



*Disruptive biological approaches in immunotherapy, based on next generation BiXAb<sup>®</sup> bi- and multi-specific antibody platform for cancer treatment*

*Corporate deck for Galien start-up prize:  
Deck1: General Information  
May 2023*

# Biopharmaceutical company focused on bi- and multi-specific antibodies for oncology

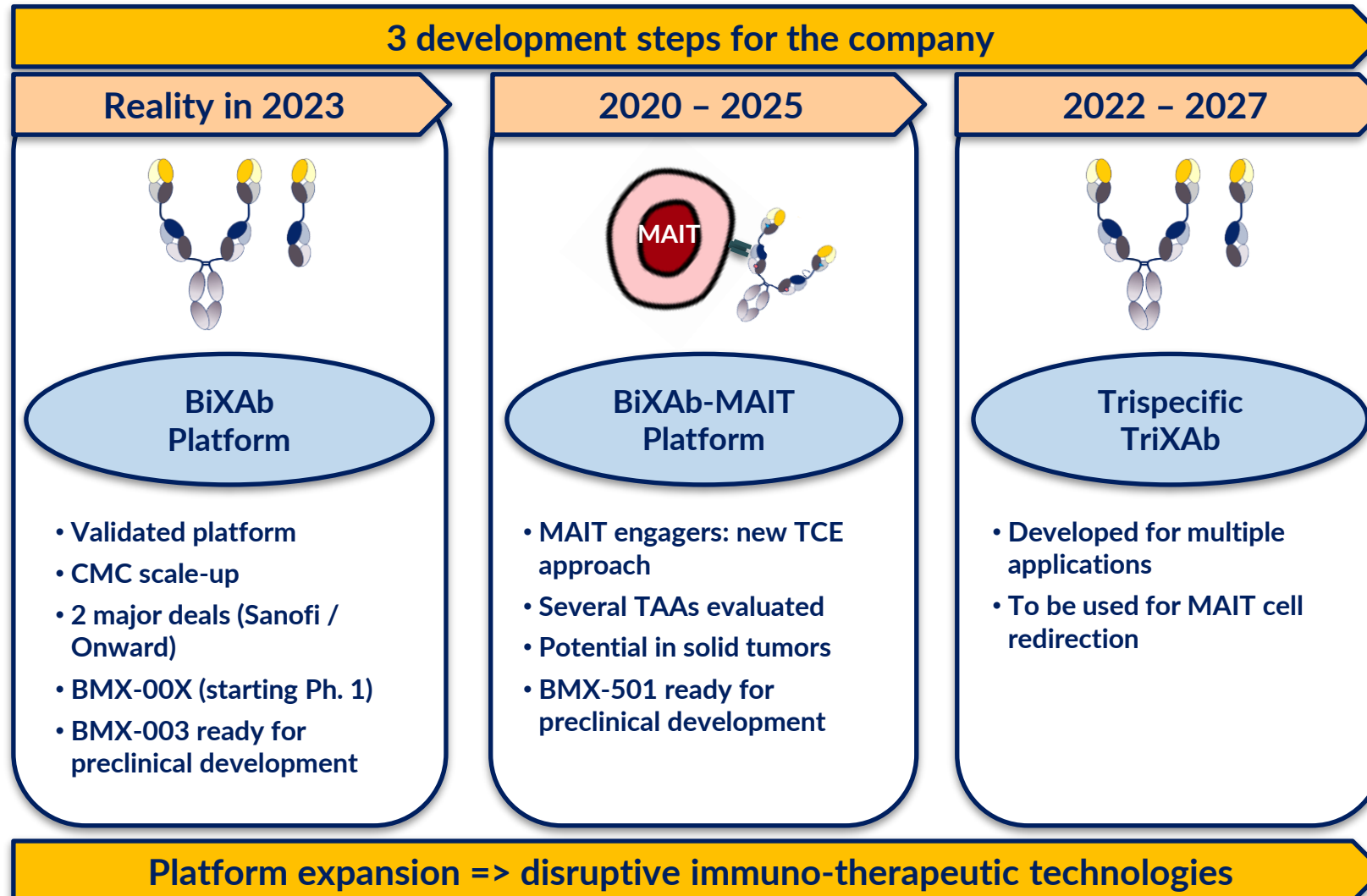
Technology	 <p>BiXAb®, “best-in-class” next-generation bi- and multi-specific Ab platform</p>	 <p>Technology validated by deals with pharma industry (i.e., Sanofi, Onward)</p>	 <p>Strong pipeline of programs with proprietary disruptive biological approaches (e.g., MAIT engagers)</p>
	 <p>World-class team &amp; in-house Lab (Cochin hospital, Paris)</p>	 <p>Established partnerships with renowned research institutions &amp; current discussions with big pharma</p>	 <p>Robust IP portfolio both on BiXAb platform and pipeline (incl. MAIT)</p>

# Major strategic collaboration and out-licensing deals with pharma & biopharma companies validated the Biomunex BiXAb® platform

- **2019: Licensing deal on BiXAb® proprietary technology with SANOFI**
  - For the generation, optimization and development of BsAb and MsAb
  - Upfront received + major clinical, regulatory, commercial milestone payments
  - Nominated for Best Collaboration in GALIEN Medstartup prize (New York)
  
- **2021: Co-development and out-licensing agreement with Onward Therapeutics for a proprietary BiXAb® antibody**
  - Proprietary BiXAb® antibody for Oncology indications
  - Upfront received + Strategic investment (Series A)
  - Clinical, regulatory and commercial milestone payments + other payments
  
- **Great grants and financial support of French State**
  - ✓ CIR (research tax credit)
  - ✓ CreaDev grant and different grants
  - ✓ 2017-2020: ANR project for new candidate
  - ✓ PGE 2020; Innov'up Leader 2020; ADI 2021
  - ✓ National Laureate Grand Défi 2021 (SGPI): Scheme « Innovative Biotherapy and Bioproduction tools » (1<sup>st</sup> national budget = 3M€)



# An ambitious plan to leverage the BiXAb® platform towards disruptive biological approaches



TAA: Tumor Associated Antigen; TCE: T cell Engagers; MAIT engagers (MAIT cell redirection): Mucosal Associated Invariant T cell redirection

# A robust pipeline of disruptive proprietary BiXAb® programs in oncology

Programs	Mechanism of Action / Indication	Discovery	Candidate nomination	Preclinical (CMC, Tox)	Clinical Phase 1 & 2
DEVELOPMENT PROGRAMS					
BMX-00X BiXAb bispecific Ab (out-licensed; codevelopment)	Dual immune checkpoints Clinical development planned in hematological malignancies and solid tumors				Should start first in man clinical Phase 1 soon in 2023
BMX-003 BiXAb bispecific Ab	RTK (EGFR) family of receptors Potential in colon and pancreatic cancers				Ready for CMC and regulatory preclinical
CURRENT DISCOVERY PROGRAMS					
BMX-501 MAIT engagers BiXAb (MAIT x HER2)	1 <sup>st</sup> program (HER2, considered as an anchor for MAIT redirection) => solid tumors (ie. CRC, lung, pancr., etc)				CMC and regulatory preclinical
BMX-50X MAIT engagers BiXAb (MAIT x TAA2)	2 <sup>nd</sup> program (TAA2) => solid tumors				Ready for CMC and regulatory preclinical in early Q4 2023
Early-stage discovery programs	Other BiXAb bispecifics Ab <ul style="list-style-type: none"> <li>MAIT engagers</li> <li>Anti-CPI-PD1</li> <li>Immune cell redirection</li> </ul>				
BMX-900 TriXAb trispecific antibody	Different programs with MAIT cell redirection				

TAA: Tumor Associated Antigen; CPI: (immune) CheckPoint inhibitor; MAIT engagers (MAIT cell redirection): Mucosal Associated Invariant T cell redirection

# Biomunex' BiXAb® platform patents and IP situation and strategy regarding the BiXAb platform

- Initial IP: Worldwide license from an academic Consortium in all therapeutic areas => “MULTI-SPECIFIC ANTIBODIES” Patent:
- Biomunex' unique proprietary BiXAb® platform IP:
  - Unique know-how developed
  - Continued development of New & unique IP protection (molecular modeling); **several additional patent families for the BiXAb platform :**
    1. **Filed in January 2017: “A POLYPEPTIDE LINKER FOR PREPARING MULTISPECIFIC ANTIBODIES”). Optimized design (linkers)**
    2. **Filed in March 2017: “STABLE MULTISPECIFIC ANTIBODIES”. Original set of mutations patent, to create bi- and multispecific antibodies**
    3. **Filed in January 2020: “MULTISPECIFIC ANTIBODIES THAT BIND BOTH MAIT AND TUMOR CELLS”;. MAIT Cell redirection platform patent family**

**NB: The BiXAb technology IP covers bispecific, trispecific and tetraspecific antibodies, Fab-Fab and Fab-Fc-Fab structures**

# Biomunex product pipeline IP and patents situation and strategy regarding the BiXAb products

- IP protection for each BiXAb® development candidate; several patent families for products
  - Patent applications filed for development candidates:
    1. March 2016: BMX-00X patent application
    2. April 2016: BMX-002 patent application
    3. Jan. 2020: BMX-501 program and non-conventional T Cell redirection platform and products patent application filing + PCT extension (January 2021)
    4. March 2022 : BMX-003 program
    5. July 2022: BMX-00X final development candidate

Ongoing patent application filing extending IP protection for different BiXAb antibodies

➔ Rapid IP protection for new composition of matter



# A seasoned management international team and corporate governance; labs and offices in Cochin hospital bioincubator in the center of Paris

Based in Cochin hospital, with a team of  $\pm 20$  FTEs (employees + experts & advisers + Biomunex Inc. in Cambridge, MA)

## A unique seasoned management international team



Management & Leadership team	 <b>Dr. Simon Pleyte</b> <ul style="list-style-type: none"> <li>CSO &amp; SAB member</li> <li>PhD Biochemistry</li> <li>20 y. in Pharma R&amp;D, in oncology and in Biospecific Ab companies (Menas, Mol. Partners) or Pharma (Boehringer Ing.)</li> </ul>	 <b>Dr. Pierre-E. Gerand</b> <ul style="list-style-type: none"> <li>CEO &amp; Founder</li> <li>MD, MBA</li> <li>13 y. in Pharma (Servier, Pierre Fabre) as top executive in management and strategy</li> <li>7 y. consulting partner (AEC, IQVIA)</li> </ul>
	 <b>Dr. C. Gervais</b> <ul style="list-style-type: none"> <li>IO Principal scientist</li> <li>PhD Immunology</li> <li>Experience in mAbs and BsAb</li> </ul>	 <b>Dr. Julie Prigent</b> <ul style="list-style-type: none"> <li>IO Principal scientist</li> <li>PhD Immunology</li> <li>Experience in mAbs and BsAb</li> </ul>
Advisers & experts	 <b>Dr. Olivier Leger</b> <ul style="list-style-type: none"> <li>Antibody engineering adviser</li> <li>PhD Biochemistry</li> <li>20 years of mAb R&amp;D</li> <li>Ab engineering director (Merck, P. Fabre, Novimmune)</li> <li>Inventor 20+ patents</li> </ul>	 <b>Dr. Alain Herrera</b> <ul style="list-style-type: none"> <li>Adviser in clinical strategy</li> <li>MD, PhD, hematologist</li> <li>CMO Onward</li> <li>Former VP Head Oncology Sanofi, Pierre Fabre</li> </ul>
	 <b>Dr. François Thomas</b> <ul style="list-style-type: none"> <li>Adviser in clinical and VC strategy</li> <li>MD, PhD, oncologist</li> <li>VC in several funds, former clinical director</li> </ul>	 <b>Dr. Edward Battistini</b> <ul style="list-style-type: none"> <li>CMC and bio-manufacturing expert</li> <li>PhD</li> <li>20 y. exp. in biomanufacturing and development</li> </ul>

NB: Not all members of the team are mentioned here

Strictly Confidential

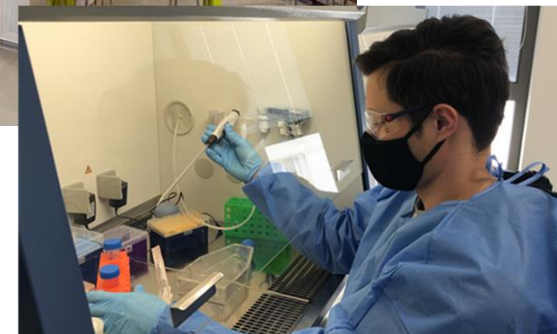
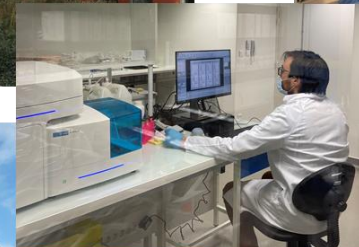
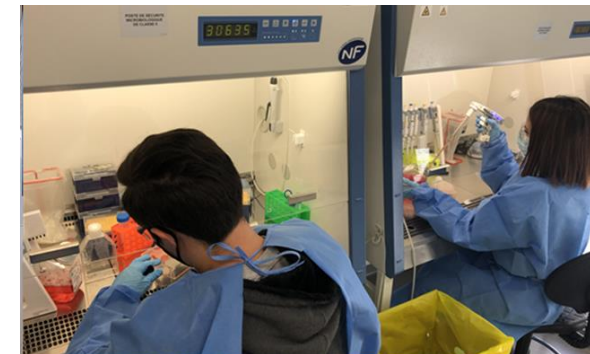
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## An international Corporate governance

Strategic Board	 <b>Jordi Estuza</b> <ul style="list-style-type: none"><li>o Board member</li><li>o Chief Strategy Officer</li><li>o Engineer</li><li>o CEO and Founder AEC Partners</li></ul>	 <b>Dr. Phil de Lavenne</b> <ul style="list-style-type: none"><li>o Ind. Board member</li><li>o MD, MBA</li><li>o Former Topex in Servier, Sanofi, VP Actelion</li><li>o MD Martos</li></ul>	 <b>Dr. C. Grace Yeh</b> <ul style="list-style-type: none"><li>o Board member</li><li>o PhD</li><li>o Founder &amp; CEO Onward Ther.</li><li>o Former founder &amp; CEO PharmaEngine</li></ul>	
	 <b>Dr. Pierre-E. Gerand</b> President & CEO	 <b>Alain Dubin</b> <ul style="list-style-type: none"><li>o Board member</li><li>o Head of Solutions TPI/CAP group</li><li>o Former Global Head of Equity Derivatives at BNP Paribas</li></ul>	 <b>Dr. Dragan Grabulovski</b> <ul style="list-style-type: none"><li>o Board observer</li><li>o PhD, former CSO and cofounder at Covagen, now J&amp;J affiliate</li><li>o CEO &amp; founder of several startups</li></ul>	 <b>Pr. Tony Sedwizki</b> <ul style="list-style-type: none"><li>o Board observer</li><li>o Key SC. Adviser</li><li>o PhD FRCPat.</li><li>o Former CEO biotech</li><li>o Global Head of clinical operations at Roche</li></ul>
MAIT SAB	 <b>Dr. Simon Pleyte</b> CSO	 <b>Pr. Seb. Amigorena</b> <ul style="list-style-type: none"><li>o SAB member</li><li>o PhD in IO</li><li>o Head of Immunotherapy department at Curie Institute</li><li>o WW KOL in IO</li></ul>	 <b>Dr. Olivier Lantz</b> <ul style="list-style-type: none"><li>o SAB member</li><li>o MD-PhD IO</li><li>o Scientific Director in Immunotherapy at Curie Institute</li><li>o Inventor of disruptive biological approaches</li></ul>	 <b>Pr. Matthias Peipp</b> <ul style="list-style-type: none"><li>o SAB member</li><li>o MD-PhD in IO</li><li>o Scientific Director, Head of Immunotherapy Research at Kiel Univ.</li><li>o WW KOL in IO</li></ul>

Sachs Biotech in Europe Forum - September 2022

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# Several collaborations with key research institutions

Lab/Hospital	Location	Research team	Technologies and Objectives	Development Stage
Institut Curie, CNRS / Inserm	Paris (FR)	Dr. S. Amigorena, Dr. O. Lantz	Collaboration on innovative IO pairs of targets, notably on MAIT cell redirection "Grand défi" ('New biotherapies and bioproduction tools' scheme) => € 3M grant (€ 1.9M for Biomunex)	2 collaborations performed Consortium signed after grant validated by French government (Grand Défi)
IRCM / CNRS / Univ. Montpellier / Inserm /	Montpellier, Tours (FR)	Dr. A. Pelegrin	Evaluation of novel treatments for solid tumors	ANR collaboration finalized Ongoing new studies
Univ. Kiel	Kiel (Germany)	Pr. M. Peipp Dr. D. Wesch	Different in vitro and in vivo programs (several MAIT programs)	Ongoing studies (fee for service)
UNIL Lausanne	Lausanne (CH)	Pr. O. Michielin (co-inventor of BiXAb platform)	Collaboration on mutations search and molecular modelling Evaluation clinical trial expected in Phase 1	Collaboration being discussed

# Biomunex: a Unique Opportunity in the multi-specific and T cell engager field

A “best-in-class” BiXAb platform enabling development of proprietary BsAb candidates:

- Validated by deals with Sanofi and Onward
- Delivered 3 robust candidates nomination packages (BMX-00X; BMX-003; BMX-501)
- Disruptive BiXAb-MAIT engager platform leading to disruptive immunotherapy
- Strong IP position

Biomunex will become a clinical stage company soon in 2023

- ❖ The objective to develop 2 antibodies in clinical development and expand the MAIT-BiXAb platform in the short term
- ❖ To change the paradigm of treatment for cancers with unmet medical needs