



# **Reviva Pharmaceuticals**

Corporate Presentation | November 2025

## **Forward-Looking Statements**

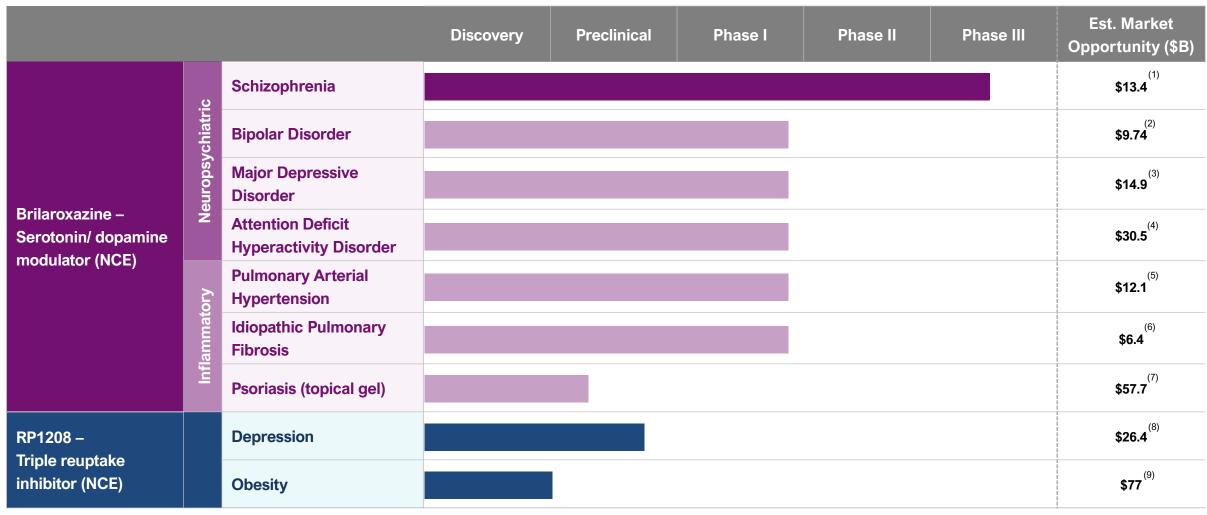
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# **Reviva Clinical Development Pipeline**



<sup>\*</sup>Opportunity to expand into other indications including Parkinson's Psychosis and Alzheimer's (Psychosis/agitation)

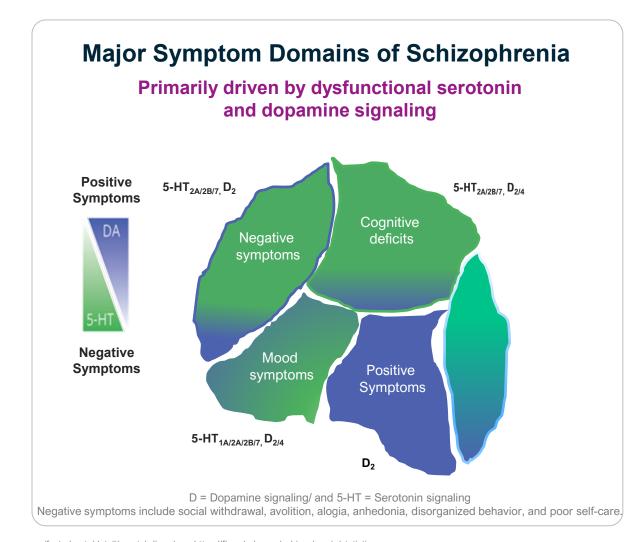


# Schizophrenia: Common Psychiatric Condition With Multiple Symptom Domains

- Affects ~1.1% of the world's population
  - ~ 24 million people globally
  - ~ 3.5 million people in USA
- Mix of heterogenous psychotic symptoms with varying degrees of severity
- Most patients requires lifelong treatment

### **Key Unmet Needs:**

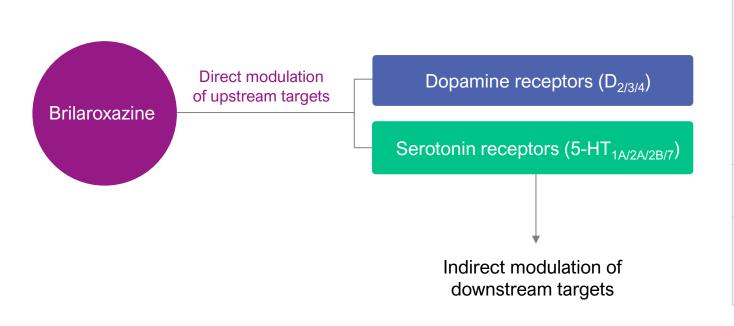
- 1) ~30% of patients are treatment refractory
- 2) High treatment discontinuation rate (30-74%)
- 3) Relapse rate ~25% in 1 year and ~90% in 5 years
- 4) Treating neuroinflammation, as it is implicated as major contributing factor to schizophrenia
- 5) Negative symptoms and nonadherence to treatment are the top unmet needs



Source: Delveinsight Market Research 2023; <a href="https://www.mentalhelp.net/schizophrenia/statistics/">https://www.mentalhelp.net/schizophrenia/statistics/</a>; <a href="https://www.mentalhelp.net/schizophrenia/statistics/">http

# Brilaroxazine: Novel Serotonin-Dopamine & Neuroinflammatory Signaling Modulator

Multi-faceted direct and indirect activities on critical pathways implicated in schizophrenia



#### **Brilaroxazine Receptor Activities**

	Dopamine D <sub>2</sub>	0.47	
High (Ki, nM)*	Dopamine D <sub>3</sub>	3.7	
	Dopamine D <sub>4</sub>	6	
	Serotonin 5-HT <sub>1A</sub>	1.5	
	Serotonin 5-HT <sub>2A</sub>	2.5	
$(5-HT_{2B} > D_2)$	Serotonin 5-HT <sub>2B</sub>	0.19	
	Serotonin 5-HT <sub>7</sub>	2.7	
Madarata (Ki nM)	Nicotine $\alpha_4\beta_2$	36.3	
Moderate (Ki, nM)	Serotonin 5-HT <sub>6</sub>	51	
Weak or no	No significant activities at the rapeutic dose for off-targets 5-HT <sub>2C</sub> , $\alpha_{1,2,}$ and		
significant activity	M <sub>1-4</sub> implicated in cardiometabolic, metabolic, or GI side effects		
	·		

<sup>\*</sup>partial agonists for D<sub>2.3.4</sub> and 5-HT<sub>1A/2A</sub> receptors

Inflammatory cytokines

Implicated in inflammation and immune dysfunction

**Nicotinic receptors** 

Implicated in positive symptoms and cognition

**NMDA/Glycine receptors** 

Implicated in negative symptoms and cognition

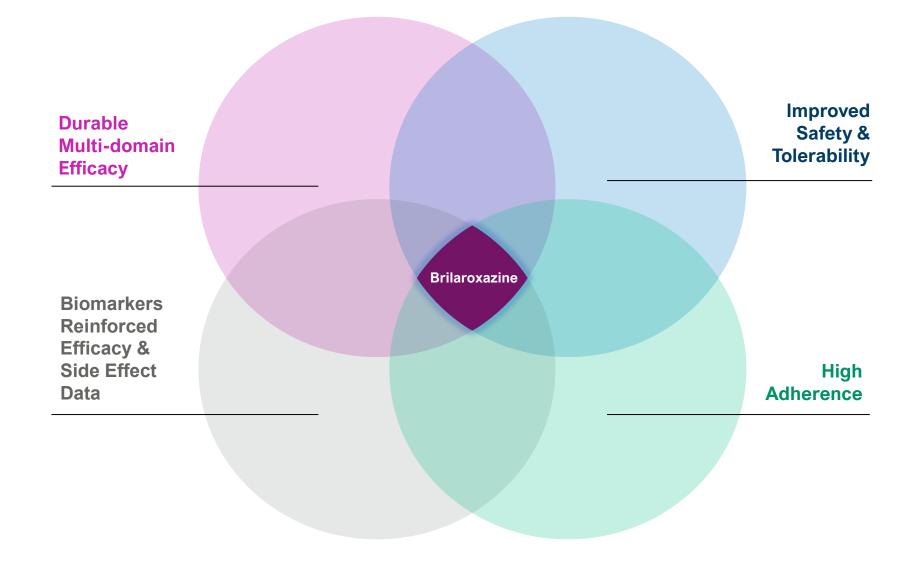
**GABA** receptors

Implicated in mood



# **Brilaroxazine**

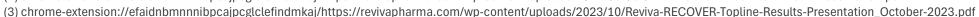
Differentiated clinical profile with potential to address unmet needs across the treatment of schizophrenia compared to historical data reported for standard of care antipsychotics







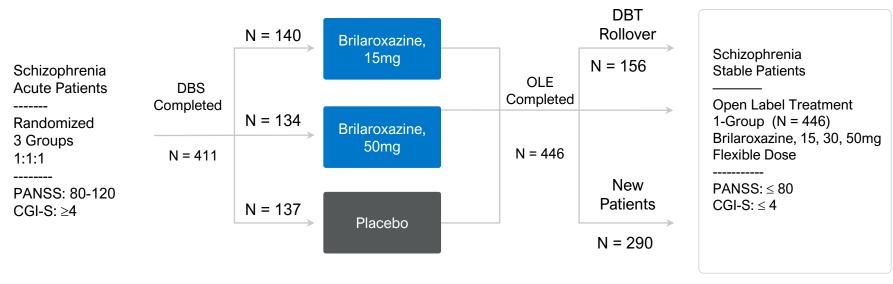
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# **Brilaroxazine Phase 3 RECOVER Trial For Schizophrenia**

Phase 3, Randomized, 28 Days, Double-blind, Placebo-controlled, Multicenter Study to Assess the Safety and Efficacy of Brilaroxazine in Subjects with an Acute Exacerbation of Schizophrenia, Followed by a 52-Week Open-label Extension



Part 1 Double-blind Study (DBS) 28 Days 1-Week follow up and stabilization for patients discontinue treatment or rolling over to OLE

Open-Label Extension Study (OLE) 52 Weeks 1-Week follow up and stabilization for patients discontinue or complete the OLE

Part 2

#### Study Overview

#### **Primary Endpoint (DBS):**

Reduction in total PANSS at the end of treatment in a brilaroxazine arm from baseline versus placebo

#### Safety (DBS, OLE):

Clinical, labs, body weight, lipids, fasting glucose, prolactin

#### **Pharmacokinetics:**

Population pharmacokinetics

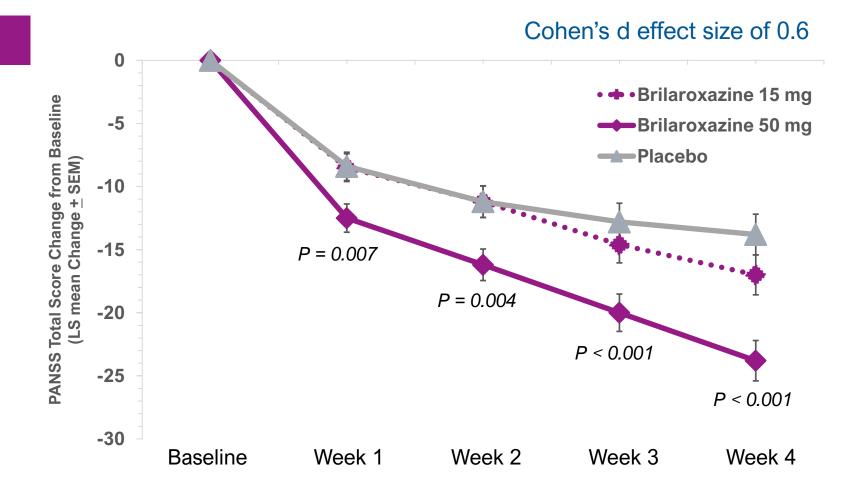


# **Brilaroxazine Phase 3 RECOVER Trial Primary Endpoint: PANSS Total Score**

10.1-point reduction in PANSS total score vs. placebo, p <0.001 (-23.9 brilaroxazine 50 mg vs. -13.8 placebo)

## **PANSS Total Score**

- Successfully met PANSS Total Score primary endpoint for brilaroxazine 50 mg
- Separation for brilaroxazine 50 mg from placebo within a week
- Brilaroxazine 15 mg numerically separated from placebo
- Results further supported by vocal and blood biomarkers data





# Brilaroxazine Phase 3 Trial: Favorable Efficacy, Safety & Adherence

Early onset of action with strong broad-spectrum efficacy further supported by vocal biomarker (VBM) & blood biomarkers

#### **Acute Schizophrenia Patients**

# **Primary Negative Symptom Patients**

## **Acute Patients**

Brilaroxazine 50mg vs Placebo

Vocal Biomarker Positive	)
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Brilaroxazine 50mg vs Placebo

В	lo	0	d	В	io	m	ar	·k	er	S
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Symptom Domains	Point Improvement	Cohen's d Effect Size
PANSS Total Score	-10.1	0.6
PANSS Positive Symptoms	-2.8	0.5
PANSS Negative Symptoms	-2.0	0.4
PANSS Negative Marder Factor	-2.1◆	0.4
PANSS Social Cognition	-1.6	0.5
PANSS Excitement/Agitation	-2.1	0.5
PANSS Gen Psychopathology	-5.3	0.6
Personal & Social Performance	6.3	0.5
CGI-S Score	-0.5 (≥1-point in 78% )	0.5
Treatment Discontinuation	16% (vs. pla	acebo, 22%)

Point Improvement	Cohen's d Effect Size
-15	0.9
-3.5	0.8
-3.7	0.6
-3.8	0.8
6.3	0.6
-0.7	0.7

Neurotrophins* BDNF
Hormones* Prolactin Thyroid T3
Cytokines IL-6 IL-8* IL-10 IFN-γ/IP-10* TNF-α MIP-1*

<sup>\*</sup>Significant improvement, P≤0.05



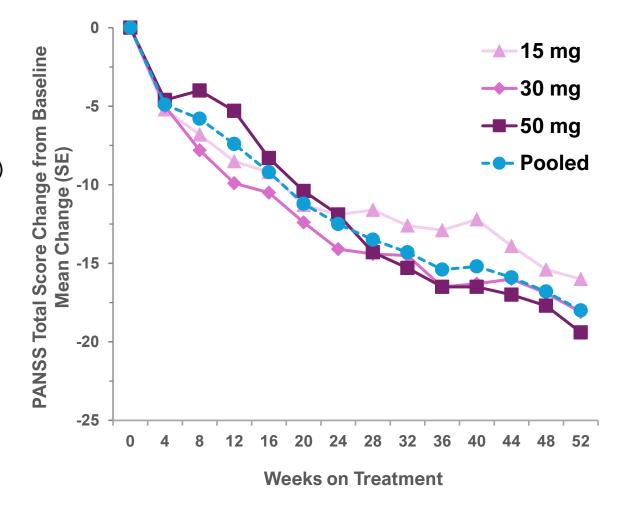
<sup>\*</sup>Significant improvement in Marder scores for depression, hostility, and disorganized thoughts

# PANSS Total Score: Progressive & Durable Efficacy Sustained Over 1-year

18-point decrease with brilaroxazine pooled (15, 30, and 50 mg) at Week-52 vs baseline ( $p \le 0.0001$ ; n = 159)

#### CHANGE IN PANSS TOTAL SCORE

- Strong, progressive and durable efficacy from acute through maintenance treatment with <1% report of exacerbation or relapse of symptoms over 1-year treatment
- Dose dependent decrease from baseline to Week-52 (1-year)
  - 16.0-point decrease in 15 mg (61.2  $\rightarrow$  45.2)
  - 18.0-point decrease in 30 mg (69.7  $\rightarrow$  51.7)
  - 19.4-point decrease in 50 mg (75.6  $\rightarrow$  56.2)
  - 18.1-point decrease in pooled (69.9  $\rightarrow$  51.8)
- Decrease in PANSS total score in rollover patients from the double-blind trial to OLE over 1-year treatment (Baseline to Week-56):
  - 46.1-point decrease in 15 mg (94.4  $\rightarrow$  51.3)
  - 49.6-point decrease in 50 mg (102.7  $\rightarrow$  53.1)





# Brilaroxazine Phase 3 Trial OLE: Favorable Efficacy, Safety & Adherence

Progressive and durable broad-spectrum efficacy across all three doses of brilaroxazine (15, 30 and 50 mg)

#### Clinically Stable Schizophrenia Patients (N=446, 52 Weeks / 12 Months)

Brilaroxazine 15, 30 and 50mg (pooled)

			) (P)
Symptom Domains	OLE Point Improvement* at 6M (N=303)	OLE Point Improvement* at 12 M (N=159)	Rollover Patients** DB Trial to OLE Point Improvement* at 13 M (N= 50)
PANSS Total Score	-10.7	-18.1	-47.7
PANSS Positive Symptoms	-3.3	-5.0	-14.0
PANSS Negative Symptoms	-2.8	-4.4	-10.5
PANSS Negative Marder Factor	-3.0*	-4.4*	-10.5*
PANSS Social Cognition	-1.5	-2.9	-7.9
PANSS Excitement/Agitation	-1.4	-3.5	-8.3
PANSS Gen Psychopathology	-4.7	-8.7	-23.2
Personal & Social Performance (PSP)	4.5	11.3	32.7
CGI-S Score	-0.4 (≥1 point in 37%)	-0.8 (≥1 point in 59%)	-2.5 (≥1 point in 100%)
Treatment Adherence	Discontinuation rate, 35%		

#### **Blood Biomarkers**

**Neurotrophins\*** 

**BDNF** 

**Hormones\*** 

Prolactin

Thyroid T3

Cytokines\*

IL-6

IL-8

IL-10

IFN- $\gamma$ /IP-10

TNF- $\alpha$ 

MIP-1

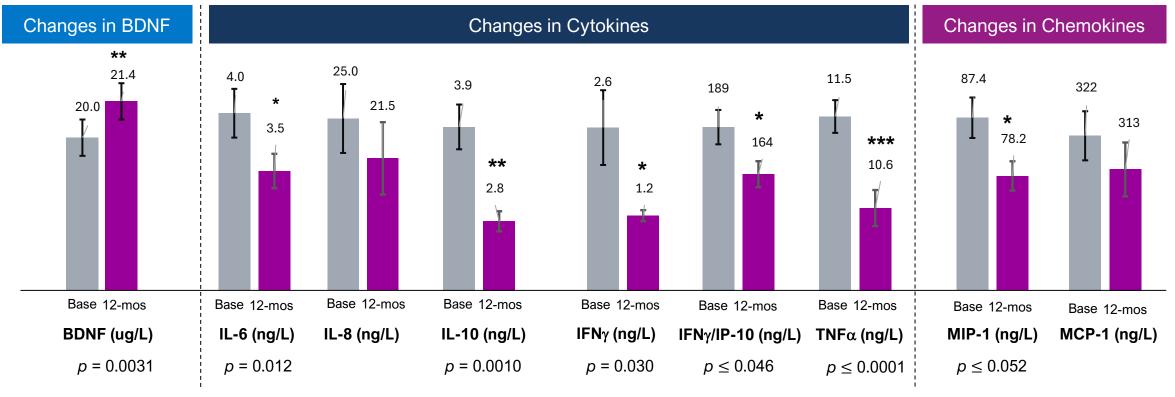


<sup>\*</sup>Significant improvement, P= ≤0.05

<sup>\*</sup>Significant improvement in Marder scores for depression, hostility and disorganized thoughts

# Brilaroxazine Phase 3 RECOVER OLE Trial Inflammatory Biomarker Data

A significant increase in BDNF & decrease in inflammatory cytokines and chemokines over 12 months



Individual treatment groups (15, 30 50 mg) also showed increase in BDNF and decrease proinflammatory cytokines and chemokines

Reduced BDNF implicated in cognitive and memory impairments in schizophrenia and depression

Elevated proinflammatory cytokines IL-6, IL-8, IL-10, IFN $\gamma$ , and TNF $\alpha$  reported in schizophrenia, bipolar and depression patients

Chemokine dysregulation is associated with neuroinflammation in schizophrenia

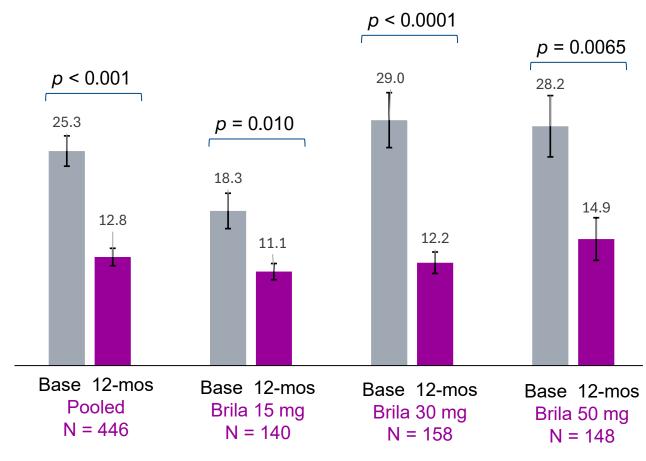


## **Brilaroxazine Phase 3 OLE Trial: Change in Prolactin Hormone**

Clinically significant decrease in prolactin levels across all doses of brilaroxazine over 12 months

#### **DECREASE IN PROLACTIN**

- Elevated serum prolactin levels reduced to normal across all doses of brilaroxazine from baseline to week-52/EOT (p ≤0.01):
  - -7.14  $\mu$ g/L in 15mg, (18.26  $\rightarrow$  11.12)
  - $\circ$  -16.79 µg/L in 30mg, (28.95 → 12.16)
  - $\circ$  -13.30 μg/L in 50 mg, (28.24 → 14.94)
  - o -12.50  $\mu$ g/L Overall, (25.32 → 12.82)
- Hyperprolactinemia is common condition in patients with schizophrenia / psychiatric disorders
  - Associated with immune diseases (multiple sclerosis, systemic sclerosis etc)
  - Associated with variety of adverse effects: weight gain, type 2 diabetes, breast tenderness and enlargement, sexual dysfunction (lack of libido), and erectile dysfunction in men



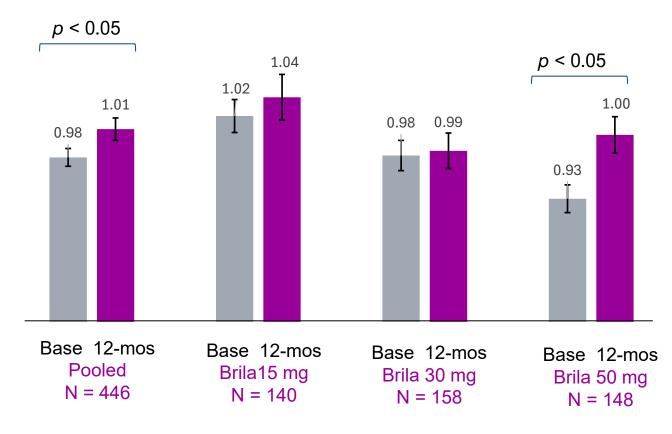


# Brilaroxazine Phase 3 OLE Trial: Change in Thyroid Hormone

Improvement in thyroid hormone levels across all doses of brilaroxazine over 12 months

#### IMPROVEMENT IN THYROID HORMONES

- Improvement in thyroid (T3) hormone levels across all doses of brilaroxazine from baseline to week-52/EOT
  - 0.033 ug/L in 15mg
  - 0.020 ug/L in 30mg
  - 0.076 ug/L in 50 mg,  $P \le 0.05$
  - o 0.044 ug/L in overall,  $P \le 0.05$
- Improvement in thyroid (T4) and decrease in TSH hormone levels across all doses of brilaroxazine
- Hypothyroidism reported in schizophrenia(negative symptom) and mood disorders (bipolar, depression)
- Hypothyroidism implicated in antipsychotic induced metabolic (obesity) and immune disorders
- Thyroid hormones are important for modulation of dopaminergic, serotonergic, glutamateric and GABAergic network.



Normal blood level of thyroid T3 hormone, 0.8- 2.2 μg/L



# Sexual Function, CSFQ Score: Improvement in both Males and Females

Improvement in sexual function CSFQ Score over 12 months ( $p \le 0.001$ )

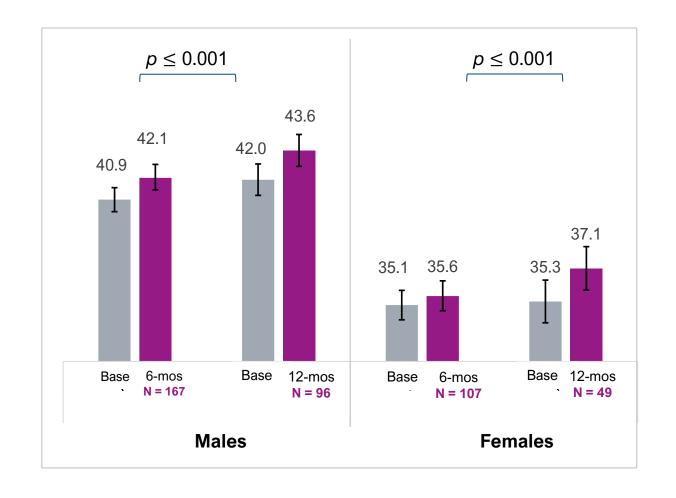
#### SEXUAL FUNCTION, CSFQ SCORE

Significant improvement in total sexual function score with brilaroxazine pooled (15, 30, & 50 mg) vs. baseline over 1-year ( $p \le 0.001$ ):

> Males: 1.2 point in male  $(40.9 \rightarrow 42.1)$  at 6M 1.6 point in male (42.0  $\rightarrow$  43.6) at 12M

Females: 0.5 point in female (35.1  $\rightarrow$  35.6) at 6M 1.8 point in female (35.3  $\rightarrow$  37.1) at 12M

- Prevalence of sexual dysfunction in women 60% and men 55% men with schizophrenia
- Sexual dysfunction linked to negative symptoms, social cognition and social functioning
- Sexual dysfunction impacts quality of life, treatment adherence, and may develop depression and suicidality
- Hyperprolactinemia and hypothyroidism in schizophrenia linked sexual dysfunction





# Brilaroxazine Phase 3 RECOVER Trial in Acute Schizophrenia

Safety, Tolerability and Compliance (double-blind trial for 4-week, N=411)

Variables	Brilaroxazine 15 mg (N=140)	Brilaroxazine 50 mg (N=134)	Placebo (N=137)
Any Treatment Emergent Adverse Event (TEAE)	104 (34.5%)	107 (35.5%)	90 (29.9%)
Discontinuation, n (%)	26 (18.6%)	22 (16.4%)	30 (21.9%)
TEAE occurring in >5% participants			
Somnolence	4 (2.9%)	10 (7.5%)	3 (2.2%)
Headache	8 (5.7%)	7 (5.2%)	3 (2.2%)
Metabolic Changes (weight and lipids), TEAE			
Body Weight Change in kg, Mean (SD)	2.20 (3.65)	2.50 (3.50)	0.94 (2.95)
≥7% Increase in Body Weight, n (%)	3 (2.1)	8 (5.9)	4 (2.9)
Cholesterol change in mg/dl, Mean (SD)	-2.4 (27.99)	-4.73 (26.13)	3.65 (28.47)
LDL change in mg/dL, Mean (SD)	-4.38 (22.63)	-5.71 (22.06)	4.07 (24.07)
HDL change in mg/dL, Mean (SD)	1.54 (10.46)	0.48 (13.27)	-2.16 (10.18)
Extrapyramidal Symptoms, TEAE			
Barnes Akathisia Rating Scale Score, Mean (SD)	0.0 (0.13)	0.0 (0.19)	0.1 (0.35)
Abnormal Involuntary Movement Scale Score, Mean (SD)	-0.0 (0.41)	-0.0 (0.28)	0.0 (0.48)
Simpson-Angus Scale Score, Mean (SD)	0.1 (0.42)	0.2 (0.48)	0.3 (0.71)



# **Brilaroxazine Phase 3 RECOVER Trial in Stable Schizophrenia**

Safety, Tolerability and Compliance (open-label trial for 52-week/1-year, N=446)

Variables	Brilaroxazine 15 mg (N=140)	Brilaroxazine 30 mg (N=158)	Brilaroxazine 50 mg (N=148)	Pooled (N=446)
Number of Treatment Emergent Adverse Event (TEAE) Patients with any TEAE, n (%)	85 50 (35.7%)	91 49 (31.0%)	104 67 (45.3%)	280 106 (37.2%)
Patient with any related TEAE, n (%)	6 (4.3%)	13 (8.2%)	19 (12.8%)	38 (8.5%)
Discontinuation due to TEAE , n (%)	0	3(1.9%)	2 (1.4%)	5 (1.1%)
TEAE occurring in >2% participants				
Headache	1 (0.7%)	7 (4.4%)	4 (2.7%)	12 (2.7%)
Insomnia	3 (2.1%)	5 (3.2%)	10 (6.8%)	18 (4.0%)
Sleep Disturbance	2 (1.4%)	2 (1.3%)	9 (6.1%)	13 (29%)
Tremor (mild)	1 (0.7%)	3 (1.9%)	10 (6.8%)	14 (3.1%)
Metabolic Changes (weight and lipids), TEAE				
Body Weight Change in kg, Mean (SD)	1.58 (4.96)	1.85 (2.23)	1.28 (2.95)	1.52 (3.49)
≥7% Increase in Body Weight (AESI), n (%)	3 (2.1%)	2 (1.3%)	6 (4.1%)	11 (2.5%)
Cholesterol change in mg/dL, Mean (SD)	-8.6 (31.01)	-5.5 (23.50)	-10.9 (28.86)	-8.3 (27.82)
LDL change in mg/dL, Mean (SD)	-8.4 (25.52)	-4.5 (22.33)	-11.1 (24.57)	-8.0 (24.19)
HDL change in mg/dL, Mean (SD)	-0.6 (9.34)	-0.9 (8.72)	-0.1 (9.38)	-0.6 (9.12)
Extrapyramidal Symptoms, TEAE				
Barnes Akathisia Rating Scale Score, Mean (SD)	0.0	0.0	0.0	0.0
Abnormal Involuntary Movement Scale Score, Mean (SD)	-0.0 (0.29)	-0.2 (0.59)	-0.0 (0.36)	-0.0 (0.41)
Simpson-Angus Scale Score, Mean (SD)	0.0	0.1 (0.43)	0.0	0.0



# Brilaroxazine Phase 3 Trial: Bodyweight Change in Acute vs Stable Patients

Bodyweight change in acute in-patient trial over 4 weeks vs stable out-patient trial over 1 year

Change from Baseline	Acute Patients DB Inpatient Trial	Stable Patients OLE Outpatient Trial		
Mean (SD), Kg	4-Week   N=411	24-Week   N=303	52-Week   N=159	
Brilaroxazine 15 mg	2.20 (3.65)	0.32 (3.06)	1.56 (5.06)	
Brilaroxazine 30 mg		0.67 (1.90)	1.88 (2.32)	
Brilaroxazine 50 mg	2.50 (3.50)	0.62 (2.69)	1.28 (2.95)	
Placebo	0.94 (2.95)			

	Bodyweight change in rollover patients, double-blind through OLE treatment over 13 months
Brila-50 mg, Mean Change (N=23) Efficacious top dose	1 20 KO



# **Brilaroxazine Phase 3 Trial: Lipids Change in Acute vs Stable Patients**

Lipids change in acute in-patient trial over 4 weeks vs stable out-patient trial over 1 year

Change from Baseline	Change in total (	Cholesterol, mg/dL	Change in LDL Cholesterol, mg/dL		
Mean (SD)	Acute Patients (N=411) DB, 1-month	Stable Patients (N=446) OLE, 12 Months	Acute Patients (N=411) DB, 1-month	Stable Patients (N=446), OLE, 12 Months	
Brilaroxazine 15 mg	- 2.4 (27.99) <sup>#</sup>	- 8.6 (31.01)	- 4.38 (22.63) <sup>#</sup>	- 8.4 (25.52)	
Brilaroxazine 30 mg		- 5.5 (23.50)		- 4.5 (22.33)	
Brilaroxazine 50 mg	<b>- 4.73 (26.13)</b> #	<b>– 10.9 (28.86)*</b>	<b>- 5.71 (22.06)</b> #	<b>– 11.1 (24.57)*</b>	
Placebo	3.65 (28.47)		4.07 (24.07)		

<sup>#</sup>p<0.05 vs placebo (DB)



<sup>\*</sup>p<0.05 vs baseline (OLE)

## Brilaroxazine: Strong Efficacy & Well-Tolerated Safety with Low Discontinuation Over 1-Year

RECOVER Phase 3 trials in acute and stable schizophrenia patients (total patients enrolled, N=857)

Strong, I	Durable	<b>9</b>
<b>Efficacy</b>	over 1	year

Brilaroxazine demonstrated a significant, sustained, and durable broad-spectrum efficacy in both acute and stable schizophrenia patients with <1% patients reported symptom relapse on treatment over 1-year of treatment. A strong, consistent treatment adherence both in acute and stable patients

## **Well-Tolerated** over 1 year

Brilaroxazine is safe and well-tolerated following 1-year of treatment. Most common TEAEs were headache, insomnia, sleep disturbance. No drug related SAEs or major safety concerns reported.

## No Motor Side **Effects**

No clinically meaningful changes in movement disorder scales used for evaluating motor side effects such as akathisia and extrapyramidal symptoms

## **Low Metabolic Side Effects**

Mild weight gain (1.52 kg) reported in the pooled brilaroxazine dose group treatment over 1 year. Weight gain was not dose dependent with least weight gain (1.28 kg) at 50 mg dose. Decrease in lipid levels (cholesterol, LDL cholesterol) and no significant change in blood sugar levels reported

## No Endocrine / **Sexual Effects**

Brilaroxazine is not associated with hormonal imbalance and sexual side effects. Elevated prolactin levels reported at the beginning of the study were significantly reduced to normal or near normal in all three dose groups. Improvement in thyroid hormone levels and sexual function reported

## No Cardiac, GI & **Liver Side Effects**

No incidence of clinically significant cardiac or gastrointestinal side effects No incidence of drug induced liver injury (DILI)



# Lower Drug-Drug Interactions (DDIs) with Brilaroxazine vs. Standards of Care

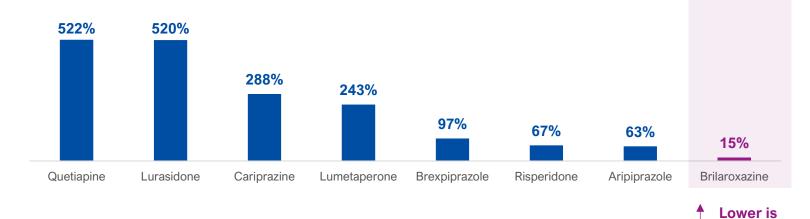
DDIs and polypharmacy alter plasma drug concentrations, and can impact efficacy and side effect profiles of a drug<sup>11</sup>

~50% of prescribed drugs and over 25% of approved antipsychotics are known to cause drug interactions in the presence of a strong CYP3A4 inhibitor drug

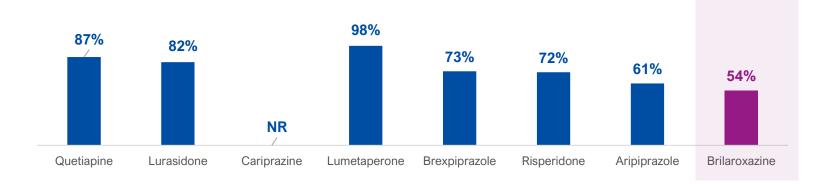
# Change in drug concentration with a CYP3A4 Inhibitor<sup>1</sup>

Antipsychotic	Fold increase vs brilaroxazine	
Brilaroxazine		
Aripiprazole	4.2x	
Risperidone	4.5x	
Brexpiprazole	6.5x	
Lumetaperone	16.2x	
Cariprazine	19.2x	
Lurasidone	34.7x	
Quetiapine	34.8x	

% Increase in drug concentration (AUC) with a CYP3A4 Inhibitor







<sup>\*</sup>Olanzapine9 not evaluated; metabolized by CYP1A210



better

# Positive Registrational Trials for Brilaroxazine in Schizophrenia

- Completed required NDA-enabling safety pharmacology, toxicology & carcinogenicity studies, & CMC development
- In light of successful completion of the RECOVER double-blind study and OLE, Reviva is currently assessing
  appropriate next steps in Brilaroxazine's path to approval

PHASE 1A and 1B, Clin Pharm Studies (N≈150)	PHASE 2 REFRESH NCT01490086	PHASE 3 RECOVER DB NCT05184335	PHASE 3 RECOVER OLE NCT05184335	
Phase 1A Healthy subjects, double-blind, safety and tolerability, pharmacokinetics (PK)	N = 234 (4-Week) Acute schizophrenia or schizoaffective disorder	N = 411 (4-Week) Acute schizophrenia	N = 446 (52-Week/1-Year) Stable schizophrenia	
Phase 1B Stable schizophrenia patients, doubleblind, POC efficacy, safety and tolerability, PK  ADME & Bioavailability Once daily brilaroxazine, ~72% bioavailability  Drug-Drug Interactions No clinically significant drug-drug interactions	Efficacy and safety of brilaroxazine vs placebo	Efficacy and safety of brilaroxazine vs placebo	Long-term safety/tolerability, efficacy and compliance of brilaroxazine	
	3:3:2 Randomized, 4-week, double- blind, placebo-controlled, multicenter	1:1:1 Randomized, 4-week, double- blind, placebo-controlled, multicenter	Open label,1-year outpatient extension of RECOVER	
	Once daily brilaroxazine 15, 30, 50 mg	Once daily brilaroxazine 15, 50 mg	Once daily brilaroxazine 15, 30, 50 mg flexible dose	
	Completed and met primary and multiple secondary endpoints	Completed and met primary and multiple secondary endpoints	Completed and met primary and multiple secondary endpoints	



# **Brilaroxazine Phase 2 and Phase 3 Trials Efficacy Data Comparison**

Early onset of action with progressive and durable broad-spectrum efficacy sustained over 52 weeks (1 year)

Phase 2 REFRESH (DB, 4-Week)
Acute Schizophrenia

Phase 3 RECOVER (DB, 4-Week)
Acute Schizophrenia

Phase 3 RECOVER (OLE, 1 Year)
Stable Schizophrenia

Brilaroxazine 50mg vs Placebo

Brilaroxazine 50mg vs Placebo

Brilaroxazine (15/30/50mg)<sup>P</sup>

Symptom Domains	Point Decrease / Improvement	P-Value (Effect Size)	Point Decrease / Improvement	P-Value (Effect Size)	Point Decrease / Improvement
Primary Endpoint: PANSS Total Score	-9.1	< 0.001 (1.15)	-10.1	< 0.001 (0.6)	-18.1
PANSS Positive Symptoms	-2.6	<0.01 (1.31)	-2.8	< 0.001 (0.5)	-5.0
PANSS Negative Symptoms	-2.3	<0.01 (0.78)	-2.0	<0.01 (0.4)	-4.4
PANSS Negative Marder Factor	-1.6*	0.04 (0.70)	-2.1*	< 0.001 (0.4)	-4.4*
PANSS Social Cognition	-1.7	<0.01 (0.90)	-1.6	< 0.001 (0.5)	-2.9
PANSS Excitement/Agitation	-1.9	0.01 (0.70)	-2.1	< 0.001 (0.5)	-3.5
PANSS Gen Psychopathology	-4.3	<0.01 (0.96)	-5.3	< 0.001 (0.6)	-8.7
Personal & Social Performance			6.3	< 0.001 (0.5)	11.3
CGI-S Score	-0.5 (≥1-point in 72% )	< 0.001 (1.25)	-0.5 (≥1-point in 78%)	< 0.001 (0.5)	-0.8 (≥1-point in 59% )
Treatment Discontinuation	12% (vs. pla	cebo 28%)	16% (vs. pla	cebo, 22%)	35%

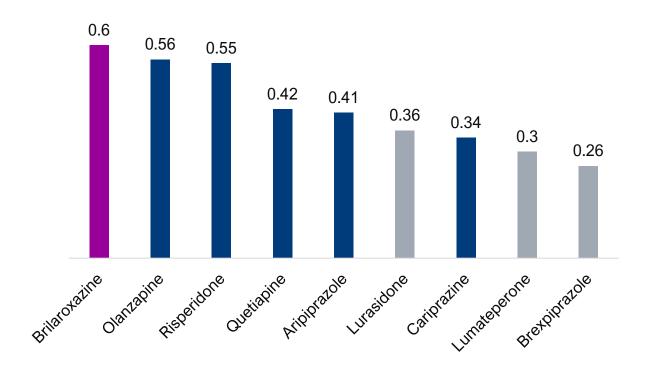
<sup>\*</sup>Significant improvement in Marder scores for depression, hostility and disorganized thoughts



## Comparison of Treatment Effect Size: Brilaroxazine vs Standard of Care Antipsychotics

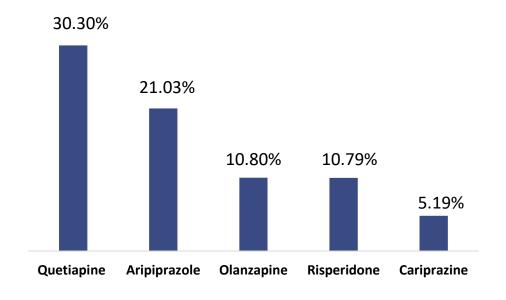
Phase 3 data of brilaroxazine (50 mg) vs. historical data of current standard of care antipsychotics

Brilaroxazine<sup>1</sup> vs Marketed Antipsychotics<sup>2,3</sup>



Top 5 Antipsychotics Market Share in 2024<sup>4</sup>

(United States)



Source: (1) Bhat L et al ASCPT 2024 (Poster #LB008) and SIRS 2024 (Poster #T291); (2) Huhn M et al. Lancet 2019, 394:939-951; (3) Correll CU et al. JAMA Psychiatry 2020, 77(4):349-358; (4) Definitive Healthcare 2025





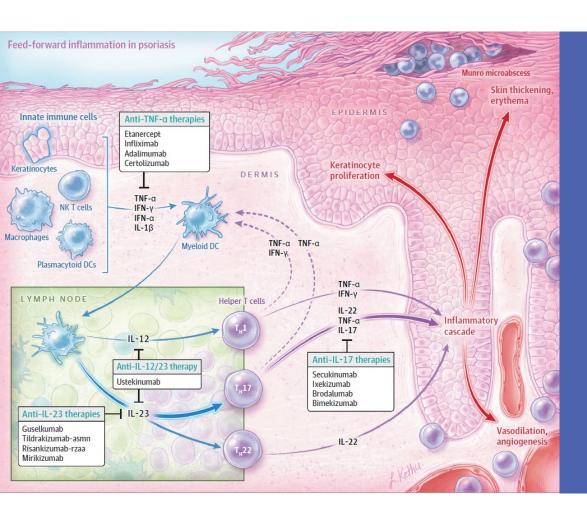


Inflammatory / Immune Disease Programs

Psoriasis | Pulmonary Arterial Hypertension (PAH) | Idiopathic Pulmonary Fibrosis (IPF)

## **Brilaroxazine has Potential to Treat Psoriasis**

Inflammatory skin disease driven by dysfunctional serotonin-dopamine signaling



- Approx 3% of the US population and an estimated 125 million people worldwide suffer from psoriasis
- An estimated one-third of neuropsychiatric and neurodegenerative disease patients suffer from psoriasis
- Currently there is no known cure for psoriasis
- Approved treatments for management of psoriasis
  - Topical corticosteroids therapies remain the cornerstone for treating mild psoriasis
  - Biologics that inhibit cytokines TNF-α, p40IL-12/13, IL-17, and p19II-23, and oral PDE-4 inhibitor for moderate to severe plaque psoriasis



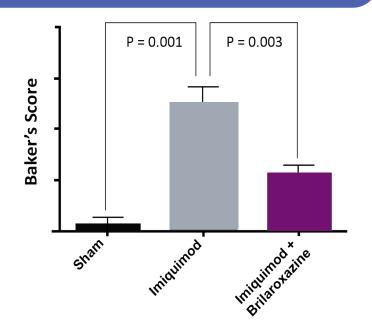
# **Brilaroxazine Demonstrated Encouraging Preclinical Efficacy**

In an imiquimod induced mouse model of psoriasis

#### **Psoriasis Area Severity Index (PASI)**

## 

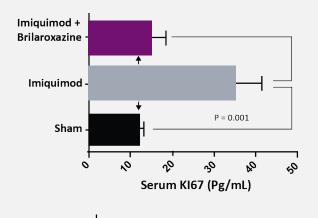
### **Psoriasis Severity by Baker Score**

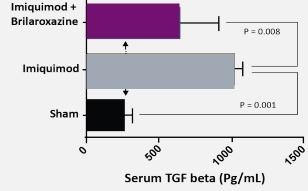


# Brilaroxazine topical liposomal gel significantly decreased

- Psoriasis area severity index (P= 0.03)
- Clinical severity of psoriasis, Baker score (p=0.003)
- Proinflammatory and proliferation cytokine, KI67 (P=0.001)
- Profibrotic chemokine, TGF-β (P=0.001)

# Decrease in anti-inflammatory and proliferation cytokine (KI67) and profibrotic chemokine (TGF-β)

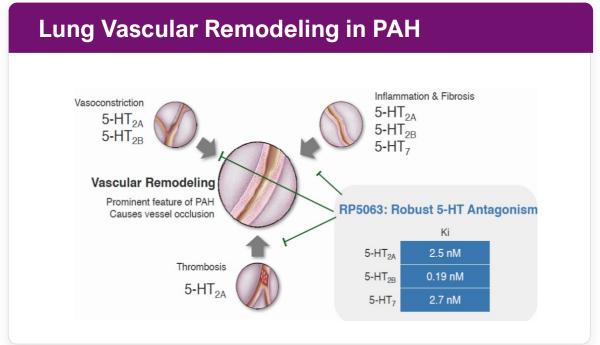




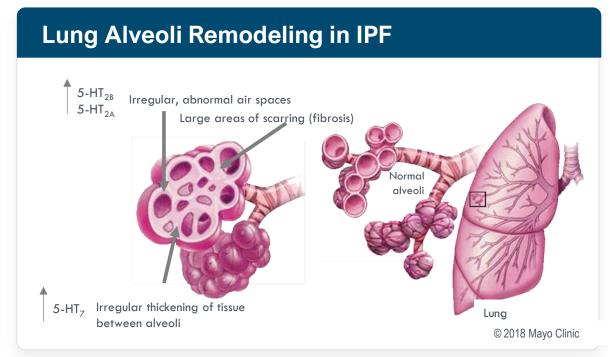


# Brilaroxazine: Potential to Delay PAH and IPF Disease Progression

PAH and IPF are Orphan Diseases that involve dysfunctional serotonin signaling



- PAH and IPF are rare, chronic, and debilitating conditions
- No therapies significantly delay disease progression
- Patients experience elevated plasma serotonin (5-HT) levels, increased expression of 5-HT<sub>2A/2B/7</sub> receptors & inflammatory cytokines in lungs



- Lung vascular/alveoli remodeling occurs due to inflammation, fibrosis, and pulmonary hypertension
- Brilaroxazine has robust antagonism against serotonin receptors involved in vasoconstriction, fibrosis, blood clots, and inflammation

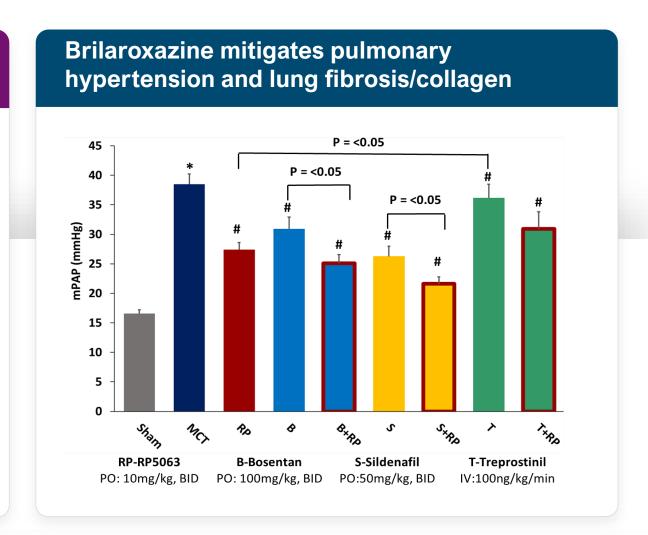


# **Brilaroxazine: Encouraging Results in PAH Translational Rodent Models**

Potential for Improved Treatment Effect Compared to Standard of Care

# Brilaroxazine alone and co-administered with standard of care for PAH

- Mitigated PAH in MCT and Sugen-Hypoxia rodent models
- Decreased respiratory resistance and restored blood oxygen saturation
- Decreased vascular remodeling and fibrosis in the small vessels
- Mitigated inflammation & reduced small vessel thickness
- Significantly reduced inflammatory cytokines
   TNFα, IL-β, IL-6, and chemokine LTB4



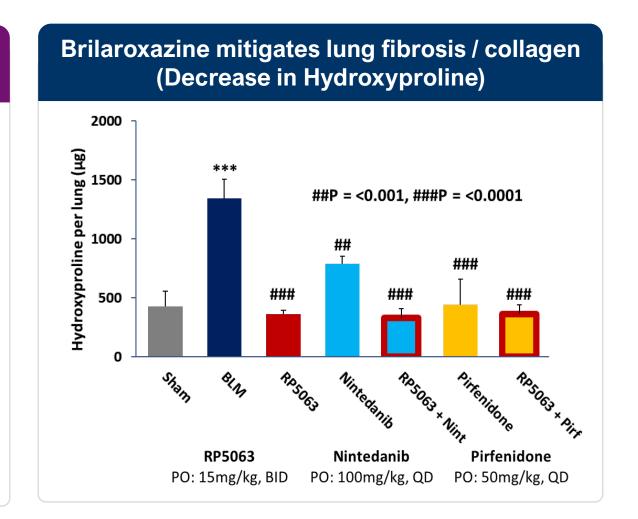


# Brilaroxazine: Encouraging Results in Bleomycin-Induced IPF Rodent Model

Potential for Improved Treatment Effect Compared to Standard of Care

## Brilaroxazine both alone and co-administered with standard of care for IPF

- Mitigated lung fibrosis and collagen deposits
- Decreased respiratory resistance & improved blood oxygen saturation
- Restored body weight and cardiac output
- Reduced the IPF biomarkers BALF cell counts. hydroxyproline, and blood lactate levels
- Decreased cytokines RANTES, IFN<sub>γ</sub>, MCP1, IL-6, and IL-17
- Improved survival rates





# Brilaroxazine: Ready for Phase 2 Trials in PAH and IPF

## FDA granted Orphan Drug Designation

#### **Brilaroxazine Phase 2 trials in PAH and IPF**

- Preclinical evidence supports the use of Brilaroxazine in PAH and IPF
- Generally well-tolerated in clinical studies for schizophrenia in >250 patients
- Completed long-term regulatory toxicology studies
- Manufactured API and drug products (clinical trial materials)
- Oral once daily dosing, potential to develop once daily inhaler for enhanced effect and convenience

## Key regulatory milestones achieved

- FDA reviewed preclinical pharmacology, toxicology, CMC, and clinical Phase 1 safety data for initiating a Phase 2 study
- FDA reviewed and provided guidance on Phase 2/3 clinical development plan and a potential "Disease Modifying Agent" label claim
- FDA granted Orphan Drug Designation for the treatment of PAH and IPF



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