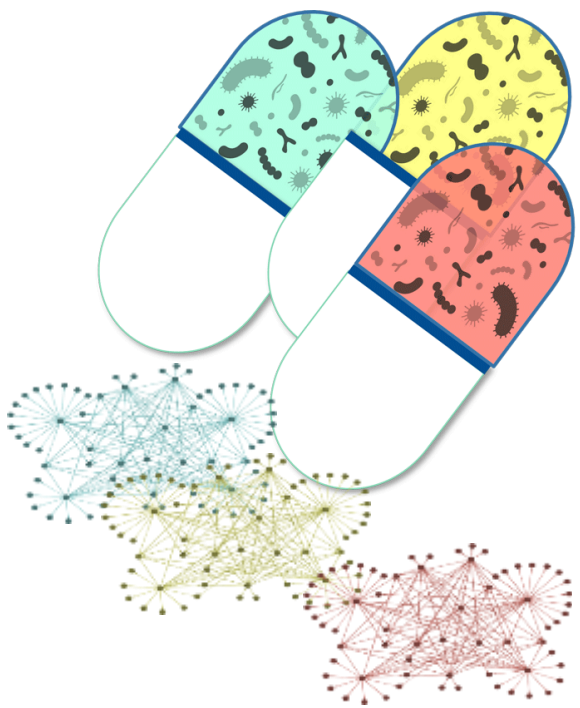
Proprietary gutPrint® platform synergizes multi-source data to generate innovative and indication-specific microbiome ecosystem therapies



gutPrint® is the engine that drives MaaT Pharma's MET product candidate generation capabilities to broaden and strengthen the pipeline

✓ *Full cycle in 15 months to enter clinical phase*

MaaT03X: Modulate the gut microbiome to *improve response* to Immune Checkpoint Inhibitors treatment in solid tumors



Characteristics
High richness, co-cultured, designed ecosystem

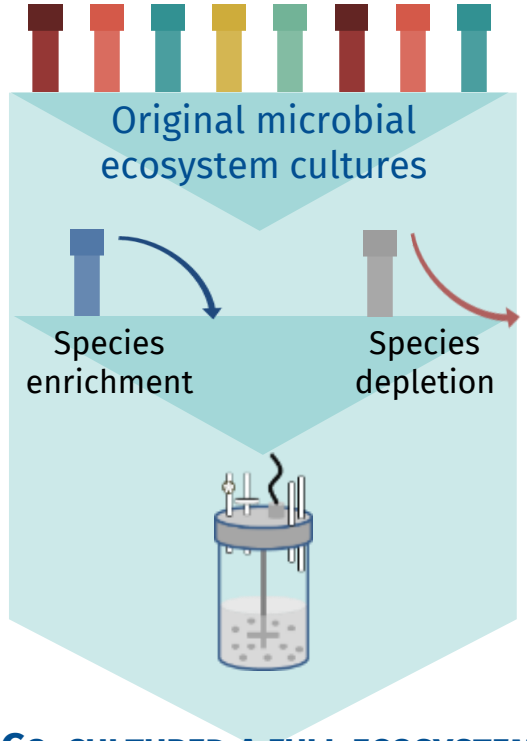
Administration
Oral (proprietary lyophilized capsule)

Development program

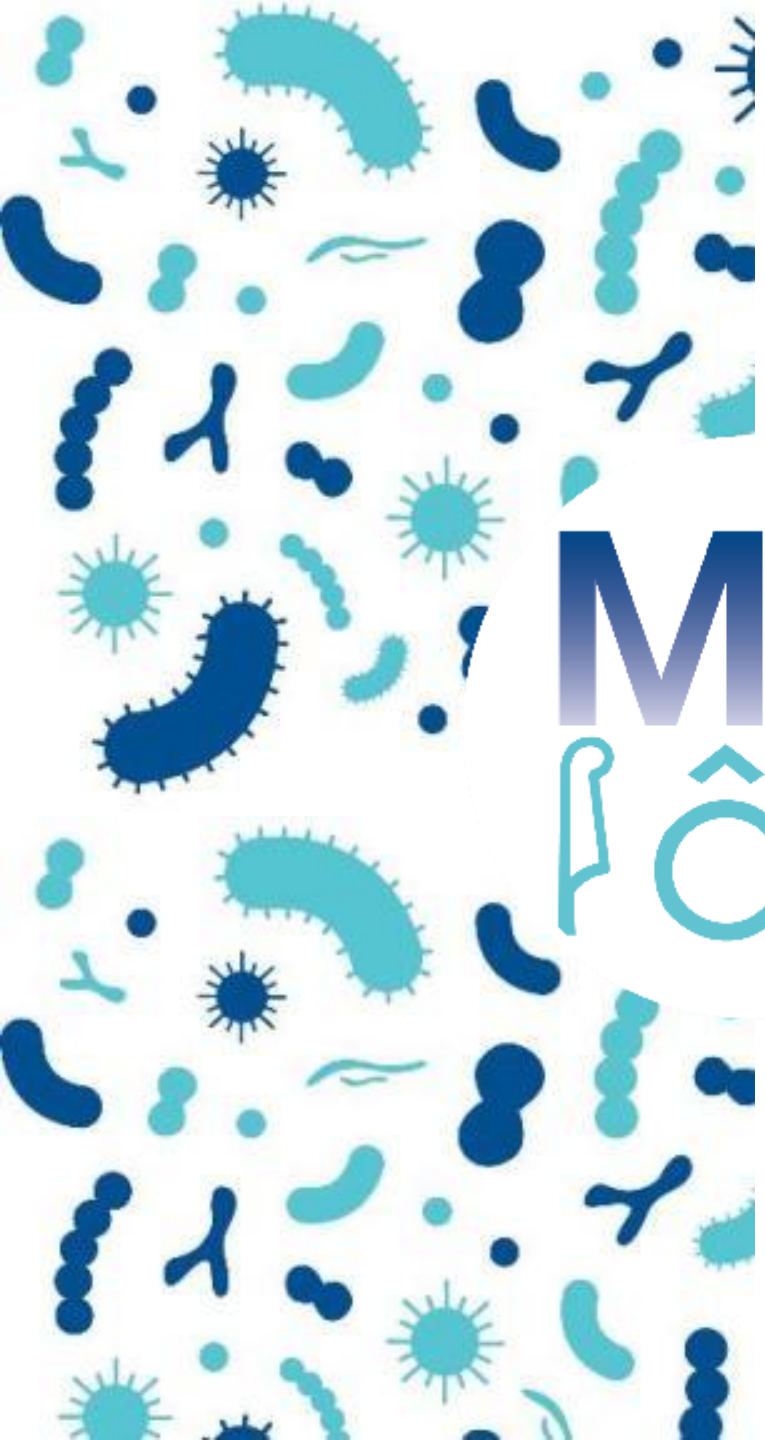
✓ First candidate in preclinical development
→ Targeting FIH H1 2024

Indication
Improvement of response to ICI
Potential to be declined to multiple indications

Customizable, donor-independent, scalable co-culture process

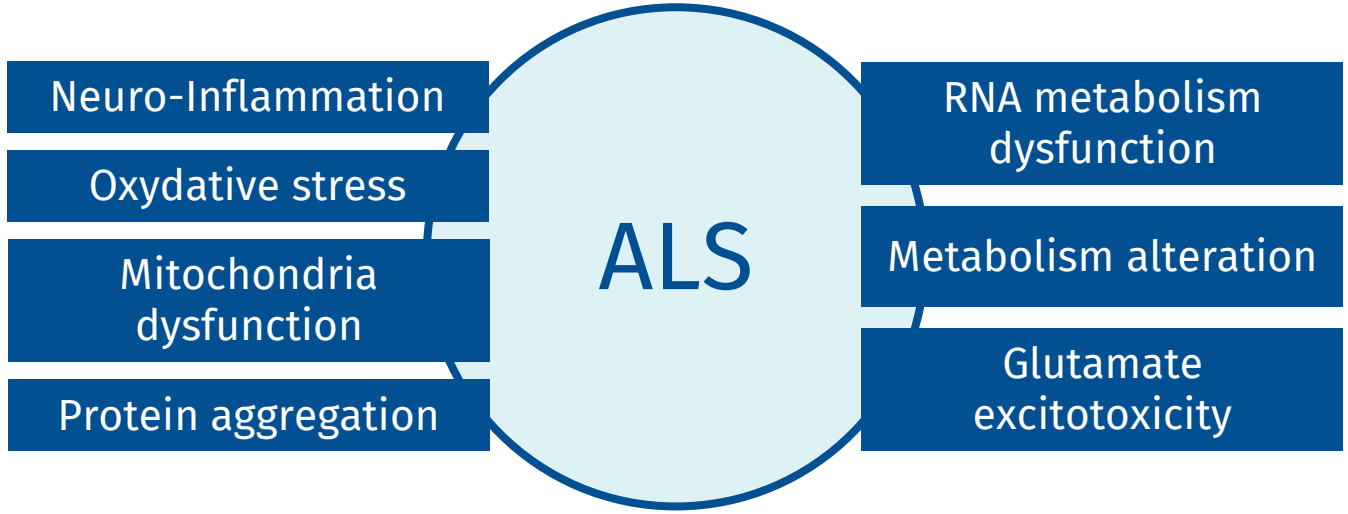


CO-CULTURED A FULL ECOSYSTEM



Neuro-degenerative diseases: Amyotrophic Lateral Sclerosis (ALS)

Amyotrophic Lateral Sclerosis: a uncurable disease leading to death within 3-5 years after diagnosis



~ 60,000 patients in US & EU by 2040 (2016)[1]

Paralysis
Death 3-5 years after diagnosis[2]

No curative treatment
Few symptomatic treatments

[1]Arthur, K., Calvo, A., Price, T. *et al.* Projected increase in amyotrophic lateral sclerosis from 2015 to 2040. *Nat Commun* **7**, 12408 (2016). https://doi.org/10.1038/ncomms12408

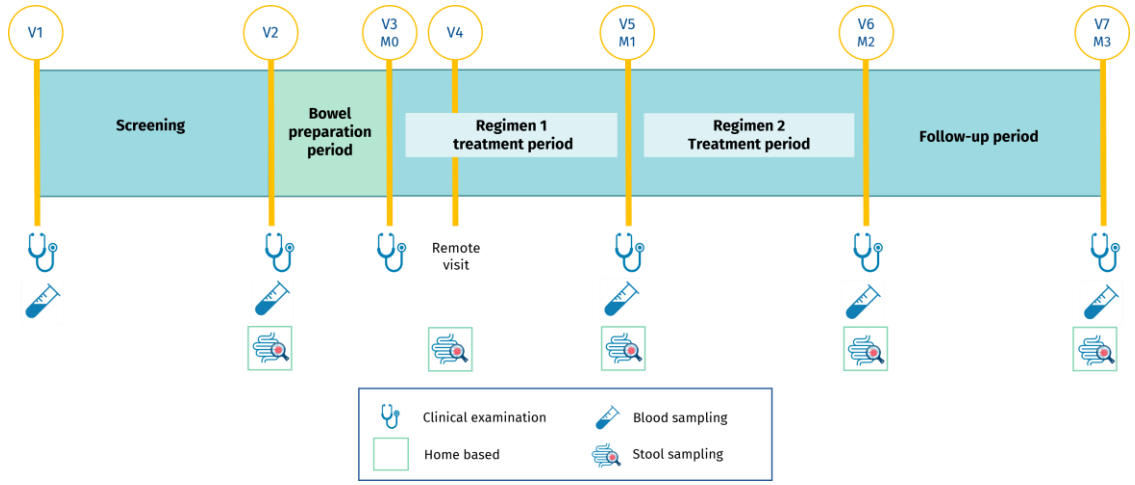
[2]https://tousensellescontrelasla.fr/la-sla-cest-quoi/

IASO trial is designed to develop the potential first oral microbiotherapy in ALS*

- Up to 15 patients in a pilot, open-label, Phase 1b study in France
- Study is expected to start in H1 2023, results are expected in H1 2024

Study developed with:

With the support of

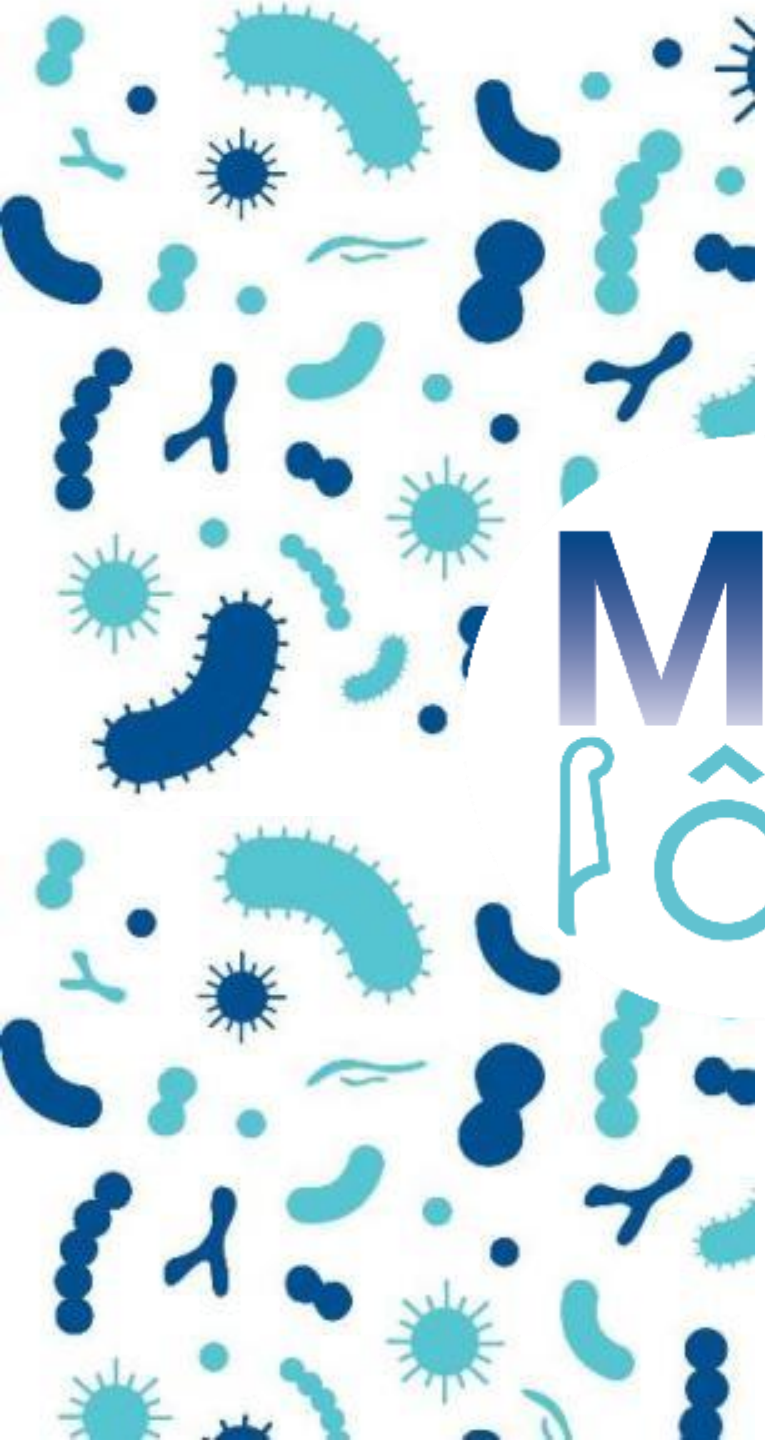


Key study endpoints:

- Assess safety and tolerability of multiple doses of MaaT033
- Assess gut microbiota composition evolution
- Identify biomarkers sensitive to treatment before considering a larger randomized controlled efficacy study

Potential to extend further to other chronic CNS diseases/ immuno-inflammatory diseases as MaaT Pharma collects data and in-depth understanding of MOA.

* One academic study testing native gut microbiome in ALS patients using **an invasive administration** procedure on going.



End-to-End in-house cGMP manufacturing

Building Europe's largest specialized cGMP manufacturing facility for Microbiome Ecosystem Therapies

Building a dedicated 1,600m² site (which could be doubled) to support up to 2034 needs of clinical and then commercial production of native MET (MaaT013 & MaaT033) and R&D and clinical batches of cultured products MaaT03X (est. first step):

MaaT013	▶	9,000 per year
MaaT033	▶	1 300 000 capsules per year
MaaT03X	▶	Up to 300,000 capsules per year

Site provides for a fully integrated Manufacturing and development platform to allow for a quick and efficient product development, scaleup and GMP process.

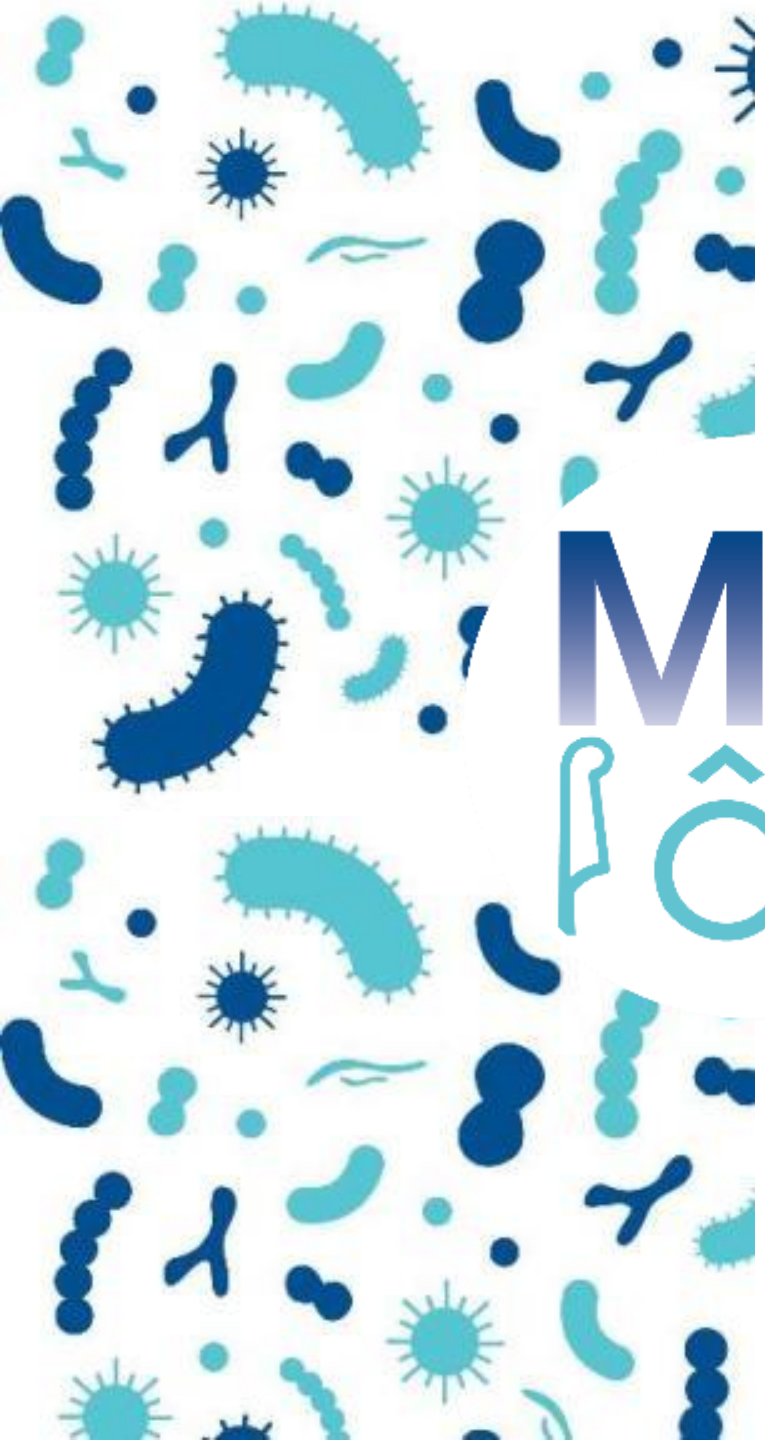
Ongoing CSR global strategy: participating in a reforestation program in France (opting for more ecological items (GoGreen) and joining the Cap Vert pour la forêt program and furnishing the plant with sustainable & used materials

Partnership with Skyepharma

MANUFACTURED TO cGMP STANDARDS

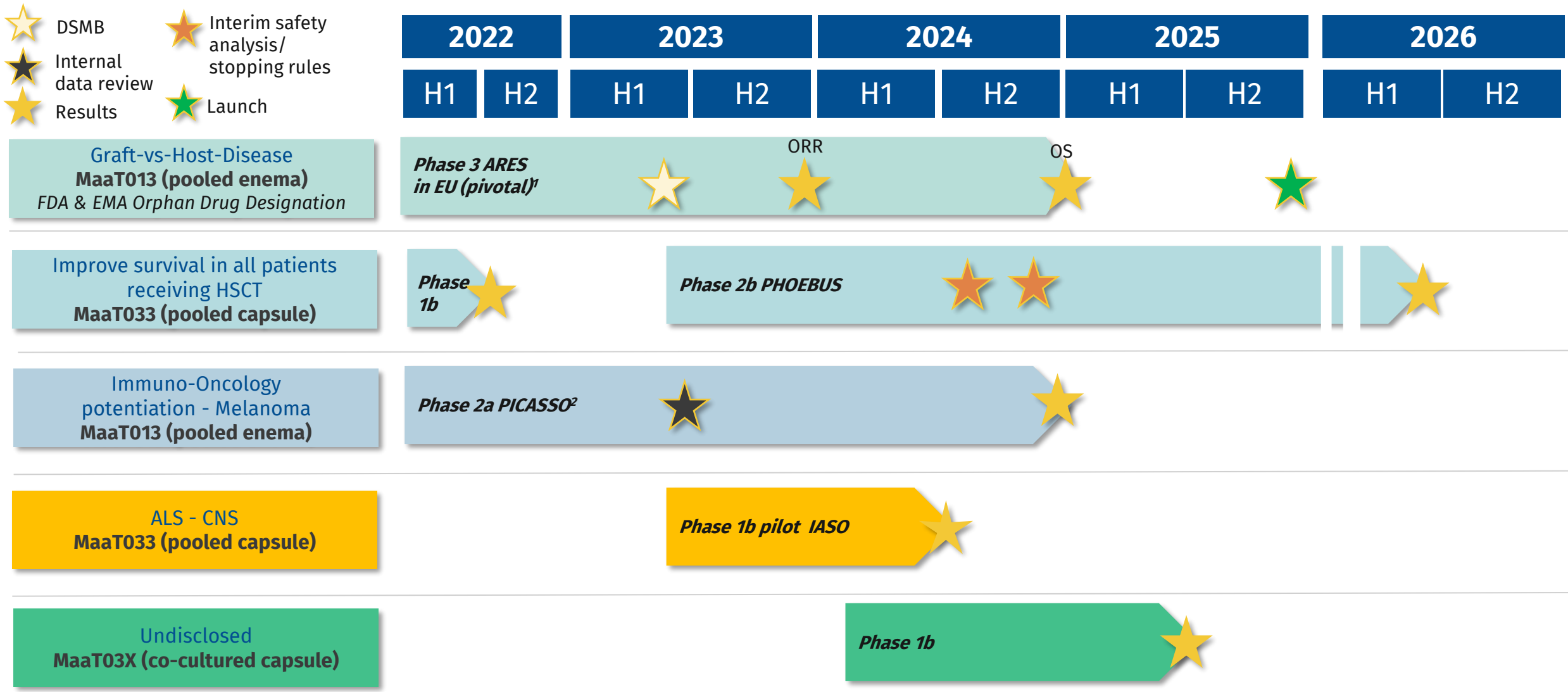
Artist's representation of future plant

Delivery expected in mid-2023



Upcoming key milestones

Meaningful milestones in both the near and long term



[1]Expansion to US sites subject to IND approval in the US;
[2]Investigator sponsored trial (AP-HP) where MaaT Pharma supplies the drugs and performs the microbiome profiling using its gutPrint® platform

Key differentiators of MaaT Pharma from other microbiome competitors

Leveraging the complexity of the microbiome

Pioneering a **full ecosystem approach** to restore host/microbiome **immune symbiosis**, based on proprietary **AI** and manufacturing capacities

Manufacturing versatility

In-house cGMP manufacturing scalability for both native and co-cultured products and end-to-end control of its supply chain

Oncology focus

Addressing **high unmet needs** in the hemato-oncology and immuno-oncology therapeutic areas

Established proof of concept

First company to reach Phase 3 testing for a microbiome product in oncology globally

A highly experienced team

Hervé Affagard
Founder & CEO

Siân Crouzet
Chief Operating Officer/
Chief Financial Officer

Carole Schwintner, Ph.D
Chief Technology Officer

Savita Bernal, Ph.D
Chief Business Officer

Isabelle Adeline, Ph.D
Chief of staff

Nathalie Corvaia
Chief Scientific Officer

BOARD OF DIRECTORS

Jean-Marie Lefèvre
Chairman & Non-Executive Director
President - Biocodex

Isabelle de Crémoux
Non-Executive Director
CEO & Managing Partner - Seventure

Claude Bertrand *
Non-Executive Director
General Director R&D - Servier

Jean Volatier *
Non-Executive Director
CFO - Inventiva

Dorothée Burkel *
Non-Executive Director
Former Chief Corporate and People Operations Officer - PartnerRe

Muriel Prudent
Censor
VC Investment Manager – Fonds PSIM - Bpifrance

Hervé Affagard
Executive Director
MaaT Pharma

* *Independent member*

Corporate Social Responsibility

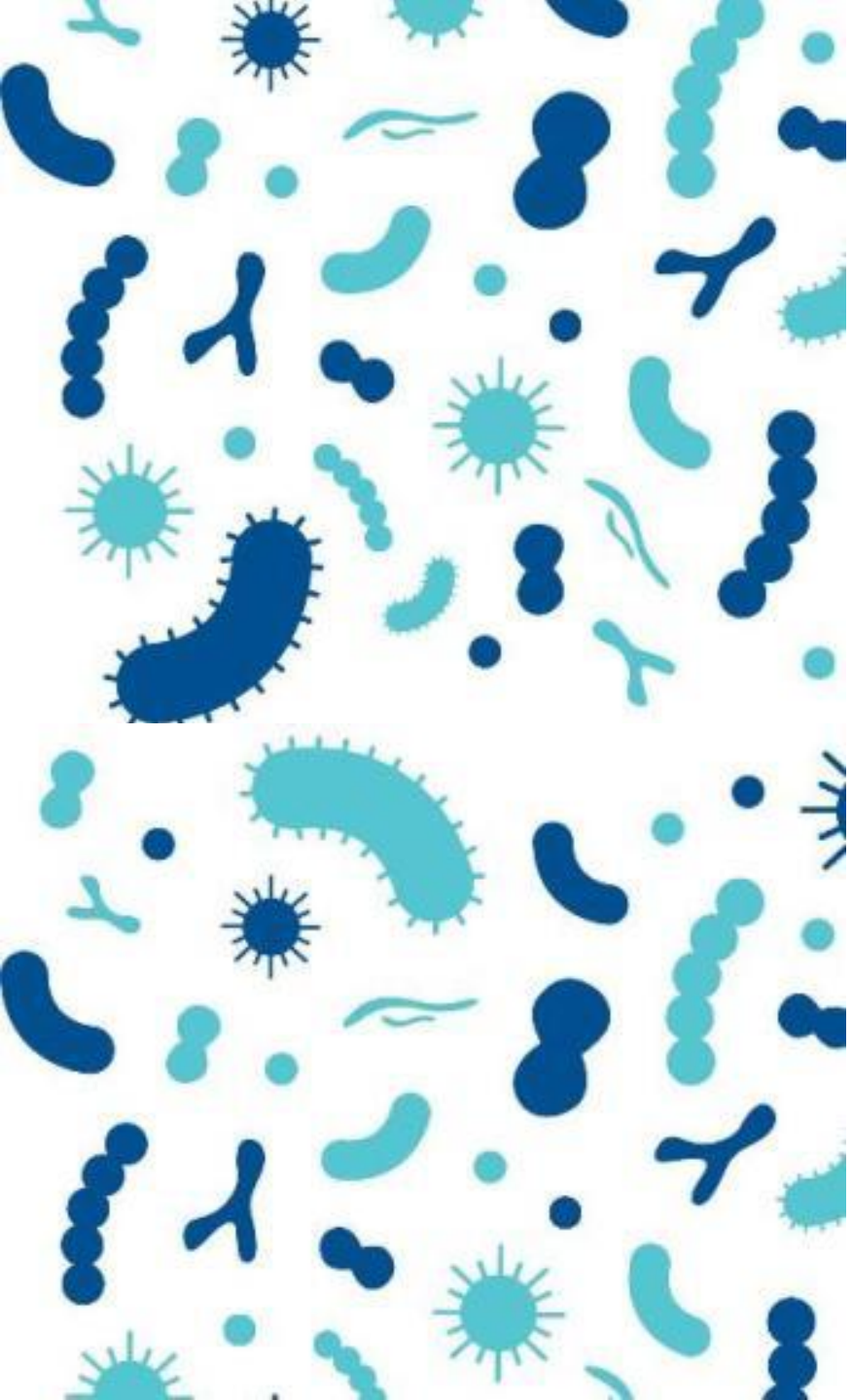
MaaT Pharma aims to become the source of Microbiome excellence providing patients with safe and innovative medicines. The Company develops products from sustainable biological matters, driving optimal impact of Microbiome.

Patients are our priority. We are committed to our patients and to the protection of human health by respecting environmental protection, respecting our employees and ensuring good governance practices. Our way of working every day is driven by the 4 guidelines below:

- Innovate and raise awareness to deliver better care,
- Contribute to employees-growth within a people-oriented ecosystem,
- Place ethics and transparency at the core of the Company's strategy,
- Control and measure our impact on the environment.

2022 CSR indicators

SOCIAL	Gender Equality Index Employment of young people (under 30 and less than 5 years experience) QWL: Job satisfaction
ENVIRONMENT	Carbon footprint Energy consumption per employees on site
SOCIETAL	Responsibility to patients and practitioners Increase awareness of Microbiome therapies R&D at the focus of our investments
GOVERNANCE	% of women in the board of directors and management team % of women in the top 10 earners



THANK YOU