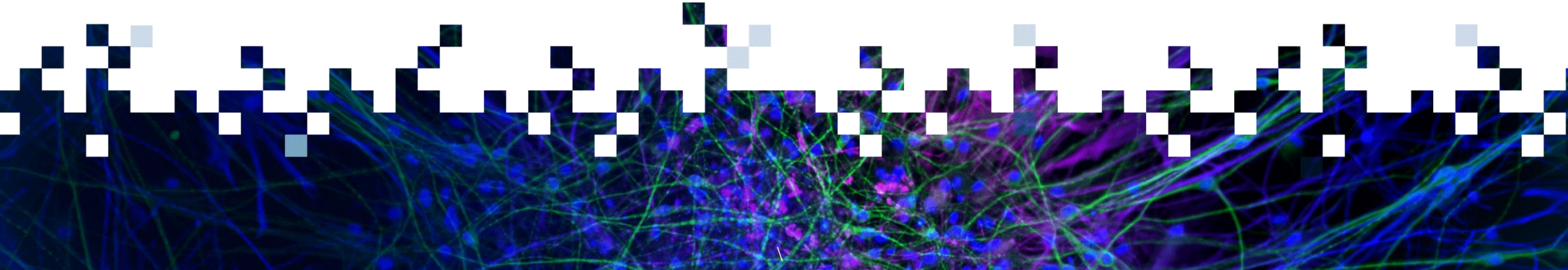
VYANT bio

HUMAN-POWERED **DRUG DISCOVERY**

Nasdaq: VYNT

Conference Call & Webcast for the First Quarter 2022

Monday, May 16, 2022 - 4:30pm ET



SAFE HARBOR

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements involve known and unknown risks and uncertainties that exist in our operations and business environment, which may be beyond our control, and which may cause actual results, performance or achievements to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. All statements other than statements of historical fact are statements that could be forward- looking statements. For example, forward-looking statements include, without limitation: statements pertaining to Vyant Bio, Inc.'s expectations regarding future financial and/or operating results, the efficacy of our drug screening and discovery process, potential for our services, future revenues or growth and plans, strategies and objectives of management for future operations or transactions. The risks and uncertainties referred to above include, but are not limited to, risks detailed from time to time in our filings with the Securities and Exchange Commission, including our Annual Report on Form 10-K for the year ended December 31, 2021 and any subsequent filings. These risks could cause actual results to differ materially from those expressed in any forward-looking statements made by, or on behalf of, Vyant Bio. Forward-looking statements represent the judgment of the Company's management regarding future events. Although the we believe that the expectations reflected in such forward-looking statements are reasonable at the time that they are made, we can give no assurance that such expectations will prove to be correct. Unless otherwise required by applicable law, the Company assumes no obligation to update any forward-looking statements, and expressly disclaims any obligation to do so, whether as a result of new information, future events or otherwise.

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Needs a Paradigm Shift

Underperformance of Widely Used Models for Predicting Drug Efficacy and Safety

Late Introduction of Human Biology in the R&D Process Leads to High Failure and Cost

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Defines a New Approach

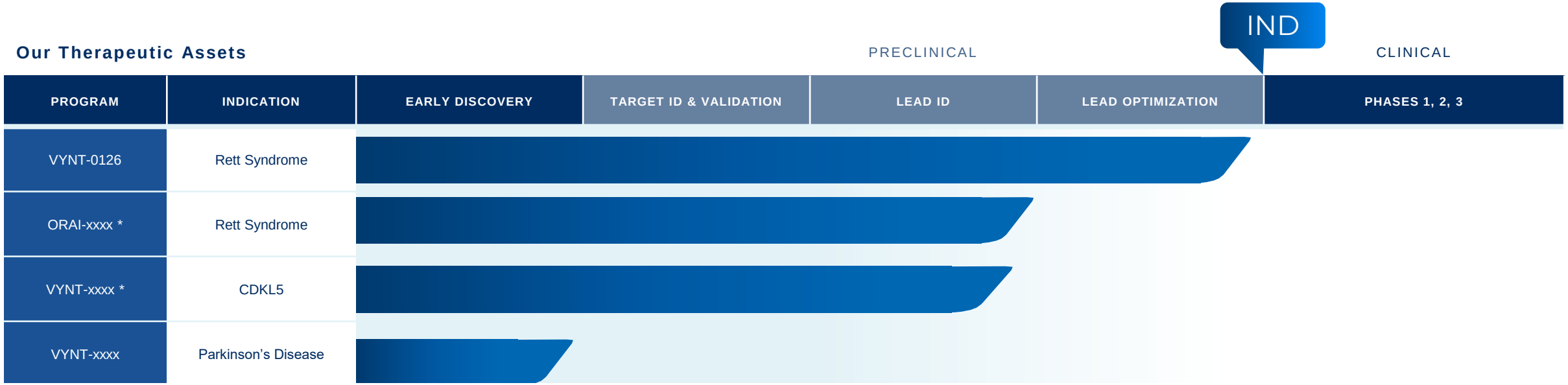
Deep Expertise and Global Presence in Drug Discovery

Human Biology and Data Science Driven Proprietary Discovery Engine

Focused on Efficiently Discovering Novel Therapeutics for Neurological Developmental and Degenerative Diseases

Therapeutic Pipeline

Our Therapeutic Assets



* We are in partnerships for the use of artificial intelligence systems with Atomwise for the discovery of a novel Rett Syndrome compound and Cyclica for the discovery of a novel CDKL5 compound

FIRST QUARTER 2022 HIGHLIGHTS

Collaboration with OrganoTherapeutics

Completing lab facility consolidation & Ongoing sale process for preclinical CRO business

Insightful data readouts on disease phenotype in Rett Syndrome and CDKL5

Entered into two financing vehicles & increased corporate visibility

- A **“human first”** strategy using patient-derived iPSC* organoids for screening
  - **accelerate drug discovery** by reducing failure rates
  - **drive clinical translation** of drug candidates
  - **improve clinical success** by picking appropriate genetically defined patient populations

- Focused on models for **CNS genetic disorders**
  - established the first models for the monogenetic disorders **RETT syndrome** and **CDKL5**
  - development of models for known **familial Parkinson’s disease** genes

    potential to expand into the more common sporadic/idiosyncratic populations for **Parkinson’s disease**

* iPSC = Induced Pluripotent Stem Cell

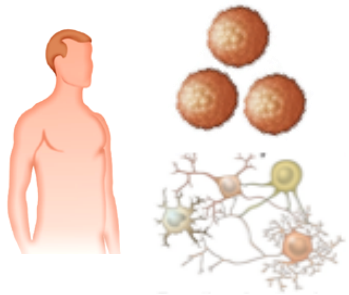
VYANT bio

Leveraging Human Biology and Data Science to Discover New Therapies for Neurodevelopmental and Neurodegenerative Disorders

Human microOrgan™ Discovery Platform

Paradigm for high-throughput clinic-based screening

Drive Successful Clinical Outcomes Through Patient-Based Discovery



Discovery
Targets & Hits
Novel & Repurposed

Patient-derived iPSC Organoids

Establish translatable bio-markers to drive Discovery and de-risked clinical trials

Biomarker-based Screening

Identify, validate, and de-risk targets and hits across multiple biological endpoints

Value Creation

Rapidly discover and advance first and/or best in class targets and molecules

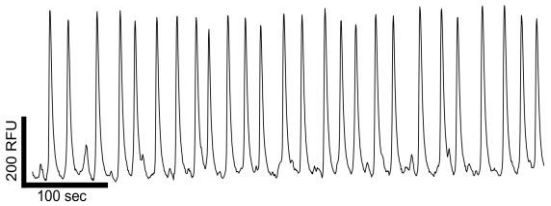
Utilize patient biology, high-throughput screening and data science to drive de-risked target and hit discovery

Rett neurospheroids display a unique functional phenotype

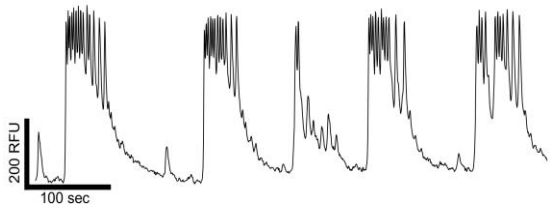
- Rett neurospheroids display a distinct functional signature
- Proprietary AnalytiX algorithms extract and quantify several features of the calcium signal

FLIPR

Control spheroids

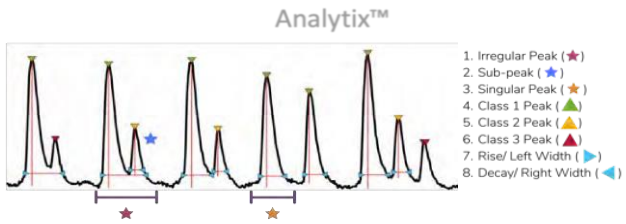


RTT spheroids



AssayAnalytiX

Feature extraction

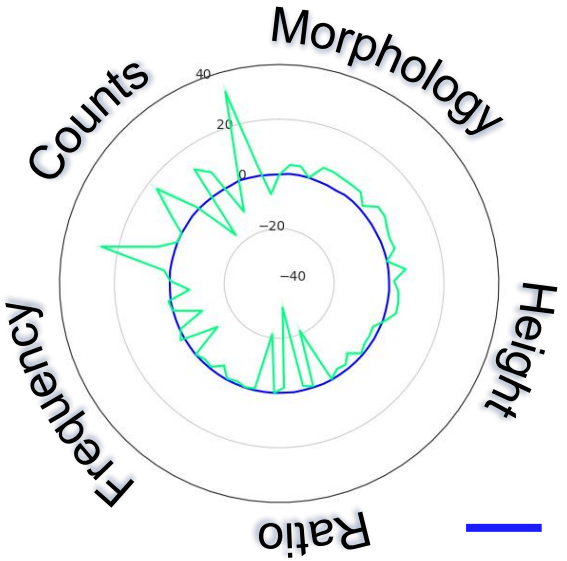


Feature Extraction (72 parameters)

- Automated
- Unbiased
- Disease-relevant

AssayAnalytiX

Phenotypic distinction

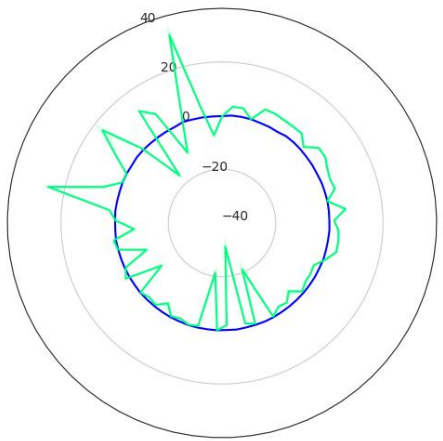


- Control normalized to zero
- RTT values expressed as std dev from control

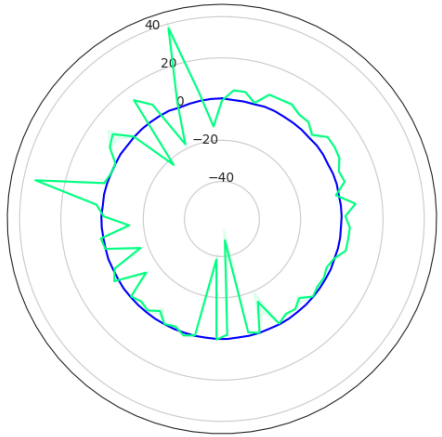
Rett neurospheroids show consistent and robust phenotypic signatures

Rett disease functional phenotype is robust across multiple distinct differentiation batches and screens

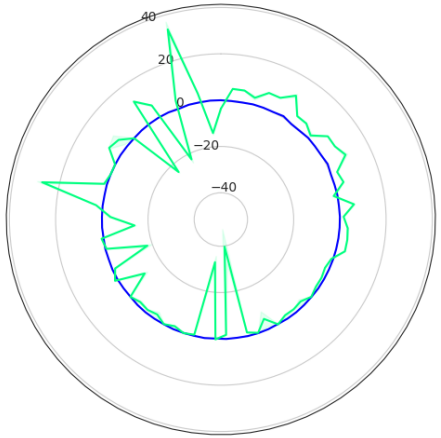
Rett neurospheroid
Control neurospheroid



Batch 1

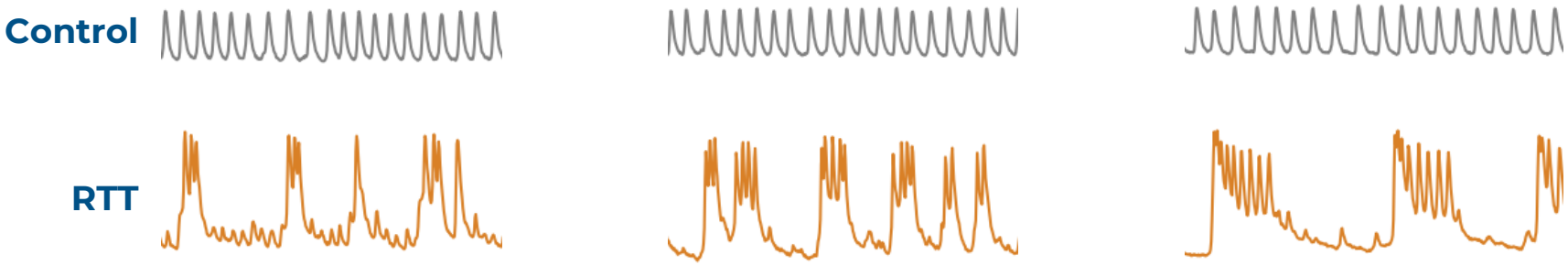


Batch 2



Batch 3

Representative tracings of the neural activity (per batch)

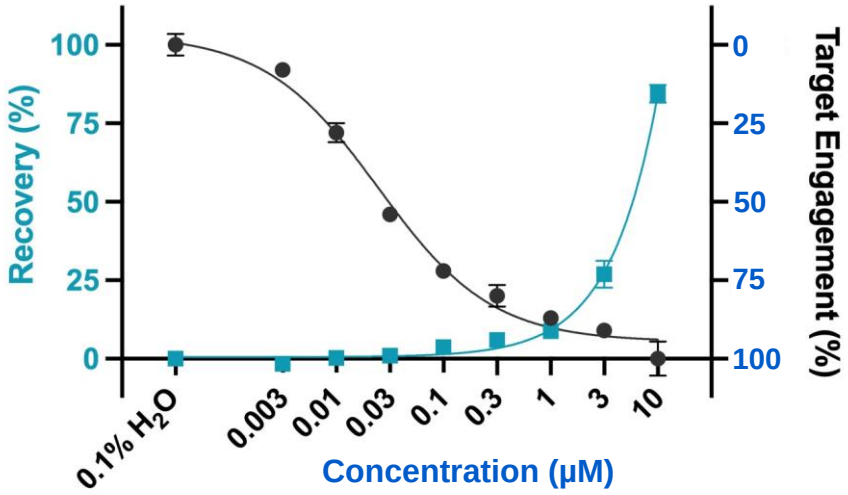


Key features to distinguish RTT and control phenotypes

Feature Class	Feature
Ratio	Si Peak Ratio
	Class 1 Peak Ratio
	C1Si Peak Ratio
Morphology	Peak DecayTime Avg
Count	Class 3 Peak Count
	C2Su Peak Count
	C1Si Peak Count
	Si Peak Count
	Su Peak Count
	C3Si Peak Count
	Class 1 Peak Count
	Ir Peak Count
Frequency	Si Peak Frequency
	C1Si Peak Frequency
	Class 1 Peak Frequency

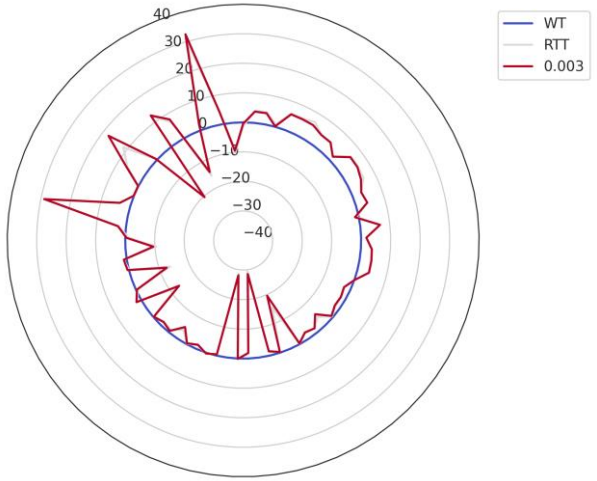
VYNT-0126 showed a dose-dependent rescue of the Rett functional phenotype

Global recovery with VYNT-0126



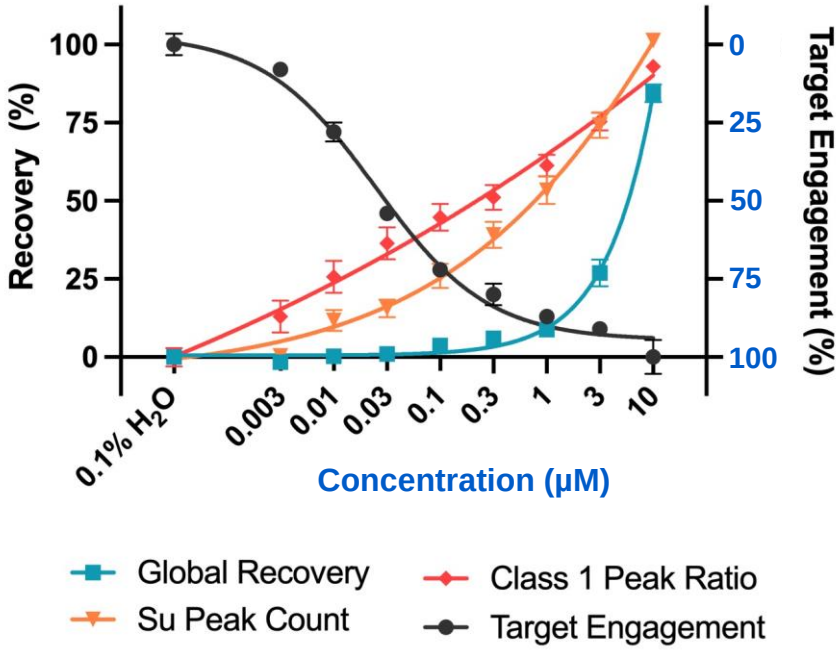
Unweighted average of all 72 endpoints

Features change by concentration



Dose-dependent change of captured phenotype features

Rescue of key parameters

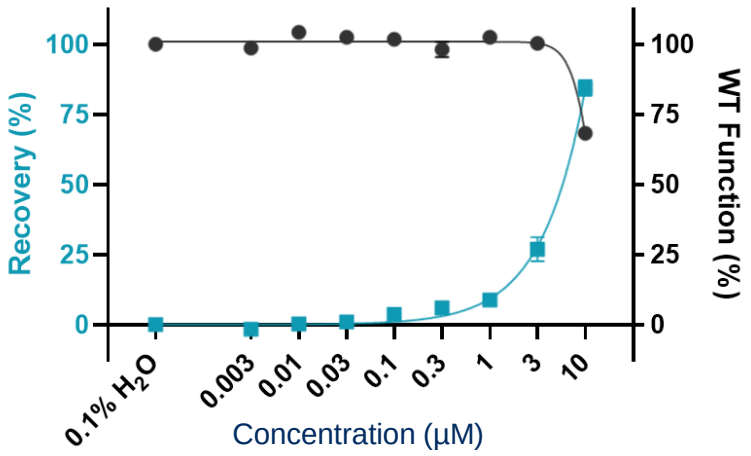


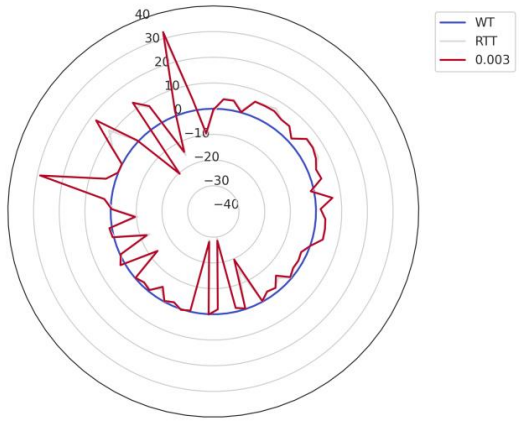
Parameter specific recovery may not need full target engagement

Recovery from the Rett phenotype after chronic treatment with VYNT-0126 correlates with target engagement

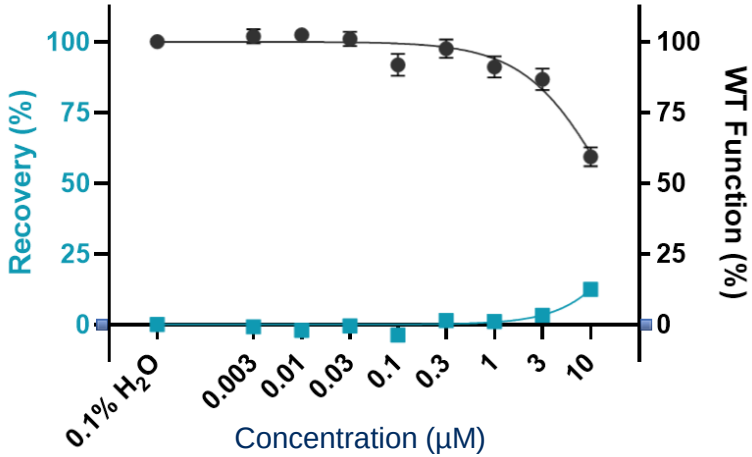
VYNT-0126 has a distinct mechanism compared to advanced clinical candidates

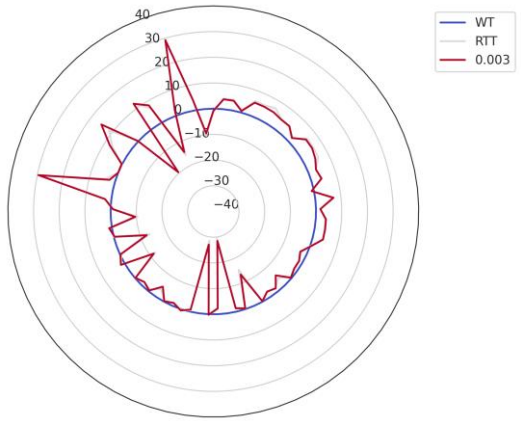
VYNT-0126



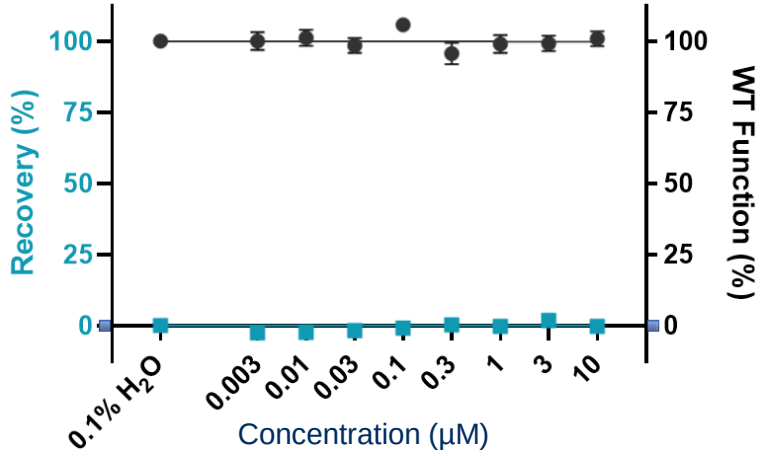


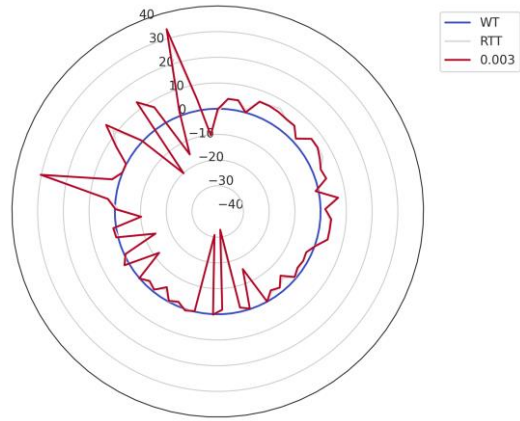
Clinical candidate 1





Clinical candidate 2





Differentiated mechanism offers potential combinatorial therapeutic approaches

FINANCIAL DISCUSSION

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Quarterly Period Ended March 31, 2022

Commission File Number 001-35817

VYANT BIO, INC.
(Exact name of registrant as specified in the charter)

Delaware	**04-3462475**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

2 Executive Campus
2370 State Route 70, Suite 310
Cherry Hill, NJ 08002
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: **(201) 479-8126**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 Par Value	VYNT	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐.

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ Accelerated filer ☐
Non-accelerated Filer ☒ Smaller reporting company ☒
Emerging growth company ☐

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Leveraging Human Biology and Data Science to Discover New Therapies for Neurological Diseases and Oncology