igm biosciences®

REIMAGINING

antibody medicines

Strategic Pivot to Autoimmunity

September 30, 2024

Forward-looking statements

This presentation contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements reflect the current views of the management of IGM Biosciences, Inc. (the “Company,” “we” or “our”) based on information available to us as of the date hereof. All statements other than statements of historical fact could be deemed forward-looking, including but not limited to statements regarding the potential of, and expectations regarding, IGM’s IgM antibodies and product candidates, including imvotamab and IGM-2644; statements regarding the clinical development of imvotamab and IGM-2644, including the timing of clinical study initiation and clinical data; statements regarding IGM’s business plans, strategies, strategic priorities, and objectives; the potential advantages of IGM’s product candidates and pipeline; IGM’s competitive position, industry environment, and potential market opportunities; and IGM’s expectations regarding its financial position and projected cash runway. In some cases, you can identify forward-looking statements by terms such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potentially” “predict,” “should,” “target,” “will” or the negative of these terms or other similar expressions. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, among other things: IGM’s early stages of clinical drug development; risks related to the use of engineered IgM antibodies, which is a novel and unproven therapeutic approach; IGM’s ability to demonstrate the safety and efficacy of its product candidates; IGM’s ability to successfully and timely advance its product candidates through clinical trials; IGM’s ability to enroll patients in its clinical trials; the potential for the results of clinical trials to differ from preclinical, preliminary, initial or expected results; the risk of significant adverse events, toxicities or other undesirable side effects; the risk of the occurrence of any event, change or other circumstance that could give rise to the termination of collaborations with third parties, including the agreement with Sanofi; IGM’s ability to successfully manufacture and supply its product candidates for clinical trials; the potential impact of continuing or worsening supply chain constraints; the risk that all necessary regulatory approvals cannot be obtained; the potential market for IGM’s product candidates, and the progress and success of alternative therapeutics currently available or in development; IGM’s ability to obtain additional capital to finance its operations; uncertainties related to the projections of the size of patient populations suffering from the diseases IGM is targeting; IGM’s ability to obtain, maintain and protect its intellectual property rights; developments relating to IGM’s competitors and its industry, including competing product candidates and therapies; any potential delays or disruptions resulting from catastrophic events, including epidemics or other outbreaks of infectious disease; general economic and market conditions, including inflation; uncertainties related to IGM’s ability to realize the contemplated benefits of its strategic pivot and pipeline transformation and related reduction in force; and other risks described in our public filings with the Securities and Exchange Commission (“SEC”), including our most recent Quarterly Report on Form 10-Q filed on August 14, 2024. New risk factors emerge from time to time, and it is not possible for our management to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward looking statements. You should not rely upon forward looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Additionally, statements that “we believe” and similar statements reflect our management’s beliefs and opinions on the relevant subject. These forward-looking statements are based on information available to us as of the date hereof, and although we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted a thorough inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain, and readers are cautioned not to unduly rely upon these statements. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason.

This presentation includes information on drug candidates that are under clinical investigation, and which have not yet been approved for marketing by the U.S. Food and Drug Administration. The drug candidates are currently limited by federal law to investigational use, and no representation is made as to their safety or effectiveness for the purposes for which they are being investigated.

Today’s speakers

Mary Beth Harler, M.D.,
Chief Executive Officer and Director

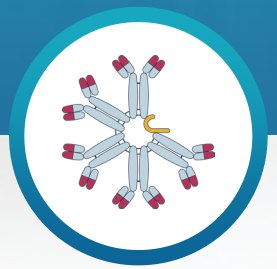
Misbah Tahir,
Chief Financial Officer

Lisa L. Decker, Ph.D.,
Chief Business Officer

Eric Humke, M.D., Ph.D.,
Senior Vice President, Head of Clinical Research and Development

Strategic pivot to focus exclusively on autoimmunity

A **leader in the development of T cell engagers** (TCEs) for the treatment of **autoimmune diseases**



Four clinical studies underway or planned in areas with **large, unmet medical need**

Worldwide collaboration agreement with Sanofi to develop IgM agonist antibodies for autoimmunity

Cash and investments of ~$256 million as of June 30, 2024; expected runway **into 2027**

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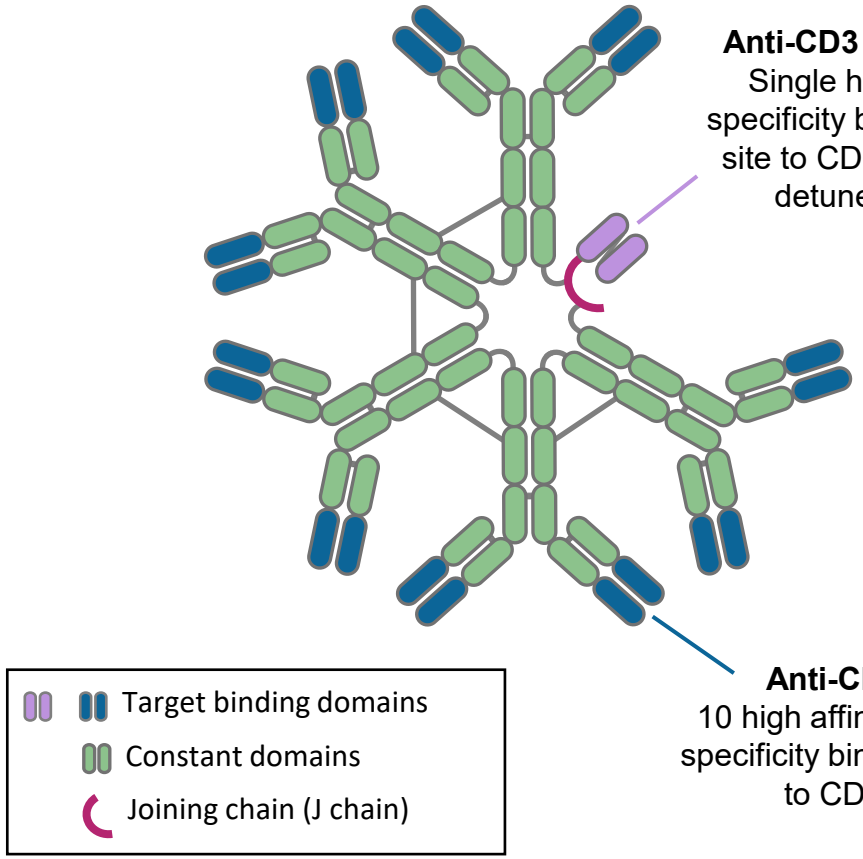
TCE pipeline addresses all pathogenic B cell drivers of autoimmune disease

PROGRAM	INDICATION	DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3
T Cell Engaging IgM Antibodies						
Imvotamab (CD20 x CD3)	Systemic Lupus Erythematosus (SLE)					
	Rheumatoid Arthritis (RA)					
	Myositis					
IGM-2644 (CD38 x CD3)	Generalized Myasthenia Gravis (gMG)					
Partnered: 3 IGM-based Agonist Immunology & Inflammation Targets						
sanofi	Undisclosed					

Imvotamab is a potential first-in-class IgM T-cell engager targeting CD20

Imvotamab leverages key advantages of the IgM platform

- Deep tissue depletion (TDCC + CDC)
- Depletion of low target expressing B cells (memory, class switched, and activated memory)
- Engineered for wide therapeutic window (Geometry/Stoichiometry)

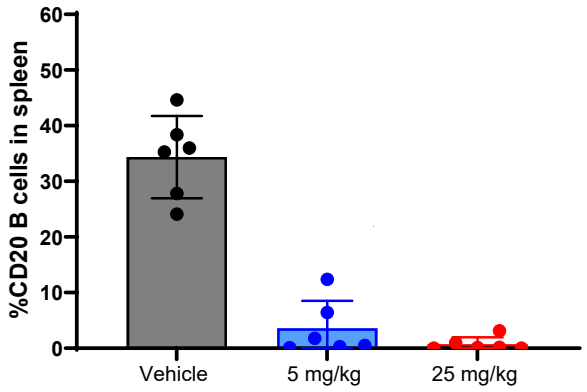


Engineered IgM > IgG for:

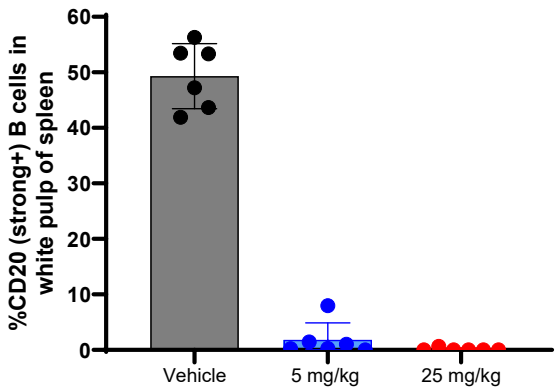
- Binding low density and/or low affinity targets (avidity)
- Off-rate immeasurable
- Killing target cells in low T cell environment
- More physiologic stimulation of T-cell receptor (reduced risk of severe CRS)

Imvotamab **deeply depletes** tissue-resident B cells in Non-Human Primates (NHPs)

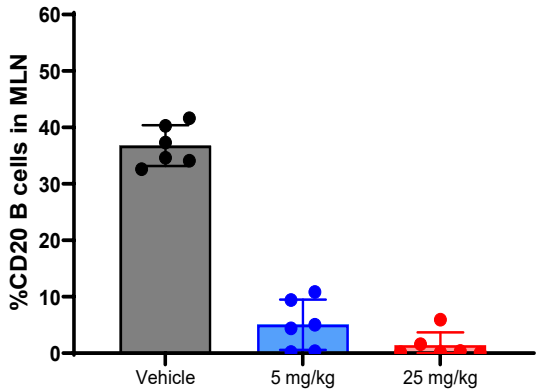
Whole spleen



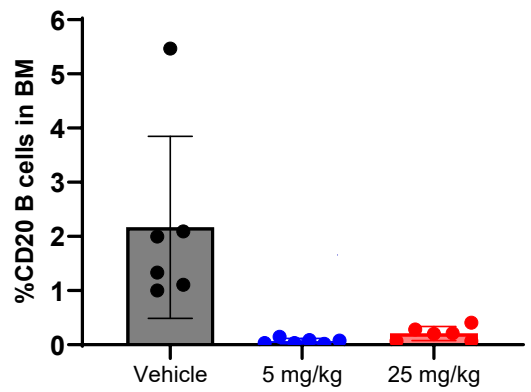
White pulp of spleen



Whole Mesenteric LN



Bone Marrow

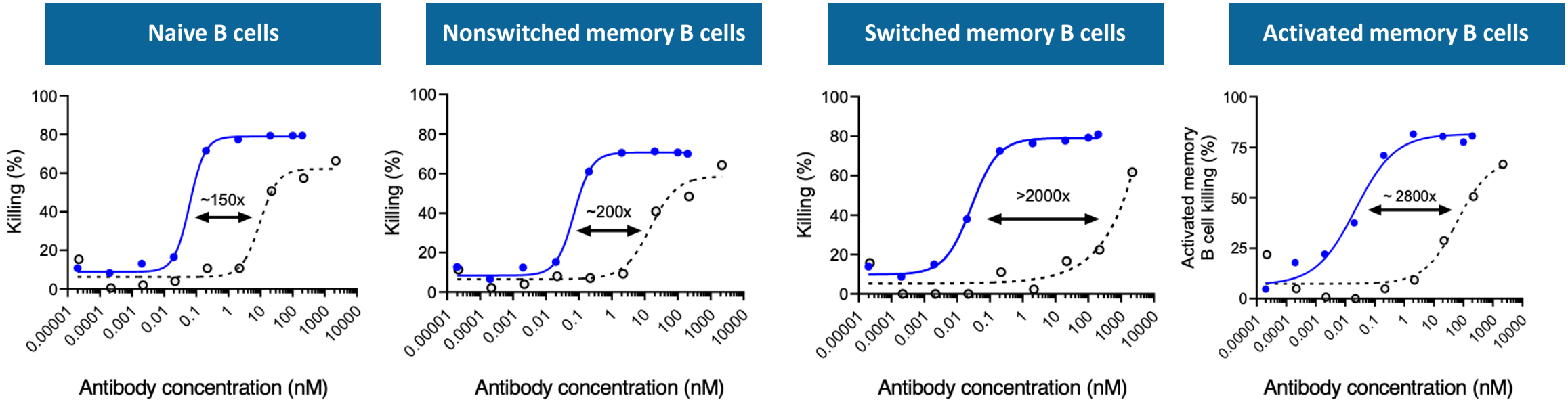


Non-human primate data presentations

- 2023 American College of Rheumatology (ACR) Convergence Poster #0583, "Therapeutic Potential of Imvotamab, a CD20-Targeted Bispecific IgM T Cell Engager, for the Treatment of Refractory Autoimmune Disease Patients"
- 7th Digital Pathology and AI Conference; 2023

Note: All 5 mg/kg and 25 mg/kg doses used a non-human primate version of imvotamab.

Imvotamab is substantially **more potent than rituximab** in killing pathogenic B cells which drive autoimmune disease

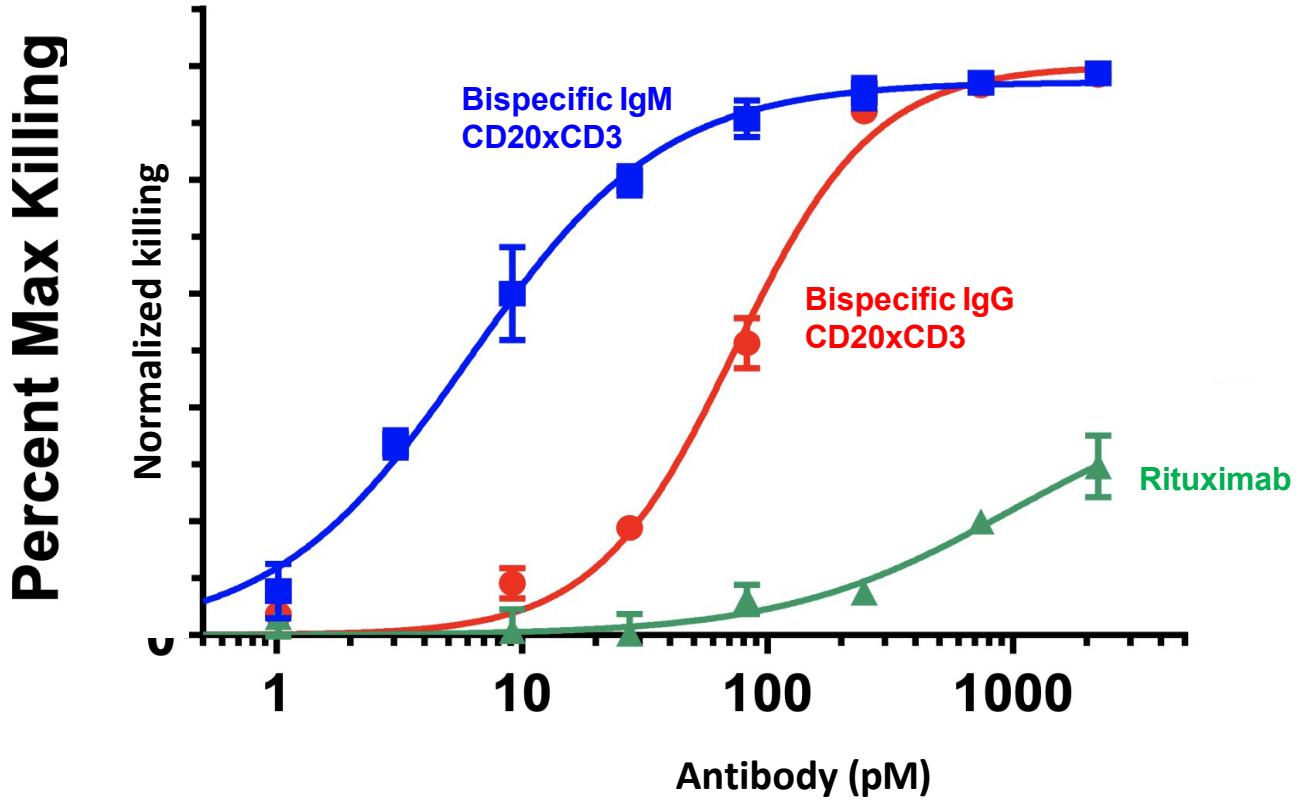


CD20 copies/cell:			
40,000	6,500	4,500	4,500

Imvotamab
Rituximab

Note: Ex vivo data using PBMCs from 3 healthy donors.

Imvotamab is more potent than an IgG-based T cell engager in killing of low CD20 expressing cells *in vitro*



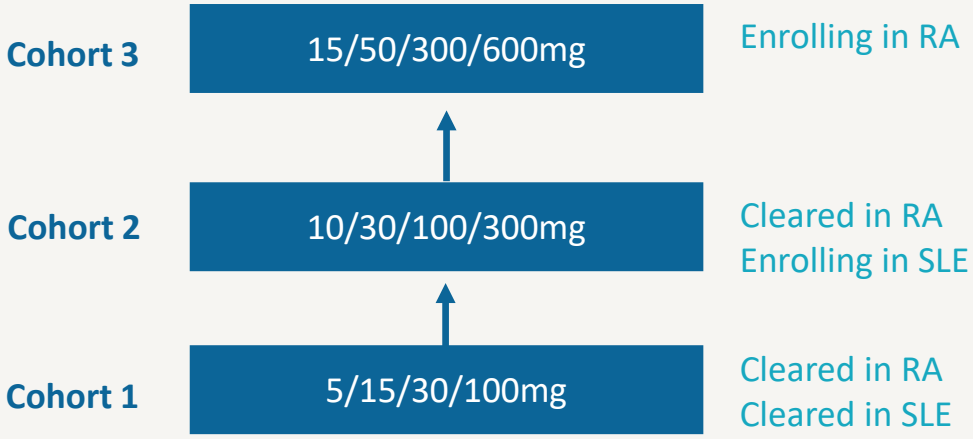
Note: Co-culture of rituximab-resistant Ramos cells and PBMCs with 10% normal human serum as source of complement.

Imvotamab is the only clinical stage TCE actively enrolling across multiple autoimmune indications

SLE and RA

Preliminary clinical data expected end of 2024/beginning of 2025

- 4 weekly escalating doses initially
- 52-week follow-up
- ***Systemic Lupus Erythematosus (SLE):***
  - Single arm, open label (N = 18)
- ***Rheumatoid Arthritis (RA):***
  - Placebo controlled, double blinded (N = 24)

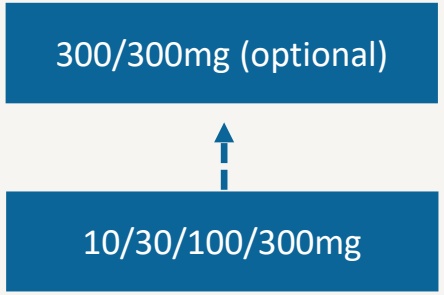


Myositis

Currently enrolling

Stanford University

- 4 weekly escalating doses; 2 additional doses optional
- 52-week follow-up
- Single arm, open label (N = 5-10)
- Initiated Q3 2024
- In collaboration with Stanford University



Endpoints

- Safety
- PK
- PD
- Preliminary efficacy

Biomarkers

- B cell counts
- Autoantibodies
- Cytokines
- Profile of reconstituted B cells

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Imvotamab: key factors supporting potential for success in autoimmune disease

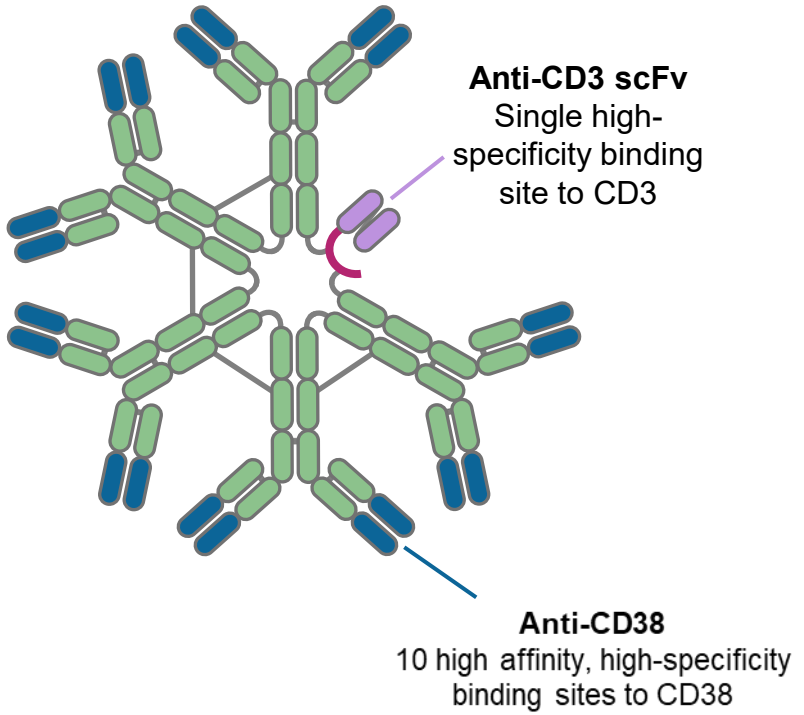
- **CD20 is a highly validated target** across multiple autoimmune diseases, with clear opportunity for improved outcomes
  - CD19 is not a clinically validated target in autoimmunity with no approved therapies in this setting
- **Deep depletion** in the preclinical setting
  - Tissue-resident B cells
  - Low CD20 expressing pathogenic B cell subsets known to drive autoimmune disease
- **Complete responses** across all major subtypes of NHL
- **Encouraging safety profile** based on data from nearly 100 NHL patients
  - CRS rate of 15% across all titration groups, and 9% at 100mg plateau dose
  - No ICANS
- **Convenient administration**
  - Off the shelf
  - Out-patient

Deep tissue depletion
(TDCC + CDC)

Comprehensive coverage of autoantibody-producing plasma cells and plasmablasts

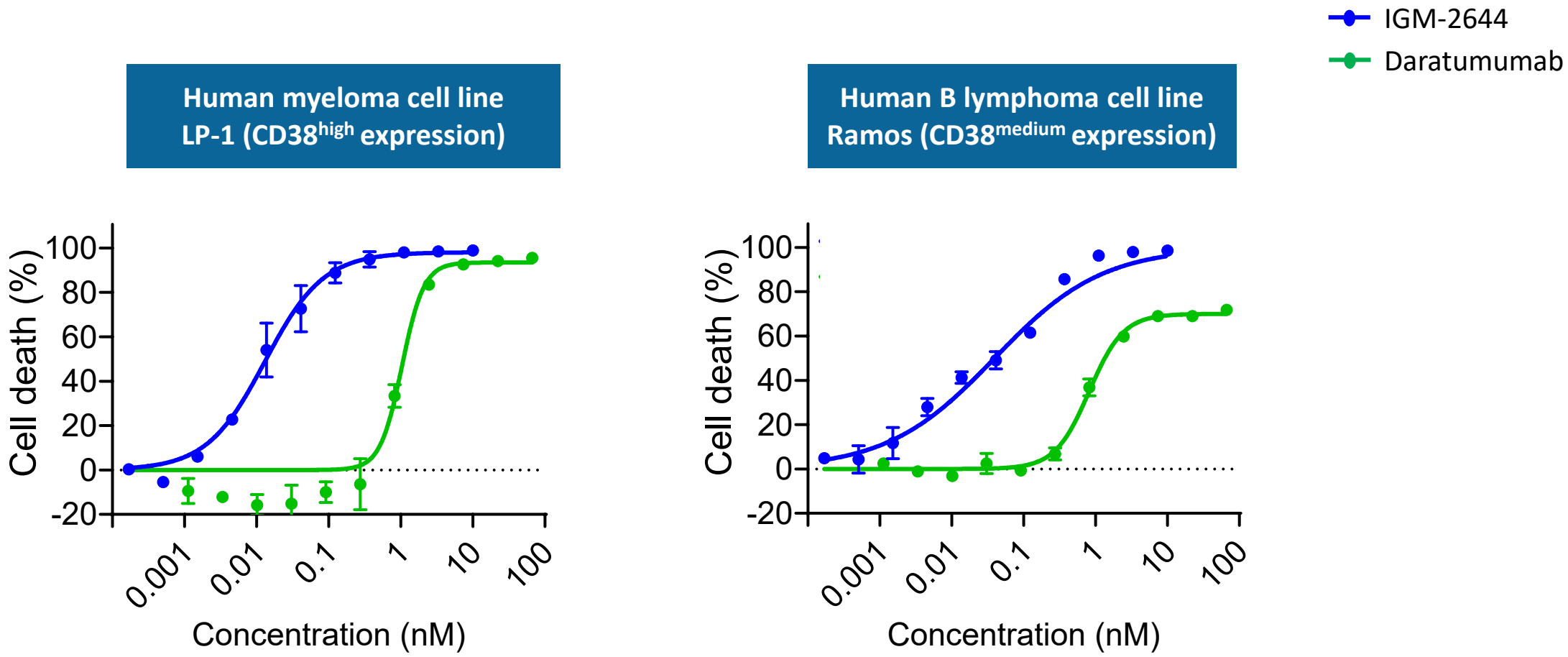
Engineered for wide therapeutic window
(Geometry/Stoichiometry)

IGM-2644 is a potential first-in-class IgM T cell engager targeting CD38 in autoantibody-driven disease



- Evaluated in small cohort of multiple myeloma patients
- Phase 1 generalized Myasthenia Gravis study expected to initiate end 2024

IGM-2644 shows promising potency compared to daratumumab *in vitro*



The IGM TCE pipeline offers the potential to tailor the breadth and depth of B cell depletion to the needs of a given autoimmune disease

Greatest depth and breadth of B cell depletion for very severe or treatment refractory patients...

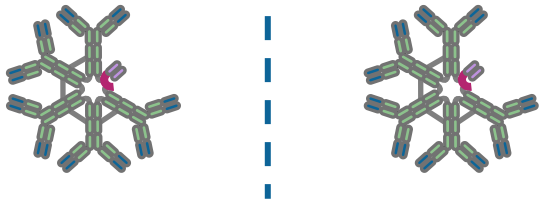
As individual monotherapies…

Imvotamab

CD20 x CD3

IGM-2644

CD38 x CD3



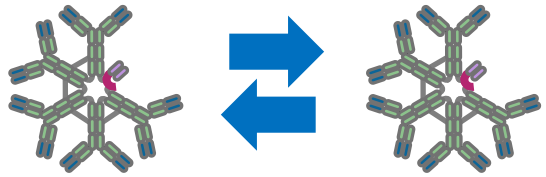
In sequence as induction / maintenance therapy…

Imvotamab

CD20 x CD3

IGM-2644

CD38 x CD3



As combination therapy

Imvotamab

CD20 x CD3

IGM-2644

CD38 x CD3

…particularly for the patients with autoimmune disease who may be inappropriate for or unable to access CAR T therapies

Broad range of autoimmune diseases may benefit from deeper B cell depletion

Multiple Sclerosis

Myasthenia Gravis

Neuromyelitis Optica

Demyelinating Polyneuropathy

Rheumatoid Arthritis

Systemic Lupus Erythematosus

Sjogren's

Myositis

Lupus Nephritis

IgA Nephropathy

ANCA Vasculitis

Idiopathic Thrombocytopenia Purpura

Autoimmune Hemolytic Anemia

Anti-phospholipid Syndrome

Pemphigus Vulgaris

Alopecia Areata

Reinforcing our leadership position on TCEs in autoimmunity

"Cutting-edge Approaches to B-cell Depletion in Autoimmune Diseases"
Robinson et al; Frontiers in Immunology
Volume 15 - Sept 2024
https://www.frontiersin.org/journals/immunology/articles/10.3389/fimmu.2024.1454747/abstract

American College of Rheumatology
Poster presentation November 17, 2024
"Imvotamab, a CD20-Targeted Bispecific IgM T Cell Engager, Effectively Depletes Low-Expressing CD20+ B Cells in Preclinical Models of Autoimmune Disease"

Initial data disclosure for imvotamab clinical program targeted for end 2024/ early 2025