

Abstract P190 Table 1 QVA149 versus placebo least squares mean (LSM) differences in FEV₁ and FVC

Visit	QVA149-placebo LSM treatment difference (SE) in mL			
	FEV ₁		FVC	
	30 min post-dose	60 min post-dose	30 min post-dose	60 min post-dose
Day 1	156 (14.2)	200 (16.9)	221 (29.7)	255 (35.8)
Week 3	255 (24.8)	275 (25.1)	342 (43.3)	335 (44.7)
Week 6	266 (26.2)	275 (27.2)	341 (47.3)	342 (46.5)
Week 12	236 (25.4)	260 (26.7)	277 (43.2)	294 (44.1)
Week 26	265 (31.5)	270 (29.6)	345 (49.7)	331 (48.1)
Week 39	240 (32.4)	286 (32.7)	296 (51.0)	340 (51.7)
Week 52	247 (33.3)	255 (33.6)	289 (52.9)	317 (56.9)

all p<0.001

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P191 QVA149 ONCE DAILY IMPROVES EXERCISE TOLERANCE AND LUNG FUNCTION IN PATIENTS WITH MODERATE TO SEVERE COPD: THE BRIGHT STUDY

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Introduction QVA149 is a novel once-daily fixed-dose combination of the long-acting β_2 -agonist indacaterol and the long-acting muscarinic antagonist glycopyrronium (NVA237) in development for the treatment of chronic obstructive pulmonary disease (COPD). The BRIGHT study evaluated the effects of QVA149 versus placebo and tiotropium on exercise tolerance and lung function in patients with moderate-to-severe COPD.

Methods In a double-blind, double-dummy, 3-period crossover study, patients with moderate-to-severe COPD were randomised to QVA149 110/50 μ g, placebo or tiotropium 18 μ g once daily for 3 weeks. The primary endpoint was exercise endurance time for QVA149 versus placebo during a submaximal exercise tolerance test (SMETT) via cycle ergometry at Day 21. Dynamic inspiratory capacity (IC) at isotime during exercise, trough IC, trough FEV₁ and trough forced vital capacity (FVC) were also measured.

Results Eighty five patients were randomised; mean age was 62 years, mean post-bronchodilator FEV₁ 56% predicted. 86% patients

completed the study. At Day 21, QVA149 significantly improved exercise endurance time by 59.5 seconds versus placebo (p=0.006), which was of a similar magnitude to the improvement seen with tiotropium versus placebo (66.3 seconds; p=0.002). More patients stopped exercise due to dyspnoea with placebo (43% versus 36% with both QVA149 and tiotropium) and due to muscle fatigue with QVA149 and tiotropium (44–46% versus 38% with placebo). QVA149 also produced significant and clinically meaningful improvements in trough FEV₁, dynamic IC at exercise isotime, trough IC and trough FVC versus placebo and tiotropium (table).

Conclusion QVA149 once daily provided significant and clinically meaningful improvements in exercise tolerance and lung function in patients with moderate-to-severe COPD. Despite superior bronchodilation demonstrated by QVA149 versus tiotropium, improvements seen in exercise endurance were similar, perhaps due to extra-pulmonary factors (muscle fatigue, ceiling effect). There were no safety concerns.

P192 QVA149 ONCE DAILY PROVIDES SUPERIOR BRONCHODILATION VERSUS INDACATEROL, GLYCOPYRRONIUM, TIOTROPIUM AND PLACEBO: THE SHINE STUDY

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Introduction QVA149 is a novel inhaled once-daily dual bronchodilator containing a fixed-dose combination of the long-acting β_2 -agonist indacaterol and the long-acting muscarinic antagonist NVA237 (glycopyrronium) in development for the maintenance treatment of COPD. This study evaluated the effect of QVA149 on

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	Treatment differences on Day 21		
	Least squares means (95% Confidence interval)		
	QVA149–Placebo	QVA149–Tiotropium	Tiotropium–Placebo
Exercise endurance time (seconds)	59.5 (17.7, 101.3)**	–6.7 (–47.5, 34.0)	66.3 (24.8, 107.7)**
IC at isotime (L) [†]	0.32 (0.23, 0.40)***	0.14(0.05, 0.22)**	0.18(0.10,0.27)***
Trough IC (L)	0.19 (0.09, 0.29)***	0.15 (0.06, 0.25)**	0.04 (–0.06, 0.13)
Trough FEV ₁ (L)	0.20 (0.15, 0.26)***	0.10 (0.05, 0.15)***	0.10 (0.05, 0.15)***
Trough FVC (L)	0.28 (0.19, 0.37)***	0.11 (0.02, 0.20)*	0.17 (0.08, 0.27)***

***p<0.001; **p<0.01; *p<0.05; [†]Isotime is the latest matching point during exercise at which for all periods for a patient there is an IC assessment; IC: inspiratory capacity; FEV₁: forced expiratory volume in 1 sec; FVC: forced vital capacity.