J.P. Morgan Annual Meeting

January 13, 2026

Forward-Looking Statements and Risk Factors

This presentation and the accompanying oral commentary contain forward-looking statements that involve risks, uncertainties and assumptions. If the risks or uncertainties ever materialize or the assumptions prove incorrect, our results may differ materially from those expressed or implied by such forward looking statements. All statements other than statements of historical fact could be deemed forward-looking, including, but not limited to, any statements regarding: plans, strategies, and objectives of management for future operations, including our clinical development, regulatory and commercialization plans and timelines; any projections of financial information; historical results that may suggest trends for our business; expectation or belief regarding future events; potential markets, market opportunity or market size; technology developments; our clinical product pipeline, clinical and pre-clinical data or the implications thereof; enforceability of our intellectual property rights, competitive strengths or our position within the industry; anticipated patent exclusivity timelines; anticipated benefits of our collaborations or other strategic transactions; and any statements of assumptions underlying any of the items mentioned.

These statements are based on estimates and information available to us at the time of this presentation and are not guarantees of future performance. Actual results could differ materially from our current expectations as a result of many risks and uncertainties, including but not limited to, risks associated with: the potential impacts of raising additional capital, including dilution to our existing stockholders, restrictions on our operations or requirements that we relinquish rights to our technologies or product candidates; the success, cost, and timing of our product development activities and clinical trials; the timing of our planned regulatory submissions to the FDA for our product candidate bezuclastinib and feedback from the FDA as to our plans; our ability to obtain and maintain regulatory approval for our bezuclastinib product candidate and any other product candidates we may develop, and any related restrictions, limitations, and/or warnings in the label of an approved product candidate; the potential for our identified research priorities to advance toward clinical development; the ability to license additional intellectual property relating to our product candidates from third parties and to comply with our existing license agreements and collaboration agreements; the ability and willingness of our third-party research institution collaborators to continue research and development activities relating to our product candidates; our ability to commercialize our products in light of the intellectual property rights of others; our ability to obtain funding for our operations, including funding necessary to complete further development and commercialization of our product candidates; the scalability and commercial viability of our manufacturing methods and processes; 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; our expectations regarding our ability to obtain and maintain intellectual property protection for our product candidates; business interruptions resulting from public health crises, which could cause a disruption of the development of our product candidates and adversely impact our business; and the fact that interim clinical data may not be indicative of future results, among others. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to our business in general, see our periodic filings filed from time to time with the Securities and Exchange Commission. Unless as required by law, we assume no obligation and do not intend to update these forward-looking statements or to conform these statements to actual results or to changes in our expectations.

All of Cogent Biosciences, Inc.’s (“Cogent”) product candidates are investigational product candidates and their safety and efficacy have not yet been established. Cogent has not obtained marketing approval for any product, and there is no certainty that any marketing approvals will be obtained or as to the timelines on which they will be obtained.

Cogent Biosciences Poised for Transformative 2026

Three Pivotal Trial Wins Position Bezuclastinib as Best-in-Class KIT inhibitor

PEAK: First ever positive trial in GIST patients using active comparator

SUMMIT: Demonstrated reduction in mast cell burden leads to substantial symptom improvements

APEX: Selective, non-CNS penetrant KIT inhibitor spares toxicities associated with current SOC

Prepare to Launch Bezuclastinib in 2026

2026

- Onboarding highly experienced US commercial team to prepare for 2H 2026 launch
- SUMMIT NDA submitted Dec 2025; PEAK NDA planned April 2026, APEX NDA planned 1H 2026

Strong Balance Sheet & Cash Runway

- ~$900 million cash EOY 2025*, runway well into 2028
- Retired Structured Debt facility as part of Q4 fundraising

Creating Next-Gen, Best-in-Class Pipeline

- Focused on two franchises: Oncology & Hematology
- Pan-KRAS and JAK2 V617F inhibitors on track for IND 2026

* Preliminary, unaudited estimate. Final EOY cash balance will be reported in Company Form 10-K.

Three Positive Pivotal Trials for Bezuclastinib in 2025 Showcase Potential As Best-in-Class KIT Inhibitor Across All KIT-mutant Driven Indications

Peak GIST

Phase 3 trial in 2nd-line Gastrointestinal Stromal Tumors:
sunitinib +/- bezuclastinib 600 mg

Positive Results Announced November 2025

$4 billion+ Global Market Opportunity;

First positive 2nd-line GIST trial in over 20 years, 50% reduction in risk of progression or death, 16.5 month mPFS

Summit NONADVANCED SM

Pivotal trial in Non Advanced Systemic Mastocytosis:
bezuclastinib 100 mg vs. placebo

Positive Results Announced July 2025, NDA submitted December 2025

$3.5 billion+ Global Market Opportunity;

Best-in-class symptomatic improvement and pathobiology data demonstrate potential for complete remission in patients

Apex ADVANCED SM

Pivotal trial in Advanced Systemic Mastocytosis:
bezuclastinib 150 mg

Positive Results Announced December 2025

$500 million+ Global Market Opportunity;

Clearly differentiated safety/tolerability results provide clear path to market leadership

Total Global Market Opportunity exceeds $8 billion with limited competition;
IP protection anticipated through 2046 based on strength of COM + PTE and pending patent applications

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Bezuclastinib: Compelling Long-Term Exclusivity Expected Through 2046

2026 … 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046

PATENT EXCLUSIVITY Orange Book listable patents

Compound patent
Original expiration date: **January 2034**

Patent term extension
Expected expiration date:
January 2039

Formulation patent (pending non-provisional application)
Expected expiration date: **December 2043**

Method of administration patent (pending provisional application)
Expected expiration date: **December 2046**

REGULATORY EXCLUSIVITY No ANDAs approved by FDA

New chemical entity (NCE) exclusivity
5 year: **2026-2031**

Orphan drug exclusivity (ODE)
7 year: **2026-2033**

Results are Unprecedented, Transformative and Practice Changing

Bezuclastinib combination: First ever to demonstrate statistical advantage versus active control arm in GIST trial; positioned to become first newly approved therapy for 2L GIST in 20 years

50% reduced risk of progression or death compared to current standard of care

16.5 months mPFS compared to 9.2 months for sunitinib alone (p<0.0001)

46% ORR compared to 26% for sunitinib alone (p<0.0001)

OS immature with event rate of **less than 20%** at time of PFS analysis

Well-tolerated with **no unique risks observed** relative to sunitinib safety profile

Estimated **19 months+ mean treatment duration** for combination

Active **Expanded Access Program allowing immediate availability** for GIST patients

NDA submission planned in April 2026

PEAK Results Dramatically Change 2nd-line GIST Commercial Potential Given Estimated Average Duration of Treatment

Large Population with Unmet Need

US + EU: 12,000 GIST patients diagnosed annually

~85% KIT driven

~60% imatinib resistant within 2 years

~6,000

2nd-line GIST patients annually

Approved KIT Inhibitors Monthly Price Benchmark*

QINLOCK® (ripretinib) 50 mg tablets

$44,370

AYVAKIT® avapritinib | tablets

$40,837

PEAK Results Show Dramatic Improvement in Duration of Treatment (DOT)

>19 months

(est. mean duration treatment)

2nd-line GIST Total Available Market

$4 Billion+ Global

* Price listed 30-day supply U.S. WAC pricing

Summit NONADVANCED SM Results Suggest First Disease Modifying Therapy for NonAdvSM Patients

Bezuclastinib demonstrates rapid, deep and sustainable symptom improvements with a substantial reduction in mast cell burden – including normalization in many patients

At 24 weeks, **mean change TSS of -24.3 points**

Significant improvement in 14 symptoms, across all domains, including most severe symptom at baseline

Significant improvement in mast cell burden

Marker:	Tryptase	KIT VAF	BM Mast Cells
% Patients:	**95.4%**	**97.5%**	**88.2%**

Well-tolerated; **the only hepatic AEs reported were lab abnormalities** and all discontinued patients fully resolved

First demonstration of correlation between **mast cell burden** and **symptom improvement**

91% of bezuclastinib patients **achieve Pure Pathologic Response (PPR)**

At 48 weeks, mean change TSS improved **to -32.0 points**

Active **Expanded Access Program allowing immediate availability** for NonAdvSM patients

NDA submission completed December 2025

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Results Suggest Promising New Treatment Option for AdvSM Patients

Bezuclastinib demonstrated impressive clinical activity, without association with cognitive disorder or risk of intracranial bleeding -- provides attractive alternative to current SOC

Patients receiving bezuclastinib achieved high rates of response:

- **57% ORR per mIWG-MRT-ECNM**
- **80% ORR per PPR**

Significant reductions in objective disease markers underscore potent target engagement and impact on KIT-driven disease pathology

Well-tolerated, with **infrequent dose reductions and no patients requiring discontinuation** for treatment related adverse events

Encouraging safety profile **potentially allows for concomitant treatment in patients who require other cytoreductive therapies for AHN** or post-transplant

Active **Expanded Access Program allowing immediate availability** for AdvSM patients

NDA submission planned 1H 2026

Significant Market Opportunity in Systemic Mastocytosis With Bezuclastinib's Clinical Profile

Promising Growth Trends in SM Management

~40%
Growth in TKI Utilization in SM*

In Testing and Diagnostics

Patients Diagnosed

Limited Competition Creates Unmet Market Needs

NonAdvSM: AYVAKIT has suboptimal therapeutic dosing and is often used off label

AdvSM: AYVAKIT has significant safety concerns including risk of intracranial hemorrhage

Large Market Opportunity Across Major Markets

$4 Billion+ Global
Annual Market Opportunity

SUMMIT and APEX results together position bezuclastinib as best-in-class option for SM patients

*Internal Open and Closed Claims Analysis in SM

Investing in Bezuclastinib to Expand Market Potential

Several Ongoing or Planned Clinical Trials to Expand Commercial Utilization

	Size	2026 Goal	Purpose
1st-line GIST	~40 patients	Mid-year enrollment initiation	Investigate benefit of combination for exon 9 GIST patients (naïve to / initially treated with imatinib)
3rd-line+ GIST	~40 patients	Enrollment complete; present data mid-year	SARC[1] trial to explore benefit of bezu combination in GIST patients previously sunitinib resistant
Ava Switch NonAdvSM	~40 patients	Complete enrollment mid-year; present EOY	Measure potential benefit of bezuclastinib in patients receiving suboptimal results on avapritinib
Concomitant use SM-AHN[2]	~15-20 patients	Complete enrollment	Determine potential of concomitant administration of bezuclastinib and azacitadine in high-risk patients

1 – Sarcoma Alliance for Research through Collaboration Sponsored study;
2 – Systemic Mastocytosis with Associated Hematologic Neoplasm

Ongoing Expanded Access Programs Provide Bezuclastinib to Patients in Need

AIM

Provide bezuclastinib outside of a clinical trial to real-world patients who meet specific criteria including, but not limited to, having no comparable or satisfactory alternative therapy to treat the disease.

SYSTEMIC MASTOCYTOSIS

Diagnosis of any NonAdvSM or AdvSM subtypes according to WHO classification for SM

Patients receive **bezuclastinib 100mg (NonAdvSM) or 150mg (AdvSM).**

Treating physician to assess patients, report any SAEs, and determine treatment duration.

GASTROINTESTINAL STROMAL TUMOR

Diagnosis of locally advanced metastatic and/or unresectable GIST in patients previously treated with imatinib

Patients receive **bezuclastinib 600 mg plus sunitinib 37.5 mg**

Treating physician to assess patients, report any SAEs, and determine treatment duration.

Building Exceptional Commercial Organization to Ensure Successful Launch

Commercial Organization of ~100 Highly Experienced Colleagues

Strategic Priorities for the Launch of bezuclastinib

Positioning	Demonstrated superior pathology and clinical outcomes to establish bezuclastinib as the standard of care in all indications
Payers	Ensuring a best-in-class patient access and ease of prescribing for HCPs
Providers	Deploying an account-centric customer facing organization to support key centers and treatment teams
Patients	Partnering with patient advocacy organizations to spread awareness of personal experiences

Building Robust Pipeline Across Two Franchises

	PROGRAM	TARGET	PATIENT POPULATION	PRE-CLINICAL	EARLY CLINICAL	LATE CLINICAL
HEMATOLOGY	Bezuclastinib	KIT D816V	Nonadvanced Systemic Mastocytosis (NonAdvSM)	NDA Submitted December 2025		NDA
	Bezuclastinib	KIT D816V	Advanced Systemic Mastocytosis (AdvSM)	NDA submission on track for 1H 2026		
	CGT1145	JAK2 V617F	Myeloproliferative Neoplasms	IND expected 2026		
	Undisclosed Targets					
ONCOLOGY	Bezuclastinib	KIT D816V	Gastrointestinal Stromal Tumors (GIST)	NDA submission on track for April 2026		
	CGT4859	FGFR 2/3	Cholangiocarcinoma	Present Phase 1 results in 2026		
	CGT4255	ErbB2	Breast Cancer, NSCLC	Dose escalation in 2026		
	CGT6297	PI3Kα	Breast Cancer	Dose escalation in 2026		IND
	CGT1815	pan-KRAS	Solid Tumors	IND expected 2026		
	Undisclosed Targets					

Cogent Pipeline Highlight: Pan-KRAS Inhibitor

Potency

Best-in-class across prevalent KRAS mutations

Selectivity

No inhibition of H/NRAS for potential improvement in tolerability vs. multi-RAS inhibitors

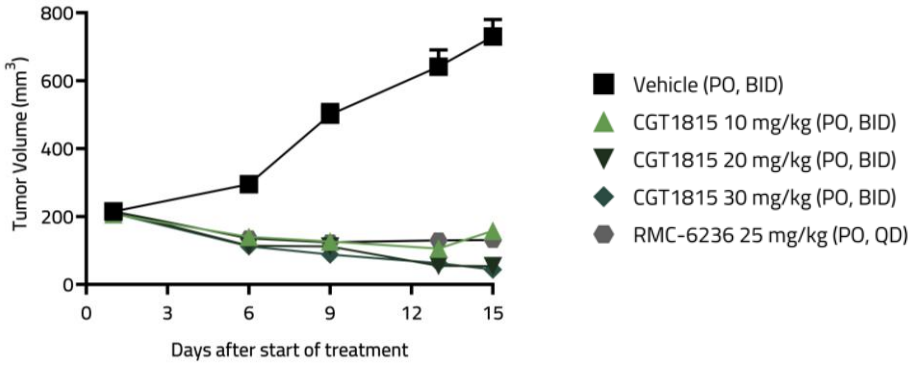
Drugability

Pro drug provides QD / low dose option for patients with excellent ability to combine

Cell Line	Tumor Type	KRAS Mutation	CGT1263 Cellular IC_{50}	RMC-6236 Cellular IC_{50}
MKN1	Gastric Cancer	Wild Type Amplified	0.65 nM	8.5 nM
NCI-H2009	Non-small cell lung cancer	G12A	0.11 nM	0.89 nM
NCI-H358	Non-small cell lung cancer	G12C	0.22 nM	0.30 nM
AsPC-1	Pancreatic cancer	G12D	0.24 nM	1.28 nM
A549	Non-small cell lung cancer	G12S	0.35 nM	0.65 nM
SW480	Colorectal cancer	G12V	0.37 nM	0.29 nM
HCT116	Colorectal cancer	G13D	1.0 nM	0.96 nM
NCI-H460	Non-small cell lung cancer	Q61H	0.30 nM	0.50 nM

- CGT1263 (the active form of CGT1815) showed pM/nM pERK inhibition across the spectrum of KRAS cell lines shown

$KRAS^{G12D}$ ASPC-1 tumors



Treatment	%TGI (Day 15)	Max %R
CGT1815 10 mg/kg (PO, BIDx14)	78	40 (D13)
CGT1815 20 mg/kg (PO, BIDx14)	93	75 (D13)
CGT1815 30 mg/kg (PO, BIDx14)	94	79 (D15)
RMC-6236 25 mg/kg (PO, QDx14)	82	39 (D15)

- CGT1815 showed superior tumor growth inhibition (>90%) at the 20 and 30 mg/kg BID PO dose levels compared to RMC-6236

Cogent Pipeline Highlight: JAK2 V617F Inhibitor

Selectivity

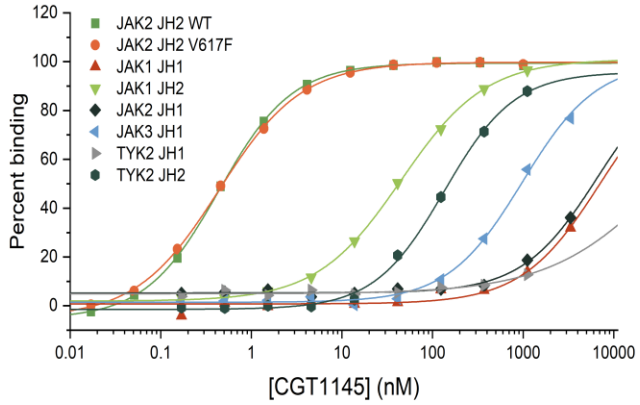
100+ fold selectivity in both binding and cellular assays for JAK2 V617F over JAK2 WT

↑ molecular response vs SOC agents
↓ thrombosis risk, ↓fibrotic risk, and ↓inflammation

Drugability

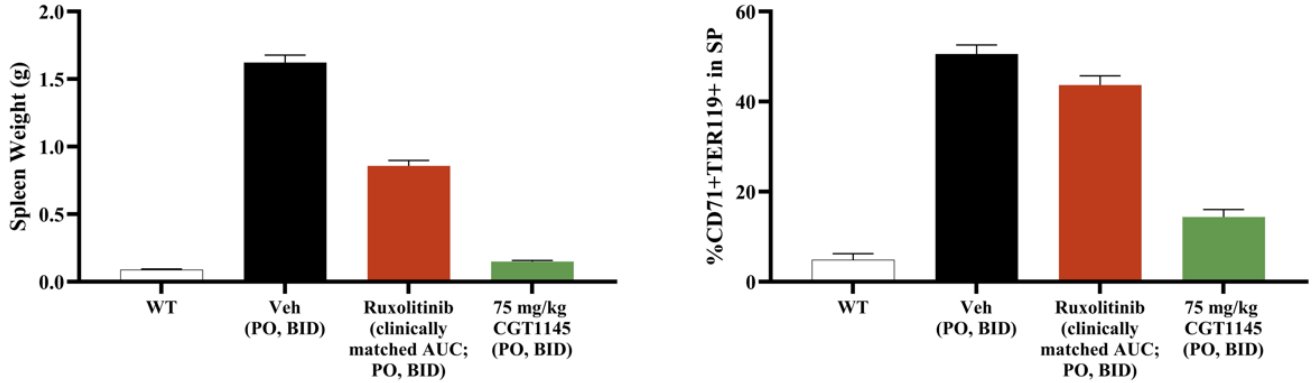
QD dose option for patients with excellent ability to combine

CGT1145 is Selective for the JAK2 JH2 Domain



CGT1145 binds to the JAK2 JH2 domain with sub-nM potency and is over 100x selective vs JAK1 JH2, JAK1/2/3 JH1, and TYK2 enzymes

Spleen Outcomes



Treatment with CGT1145 led to normalization of spleen weight and decreased CD71+TER119+ erythroid precursor accumulation in the spleen, supporting the potential of CGT1145 as a disease-modifying therapy through restoration of bone marrow function and attenuation of extramedullary hematopoiesis

Cogent Biosciences: Major Catalysts Expected in 2026

Bezuclastinib

- Gain approval and successfully launch in NonAdvSM
- Submit PEAK NDA (April 2026)
- Submit APEX NDA (1H 2026)
- Present detailed and updated results from all three pivotal trials at major medical meetings in 1H 2026

Pipeline

- Submit IND for CGT1815; novel, selective pan-KRAS inhibitor
- Submit IND for CGT1145; novel, selective JAK2 V617F inhibitor
- Present Phase 1 results for CGT4859, FGFR 2/3 inhibitor
- Dose escalation for CGT4255, CNS-penetrant erbB2 inhibitor
- Dose escalation for CGT6297, novel, selective PI3Kα inhibitor

Corporate

- Build highly capable US commercial team to support bezuclastinib launch
- Identify ex-US commercial partner(s) for bezuclastinib, including European go-to-market strategy

~$900M expected to fund operations through US commercial launch into 2028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Real Solutions.
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