

# MaaT Pharma Microbiota <u>as a</u> Therapy

Company Presentation 29 March 2022

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### A Uniquely-Positioned Microbiome Company



Differentiated approach validated by compelling Phase II data in aGvHD

Multi-asset clinical and preclinical pipeline (incl. lead asset in Phase 3 ) 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 13 patent families that **provides protection until 2036-2041 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** 





#### Management Team



**Siân Crouzet**Chief Operating Officer



**Hervé Affagard** Founder & CEO



**Dr. Carole Schwintner**Chief Technology Officer















**Dr. Savita Bernal**Chief Business Officer



**Dr. John Weinberg**Chief Medical Officer



**Dr Isabelle Adeline**Chief of Staff









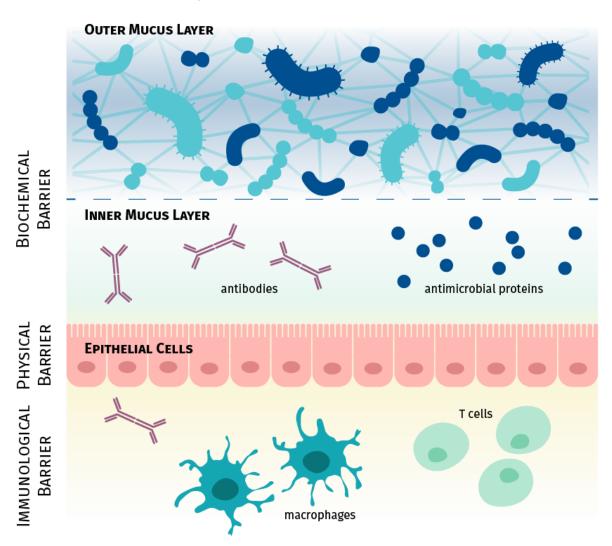








### Host – Microbiota Interactions are Critical for a Functional Immune System



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% of cellular host defense are localized in the gut (including innate and adaptive systems)

Cross-section of a healthy gut



### Diversity matters! Higher gut microbiome diversity is associated with ...

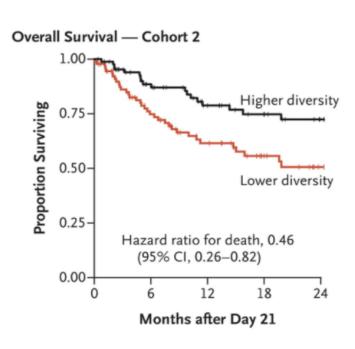
#### **Liquid Tumors**

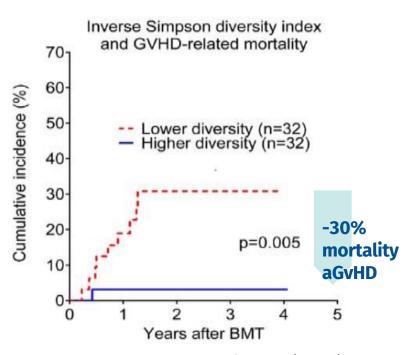
#### **Solid Tumors**

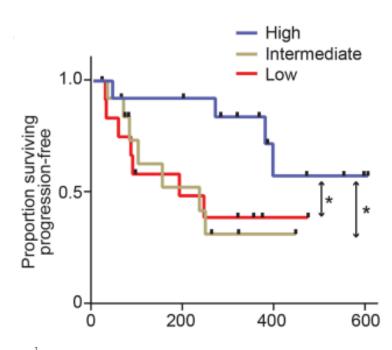
Higher survival rate in patients receiving allo-HSCT \*,1

Lower incidence and lower mortality from aGvHD\*,2

Higher response rate to ICI\* in patients with metastatic melanoma<sup>3</sup>







MaaT Pharma MET Inverse Simpson (mean): 24

\*allo-HSCT: allogeneic hematopoietic stem cell transplantation; aGvHD: acute Graft-vs-host-Disease; ICI: Immune Checkpoint Inhibitors <sup>1</sup>Peled, J.U. & al N Engl J Med 2020;382:822-34; <sup>2</sup>Ghani, 2021; <sup>2</sup>Jenq RR. et al, Biol Blood Marrow Transplant 21 (2015) 1373e1383; Pamer, Blood, 2014; Gopalakrishnan et al., Science, 2017, Routy et al, Science, 2018; Vetizou et al Science 2015;



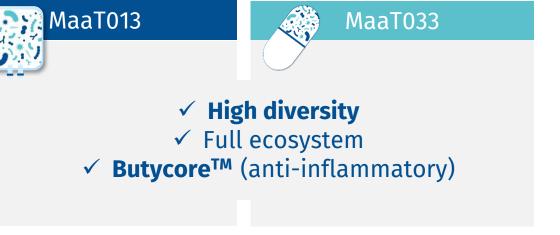
### MaaT Pharma's Microbiome Ecosystem Therapy (MET) platform has generated a diverse line of product candidates



# **Microbiome Ecosystem Therapies (MET)**

cGMP Platform

#### **Native**



**Co-fermented** 



#### MaaT03X

- ✓ Indication-specific designed ecosystem (from clinical data)
- ✓ Innovative ecosystem cofermentation technology

Preclinical Solid Tumors I/O

Ongoing Phase 3 aGvHD

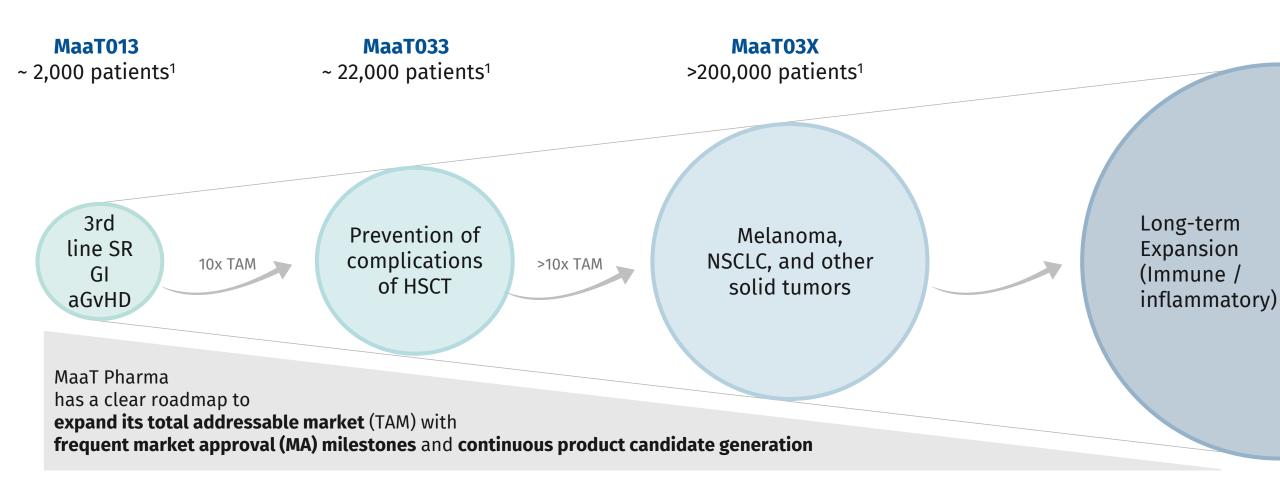
Entering Phase 2



Ongoing Phase 1b

Allo-HCT

# MaaT Pharma's approach and platform enable a rapid build-up of the addressable population that can benefit from its therapies



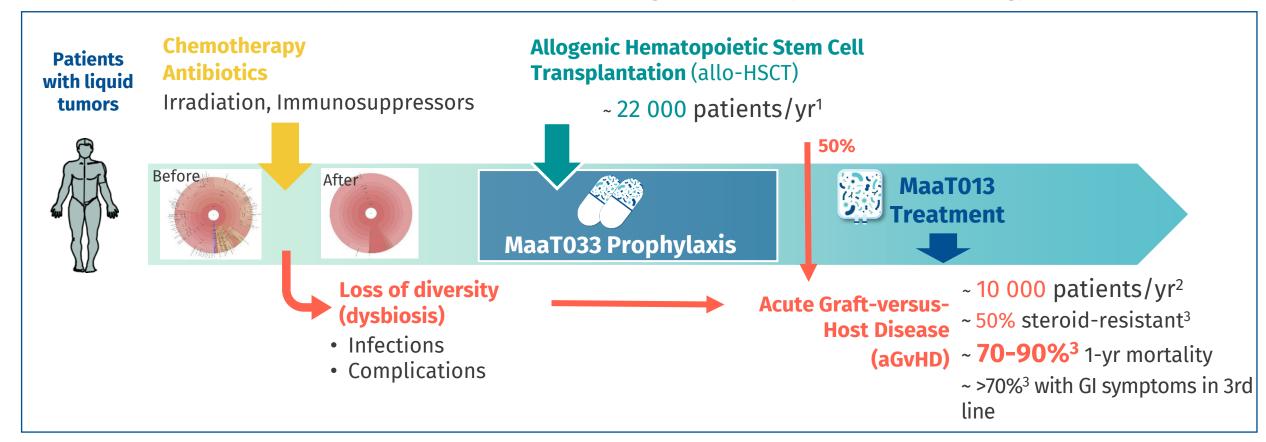


March 2022



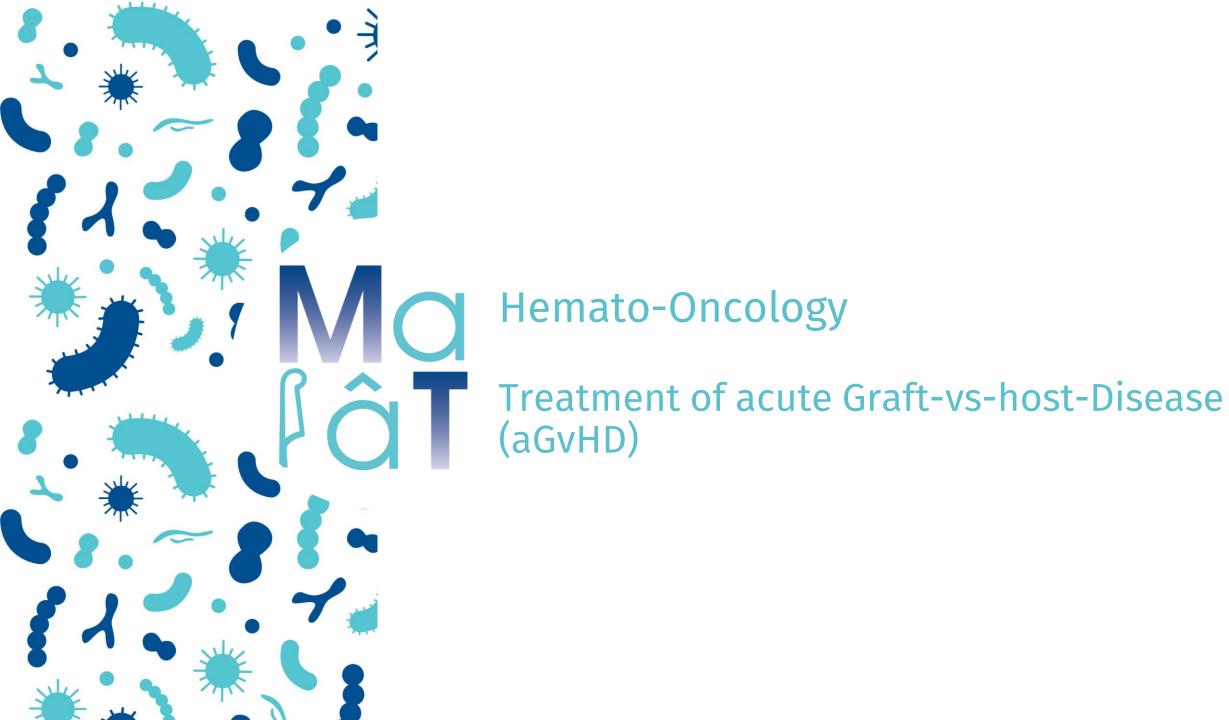
## MaaT013 and MaaT033 aim to restore the gut microbiota to improve survival in patients with liquid tumors

Intestinal dysbiosis is associated with higher mortality in hemato-oncology



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







### Two complementary approaches generating data on MaaT013

#### Phase 2 clinical trial - HERACLES

- Phase 2 clinical trial HERACLES (NCT03359980)
  - N=24 patients
  - 4 countries
- Gastro-intestinal aGvHD grade III-IV (most severe)
- Steroid-refractory
- 3 doses of MaaT013 as a monotherapy over 2 weeks
- As 2<sup>nd</sup> line of treatment
- Follow-up at 28 days (GI-response) and after 12 months (overall survival)

### Early Access Program/Compassionate Use (formerly « ATU »)

- Authorized by the French regulator (ANSM)
  - Results published on N=52<sup>1</sup> patients
  - France
- Gastro-intestinal aGvHD grade II-IV
- Steroid-refractory or steroid-dependent
- 3 doses of MaaT013 as monotherapy or in combination over 2 weeks
- After 1 to 6 lines of treatment
- Follow-up at 28 days (GI-response) and after 12 months (overall survival)

<sup>1</sup> Program is ongoing. >80 patients treated as of March 2022

MaaT013 has received Orphan Drug Designation from the FDA and EMA for aGvHD





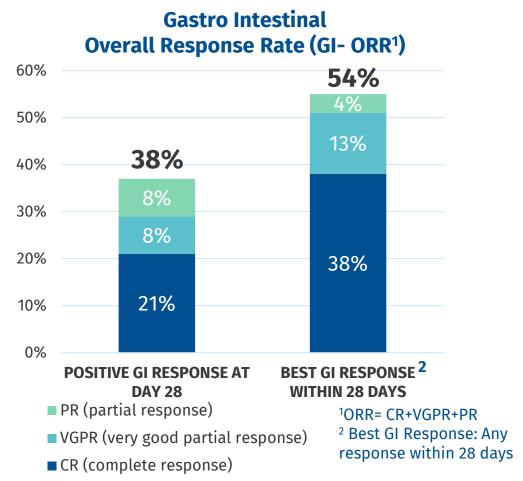


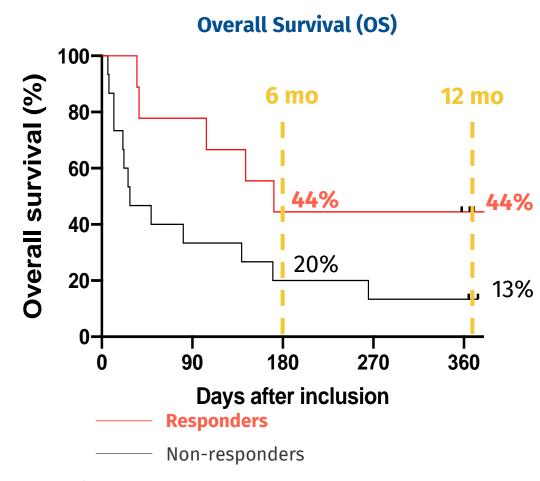
### HERACLES Phase 2 Clinical Trial Promising results in a very severe (III-IV) GI aGvHD population

- MaaT013 Phase 2
  - SOZOLVWINT W

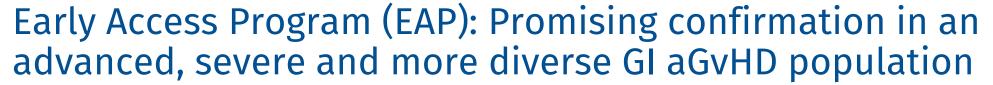
EBM1

- N=24 patients, 96% grade III (4% grade IV), 3 doses, 2<sup>nd</sup> line (Steroid-resistant)
- Microbiota analysis shows better engraftment of MaaT013 and higher gut microbiome diversity after treatment in Responders
- Very good safety and tolerability profile









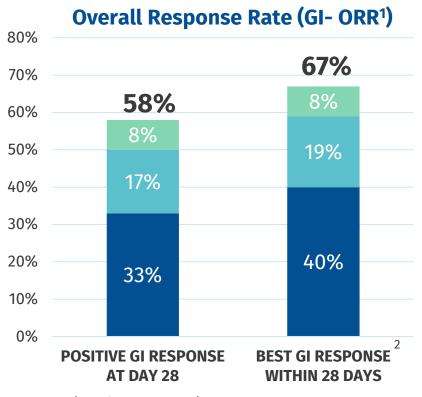


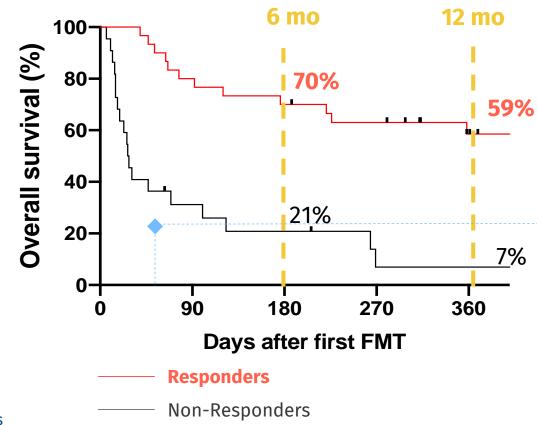
N=52 patients: 83% steroid-resistant; 94% grade III, Up to 6 lines of prior treatment (median: 3; 77% have received ruxolitinib); 3 doses

EBM1

Good tolerability and safety profile in a fragile population

**Gastro Intestinal** 





**Overall Survival (OS)** 

**22%** expected OS at 2 months in ruxolitinibresistant patients (REACH1 study)

7%

PR (partial response) <sup>1</sup>ORR= CR+VGPR+PR

■ VGPR (very good partial response) <sup>2</sup> Best GI Response: Any

■ CR (complete response)

response within 28 days



# The ARES Phase III study is designed to establish MaaT013 as the 3<sup>rd</sup> line agent in GI aGvHD treatment



- Pivotal single arm trial of MaaT013 as 3rd line (steroid-resistant & ruxolitinib-resistant) in n=75 GI-aGvHD patients
- Primary endpoint: GI-ORR at Day28 EUROPE:
  - ✓ First patient dosed in Q1 2022
  - CTA approved in 3 European countries. Expected to expand to additional EU countries

#### **USA:**

- FDA requested further information on clinical hold.
- → Submitted a request for a "Type A" meeting to the FDA by the end of 2021, with the support of well-respected regulatory consultants, aiming to resolve the clinical hold and expand ARES to US sites. Exchanges ongoing.

#### Targeted Timelines ARES Phase III Trial





¹subject to the lifting of the FDA clinical hold; ORR: overall response rate; OS: overall survival; MAA: Market approval application; BLA: Biological License Application



### Hemato-Oncology

Allogeneic-HSCT Complication Prevention



# Prevention of complications of allo-HSCT offers an attractive market opportunity for MaaT Pharma to address with MaaT033

• MaaT033, an oral formulation of MaaT013's drug substance, aims to prevent complications from allo-HSCT in all patients receiving the intervention



c. 7,800 primary procedures

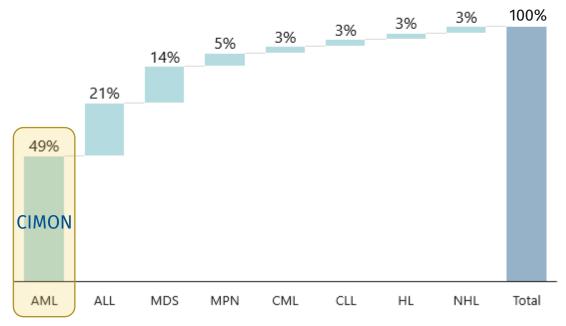


c. 9,600 primary procedures



**Additional 7%-10% recurrent procedures** 

#### Hematological Malignancy Patients Receiving Allo-HSCT<sup>1</sup>



LAM (AML): acute myeloid leukemia; LAL (ALL): acute lymphoblastic leukemia; SMD (MFS): myelodysplastic syndrome; NMP (MPN): myéloproliférative neoplasms; LMC (CML): chronic myeloid leukemia; LLC (CLL): chronic lymphocytic leukemia; LH (HL): Hodgkin's Lymphoma; LNH (NHL): Non Hodgkin Lymphoma





# Phase Ib CIMON study aims to determine MaaT033 dose for a Phase III study in post-allogeneic HSCT complication prevention



- CIMON explored safety and recommended dose of **orally administered MaaT033** in AML patients post induction chemotherapy. **Primary Endpoint:** Dose limiting toxicity-related treatment emergent (serious) adverse events
- MaaT033 achieved
  - √ 100% drug compliance
  - ✓ Good overall safety profile: 4 positive DSMB (4 cohorts evaluated), majority of mild adverse events
  - ✓ Good microbiome engraftment and engraftment persistence
    - → Final results expected H1 2022
  - → Next Phase II-III pivotal study (Allo-HSCT, RCT, ~340 patients, OS) planned to start H2 2022





## 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

√ 3/10

Non-responders

→ Responders

(Davar et al, 2021)

Non-responders

→ Responders
(Baruch et al, 2021)

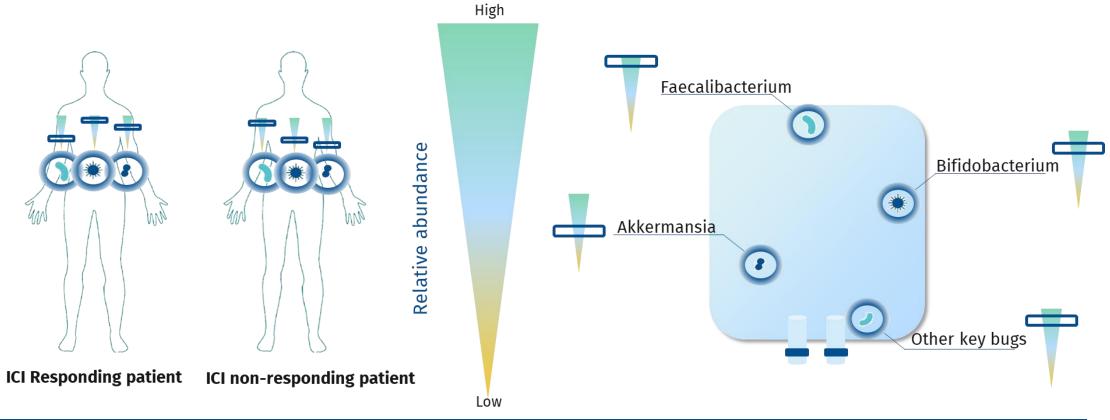


- Immune check-point inhibitors (ICI) therapies have established themselves as key therapeutic options in solid tumors, but ORR may be as low as 20% in some indications.
- Richness and Diversity of gut microbiome drive survival in patients receiving ICI<sup>1,2,3</sup>
- FMT from ICI responders (R) could induce response in metastatic melanoma non-responders (NR) (Baruch et al, *Science* 2021, Davar et al, *Science* 2021)

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



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



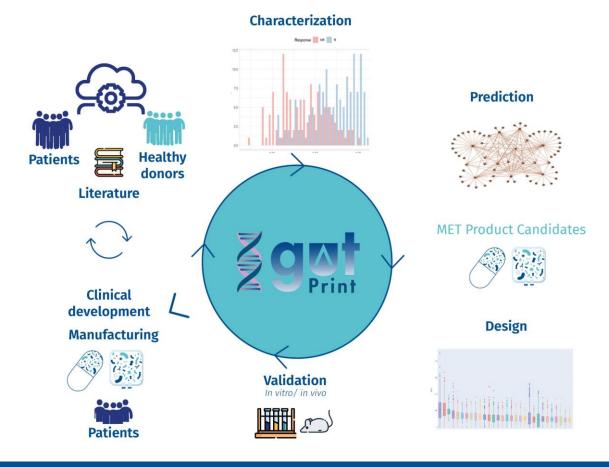
Phase IIa PICASSO trial², in collaboration with APHP (sponsor), ready to start (approved by ANSM)

✓ RCT [MaaT013 + ICI] vs. [Placebo + ICI] in 60 metastatic melanoma patients

✓ Assessing Safety and Efficacy (iRECIST) of MaaT013 vs. placebo after 23 weeks of treatment



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

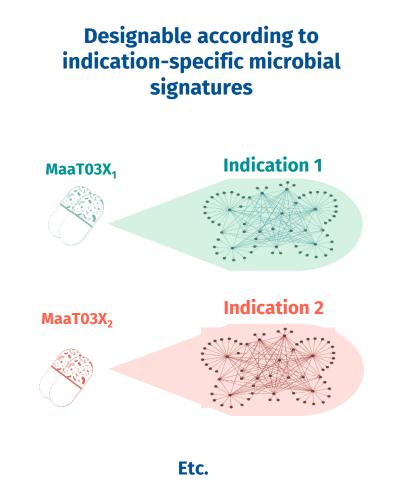


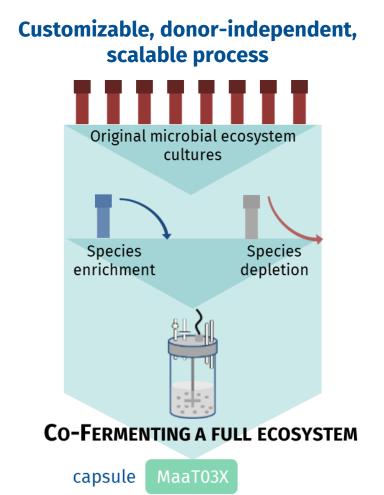
gutPrint® is the engine that drives MaaT Pharma's MET product candidate generation capabilities to broaden and strengthen the pipeline



### The customizability and scalability of the MaaT03X line allows it to potentially address several solid tumor indications

	Fermented (MaaT03X)
Ecosystem design	Full
Richness & diversity	High
Scalability	Improved
Administration route	Enema and oral
Customizability	Yes
Tumor Types	Multiple (undisclosed)



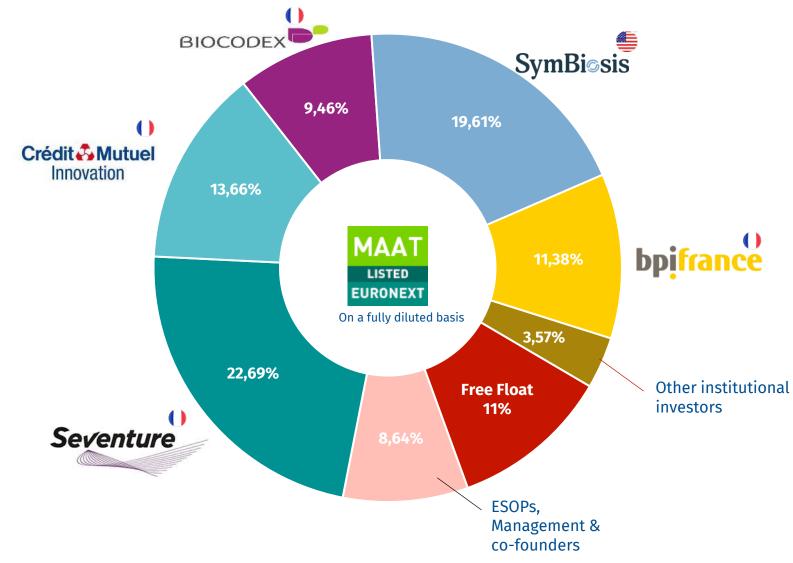


First candidate in preclinical testing – Expected to enter clinical testing in H1 2023





#### MaaT Pharma is listed on Euronext Paris - 35.7M€ IPO Nov. 2021



#### **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



Martine George Non-Executive Director Oncologist



Jean Volatier Non-Executive Director CFO - Inventiva



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



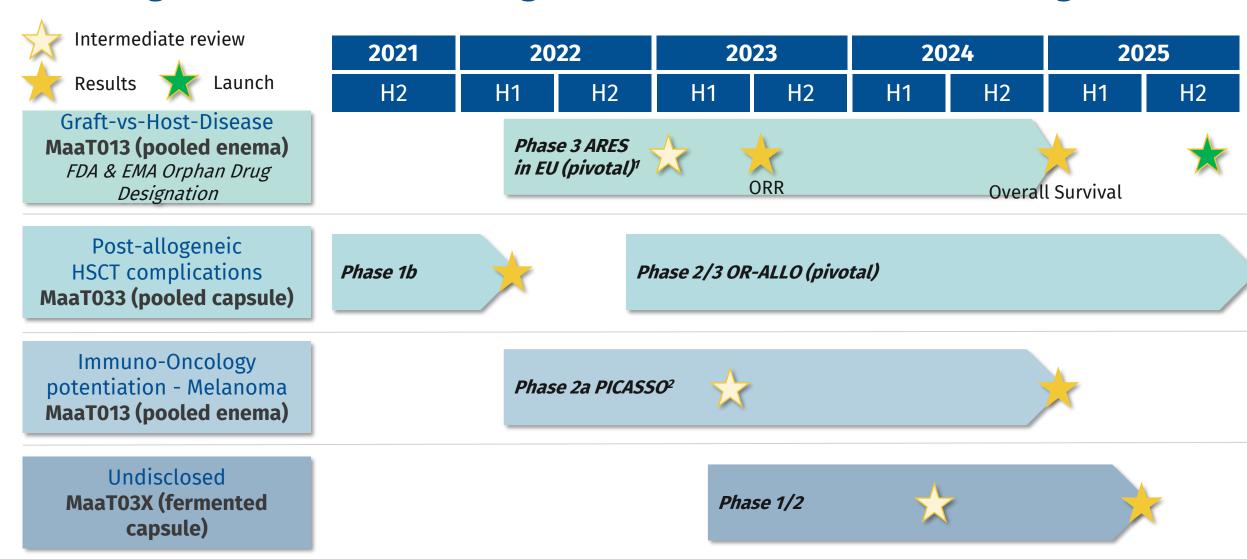
Muriel Prudent Censor VC Investment Manager – Fonds PSIM - Bpifrance



**Hervé Affagard** Executive Director



### MaaT Pharma's development plan produces a steady flow of meaningful and value-creating news in both the near and long term





<sup>1</sup>expansion to US sites in H2 2022 subject to IND approval in the US;

<sup>2</sup>Investigator sponsored trial (AP-HP) where MaaT Pharma supplies the drugs and performs the microbiome profiling using its gutPrint® platform

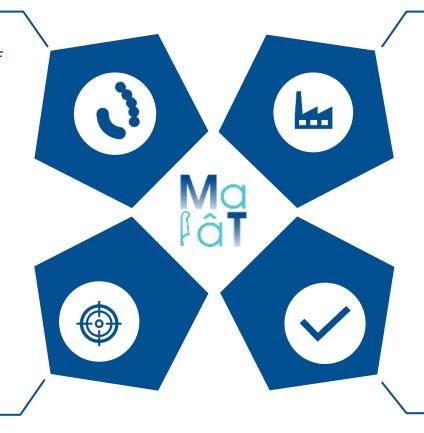
March 2022

Corporate Presentation

### Key differentiators of MaaT Pharma from other microbiome competitors

### Full ecosystem approach

MaaT Pharma pioneers a full ecosystem approach instead of single strain or consortia to restore host/microbiome symbiosis and leverage its full functionality



### Manufacturing versatility

Internal competencies enable manufacturing scalability via native or co-fermented cGMP processes in versatile presentations including enema and oral

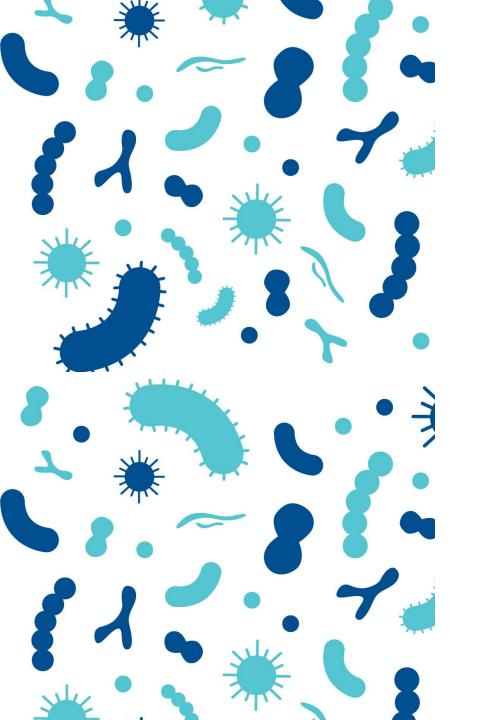
### Established proof of concept

MaaT Pharma has validated its approach in clinical trials which has been recognized by regulators

#### **Oncology focus**

MaaT Pharma focuses on high unmet diseases in the oncology and hemato-oncology therapeutic areas





# THANK YOU