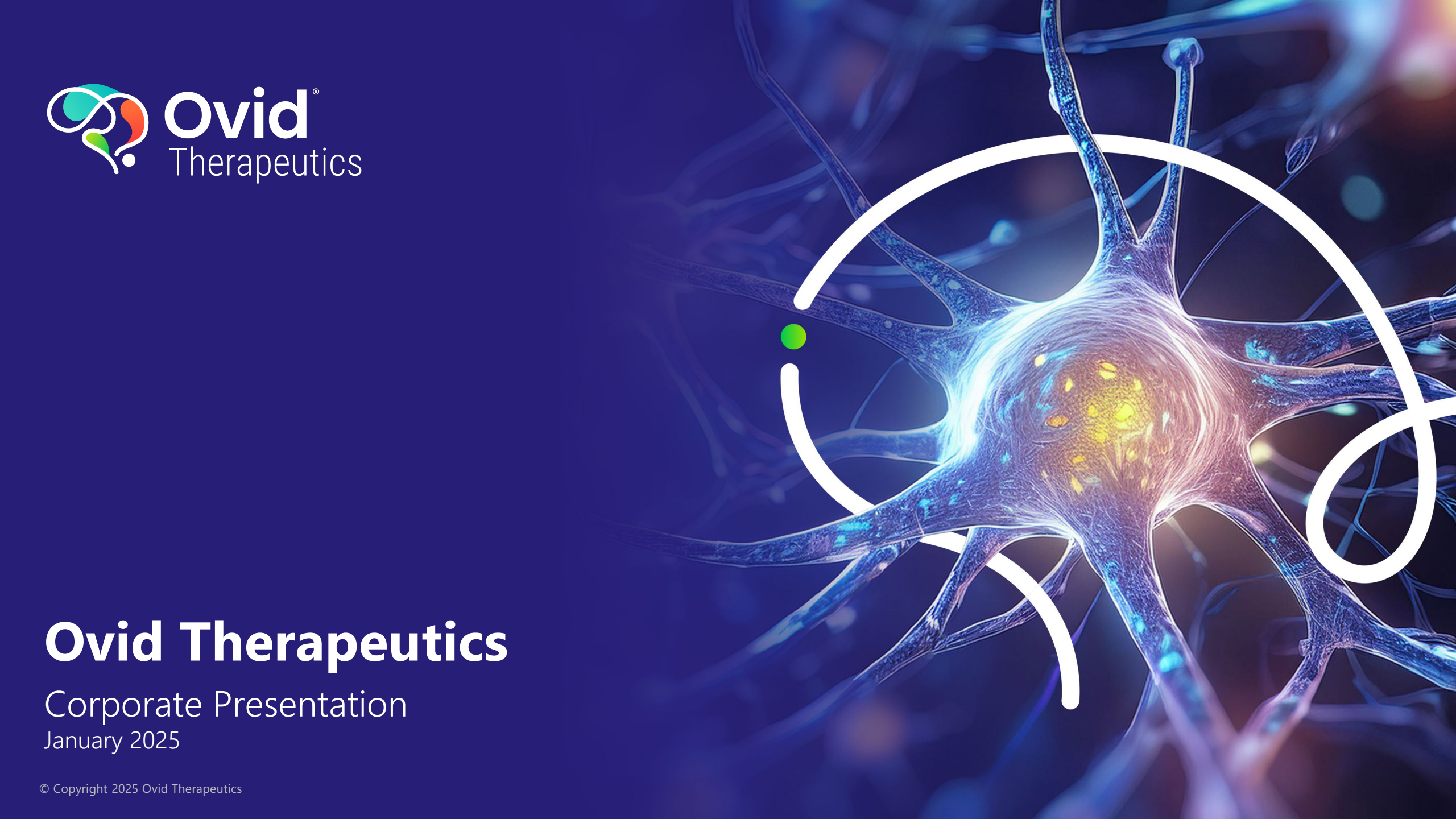

Ovid Therapeutics

Corporate Presentation

January 2025

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Forward looking statement

This presentation contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 including, without limitation, the potential therapeutic benefits of Ovid's current or future product candidates and pipeline programs; Ovid's expectations regarding the duration its cash runway, and the expectation that it will support the advancement of Ovid's pipeline; statements regarding the expected timing of the initiation, completion, and results and data of Ovid's clinical studies; the potential to add additional cohorts to the Phase 1 MAD study of OV329, expected timing of completion of the study and expected timing of data presentation; the expected timing of submission of a regulatory application for a Phase 1 trial of OV350 IV and, the expected timing of initiation of the trial and expected timing of data presentation; Ovid's evaluation of the results of recently completed competitor trials to OV888/GV101 for CCM; the potential use and development of OV329, OV350 and other compounds from Ovid's library of direct activators of KCC2, and OV888/GV101 and other ROCK2 inhibitors; the potential therapeutic opportunity of OV329, OV350 and other compounds from Ovid's library of direct activators of KCC2, and OV888/GV101 and other ROCK2 inhibitors; the potential use of OV329 to treat neuronal hyperexcitability; the likelihood that data, including safety and tolerability data, for OV329 will support future development and therapeutic potential; the suitability of OV329 for a range indication opportunities; the clinical and regulatory development and expected timing of the initiation, completion and results and data of any clinical studies related to any of the KCC2 compounds in the Company's library including OV350, OV4071, OV4000 series and OV5000 series; the suitability of the Company's library of novel, direct KCC2 transporter activators for a range of formulations and administrations; the potential development and therapeutic opportunity of OV888/GV101; and the potential safety, selectivity and potency of OV888/GV101 and other ROCK2 inhibitors; and expectations regarding the size of the market for Ovid's current or future product candidates and pipeline programs. You can identify forward-looking statements because they contain words such as "will," "may," "plan," "believes," "intends," "anticipates," "design," "advance," "target," "seek," "expects," "demonstrates," and "potential," and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances).

Forward-looking statements are based on Ovid's current expectations and assumptions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that may differ materially from those contemplated by the forward-looking statements, which are neither statements of historical factor guarantees or assurances of future performance. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, without limitation, uncertainties inherent in the preclinical and clinical development and regulatory approval processes, risks related to Ovid's ability to achieve its financial objectives, the risk that Ovid may not be able to realize the intended benefits of its technology or its business strategy, risks related to Ovid's ability to identify business development targets or strategic partners, to enter into strategic transactions on favorable terms, or to consummate and realize the benefits of any business development transactions and risks to Ovid's or any of its partners' abilities to meet anticipated deadlines and milestones. Additional risks that could cause actual results to differ materially from those in the forward-looking statements are set forth under the caption "Risk Factors" in Ovid's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (SEC) on November 12, 2024, and in future filings Ovid makes with the SEC. Any forward-looking statements contained in this press release speak only as of the date hereof, and Ovid assumes no obligation to update any forward-looking statements contained herein, whether because of any new information, future events, changed circumstances or otherwise, except as otherwise required by law.

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OUR FOCUS

Foundational biological targets

implicated in neuronal hyperexcitability, neuroinflammation or neurovascular dysfunction

Substantial therapeutic opportunities

across neurological and neuropsychiatric conditions with deep unmet need

Highly specific small molecules

mechanistically targeted to address the root biological causes of diseases of the brain

Cash balance of $62.7 million

expected to support pipeline into H2 2026[1]

1. As of September 30, 2024

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Differentiated pipeline, advancing in the clinic

Programs	Indication	Preclinical	Phase 1	Phase 2	Anticipated Milestones
OV329 GABA-aminotransferase inhibitor	• Conditions with neuronal hyperexcitability and seizures				Phase 1 readout with clinical effect biomarkers in 2025* *Topline timing to be updated following discussions with regulators
OV888/GV101[1] Selective ROCK2 inhibitor Collaboration with: GRAVITON BIOSCIENCE CORPORATION	• Cerebral cavernous malformations • Undisclosed neurovascular indications				Paused initiation of Phase 2 program in CCM to evaluate insights from recently completed competitor programs
KCC2 DIRECT ACTIVATOR LIBRARY **OV350 IV**	• Acute & sub-acute conditions (e.g., psychosis, pain, others)				Regulatory submission filed in Q4 2024; Phase 1 initiation expected in Q1 2025
OV4XXX oral	• Psychiatric • Neurodegenerative • Neurodevelopmental • Seizure disorders				Completion of IND-enabling studies expected in 2026

1. Graviton is conducting development of OV888/GV101 capsule through Phase 2, which will be directed by a Joint Development Committee that includes members from both Graviton and Ovid.

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Anticipated pipeline milestones

Program	Key milestones	Anticipated timing
OV329	Results of Phase 1 SAD/ MAD with transcranial magnetic stimulation (TMS) and magnetic resonance spectroscopy (MRS) biomarkers	2025* *Topline timing to be updated following discussions with regulators
OV888/ GV101	Cleared by regulators to proceed with Phase 2, but paused to assess insights from competitor trials in CCM to inform potential approach in future	Paused
OV350 IV	Regulatory clearance for first-in-human study of KCC2 direct activator and Phase 1 study initiation	Q1 2025
	Phase 1 study results	Early 2026
OV4XXX oral	Completion of IND enabling studies	2026

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OV329

A next-generation GABA-aminotransferase inhibitor for the potential treatment of conditions of neuronal hyperexcitability & seizures

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OV329, a potential best-in-class, next-generation GABA-aminotransferase (GABA-AT) inhibitor

Validated target

- Inhibiting GABA-AT increases endogenous levels of GABA, the inhibitory neurotransmitter
- In non-clinical studies, OV329 shows >100x greater potency over first-generation GABA-AT inhibitor, vigabatrin[1]

Designed to avert toxicities of first-generation GABA-AT inhibitors

- OV329 has established a therapeutic index within which no ocular toxicity has been observed

Low doses deliver prolonged anti-convulsant effects; rapidly clear tissue; and do not show signs of sedation

- Repeat low doses lead to profound tonic current changes & optimal levels of GABA

Potential portfolio in a product

- Increasing GABA and reducing neuronal hyperexcitability is relevant for many conditions

1. Yang J, et al. Vigabatrin-induced retinal toxicity is partially mediated by signaling in rod and cone photoreceptors. PLoS One. 2012;7(8):e43889. doi: 10.1371/journal.pone.0043889. Epub 2012 Aug 30.

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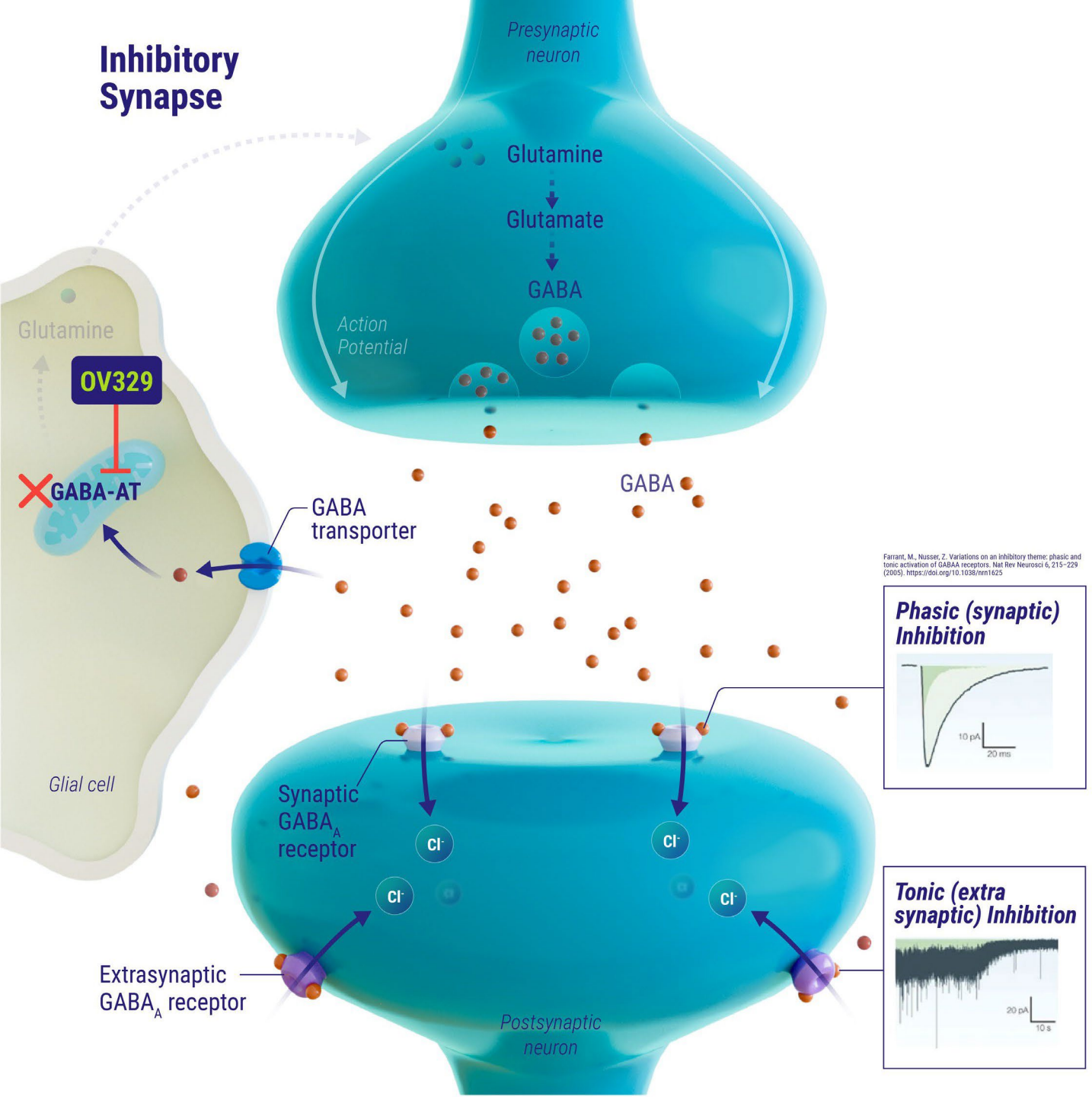

OV329 mechanism of action

Substantially reduces GABA-AT activity, the enzyme responsible for degrading GABA, thereby endogenously elevating GABA, the major inhibitory neurotransmitter[1]

Increases phasic and tonic inhibitory neurotransmission at GABAergic synapses[2]

Creates an inhibitory milieu in the synapse and extra synaptic region

Curbs excessive neuronal excitation and reduces seizures

1. Silverman RB. Chem Rev. 2018 Apr 11;118(7):4037-4070. doi: 10.1021/acs.chemrev.8b00009. Epub 2018 Mar 23. PMID: 29569907; PMCID: PMC8459698.
2. Feja, Malte et al. "OV329, a novel highly potent γ-aminobutyric acid aminotransferase inactivator, induces pronounced anticonvulsant effects in the pentylenetetrazol seizure threshold test and in amygdala-kindled rats." Epilepsia vol. 62,12 (2021): 3091-3104. doi:10.1111/epi.17090

OV329 seeks to improve upon safety & tolerability of 1st generation

SABRIL (vigabatrin) profile:

Effective seizure reduction, but no therapeutic window[1]

Approved for treatment of:[2]

- Forms of infantile spasms
- Complex partial seizures associated with tuberous sclerosis complex

Post-approval, vigabatrin associated with progressive visual field loss from retinal toxicity, resulting in:[3]

- Black Box Warning
- REMS required
- No therapeutic index (therapeutic dose has shown ocular changes)
- Safety concerns deterred broader use & prescribing

SABRIL (vigabatrin) peak sales in U.S. with ocular safety label



(Not representative of global sales)[4]

1. Maguire et al., 2010; Epilepsia, 51(12):2423–2431, 2010
2. Pesaturo KA, Spooner LM, Belliveau P. Vigabatrin for infantile spasms. Pharmacotherapy. 2011 Mar;31(3):298-311. doi: 10.1592/phco.31.3.298. PMID: 21361740.
3. BMJ 1997;314:180–181
4. Evaluate Pharma

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Preclinical findings suggest OV329 safety profile is differentiated

- In ocular accumulation studies, OV329 distributes into the brain and other tissues upon dosing but clears afterwards, whereas vigabatrin was found to preferentially accumulate in the retina[1]
- OV329 is >100x more potent than vigabatrin in animal studies[2]
- Brain penetration demonstrated in animal studies[2]
- Demonstrates rapid tissue clearance properties and half life (1.5 hours) compared to vigabatrin (4 hours)[2]
- Creates an inhibitory milieu by delivering phasic and tonic (synaptic & extra-synaptic) inhibition.[3] Vigabatrin does not deliver phasic inhibition via GABA-AT inhibition

1. Tsai, J., et al. (2024). *Evaluation of the Potential Accumulation of OV329 in the Brain, Retina, and Eye Following Continuous Infusion.* Poster presented at the 2024 Epilepsy Pipeline Conference.
2. Feja et al. OV329, a novel highly potent γ-aminobutyric acid aminotransferase inactivator, induces pronounced anticonvulsant effects in the pentylenetetrazol seizure threshold test and in amygdala-kindled rats. Epilepsia. 2021 Dec;62(12):3091-3104. doi: 10.1111/epi.17090. Epub 2021 Oct 7.
3. Mukherjee, J., et al. (2023). *Blocking of GABA-AT Activity Selectively Alters Tonic and Phasic Inhibition.* Poster presented at the 2023 American Epilepsy Society Conference.

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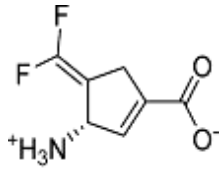
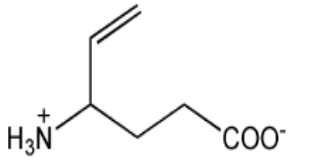
Factors contributing to OV329 safety profile differentiation

	OV329	Vigabatrin
Molecule		
Potency	IC_{50}: ~0.1 - 0.3 μM	IC_{50}: ~60 – 100 μM
Exposure characteristics	Reduced exposure ($T_{1/2}$ ~1.0 Hour) coupled with prolonged PD duration	$T_{1/2}$ >5.0 Hours Both R (inactive) & S (active) enantiomers
Mechanism of enzyme inhibition	Electrostatic (irreversible) (more sophisticated chemistry, primarily enamine pathway) [2]	Covalent modification of GABA-AT (reversible) (early generation chemistry, primarily Michael addition pathway) [1]
Purity	Only active, (S) enantiomer	Mixture of active (S) and inactive (R) enantiomers
Inhibition	Phasic + tonic (synaptic & extra synaptic)	Phasic (synaptic)
Therapeutic index (as measured in Sprague Dawley rats, a proxy model used to assess ocular safety)	✓	✗ None – toxicity seen at therapeutic dose

Improved potency (>100x) and established therapeutic index[2]

1. J Med Chem. 2012 Jan 26; 55(2): 567–575; 2. J Am Chem Soc. 2018 Feb 14; 140(6): 2151–2164
2. Feja et al. OV329, a novel highly potent γ-aminobutyric acid aminotransferase inactivator, induces pronounced anticonvulsant effects in the pentylenetetrazol seizure threshold test and in amygdala-kindled rats. Epilepsia. 2021 Dec;62(12):3091-3104. doi: 10.1111/epi.17090. Epub 2021 Oct 7.

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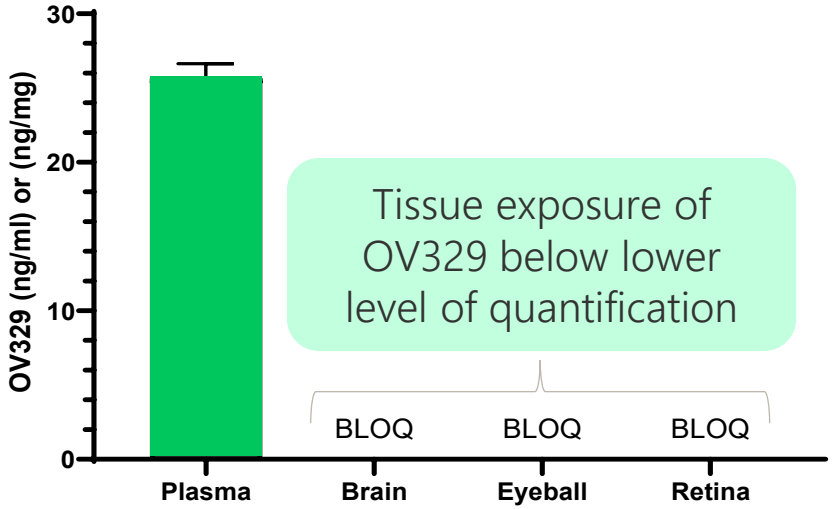
Head-to-head ocular accumulation study of OV329 versus vigabatrin

Lack of retinal accumulation of OV329 supports differentiated ocular safety profile vs. vigabatrin[1]

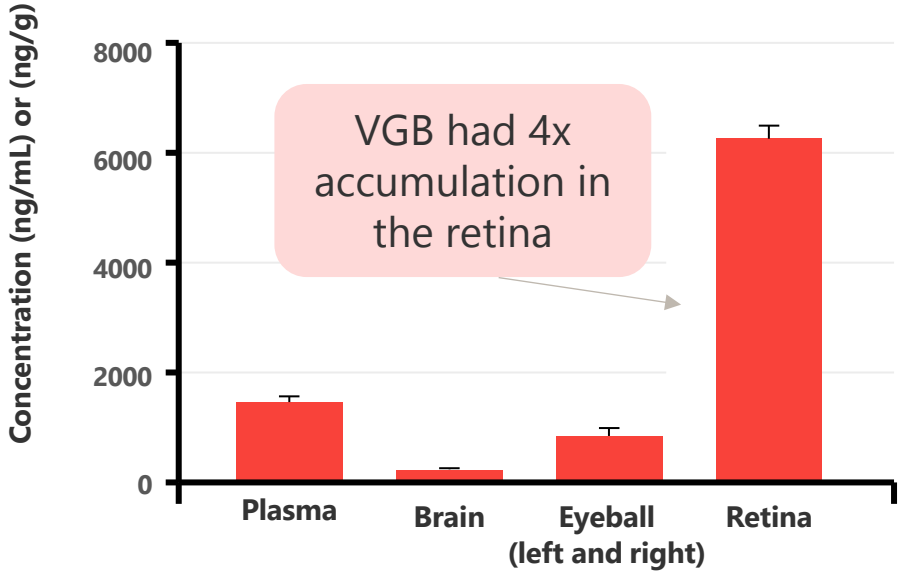
OV329

Mean Plasma and Tissue Concentration 5.0 mg/kg/day



VIGABATRIN

Mean Plasma and Tissue Concentration at 80.0 mg/kg/day



FINDINGS[1]

- OV329 penetrated the brain, was present in the plasma and then cleared the tissue
- No accumulation detected of OV329 in the eye or retina
- 4x greater exposure of vigabatrin in retina as compared to plasma
- Suggests vigabatrin, but not OV329, preferentially partitions into the retina when plasma exposure is kept at a relatively constant level

1. Tsai, J., et al. (2024). *Evaluation of the Potential Accumulation of OV329 in the Brain, Retina, and Eye Following Continuous Infusion.* Poster presented at the 2024 Epilepsy Pipeline Conference.

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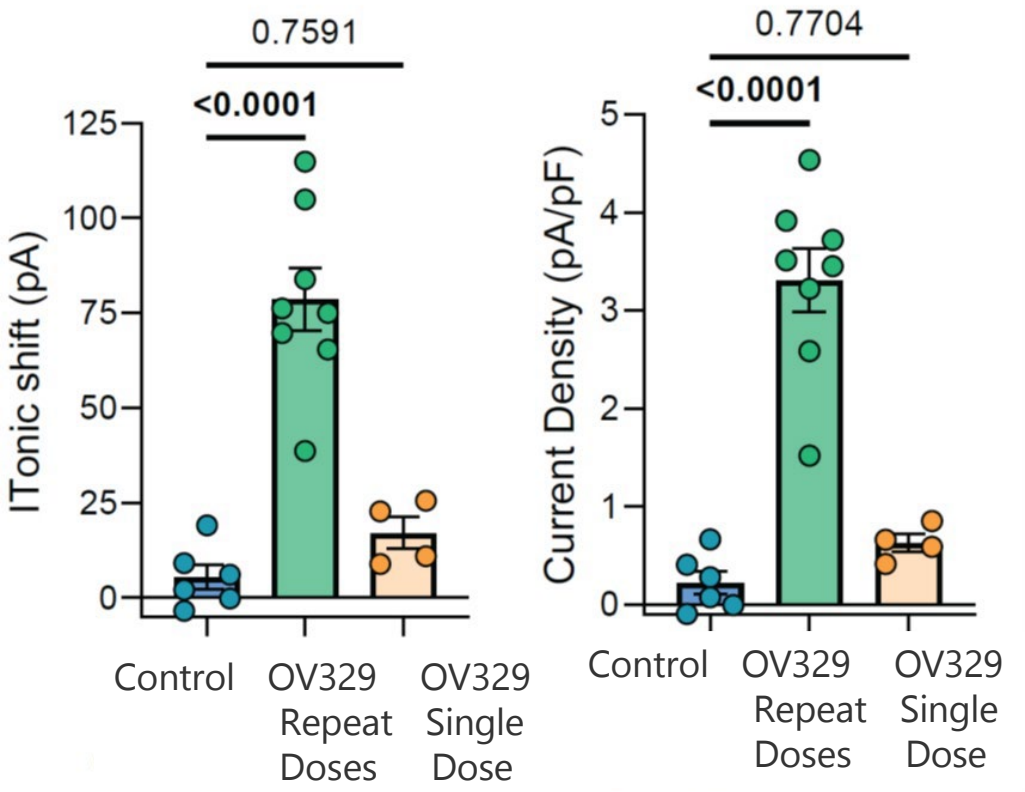
Repeat low doses of OV329 delivers tonic and phasic inhibition, potentially enabling prolonged seizure reduction

Change in tonic current (mice)



OV329 achieves modulation of GABAergic inhibition by both phasic (synaptic) and tonic current (extra-synaptic)

Chronic dosing of OV329 leads to sustained GABA increase and enhanced tonic current (extra-synaptic)

The tonic GABA inhibitory response is likely to modulate neuronal hyperexcitability more effectively

1. 1. Mukherjee, J., et al. (2023). Blocking of GABA-AT Activity Selectively Alters Tonic and Phasic Inhibition. Poster presented at the 2023 American Epilepsy Society Conference.

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Anti-convulsant activity demonstrated in 9 seizure models

Seizure reduction seen in chronic & acute seizure models

	i.v. (ivPTZ)	NMDA-Induced Infantile Spasm model	Audiogenic Seizure	Amygdala Kindled	Corneal Kindled	Intrahippocampal Kainate Model of Mesial-Temporal Lobe Epilepsy (MTLE)	Intraamygdala Kainate Model of Mesial-Temporal Lobe Epilepsy (MTLE)	Lithium-Pilocarpine	Dravet *Scn1a* $^{A1783V/WT}$
Injury Model	Acute/ seizure	Acute/ seizure	Acute	Chronic/ epilepsy	Chronic/ epilepsy	Chronic/ epilepsy	Epilepsy prevention/ modification	Acute/ seizure	Chronic/ Genetic epilepsy
Clinical Correlate	Nonconvulsive Seizures (e.g., absence, myoclonic)	Infantile spasms	Generalized seizures	Chronic focal to bilateral tonic-clonic seizure/ Pharmacoresistant seizures	Chronic focal to bilateral tonic-clonic seizure	Focal Mesial temporal lobe epilepsy/ Pharmacoresistant seizures; Status Epilepticus	Focal Mesial temporal lobe epilepsy/ Pharmacoresistant seizures; Status Epilepticus	Like human, rodents exhibit EEG abnormalities, convulsions, and cognitive impairment	Spontaneous seizures, higher rate of SUDEP. Hyperthermia-induced Pharmcoresistant seizures.
Species	Rat	Mouse	Mouse	Rat	Mouse	Mouse	Mouse	Rat	Mouse
Dosing	Acute (5, 20, 40 mg/kg i.p.)	Acute (0.0025, 0.01, 0.1, 1 mg/kg, p.o.)	Acute (0.01, 0.05, 0.1 mg/kg, p.o.)	Acute (30, 40 mg/kg, i.p.)	Acute (1, 3, 10, 20, 30, 40, 60 mg/kg, p.o.)	Acute, single dose (0.01, 0.1, 1, 10 mg/kg, p.o.; 10 mg/kg, i.p.) Subacute (8 days q.d.) 0.3, 1.0 and 3.0 mg/kg/day (p.o.)	Acute (40 mg/kg p.o.)	Acute (15mg/kg, IV)	Repeat (10mg/kg x 4d, IP)
Activity	+	+	+	+	+	+	+	+	+

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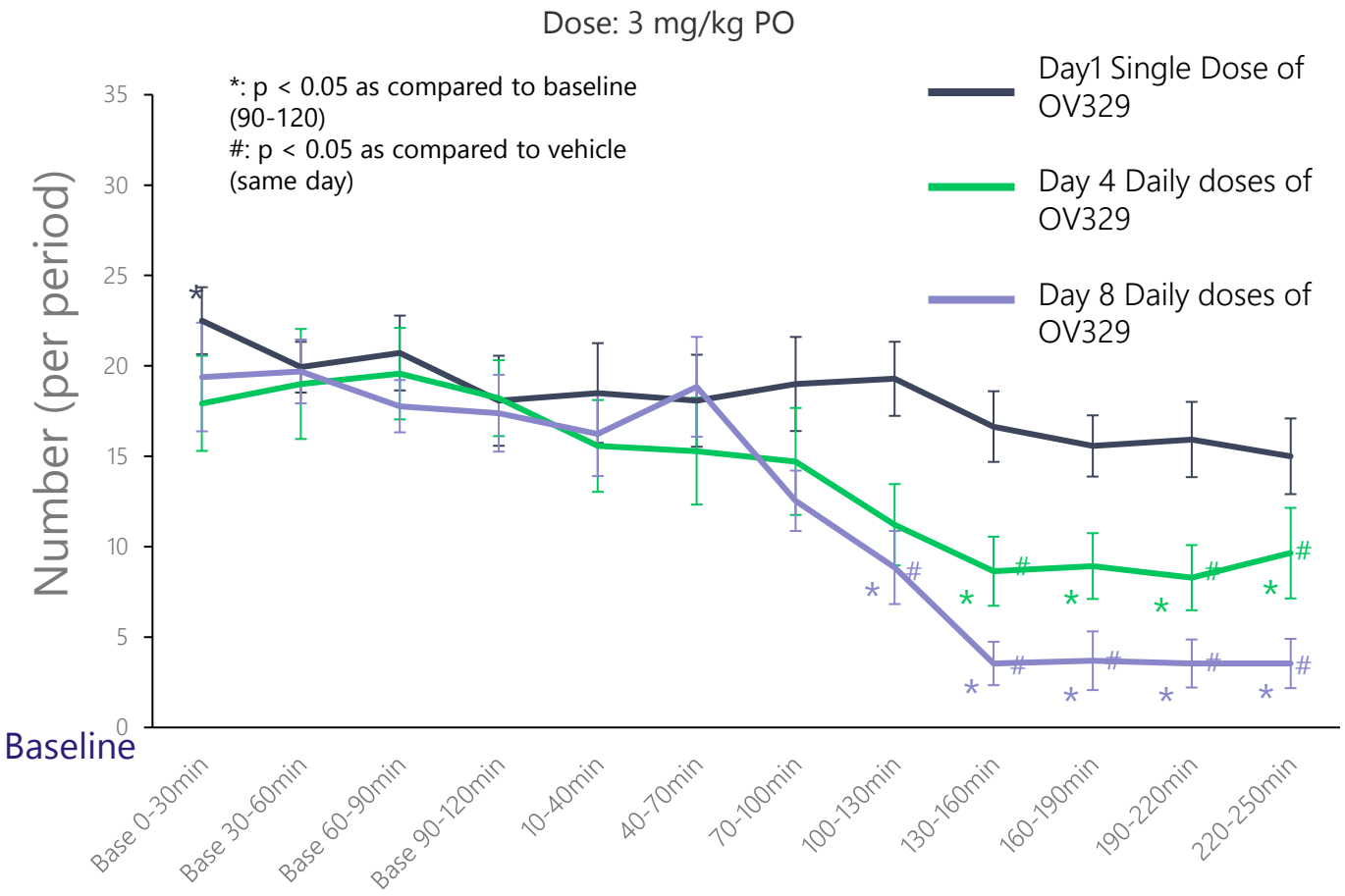
Repeat, low doses reduces seizure frequency & duration in animal models

MTLE Disease Model



Mesial temporal lobe epilepsy (MTLE) mouse model reflects:

- Common epilepsy (focal seizures)
- The main pharmaco-resistant form of epilepsy

Repeat oral dosing at 3 mg/kg leads to improved efficacy of seizure reduction:

- Seizure numbers
- Cumulative duration of focal seizures

Prolonged GABA-AT inhibition and enhanced effects by repeat low doses

Mukherjee, J., et al. (2022). *OV329, a Next-Generation GABA-AT Inhibitor, Suppresses Hippocampal Paroxysmal Discharges Following Repeat Dosing in a Mouse Model of Mesial Temporal Lobe Epilepsy.* Poster presented at the American Epilepsy Society 2022.

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OV329 has the potential to be a franchise in a product

Chronic
Applications
(Oral Formulations- in Phase 1)

- Treatment-resistant epilepsies
- Developmental epileptic encephalopathies with focal seizures
- Seizures associated with Tuberous sclerosis complex
- Neonatal spasms
- Focal seizures

Acute
Applications
(IV formulations-IND ready[1])

- Refractory status epilepticus
- Seizures from alcohol withdrawal
- Post-surgical pain

Multiple potential indication opportunities driven by endogenously increasing GABA levels

1. 1. OV329 IV has filing package ready, however program was deprioritized in August 2024 to prioritize corporate resources

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OV329 clinical development

Phase 1 safety, tolerability and biomarker study

Completed: 3 SAD cohorts in healthy volunteers

Completed: 2 MAD cohorts; excellent safety; no SAEs

Two biomarkers measuring biological effect and target engagement:

- Transcranial magnetic stimulation (TMS)
- Magnetic resonance spectroscopy (MRS)

Included safety metrics, tolerability & ophthalmic monitoring, such as:

- Best corrected visual acuity
- Fundus photography
- Indirect dilated ophthalmoscopy
- Automated threshold visual field perimetry
- Optical Coherence Tomography

Next steps:

- Based upon encouraging human safety in Phase 1, engaging regulators to add higher dosing cohorts to increase dosing opportunities for future Phase 2 programs
- Anticipated biomarker and safety readout in 2025

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KCC2 library & OV350

Potential first-in-class direct activators of the potassium chloride co-transporter 2 (KCC2)

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KCC2 is a fundamental biological target in maintaining inhibitory/excitatory balance[1]

Precise mechanism of action

to rebalance network hyperexcitability

Targets synaptic inhibition

the "final common pathway" downstream of many genetic and acquired causes of epilepsy, and other neurological conditions

Converges on a broad spectrum of neurodegenerative disorders

where hyperexcitability accelerates disease progression

Central to maintaining GABA-ergic inhibitory tone

1. Pressey et al. "Chloride transporters controlling neuronal excitability", https://doi.org/10.1152/physrev.00025.2021

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KCC2 is the main regulator of GABA inhibition by maintaining neuronal chloride homeostasis[1]

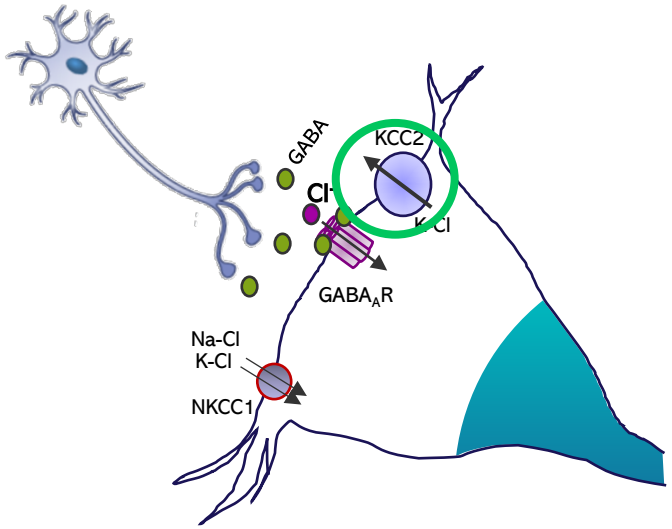
Regulates chloride gradient

Manages the passive inward flux of chloride through activated ion channels

Maintains low intracellular chloride, which is critical for:

- The efficacy of hyperpolarization
- Shunting inhibition mediated by GABAergic signaling in neurons

Healthy Neuron



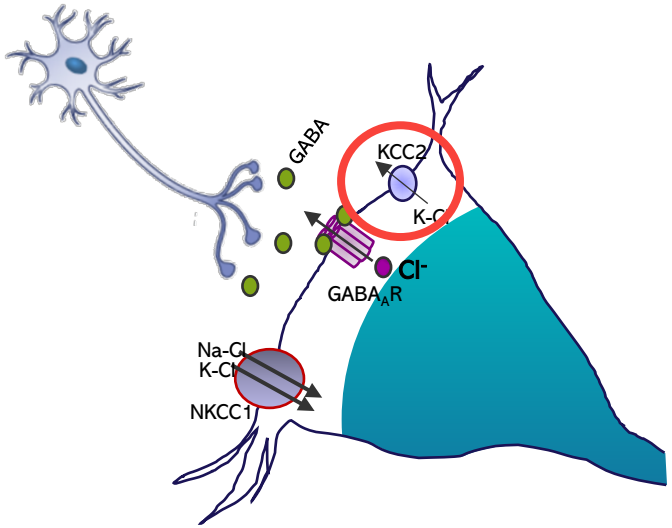
GABA → **inhibitory**

Intracellular chloride

Healthy ↑KCC2

'blanket of inhibition' in brain

Pathological Conditions



GABA → **hyper-excitatory**

Intracellular chloride

Pathology↓KCC2

hyperexcitable circuitry

1. Cheung, D.L., Toda, T., Narushima, M. et al. KCC2 downregulation after sciatic nerve injury enhances motor function recovery. Sci Rep 13, 7871 (2023). Illustrations adapted from publication by Phan Q. Duy, Miao He, Zhigang He & Kristopher T. Kahle (2020) Preclinical insights into therapeutic targeting of KCC2 for disorders of neuronal hyperexcitability, Expert Opinion on Therapeutic Targets, 24:7, 629-637, DOI: 10.1080/14728222.2020.1762174

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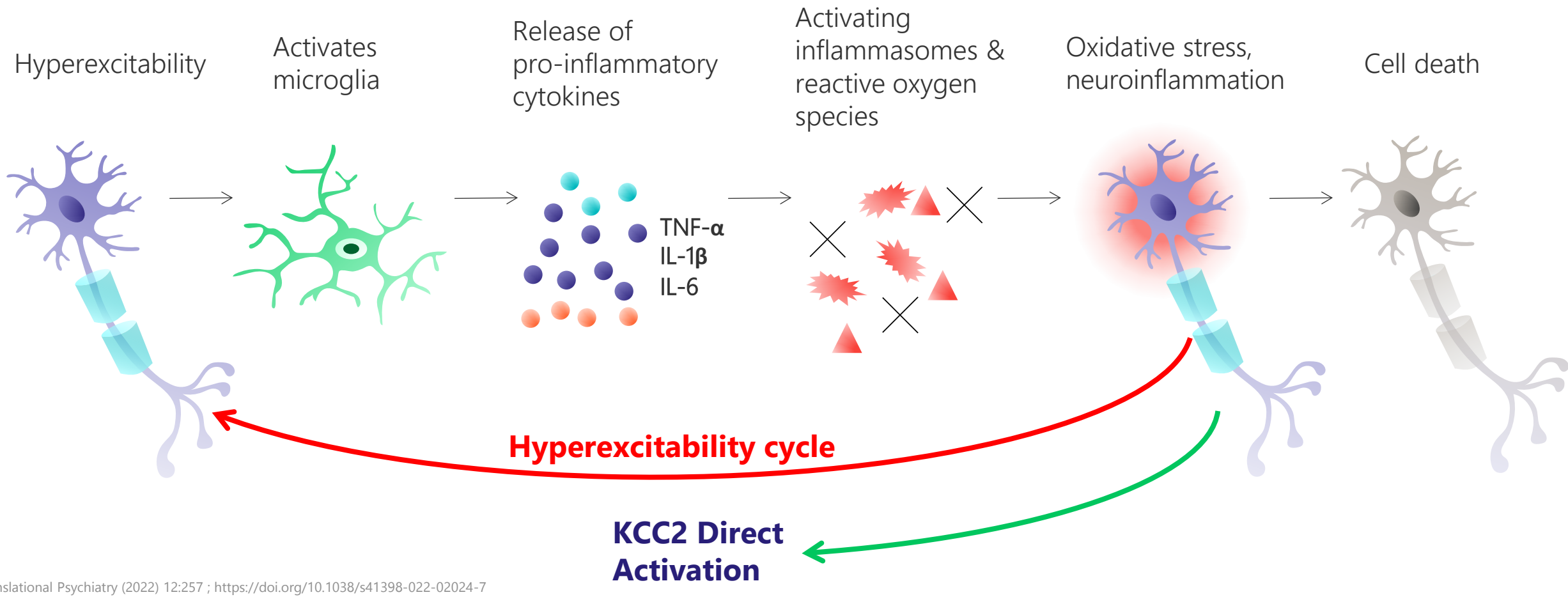
Hyperexcitation can drive cascade of toxic neuro-inflammation & cell death

Directly activating KCC2 can break the hyperexcitability cycle, returning cells to neuronal homeostasis



Translational Psychiatry (2022) 12:257 ; https://doi.org/10.1038/s41398-022-02024-7

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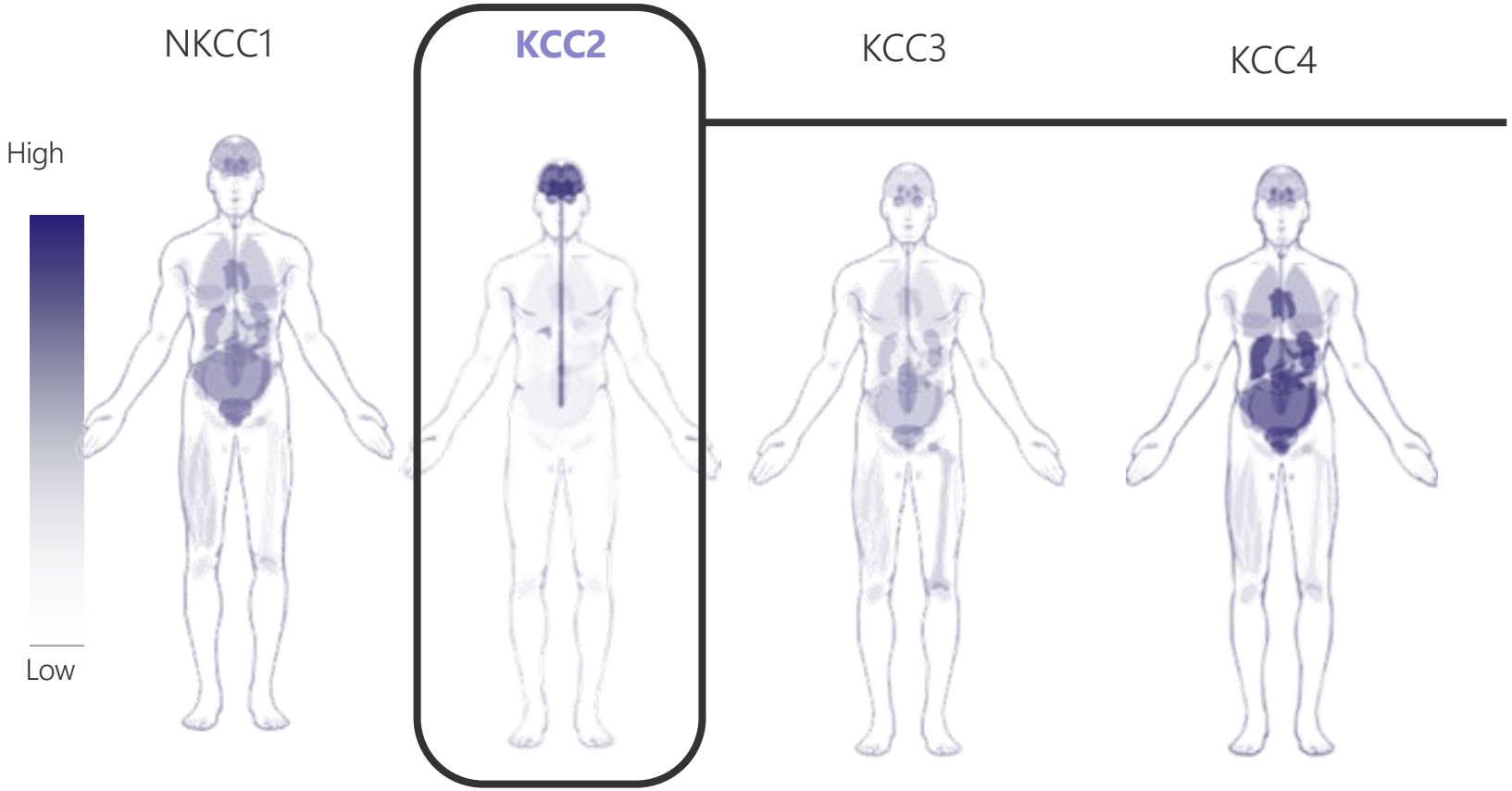
KCC2 is exclusively expressed in the CNS

KCC2 expression vs. other transporters modulating chloride homeostasis



Isoform of the potassium chloride co-transporter family

KCC2 expression only in neurons

Not systemically expressed in other organs

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Ovid's portfolio of KCC2 direct activators

4 compounds in active development
each with unique characteristics

High degree of specificity with lower risk of off-target effects

Multiple formulation opportunities,
broad therapeutic potential

No sedation observed using in vivo models

Phase 1, first-in-human for OV350,
anticipated in Q1 2025

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KCC2 offers broad therapeutic potential in areas with high unmet need

Neuropsychiatric disorders

Psychosis

Schizophrenia

Bipolar disorder

Obsessive compulsive disorder

Depression

Anxiety

Neurodevelopmental disorders

Rett syndrome

Developmental epileptic encephalopathies

Autism spectrum disorder



Neurodegenerative disorders

Psychosis in neuronal synuclein disorders (Parkinson's disease, Lewy body ddementia)

Huntington's disease

Pain

Multiple pain syndromes

Epilepsies & seizure disorders

Cluster seizures

Treatment resistant seizures

Acoustic Trauma

Tinnitus

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Potential for prolific franchise delivering annual regulatory submissions

	2025	2026	2027+
OV350	Phase 1 →	Phase 1 results	Phase 1b results
OV4XXX oral		Phase 1	Phase 2 initiation
OV4XXX intramuscular injection			Phase 1
OV4XXX oral			Phase 1
OV5000 series			Phase 1

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First program from portfolio: OV350, a first-in-class KCC2 direct activator

Specificity

Directly binds to KCC2 (surface plasmon resonance and thermal shift assay)

No off-target effects on kinases regulating KCC2 activity (PKC, SPAK, WNK)

Penetrance

Small molecule (MW<500)

Excellent brain penetration

Potential for biomarker

OV350

Disease model activity

Comparable activity to clozapine

Prominent anti-psychotic activity

Anti-convulsant activity

Neuroprotective signals

Safety

No evidence of sedation in animals

Permissive safety package

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OV350 elicits rapid antipsychotic-like effects in preclinical screen

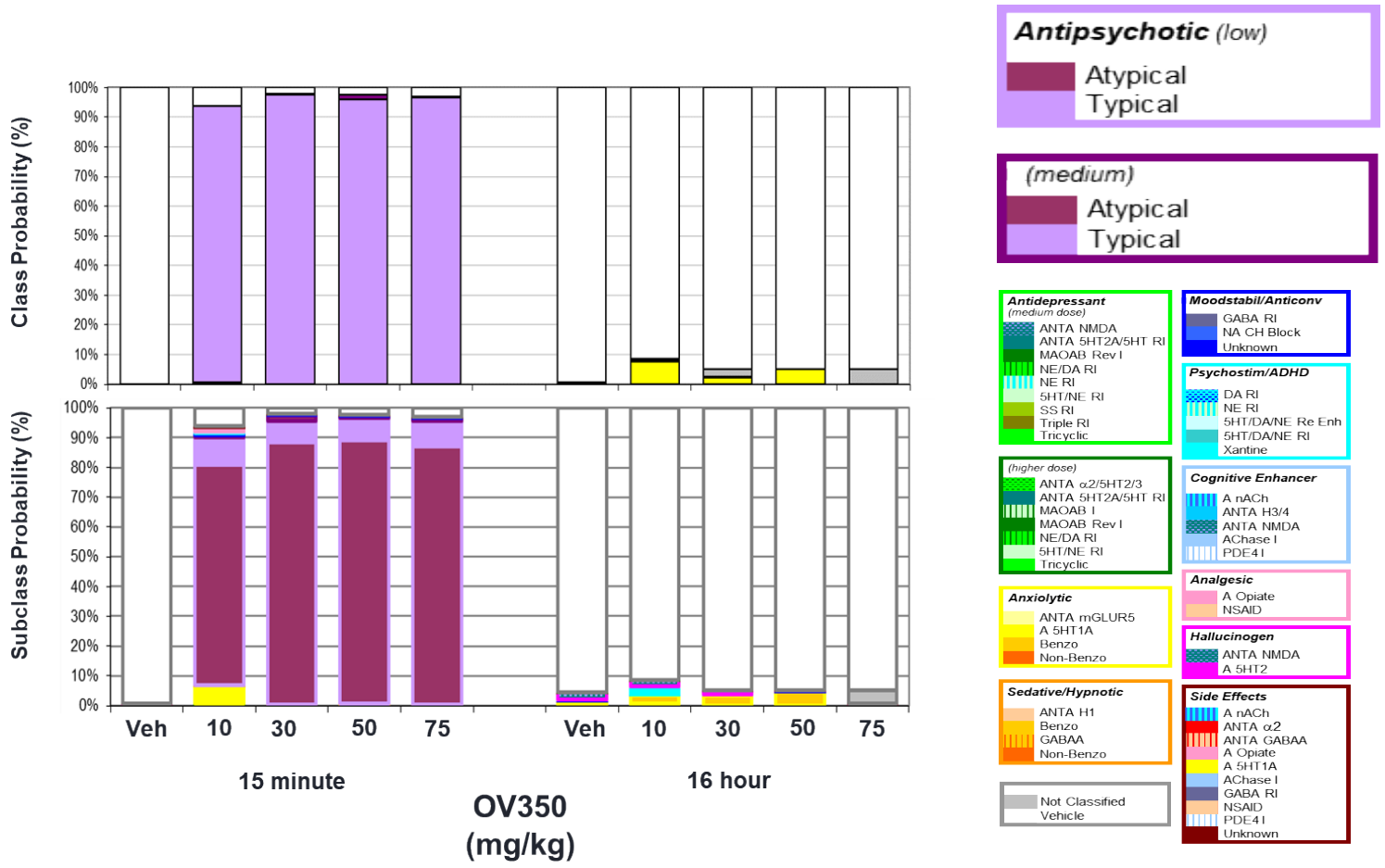
Potent, robust, rapid and reversible antipsychotic activities have been observed for OV350[1]

Behaves as atypical antipsychotic with a clean profile in SmartCube®

Elicits its in vivo effects within 15 minutes of administration

Effects are robust from 10 mg/kg dose and increase with higher dose; and disappear in 16 hours

No sedation or other adverse behavior effects observed up to 75 mg/kg



1. Ovid data on file

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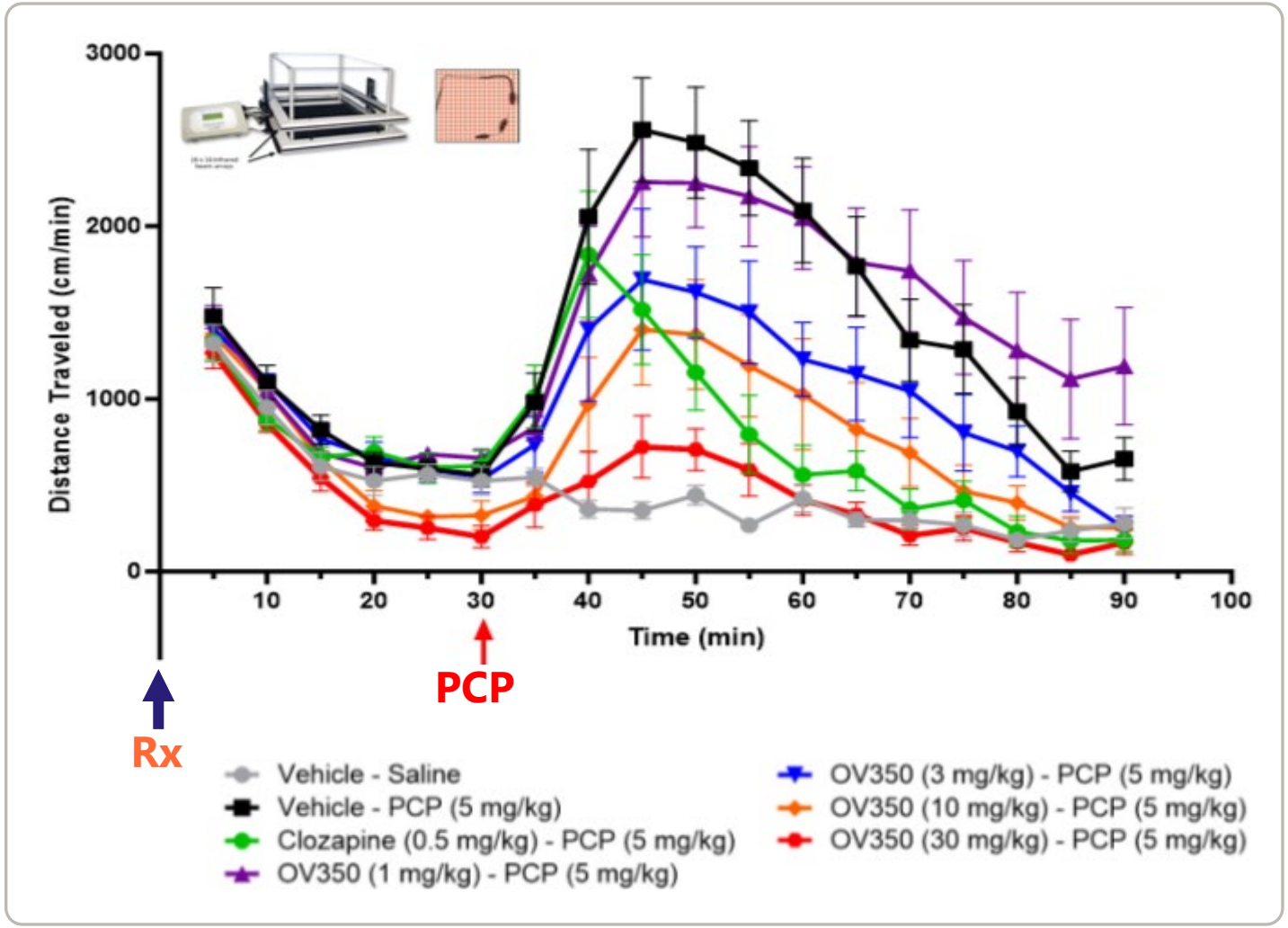
OV350 demonstrates anti-psychotic effects in a schizophrenia model



Phencyclidine-induced psychosis (PCP) is characterized by:

- Confusion, excitation, aggression, paranoia, hallucinations, and can be experimentally measured by hyperlocomotion

OV350 demonstrated dose dependent responses and inhibited PCP induced hyperlocomotion

OV350 appears to have anxiolytic effects without causing sedation

1. Ovid data on file

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OV350 IND-enabling studies show favorable toxicology profile & dose-dependent exposure

- ✓ **All IND-enabling studies completed**
- ✓ **NOAEL identified in both species**
- ✓ **Supportive of Phase 1 study**

- OV350 exhibits dose dependent exposure
- Ames and in vitro mutagenesis tests negative (i.e., clean)
- DDI assessment completed with no concerns
- Drug product manufacturing on track

Rat (QD)

- Mild, reversible clinical tox observed with no macro/microscopic findings at target dose range
- Cmax and AUC increase dose proportionally

Beagle Dog (QD)

- Well tolerated within target dose range
- No target organ macro/microscopic findings

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Rationale for OV350 IV as first-in-human direct activator of KCC2

Attribute	Rationale
First-in-class molecule	✓ First-in-human study using formulation less subject to absorption/metabolism variability ✓ Drives learnings around PK parameters and safety, tolerability to inform future studies and next compounds
Sets stage for additional oral compounds	✓ Development ahead of PO formulations ✓ Once safety demonstrated, accelerate development of first oral compound
Enables acute care option	✓ Potential for role in acute care settings, contributing to care continuum

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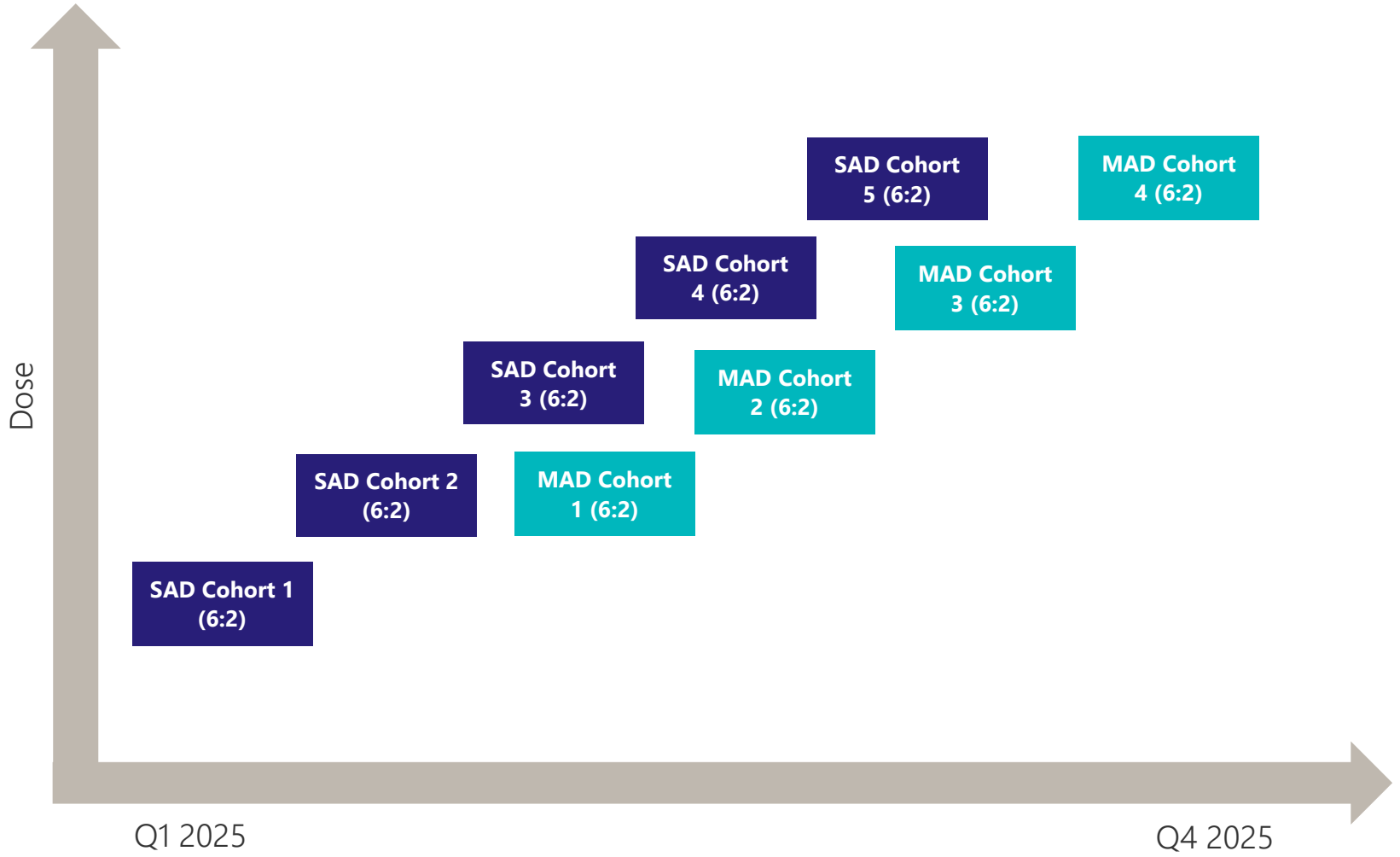
OV350 Phase 1: Staggered SAD/MAD to rapidly advance program



Healthy volunteer SAD/MAD

Sentinel gated cohorts

Endpoints will be collected on:

- Pharmacokinetics
- Safety and tolerability
- Pharmacodynamic data

Starting dose 50mg

Exploratory qEEG used as a potential biomarker*

Creates optionality to run one or more Phase 1b studies in patients

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*Note: qEEG may not show changes because the chloride gradient is not dysregulated in healthy volunteers

OV888/GV101

A highly selective inhibitor of rho-associated coiled-coil containing protein kinase 2 (ROCK2) for potential treatment of cerebral cavernous malformations & other neurovascular disorders

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Overview ROCK2 inhibition: OV888/GV101

Ovid collaborating with Graviton Bioscience to realize ROCK2 inhibition for the CNS disorders

Ovid Therapeutics + GRAVITON BIOSCIENCE CORPORATION

OV888 (GV101), best-in-class potential

- Potent and highly selective for ROCK2
- Well characterized safety profile (two Phase 1 studies)
- Blood-brain barrier penetrant
- Safety profile and tolerability well-characterized in humans (two Phase 1 studies completed)

Novel mechanism

- ROCK2 is a signaling pathway that acts on actin cytoskeletal processes, cellular to extracellular matrix adhesion and fibrosis
- Relevant for conditions with endothelial dysfunction & neurovascular disorders, including cerebral cavernous malformations

Regulatory precedent

- Prior ROCK2 approvals (REZUROCK® in GVHD)
- Potential to leverage orphan and/or accelerated approval programs

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Clinical development status: OV888/ GV101

Completed Phase 1 safety study

- Target engagement demonstrated in humans
- No serious adverse events, well tolerated at all doses tested

Phase 2 trial initiation in CCM currently being evaluated

- Secured regulatory approval to proceed with patient dosing in Israel
- Paused to evaluate insights from recently completed competitor trials in CCM, including:
  - Results, duration, biomarkers, and enrichment strategies

With Graviton, continuing to explore additional indication opportunities

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OV888/GV101 capsule: Phase 1 topline results

Overview

- OV888/GV101 capsule formulation
- Double-blinded, placebo controlled
- Male/female healthy adult volunteers
- 7-day consecutive dosing:
  - MAD: 100 mg, 200 mg, 400 mg, and 600 mg
- Objective to measure:
  - Safety
  - Tolerability
  - Pharmacokinetics

Results

- ✓ Objective met: Well-tolerated at all tested doses
- ✓ Target engagement achieved
- ✓ Exposure & half-life supportive of once daily dosing
- ✓ Results:
  - No SAEs; no participants met preset stopping criteria
  - All AEs were mild and resolved
  - Asymptomatic laboratory results rated grade 2 or higher in at least 5% of subjects:
    - Clinically insignificant increases in total bilirubin without direct hyperbilirubinemia, with no concurrent liver enzyme elevations, reported in 30% of participants
    - Creatine phosphokinase elevations without muscle pain or weakness were reported in 7% of participants
    - All participants normalized during the study period

Source: Ovid & Graviton data on file

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Ovid positioned to be at the forefront of neurotherapeutics revolution

- ✓ Differentiated CNS pipeline with first-in-class or best-in-class programs
- ✓ OV329 phase 1 clinical effect biomarker and safety results expected in 2025
- ✓ First-in-human KCC2 direct activator, OV350, to enter phase 1 in Q1 2025; results expected early 2026
- ✓ Broad partnership potential for current programs
- ✓ Experienced team with collective track record of developing and commercializing >25 medicines
- ✓ Capital base and disciplined financial strategy provides runway into H2 2026

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Thank you

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