Alanis Therapeutics INC

PURSUING A BOLD NEW TREATMENT PARADIGM FOR MDS AND AML

Non-Confidential Presentation
November 2023

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Company Overview

Company:	Privately held, Delaware Corporation spun out of AvantGen
Technology:	Targeting the bone marrow stroma of the MDS/AML tumor microenvironment
Science:	New signaling pathway activating hematopoietic (leukemic) stem cells
Lead Asset:	Jagged-1 antagonist antibody targets osteoblasts, preventing the induction of MDS and AML
Biomarker Strategy:	Osteoblast cell surface phenotypic markers
IP:	Company owned & licensed through collaboration with Columbia University
Stage:	IND Development for Proof-of-Concept Phase 1/2 clinical trial

Board of Directors

Robert Goodenow, Ph.D., Chief Executive Officer

Dr. Goodenow has held executive and management BD positions as President of HUYABIO, Chief Business Officer of Syndax Pharmaceuticals and Vice President Corporate Development of Inovio Pharmaceuticals. He has experience in business development, equity financing, drug development and global product launch, most recently with HIYASTA™ for NHL in Japan in 2021. Dr. Goodenow received an A.B. in Biochemistry from UC Berkeley and a Ph.D. in Biophysics from Stanford Medical School.

Cynthia (Cindy) Collins, Director

Cindy is a recognized leader with more than four decades of experience in gene and cell medicines, biopharmaceuticals, and diagnostics. She has served as CEO of Editas Medicine (NASDAQ:EDIT), Human Longevity, GenVec and Sequoia Pharmaceuticals as well as CEO/GM of General Electric Healthcare's Cell Therapy Business. She also served as Group Vice President, Cellular Analysis Business of Beckman Coulter, President of Clinical Micro Sensors, Inc., and held various executive roles with Baxter Healthcare, including President of Oncology, Vice President of Strategy, Vice President and General Manager of Cell Therapies, and Vice President of Business Development of Transfusion Therapies. She began her career with Abbott Laboratories in various operating roles. Cindy received her BS degree in Microbiology from the University of Illinois, Urbana, and her MBA, from The University of Chicago Booth School of Business. She is a member of the board of directors of DermTech (NASDAQ:DMTK), Certara (NASDAQ:CERT), Poseida Therapeutics (NASDAQ:PSTX), Draper Laboratories, Panavance Therapeutics, and Nutcracker Therapeutics.

Xiaomin Fan, Ph.D., Chairman & Founder

Dr. Fan is currently the President & CEO of AvantGen, the parent company of Alanis Therapeutics. In this capacity, he played a leading role in establishing and developing AvantGen. He is the inventor of the company's cutting-edge technology platforms. Prior to his leadership at AvantGen, Dr. Fan accumulated valuable experience in diverse scientific positions at Targeted Molecules Corporation. He holds a Ph.D. in Molecular Biology and Biochemistry from the University of Kansas and was a postdoctoral fellow at the University of Pennsylvania.

MDS & Acute Myeloid Leukemia Remain a High Unmet Medical Need

MDS/AML Incidence: 4.9 per 100,000/year overall (~16,000/year) increases to >70 per 100,000 in elderly prevalence >70,000; 33% progress to AML. Incidence of AML is 3-4/100,000 per year

Survival: 5-year overall survival remains low at ~30% for AML and ~14% for MDS

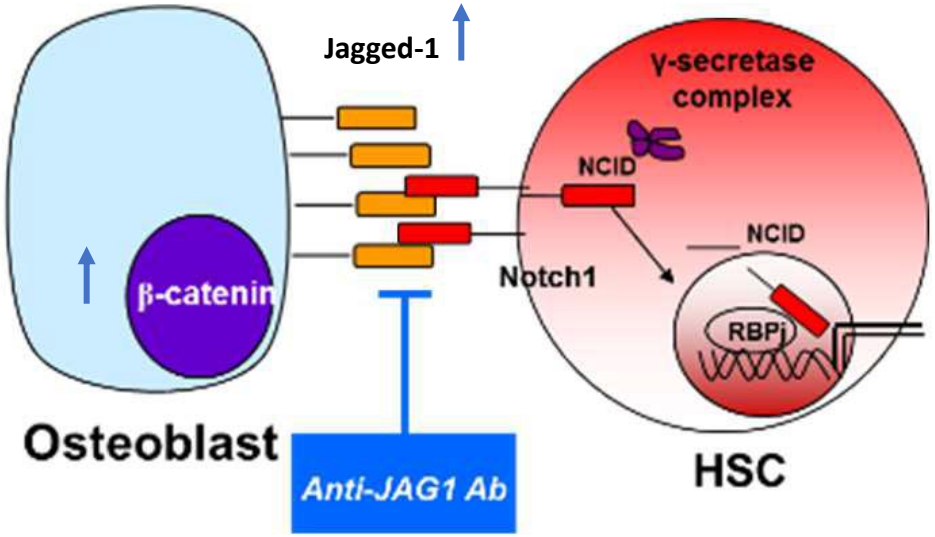
Standard of Care: Induction high dose chemotherapy "7+3" cytarabine plus anthracycline-based regimen and hematopoietic stem cell (HSC) allogenic transplants, have remained unchanged for 3-4 decades. For MDS, supportive care and hypomethylating agents if required.

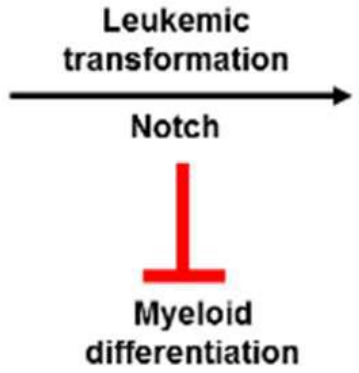
Targeted Rx: Combined with chemotherapy have improved the rate of complete remission (CR), but not the rates of relapse which remain the most important cause of treatment failure. Immunotherapies e.g., CD33 have yielded marginal improvement in 5-year survival AML cell-targeted therapies e.g., kinase, IDH & Bcl2 inhibitors also have marginal effects on survival with added toxicity burden

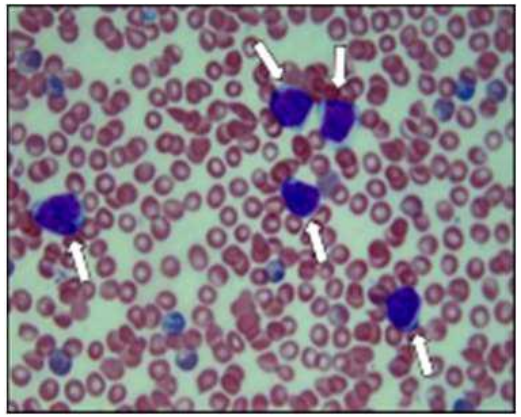
High Risk AML: The relapse rate remains over 60%, leading to an overall median disease-free survival of <1 year (range: 4-11 months). Patients ≥60 years, 5-year survival rates drop to 7.4%. Elderly patients treated with hypomethylating agents have median survival of 6.3 months

Unmet Need: AML is genetically unstable and highly clonal. Induction therapies do NOT eliminate the leukemic stem cells (LSCs). New therapies target clonal stage failing to impact new emerging resistant clones with limited benefit

Novel MOA: Osteoblast Notch1 Signaling Is Critical to Leukemogenesis







Excess immature blood cells (blasts indicated by arrows) progress rapidly interfering with the production of normal blood cells

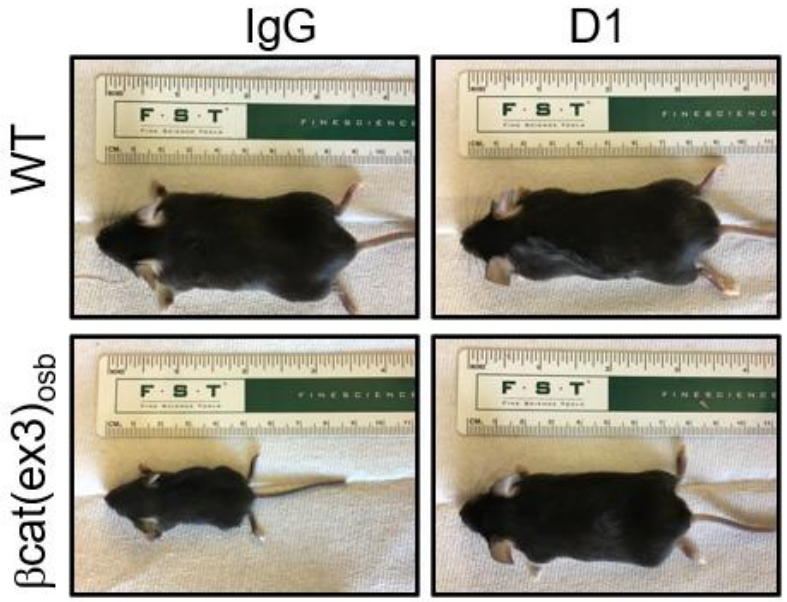
BLOOD (2022) 140 (SUPPLEMENT 1): 2902.
HTTPS://DOI.ORG/10.1182/BLOOD-2022-167042

Targeting Jagged-1 on osteoblasts with an anti-Jagged-1 antibody blocks signaling to Notch 1 on hematopoietic stem cells, triggers apoptosis or differentiation of HSCs, and restores all hallmarks associated with MDS and AML.

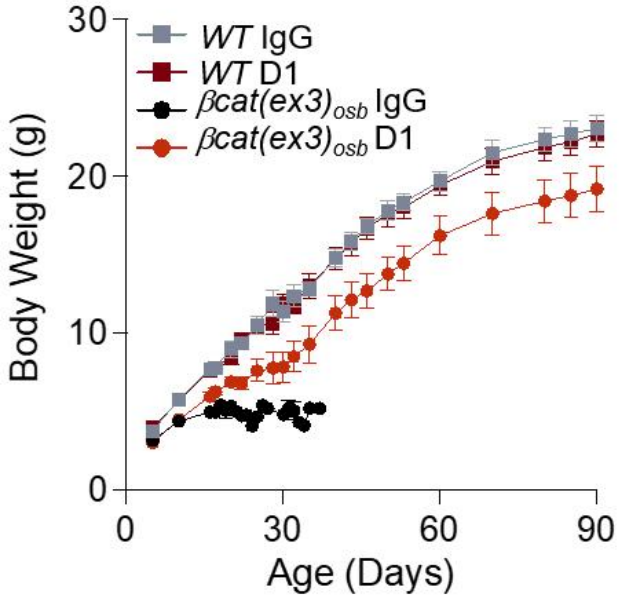
Targeting Osteoblasts in Bone Marrow Stroma with a Jagged-1 Antibody is a "First-in-Class" Therapeutic Approach for MDS/AML

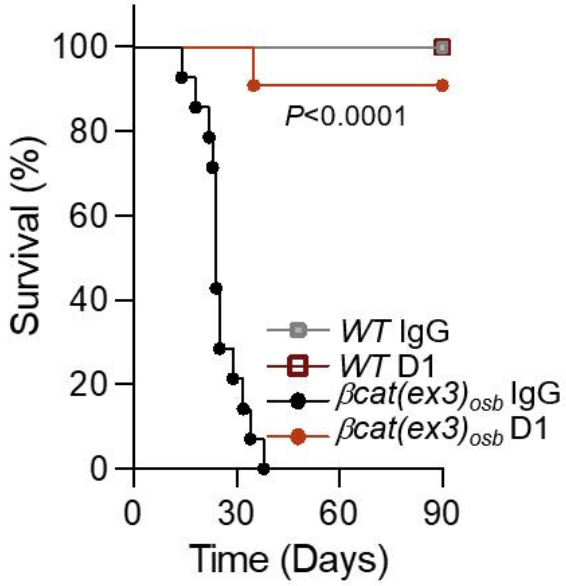
Breakthrough Designation Potential	• Novel oncogenic MDS/AML-inducing target pathway • Promising single agent activity in human samples: potent inhibitor of target activation (40 pM) • Antibody induces apoptosis in target expressing osteoblast/MDS or AML co-cultures at 1 µg/ml • Target a unifying oncogenic signal that defines the largest category of MDS/AML patients
Stable Target	• Bone Marrow Stroma: A novel more amenable & stable cell target than clonally expanding malignant cells • Osteoblasts with a defined phenotype over-expressing b-catenin & the Notch-1 ligand jagged-1 (JAG1) • Cells correlate with disease progression throughout treatment
Biomarker	• Select patients with active target pathway • Straight forward screening methodology by FACS with commercially available reagents • Quick efficacy readout to monitor treatment responses: RBC, Platelet neutrophil & lymphocyte counts
Blockbuster Market	• Target presents in approximately 38% of MDS AML patients • Monotherapy potential estimated at >$3 Bn for MDS with AML • Incremental value from other cancers homing to the bone marrow
IP/Data Exclusivity	• Licensed issued patent from Columbia University covering target and biomarker • Composition of matter patent application assigned to Alanis by AvantGen • Potential orphan drug designation for MDS/AML WW

Preclinical Proof-of-Concept in Transgenic AML Mice*



Anti-JAG1 treatment restores weight gain and prolongs survival





** Offspring βcat(ex3)osb mice, constitutively expressing osteoblastic β catenin, are derived by crossing Catnb+/lox(ex3) crossed with α1(I)Col-Cre mice expressing Cre.*

The mouse model faithfully recapitulates key aspects of the human disease, displaying all the hallmarks observed in human MDS and AML that are restored upon antibody D1 treatment.

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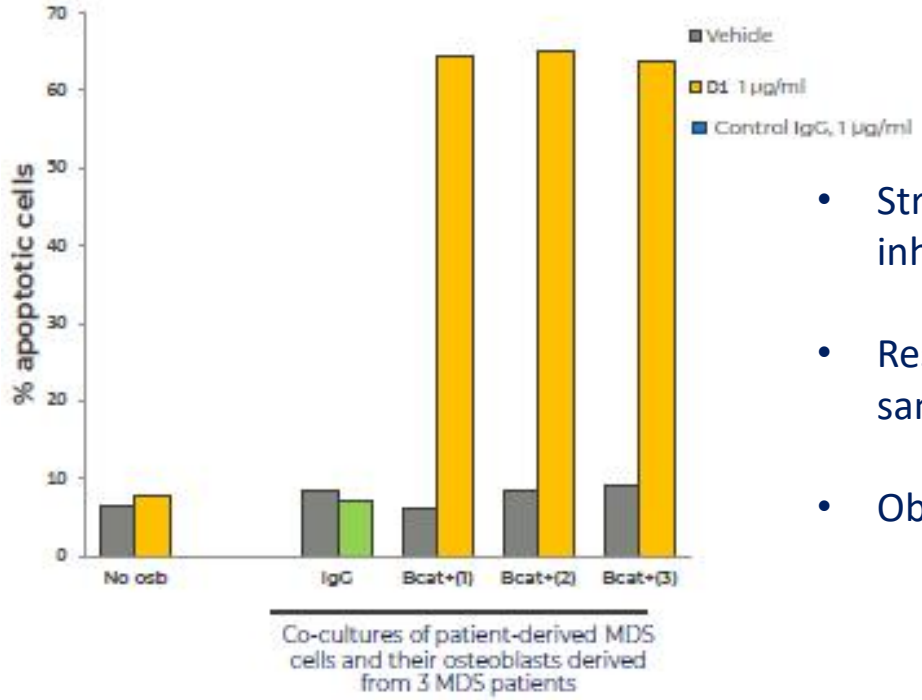
Anti-Jagged-1 Induces Apoptosis of Patient-Derived MDS Cells in Co-Culture with Their Primary Osteoblasts Over-expressing β-catenin/Jagged-1



- Strong correlation between target expression and anti-Jagged-1 induced inhibition of MDS/AML cell proliferation, apoptosis, and differentiation
- Results have been extended to include testing over 450 MDS/AML patient samples
- Observations hold across various subtypes of both MDS and AML samples

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The Commercial Potential for Anti-Jagged-1 in MDS/AML is Significant

Global AML Treatment Market

- Spans seven major countries: US, France, Germany, Italy, Spain, UK, Japan
- Approximately $1.5B in 2023, expected to grow at a CAGR of 13% to ~ $3.2B by 2030*

Global MDS Treatment Market

- Approximately $3.1B in 2022, expected to grow at a CAGR of 9.1% to ~ $6.1B by 2030**

Target Market ~ 38% of AML and MDS patients

- 38% of ($3.2B + $6.1B) = $3.5B by 2030

* HTTPS://WWW.MARKETWATCH.COM/PRESS-RELEASE/2030-ACUTE-MYELOID-LEUKEMIA-MARKET-SIZE-SHARE-2023-06-01
** HTTPS://WWW.DATAMINTELLIGENCE.COM/RESEARCH-REPORT/MYELODYSPLASTIC-SYNDROME-TREATMENT-MARKET

Anti-Jagged-1 Product Development Plan

- IND Preclinical Studies: Cell Line Development, MCB, CMC/Mfg
- Companion Diagnostic Assay Development & Validation
- IND Submission
- Phase 1 Chemo ineligible biomarker positive patients 3+3 dose escalation
- Phase 1 Results: Safety, P2RD and preliminary efficacy read out
- Phase 2 MDS and AML Design for Breakthrough Designation

Start

↓

18 mos

↓

36 mos

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