



Innovation 4 Health

**Scienze della Vita tra pubblico e privato: l'importanza del tech transfer
per l'innovative health ai tempi del Covid-19**

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UniMi, INGM, CheckMab

«CheckMab, una spin-off universitaria»

EVENTO DIGITALE 30 OTTOBRE 2020

PERCHÉ CHECKMAB MERITA DI ESSERE MENZIONATA

- 1) Le start up italiane che hanno avuto successo per lo più sono nate da spin-off industriali.
- 2) Le start up italiane nate da spin-off universitarie esistono ma molto raramente hanno ottenuto finanziamenti necessari al BP. Le spin-off accademiche che hanno raccolto nel primo round più di 5M probabilmente si contano sulle dita di una/due mani.
- 3) Questo numero limitato di successi influenza il contesto: patent attorney, TTO etc

CHI FINANZIA I RISCHI DELL'INNOVAZIONE NEL MONDO DEL BIOTECH

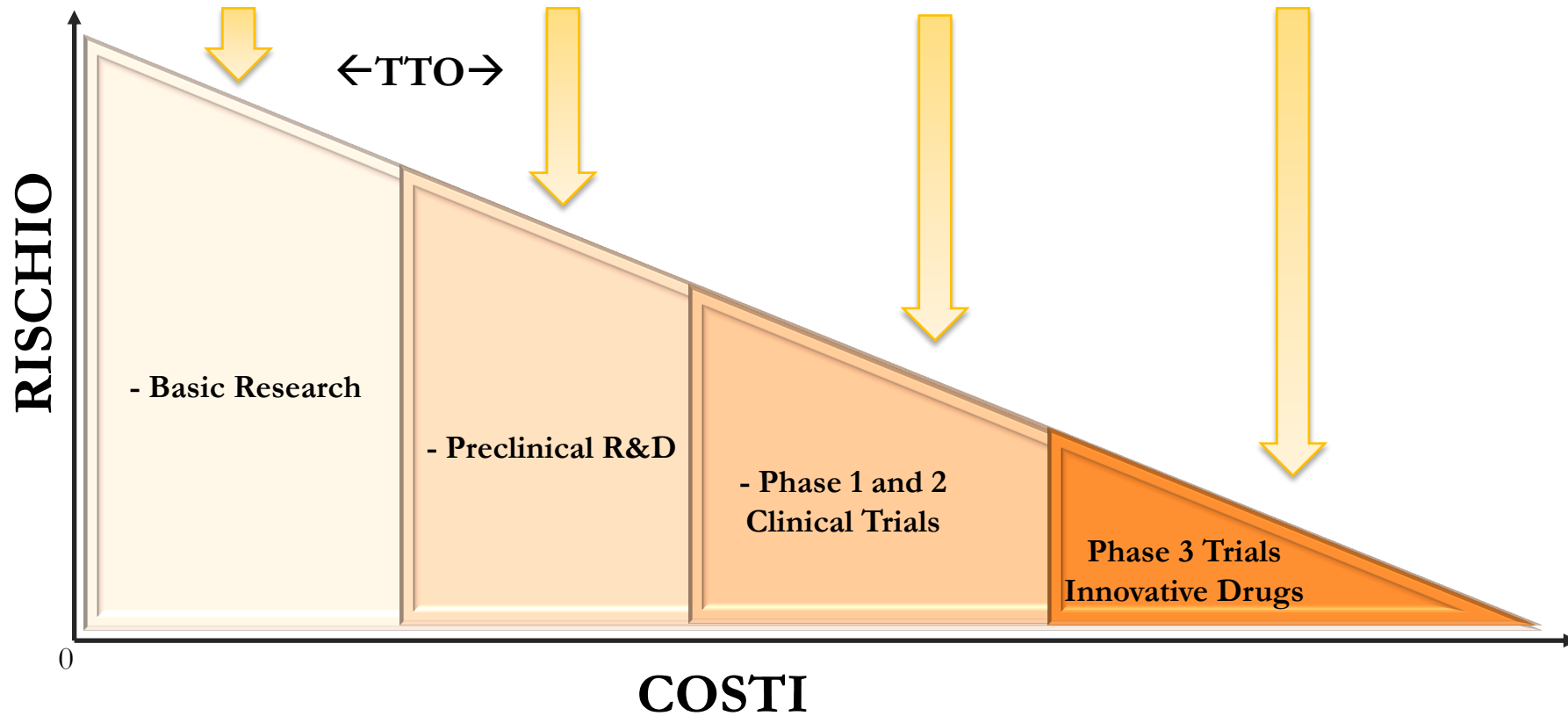
Risk mitigation through risk sharing in the process of new drug development

1) Research agencies
2) Philanthropy

1) Venture capital funds

1) Venture capital funds
2) Mature companies

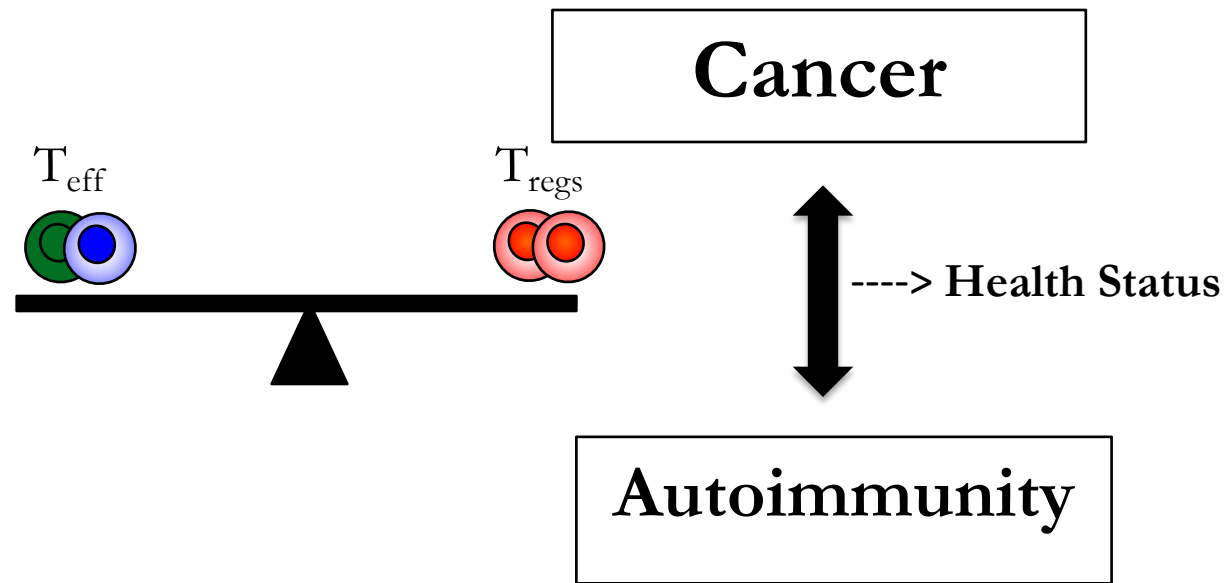
1) Mature companies



The clinical need CheckMab would like to address

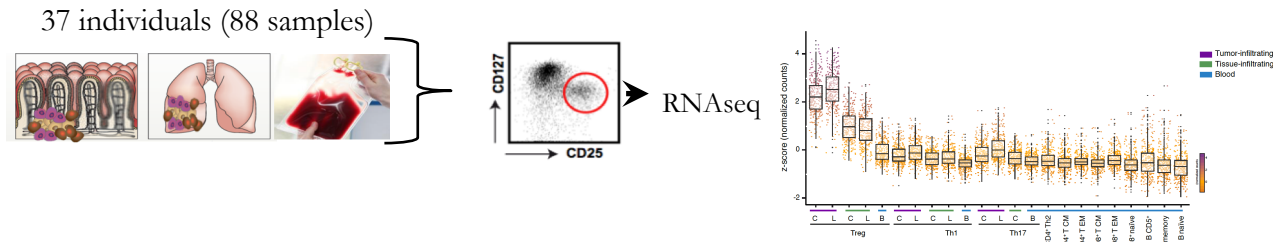
- Immune checkpoint inhibitors mAbs against CTLA-4, PD-1/PD-L1 show efficacy in a sizable fraction of cancer patients and have been game changers in cancer immunotherapy
- Such mAbs cause immune adverse events in a sizable fraction of patients, likely due to a systemic activation of the immune system:
 - 5-10% of patients receiving checkpoint inhibitor mAbs must discontinue this therapy due to untreatable major adverse events
 - 5-15% of cancer patients are ineligible for immunotherapy due to pre-existing autoimmune disorders or familiar history of autoimmunity

La nostra salute immunologica è un equilibrio fra un sistema immunitario che agisce e uno che sopprime.



CheckmAb precision approach to the Problem

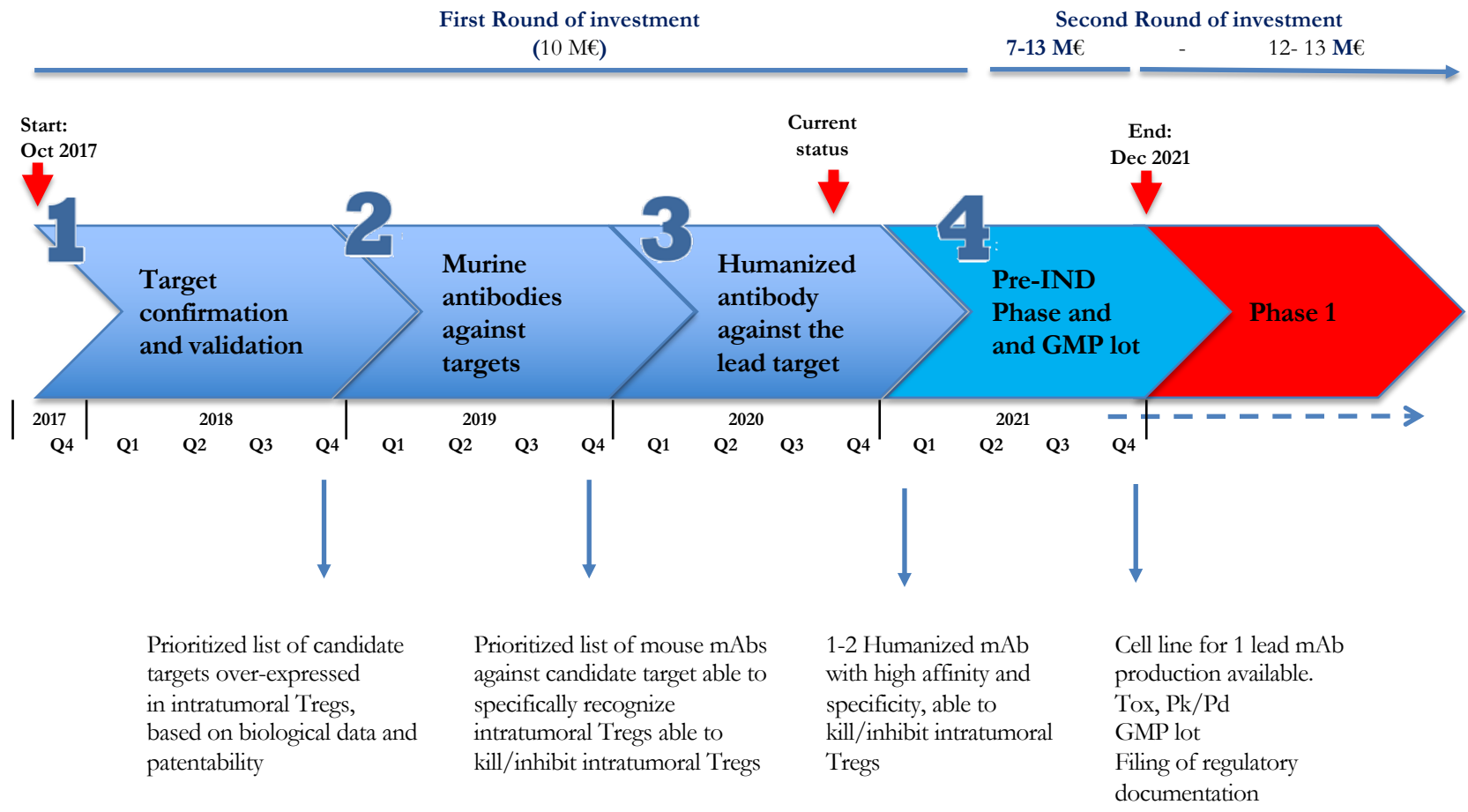
328 'signature' transcripts whose expression is higher in TI-Treg cells (WMW p-val<0.001)



We have identified cell surface molecules specific for intratumoral regulatory T cells (Immunity, 45. 1135. 2016)

To generate new therapeutic mAbs against cell surface proteins highly enriched in tumor-infiltrating regulatory T cells (Tregs) for **safer** cancer immunotherapy. Carry out mAbs pre-clinical development up to phase I clinical trial.

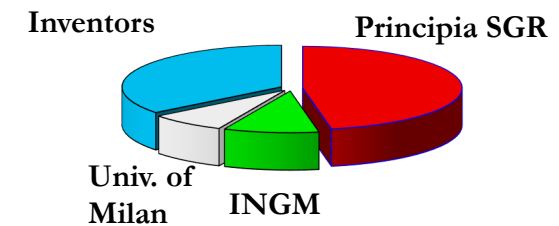
Current CheckmAb R&D plan



The Company

- ❖ **Operational starting date:** March 2018
- ❖ **Operational site:** Padiglione Romeo ed Enrica Invernizzi, Via Francesco Sforza 35, Milan
- ❖ ***Founders and shareholders***
 - ✓ INVENTORS, Sergio Abrignani & Massimiliano Pagani
 - ✓ PRINCIPIA SGR, Milan, private equity fund
 - ✓ UNIVERSITY of MILAN
 - ✓ ISTITUTO NAZIONALE DI GENETICA MOLECOLARE (INGM)

Shareholders

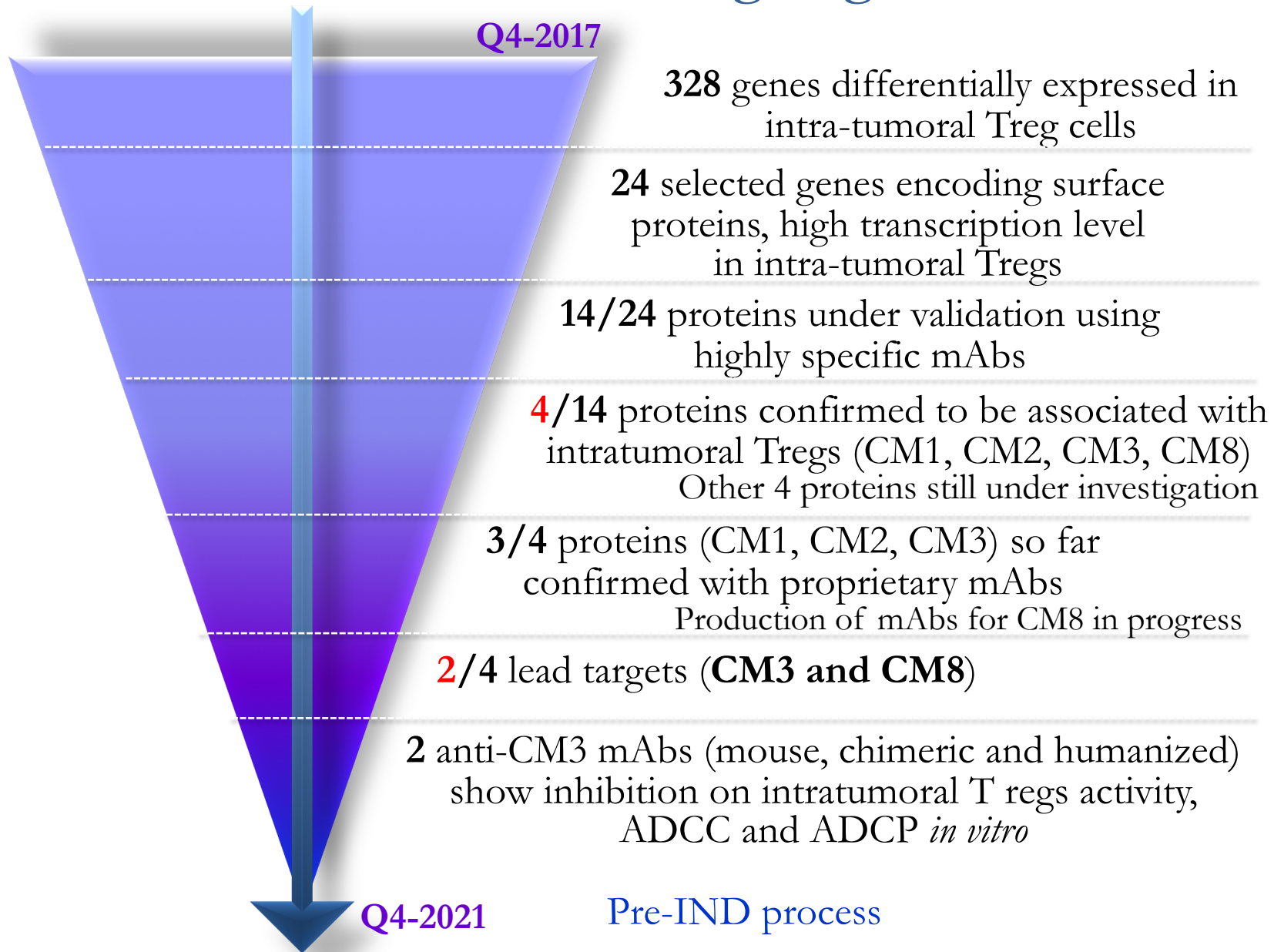


❖ ***CSO and Scientific team***

- ✓ Renata Grifantini, PhD, CEO
- ✓ Tiziano Donnarumma, PhD
- ✓ Manuele Martinelli, PhD
- ✓ Cecilia Valvo, PhD

Consolidated industrial experience in pharma companies, with competences in immuno-oncology, molecular and cellular biology, biochemistry

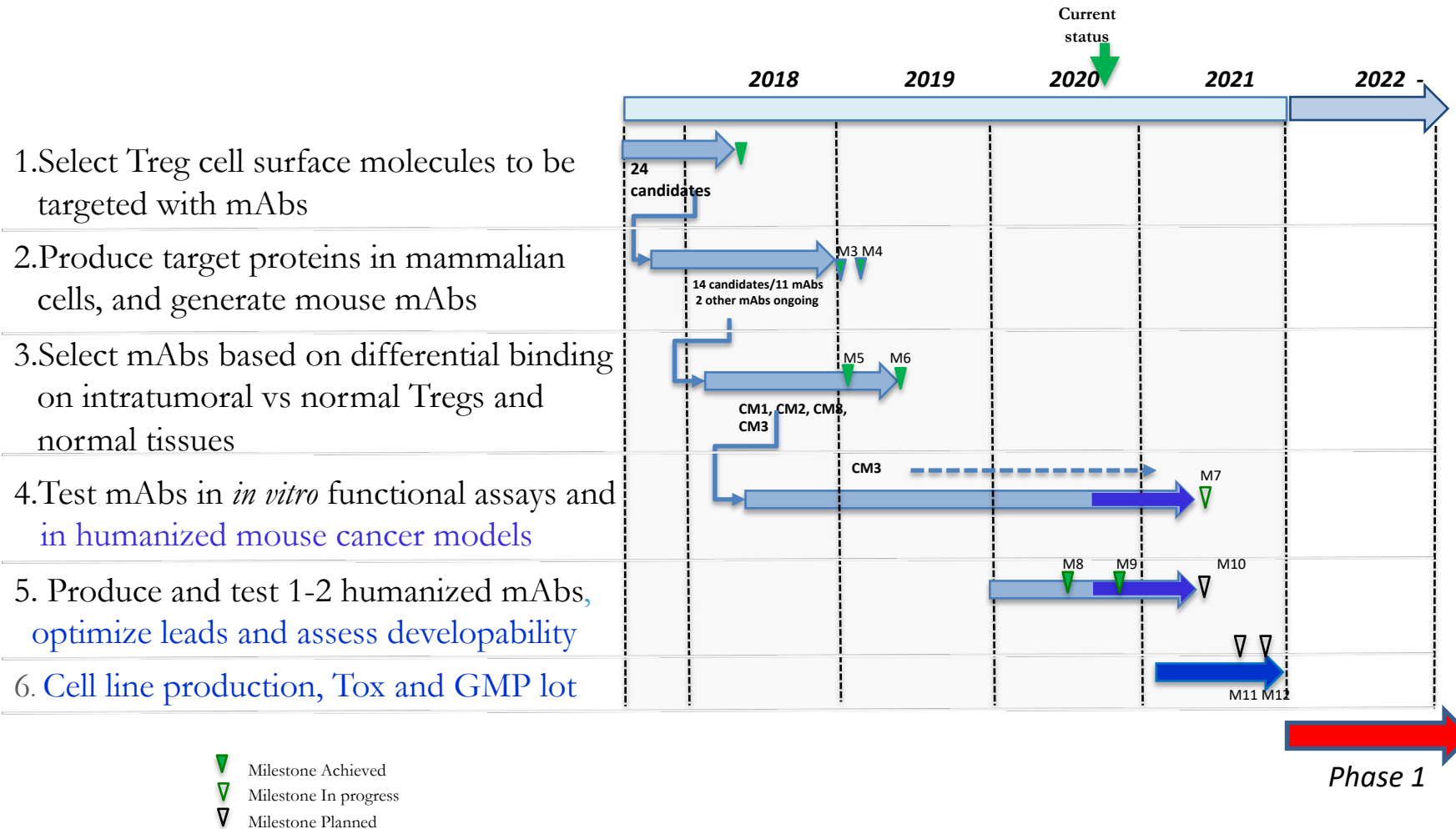
Prioritization of advanced Treg targets



Checkmab proprietary anti-CM3 mAb

1. Detects CM3 in intratumoral Tregs by FACS in cell suspension, and by IHC in FFPE tissues
2. Inhibits suppressive activity of Treg cells *in vitro*
3. Depletes Tregs cells by ADCC and ADCP activities *in vitro*
4. Reduces mouse tumor growth *in vivo*

R&D workflow and advancement status



Flusso delle attività di ricerca nella creazione e realizzazione del valore

