Bolt Biotherapeutics

Nasdaq: BOLT

Leveraging the immune system for a better way to treat cancer

May 2024

Disclaimer

This presentation contains forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this presentation, including statements regarding Bolt Biotherapeutics, Inc. (the "Company," "we," "us," or "our")'s future financial condition, ability to achieve upcoming milestones for our product candidates, the timing of our clinical trials, and the success and results of our pipeline programs and partnerships, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potentially" "predict," "should," "will" or the negative of these terms or other similar expressions. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy, and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, among other things: the success, cost and timing of our product development activities and clinical trials; our expectations about the timing of achieving regulatory approval and the cost of our development programs; our ability to obtain funding for our operations, including funding necessary to complete further development and commercialization of our product candidates; our ability to fund our clinical programs and the sufficiency of our cash, cash equivalents, and marketable securities to fund operations through key milestones and the achievement of key milestones; the commercialization of our product candidates, if approved; our plans to research, develop, and commercialize our product candidates; our ability to attract collaborators with development, regulatory and commercialization expertise; future agreements with third parties in connection with the commercialization of our product candidates; the success of our current collaborations with third parties, including our collaborations with Bristol-Myers Squibb Company, Roche, Genmab A/S, and Toray Industries, Inc.; the achievement of milestone payments or any tiered royalties related to our collaborations; the size and growth potential of the markets for our product candidates, and our ability to serve those markets; the rate and degree of market acceptance of our product candidates; and regulatory developments in the United States and foreign countries. These risks are not exhaustive. For a detailed discussion of the risk factors that could affect our actual results, please refer to the risk factors identified in our SEC reports, including, but not limited to our Annual Report on Form 10-K for the year ended December 31, 2023. 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. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this presentation.

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BOLT BIOTHERAPEUTICS

New Bolt Priorities
Focusing resources on BDC-3042 and next-generation ISAC BDC-4182

- **Discontinuing development of BDC-1001 (trastuzumab imbotolimod)**
  - Provided clinical proof-of-concept for Immune-Stimulating Antibody Conjugate (ISAC) approach
    - Design choices produced an ISAC that was well tolerated and had a favorable safety profile
    - Did not reach the increasingly high bar to be competitive in the HER2 space
- **Restructuring company to extend runway through clinical data on a next-gen ISAC product**
  - Retaining ~50 employees to deliver on key priorities
  - Cutting costs to extend cash runway into 2nd half of 2026
- **Refining focus on key value drivers for investors & patients**
  1. Generating clinical data on BDC-3042 to enable decision on subsequent development
  2. Advancing to clinical trial with next-gen ISAC program targeting Claudin 18.2 (BDC-4182)
  3. Leveraging our Boltbody™ ISAC technology with strategic partners and their antibody technology to generate and advance collaborative programs

BOLT BIOTHERAPEUTICS

The Next Generation of Bolt Bio

Leveraging existing resources to develop valuable product candidates for patients

Valuable Pipeline

BDC-3042

- Well tolerated to date
- Fourth cohort fully enrolled
- Broad potential market in multiple solid tumors

BDC-4182

- Potent next-gen ISAC targeting Claudin 18.2, validated target with significant unmet needs
- Compelling preclinical data
- IND-enabling activities underway

Proven Platform Technology

Collaborations further validate Boltbody™ ISAC platform

Genmab

TORAY

First-gen ISAC program BDC-1001 demonstrated the feasibility of this approach & translatability to the clinic

Well-Capitalized, Significant Upside Potential

$112.8 million cash & equivalents[1]

- Restructuring extends runway into second half 2026

Simple Corporate Structure

- 38.1 million shares of common stock oustanding[2]
- No debt
- No warrants

ISAC = Immune-Stimulating Antibody Conjugate

IND = investigational new drug, the FDA application required to start clinical trials

[1] Cash, cash equivalents, and marketable securities balance of $112.8 million as of 3/31/2024

[2] 38,127,740 shares outstanding as of 5/7/24

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Focused Oncology Pipeline

Portfolio of proprietary and partner-funded programs addressing significant unmet needs

Wholly-owned Development Programs

Program (Target)	Indication	Discovery	Preclinical	Phase 1	Phase 2	Phase 3
BDC-3042 (Dectin-2)	Triple-negative Breast, Clear Cell Renal Cell Carcinoma, Head & Neck, Ovarian, Colorectal, Non-small Cell Lung Cancer	Dose-escalation study				
BDC-4182 (Claudin 18.2)	Gastric, Gastroesophageal, Pancreatic	IND-enabling studies				

Boltbody™ ISAC Collaborations

Genmab	Funds 3 bispecific Boltbody ISACs through early clinical development
TORAY	Funds 1 Boltbody ISAC through early clinical development

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Upcoming Milestones for BOLT

BDC-3042 (Dectin-2 Agonist Antibody)

- First-in-class antibody with potential in a wide range of solid tumors
- Updates on enrollment and safety in 2H24

BDC-4182 (Claudin 18.2 Boltbody™ ISAC)

- Next-gen ISAC targeting gastric & pancreatic cancer
- Clinical trial initiation in 2025

Restructuring unlocks potential for clinical data on both programs

- Existing cash[1] funds key milestones & operations into 2H26
- Collaborations fund themselves and provide future upside

ISAC = Immune-stimulating antibody conjugate

[1] Cash, cash equivalents, and marketable securities balance of $112.8 million as of 3/31/2024

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BDC-3042 (Dectin-2 agonist antibody)

BDC-3042 First-in-Class Agonist Antibody Program
Targeting Dectin-2 on Tumor-associated Macrophages (TAMs) for Anti-tumor Activity

BDC-3042

Dectin-2-targeting agonist antibody

Dectin-2 is a Pattern-recognition Receptor

- Dectin-2 is selectively expressed by TAMs in most solid tumors
- Dectin-2 agonism activates TAMs & elicits anti-tumor activity
- BDC-3042 activates human TAMs

Preclinical Proof of Concept Achieved

- Potent activator of human TAMs
- Dectin-2 agonism leads to activation of CD8+ T cells, complete regression, and immunologic memory
- Mediates anti-tumor efficacy in humanized mouse model

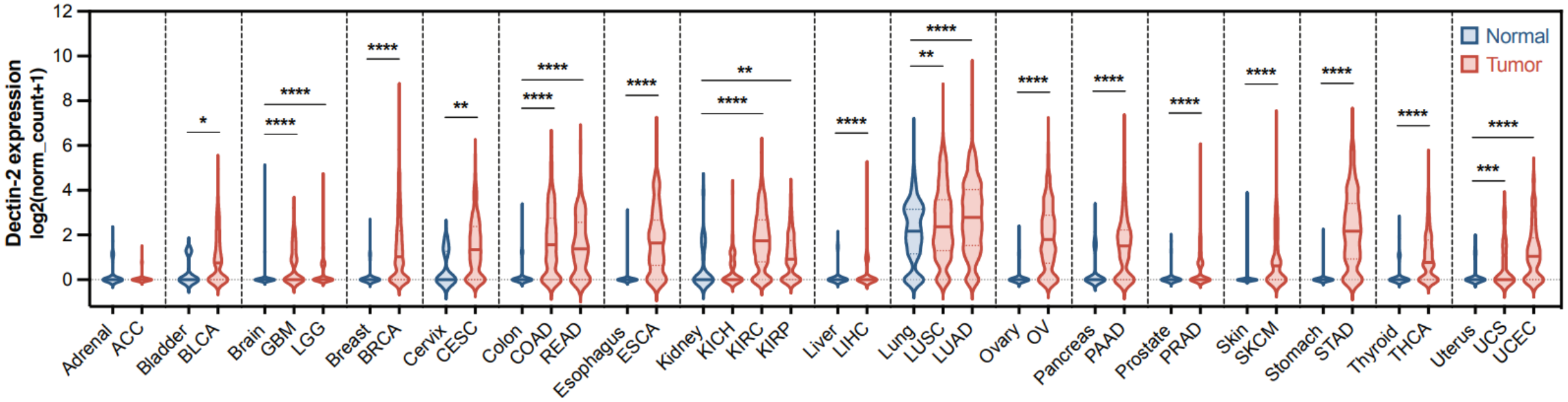
Clinical Study Ongoing

- Phase 1 dose-escalation trial across 6 tumor types

Kenkel JA, et al., SITC Poster (2022).

Dectin-2 Gene Expression is Elevated Across a Broad Set of Tumor Types

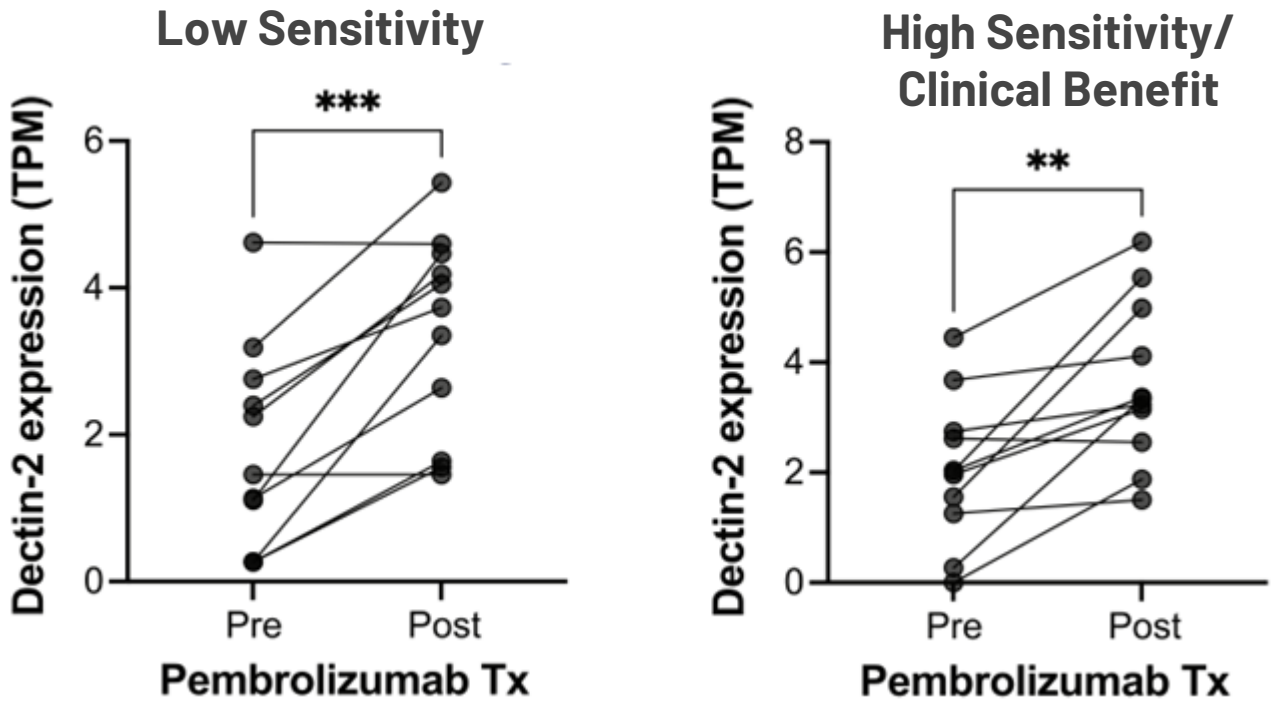
Potential market opportunity exceeds $10 billion in initial target indications



Dectin-2/CLEC6A mRNA expression in human tissue samples from the TCGA (tumor) and GTEX (normal) datasets (accessed Oct. 2019).
Kenkel JA, et al. Cancer Research. 2023;83(suppl 7):2964.

Anti-PD-1 Therapy Increases Dectin-2 Expression in Human Tumors

Pembrolizumab-Treated Mixed Solid Tumors (INSPIRE Trial)



Data obtained from Cindy Yang et al., Nat Commun 2021
Kenkel JA, et al. Cancer Research. 2023;83(suppl 7):2964.

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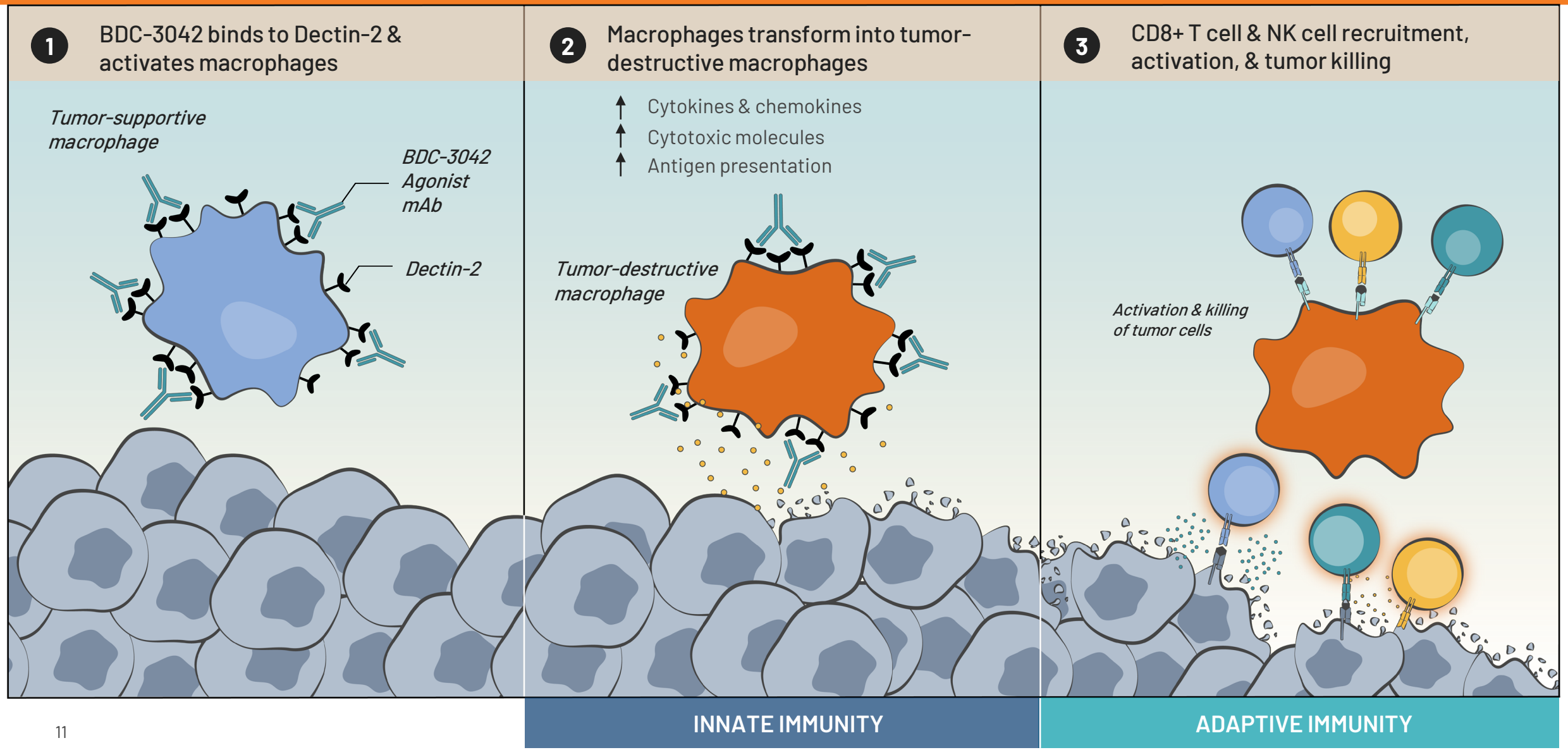
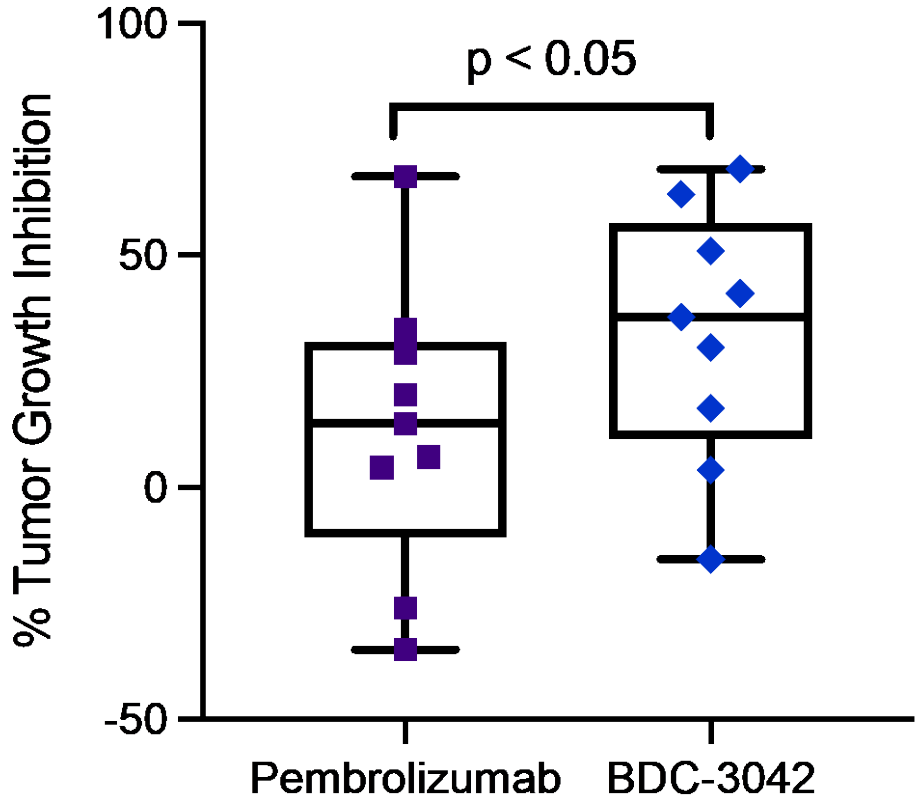
BDC-3042 Mechanism of Action



BDC-3042 Mediates Greater Anti-tumor Activity than PD-1 Inhibitor Pembrolizumab in Model of Triple-Negative Breast Cancer



Each data point represents one of 9 unique HSC donor cohorts

Kenkel JA, et al., SITC Poster (2022)

Pembrolizumab (5 mg/kg) and BDC-3042 (1 mg/kg) were both dosed intraperitoneally every 5 days for 6 doses in MDA-MB-231 tumor-bearing humanized mice

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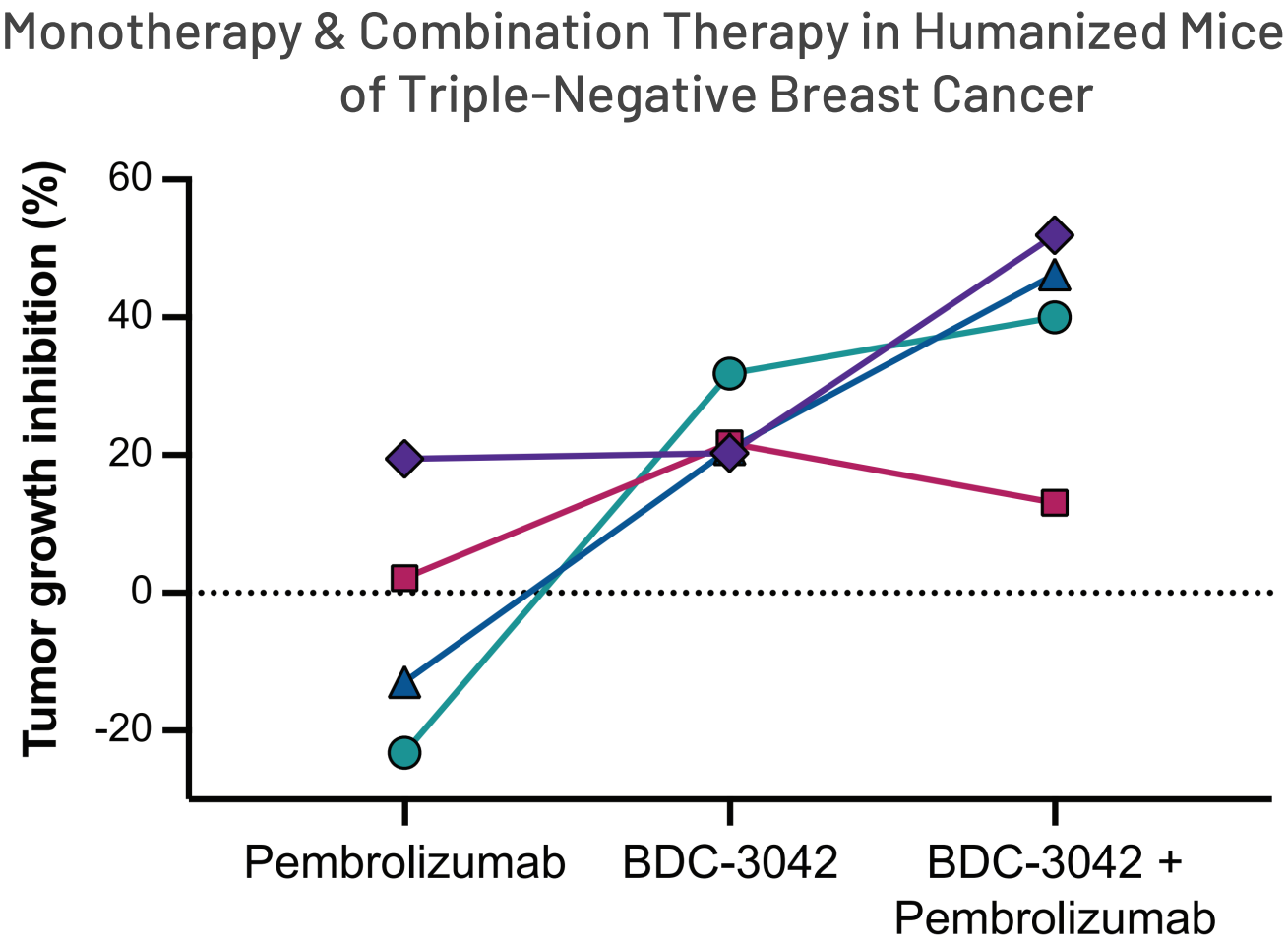
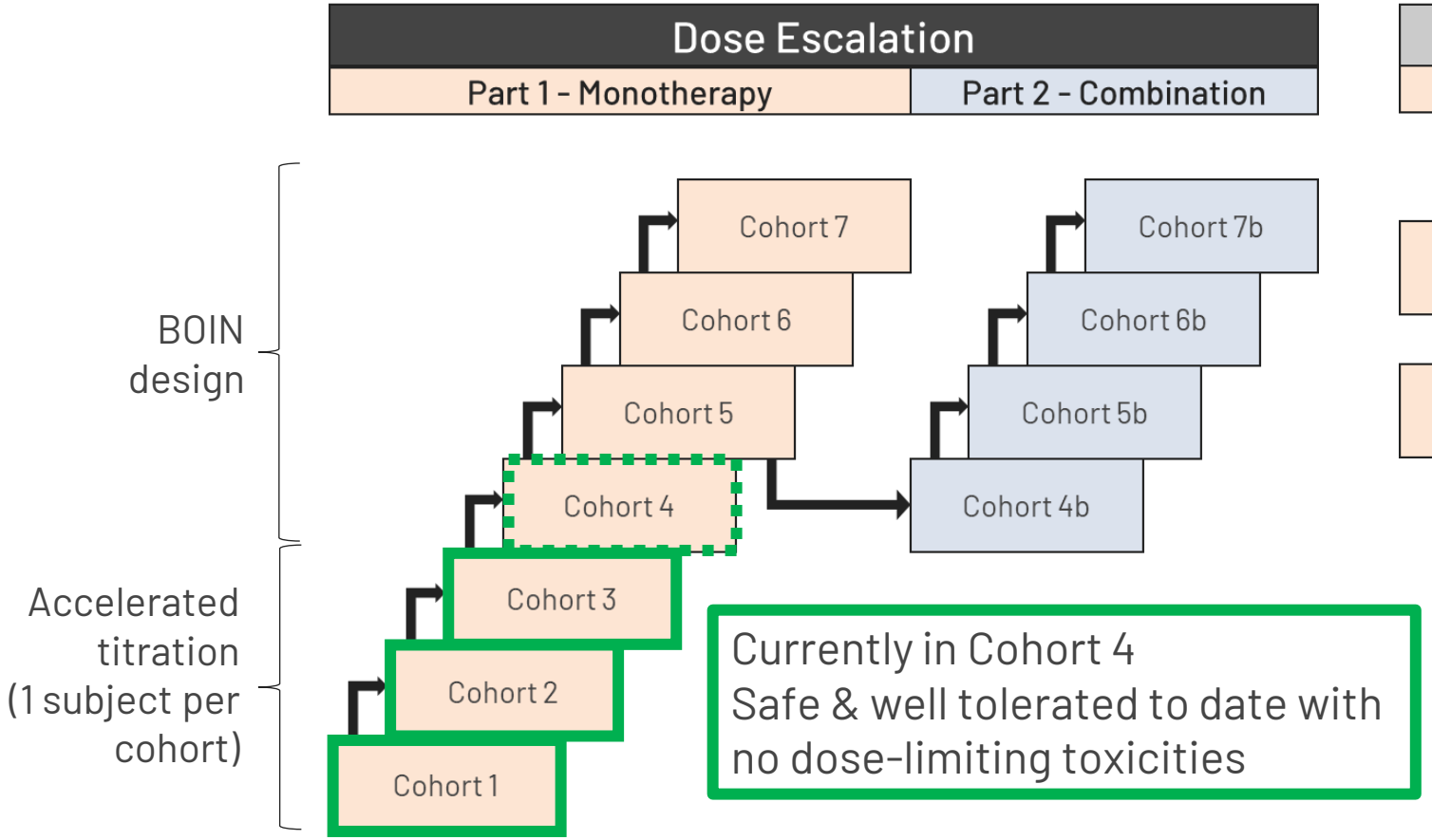
Anti-PD-1 therapy may improve anti-tumor activity of BDC-3042



Colors represent individual HSC donor cohorts

Kenkel JA, et al. Cancer Research. 2023;83(suppl 7):2964.

BDC-3042 Phase 1 Clinical Trial Ongoing in 6 Tumor Types
Updates on enrollment and safety in 2H24



Dose Expansion	
Part 3 - Monotherapy	Part 4 - Combination
Solid Tumor Indication 1	Solid Tumor Indication 1
Solid Tumor Indication 2	Solid Tumor Indication 2

- Parts 3 and 4 will initiate after completion of Parts 1 and 2, respectively, and determination of the RP2D

6 Tumor Types: triple negative breast cancer (TNBC), clear cell renal cell carcinoma (ccRCC), colorectal cancer (CRC), head and neck cancer, non-small cell lung cancer (NSCLC), and ovarian cancer

Status as of 5/9/24

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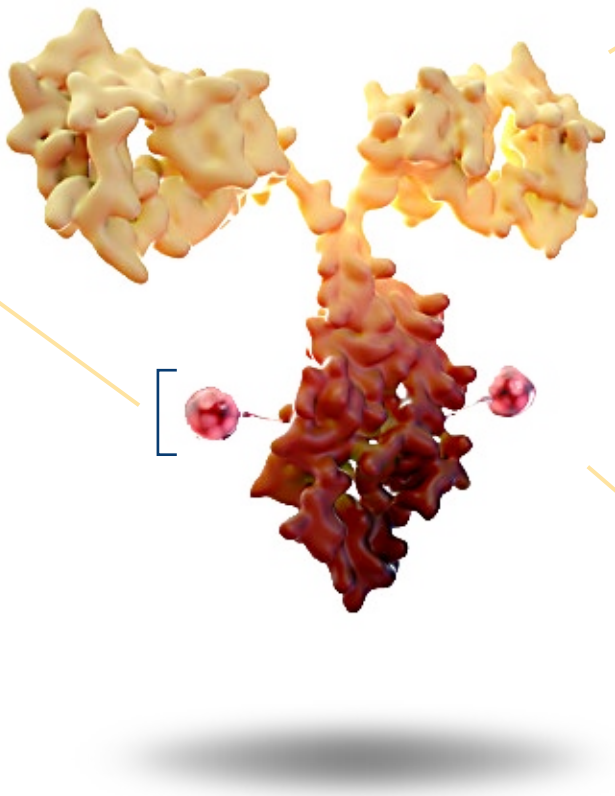
Next-Generation Boltbody™ ISAC Platform

Better By Design: Next-Generation Boltbody™ ISACs

Boltbody™ ISAC



Tumor-targeting Antibody

- Geo-locates ISAC to antigen on surface of a tumor cell
- Now optimized for enhanced phagocytosis

Immune-stimulating Payload

- Now dramatically enhanced potency
- Tailored TLR specificity for key biology
- Optimized conjugation chemistry with non-cleavable linkers

Significant Biologic Advantages

- Enhanced immune system activation
- Superior anti-tumor efficacy
- Maintains compelling safety profile

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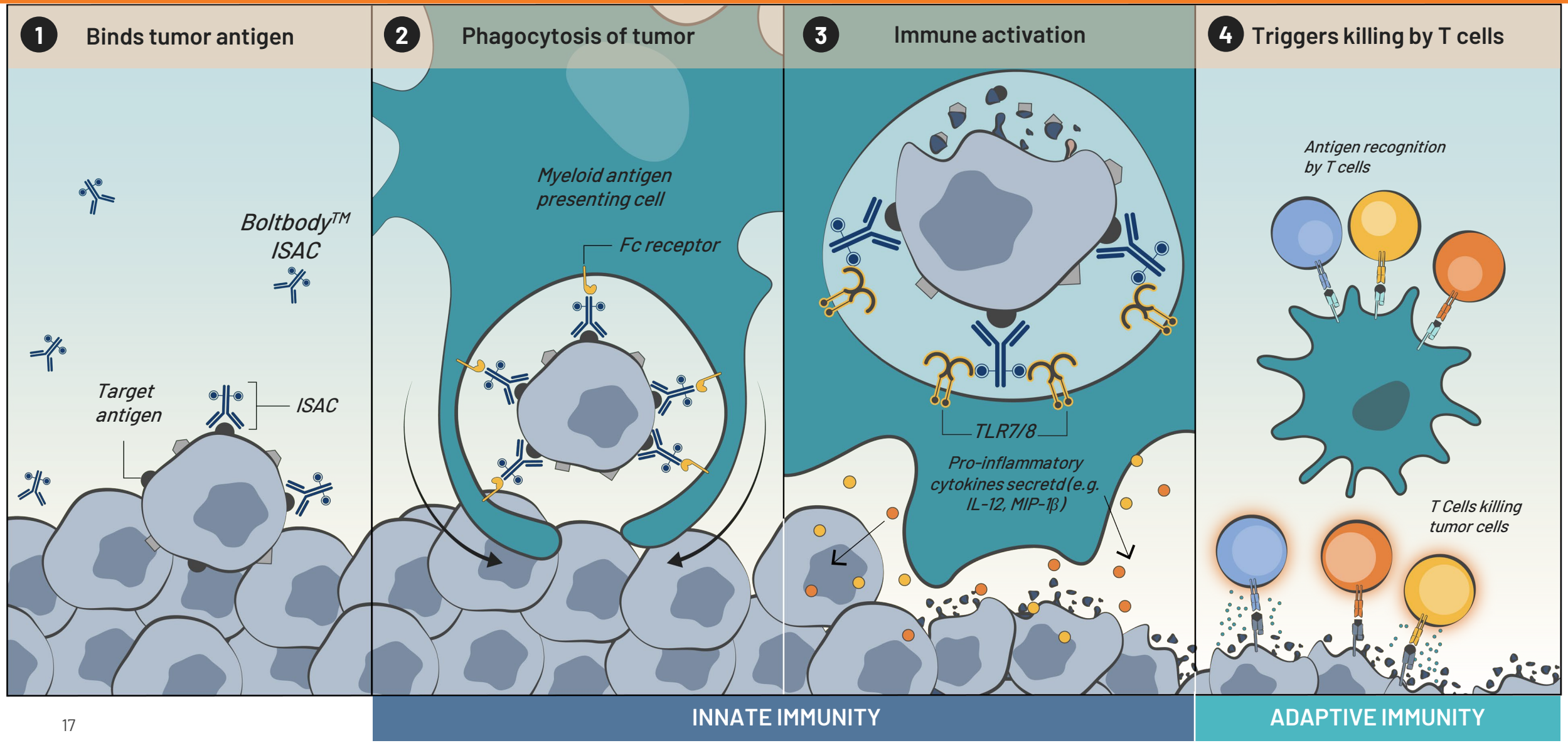
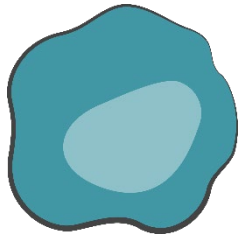
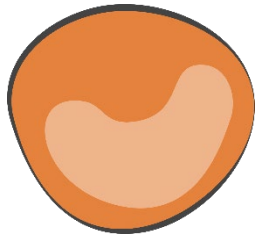
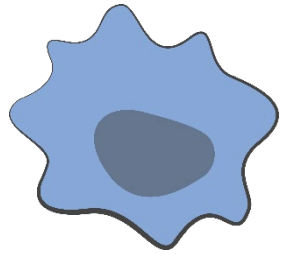
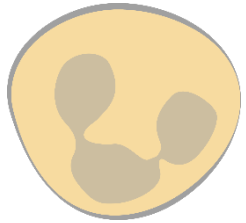
Boltbody™ ISAC Mechanism of Action



Why Target TLR7 and TLR8?

- TLRs are receptors that recognize specific foreign patterns/signatures (e.g. viral, bacterial, fungal)
- TLR7 and TLR8 are expressed intracellularly in the phagolysosome in a variety of immune cells:

TLR7	TLR7/8			TLR8
				
Plasmacytoid Dendritic Cells	Conventional Dendritic Cells	Monocytes	Macrophages	Neutrophils

Goal of TLR7 and TLR8 stimulation is anti-tumor activity

Stimulation produces IFNα	Stimulation produces cytokines such as TNFα and IL-12p70 and chemokines such as MIP-1β (recruits more myeloid cells) & IP-10 (recruits more T cells)

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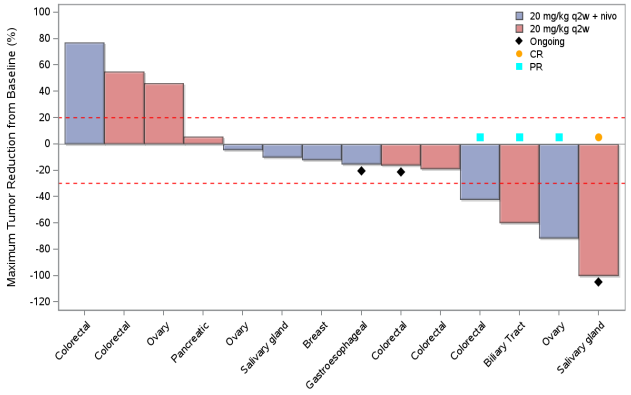
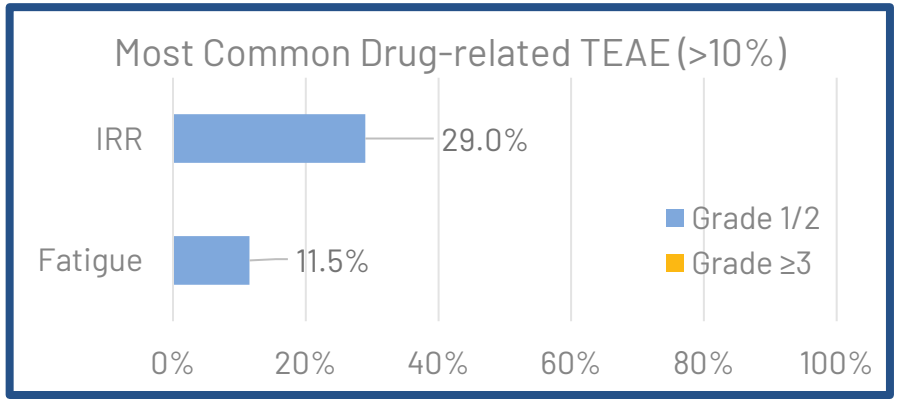
Lessons from BDC-1001 Clinical Trials

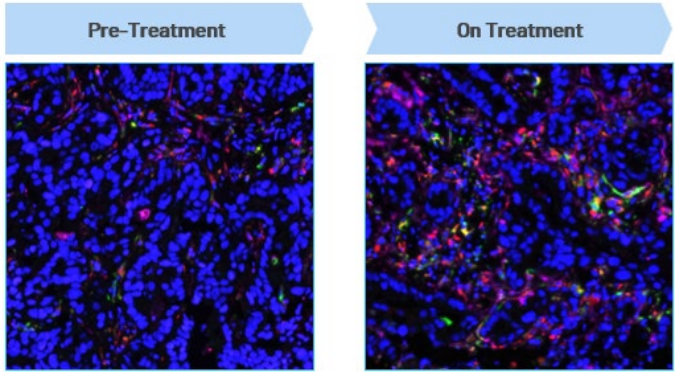
Boltbody ISACs can induce anti-tumor activity[1]



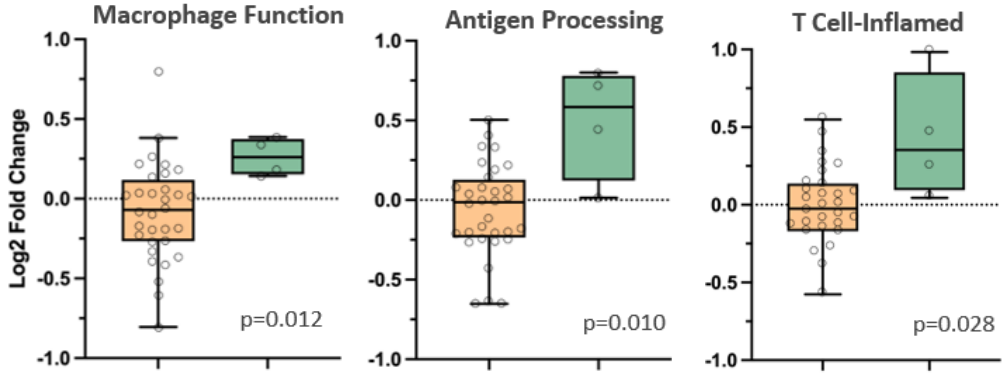
BDC-1001 safety data demonstrated safe delivery of an ISAC[2]



Boltbody ISACs can drive immune cell infiltration[3]



Boltbody ISACs can stimulate innate & adaptive immunity[4]



[1] Li B, et al. Ann Oncol. 2023;34(suppl_2):S458-S497 (ESMO, 2023), Data as of 29Aug2023

[2] Data cut-off date: 11Aug2023 (ESMO 2023 update)

[3] Li B, et al. ASCO 2023. Abstract 2538

[4] Illumina RNAseq data from Li B, et al. Ann Oncol. 2023;34(suppl_2):S458-S497 (ESMO, 2023)

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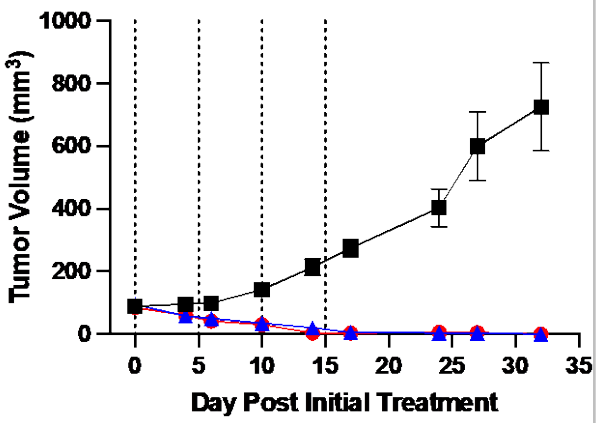
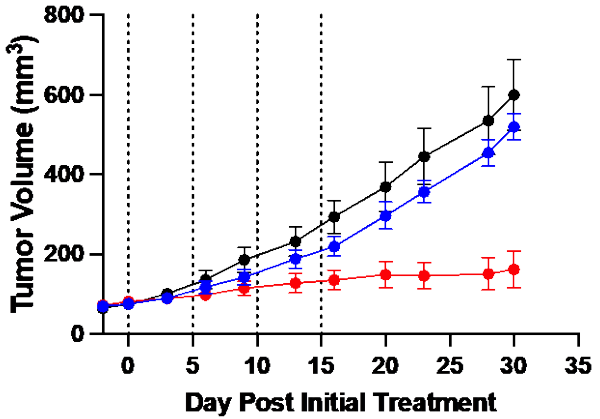
Next-generation ISACs Outperform First-generation ISACs

Across multiple tumor antigens with varying expression levels

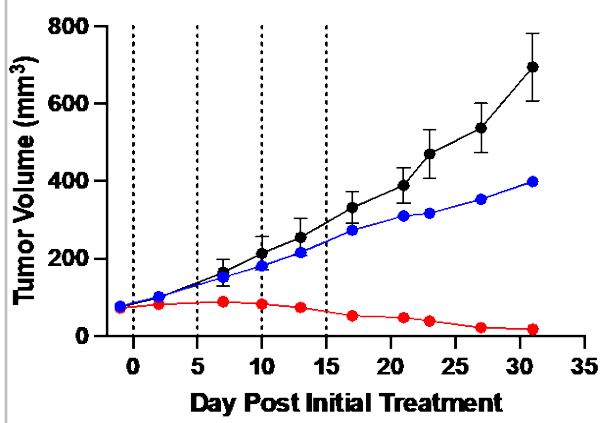
HER2
HCC1954 Model >500K Molecules/Cell



HER2
JIMT-1 Model ~25K Molecules/Cell

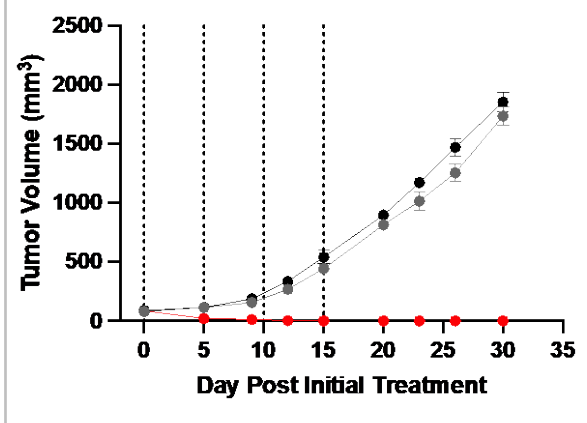


TROP2
JIMT-1 Model ~50K Molecules/Cell



CEA
HPAF-II Model ≥60K Molecules/Cell

Not Shown: 17.4% TGI for First-Gen ISAC in separate study



Naked mAb Control **First Generation ISAC** **Next Generation ISAC** **Isotype mAb**

Pharmacodynamic responses in the tumor are also amplified in the tumor with Next Generation ISACs

Mice bearing tumors with the indicated cell line were treated with 5 mg/kg (1st, 3rd, and 4th from left) or 2.5 mg/kg (2nd from left) q5d x 4 via intraperitoneal administration. Molecules/cell were quantified via QIFI beads.

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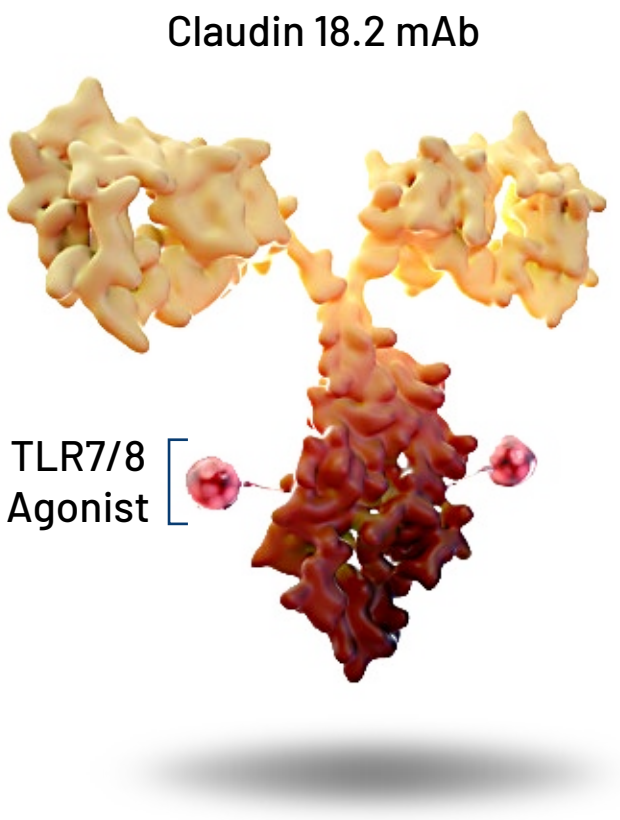
BDC-4182 (Claudin 18.2 ISAC)

Next-Generation ISAC Clinical Candidate

BDC-4182: Claudin 18.2 Boltbody™ ISAC Program

Next-generation ISAC elicits significant anti-tumor efficacy in tumors with low antigen density

BDC-4182



BDC-4182 Opportunity

- Clinically validated target in gastric cancer
- Large addressable market
- IND-enabling activities ongoing

Key Attributes

- Dramatically more potent than BDC-1001 in preclinical assays
- Immunological memory protects against tumor re-challenge and recurrence
- Efficacy in low-antigen-density tumors doubles addressable market versus zolbetuximab

Differentiation in Competitive Claudin 18.2 Landscape

- Superior efficacy relative to MMAE-ADCs in multiple tumor models
- Safety benefit seen preclinically versus cytotoxic ADCs and CAR-T cells
- Immunological memory with epitope spreading provides promise of durable responses and prevents recurrence

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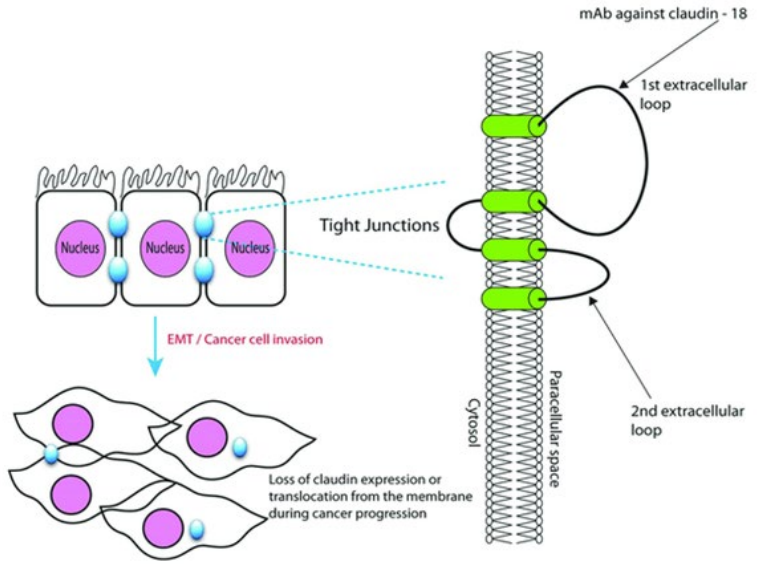
Claudin 18.2 is an Attractive ISAC Target with Multi-Billion Dollar Market Opportunity

A



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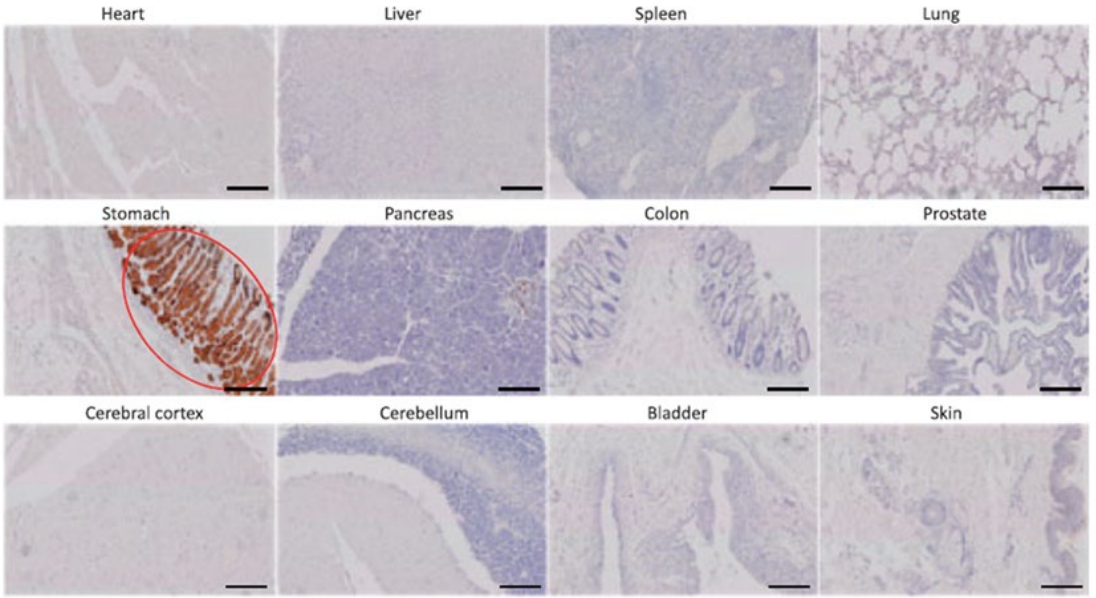

C

Prevalence or relative expression:

neg	low	int	high

	Adeno NSCLC	Squam NSCLC	Bladder	Gastric	Esophageal	HCC	Breast	Panc	Ovarian
CLDN18.2*	4%*			>50%	50%			50%	10%

A) Claudin 18.2 (CLDN18.2) is located within tight junction in healthy cells and this controlled localization is lost in cancerous cells[1]. **B)** CLDN18.2 is solely expressed in the stomach of normal tissue[2]. **C)** High prevalence of CLDN18.2 positive tumors in gastric, esophageal and pancreatic tumors.

[1]Kumar, Frontiers in Pharmacology, 2018; [2]Jiang et al., JNCI 2019.

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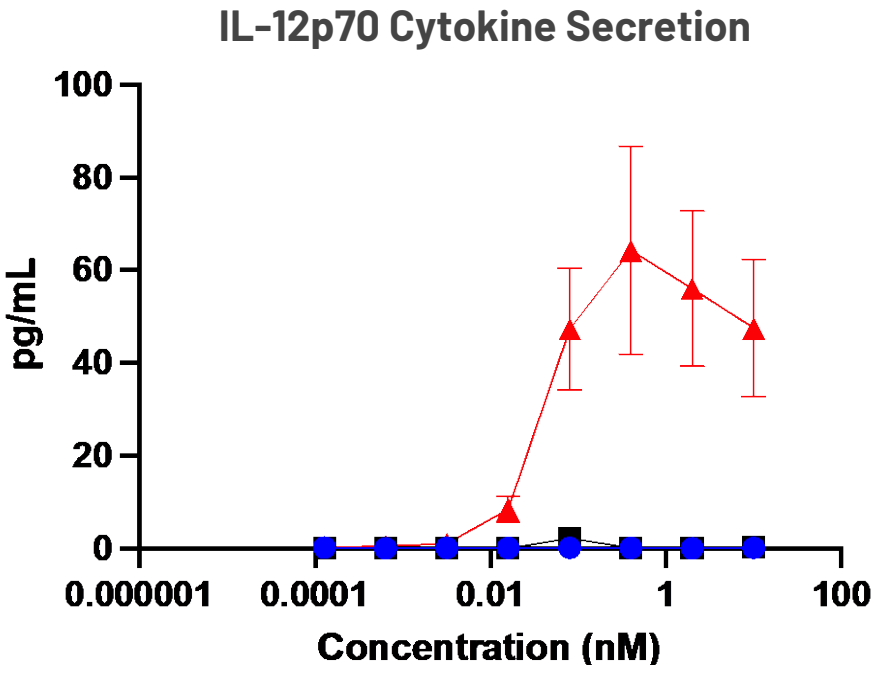
BDC-4182 Delivers Enhanced Immune Activation with Manageable Safety Profile

Enhanced Immune Activation

Human Dendritic Cell-Tumor Co-culture



Tolerability at 12 mg/kg

Non-GLP NHP Toxicology

- **MTD ≥ 12 mg/kg in NHPs**
- **Changes consistent with Claudin 18.2-targeting**
- **Evidence of immune activation**
- **Differentiated toxicology profile from cytotoxic ADCs**

Claudin 18.2 mAb **BDC-4182** **Claudin 18.2 ISAC w/ BDC-1001 Payload**

(Left) Human cDCs from n=9 donors were co-cultured with Claudin 18.2-expressing PA-TU-8988S tumor cells (IHC 1+) and the indicated test articles for 18 hr. Cytokine secretion was measured by MSD with data shown as mean with SEM. (Right) Non-GLP toxicology in NHPs administered 4 or 12 mg/kg of BDC-4182 on Day 1 & Day 15

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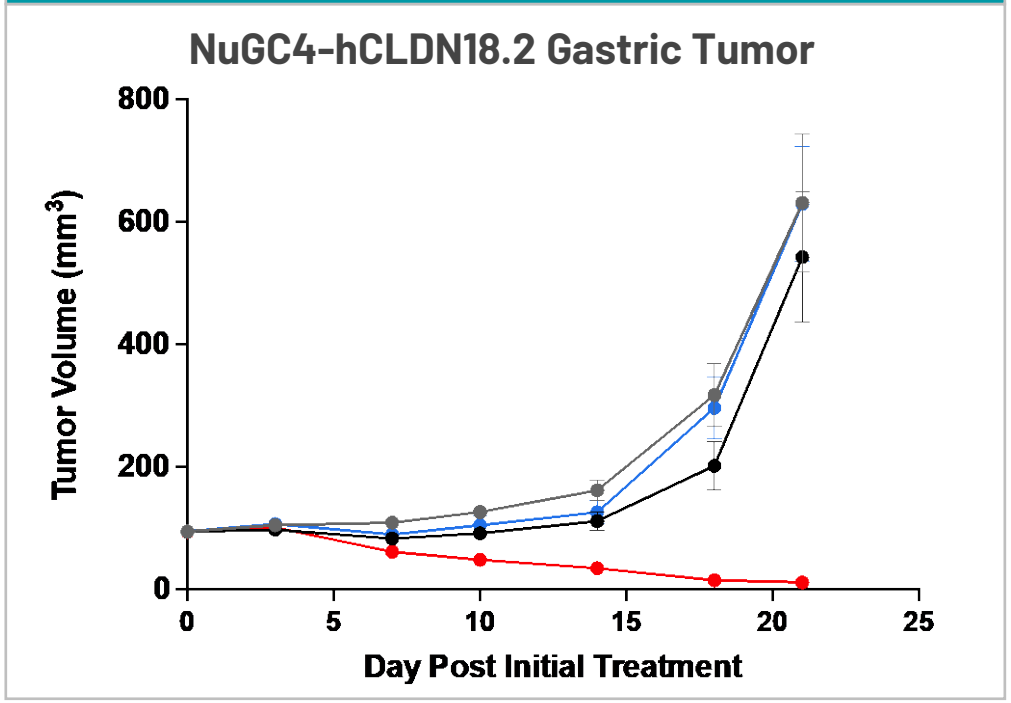
BDC-4182 Aims to Expand Zolbetuximab Market Opportunity

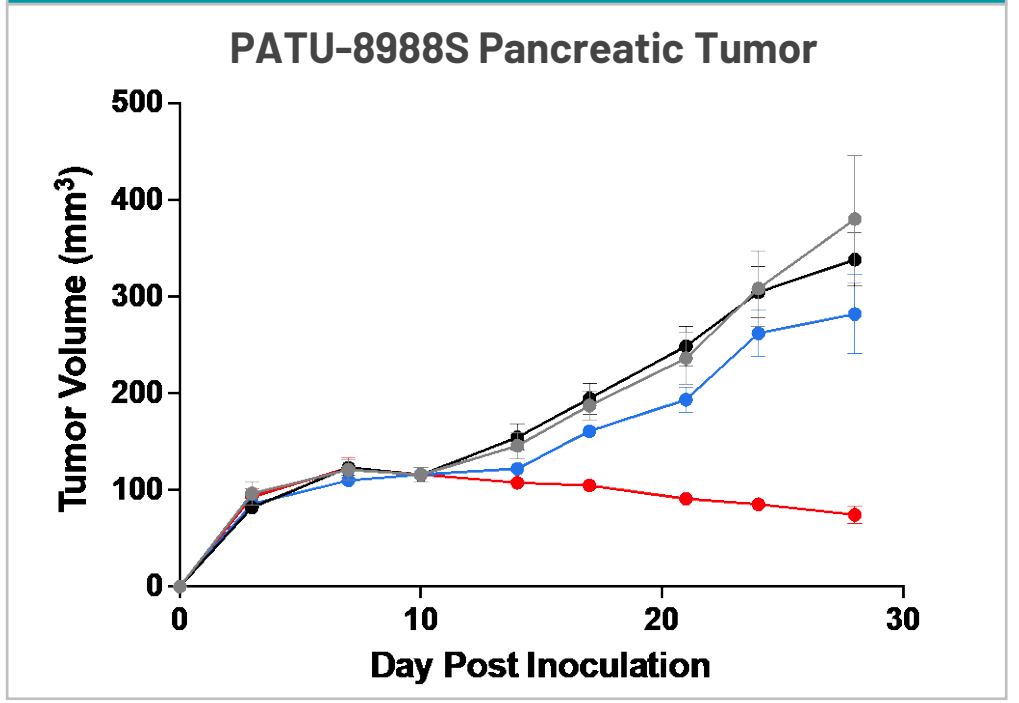
Efficacy in IHC 3+ Tumors

~220K Claudin 18.2 Molecules/Cell In Vivo



Efficacy in IHC 1+ Tumors

~20K Claudin 18.2 Molecules/Cell In Vivo



Naked mAb Control | Claudin 18.2 ISAC | Isotype Control ISAC | Isotype mAb Control

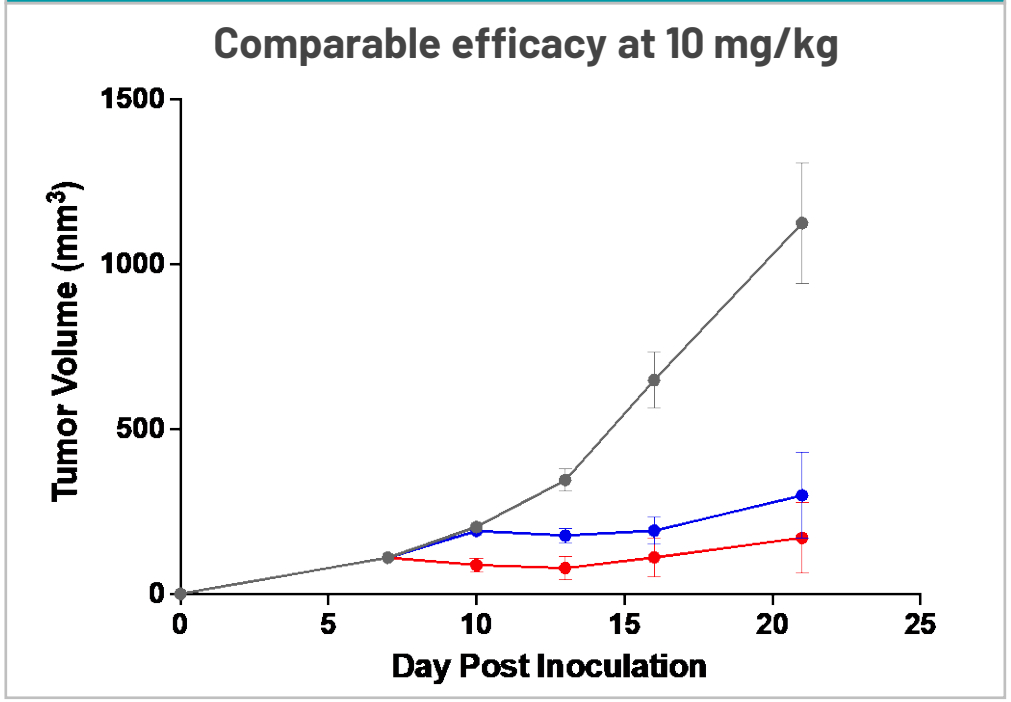
SCID/beige mice with NUGC4-hCLDN or PA-TU-8988S tumors (N=8) were treated with 5 mg/kg of the indicated test articles BIW x 4 once tumors reached an average 100m^3 as indicated.

Adapted from Kim, et al., SITC Annual Meeting 2023, Abstract #1147-D

Claudin 18.2 ISAC Outperformed Cytotoxic ADC in Syngeneic Tumor Models

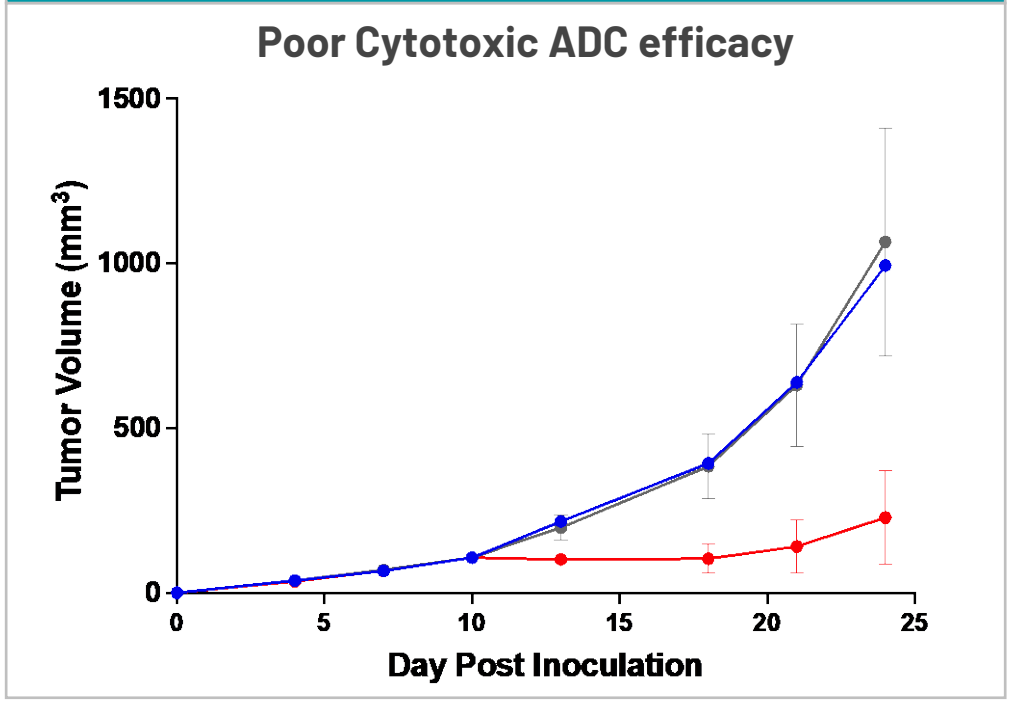
High Antigen Density Model

MC38 model expressing ~220K Claudin 18.2 molecules/cell



Medium Antigen Density Model

MC38 model expressing ~75K Claudin 18.2 molecules/cell



Claudin 18.2 ISAC Claudin 18.2 MMAE ADC Isotype mAb Control

C57BL/6 mice were treated as indicated with a single dose of test article of 10 mg/kg when tumors reached an average of 100 mm^3 (N=8).

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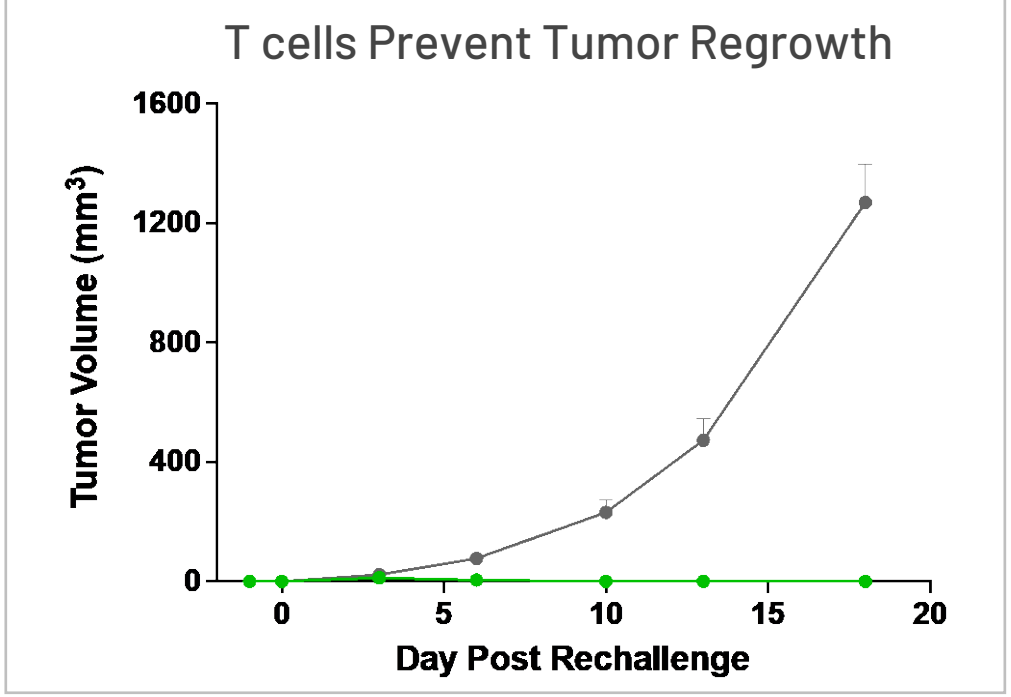
BDC-4182 Offers a Differentiated MoA with Potential for Durable Responses

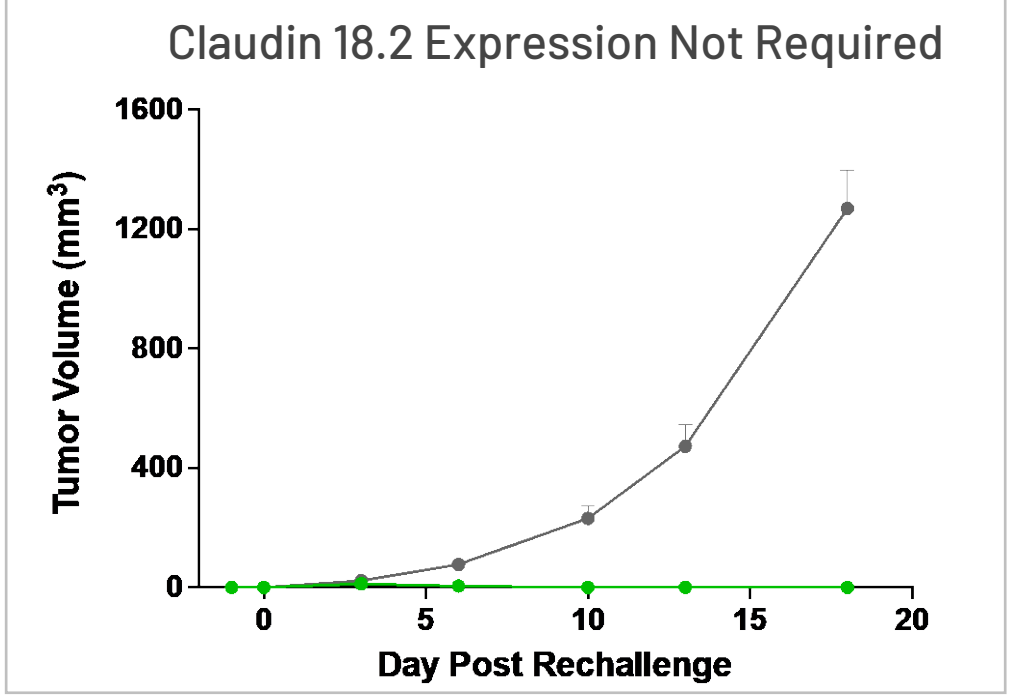
Immunological Memory

MC38 tumor expressing Claudin 18.2



Epitope Spreading

MC38 tumor lacking Claudin 18.2 expression



Mice with complete regression following Claudin 18.2 treatment prior to rechallenge: T cell depletion No T cell depletion

Mice with no detectable tumor following treatment with the Claudin 18.2 ISAC were observed for 26 days to ensure no regrowth occurred. These mice (N=4) were rechallenged with MC38 cells expressing mouse CLDN18.2 (75K molecules/cell) or parental MC38 with or without T cell depletion.

Adapted from Kim, et al., SITC Annual Meeting 2023, Abstract #1147-D

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Conclusion

Boltbody™ ISAC Platform Validated by Strategic Collaborations

Genmab

Innovative leader in antibody & bispecific development for oncology

- Genmab funds up to 3 bispecific Boltbody™ ISACs through early clinical development
- Bolt has option to co-develop & commercialize 1 candidate in certain regions
- Bolt eligible for up to $285M in milestones plus tiered royalties for each program exclusively developed & commercialized by Genmab

TORAY

Global leader in innovative technologies, conducting research in cancer immunotherapeutics

- Toray funds Boltbody ISAC for specific & novel target through end of Phase 1
- Global co-development/co-commercialization

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BOLT: Valuable Pipeline with Multiple Near-term Inflection Points

BDC-3042 (Dectin-2 Agonist Antibody)

- First-in-class antibody with potential in a wide range of solid tumors
- Updates on enrollment and safety in 2H24

BDC-4182 (Claudin 18.2 Boltbody™ ISAC)

- Next-gen ISAC targeting gastric & pancreatic cancer
- Clinical trial initiation in 2025

Restructuring unlocks potential for clinical data on both programs

- Existing cash[1] funds key milestones & operations into 2H26
- Collaborations fund themselves and provide future upside

ISAC = Immune-stimulating antibody conjugate

[1] Cash, cash equivalents, and marketable securities balance of $112.8 million as of 3/31/2024

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Thank you.

Bolt Biotherapeutics

Nasdaq: BOLT

Leveraging the immune system for a better way to treat cancer