SYNOPSIS

Name of Sponsor/Company: **Royal College of Surgeons in Ireland**	Individual Study Table Referring to Part of the Dossier	*(For National Authority Use only)*
Name of Finished Product: **Sildenafil**	Volume:	
Name of Active Ingredient: **Sildenafil**	Page:	

Title of Study:
The use of Sildenafil in Neonates with Down Syndrome to Reduce Pulmonary Vascular Resistance

Investigators:
Prof Afif El Khuffash

Study centre(s):
Rotunda Hospital Dublin

Publication (reference)

N/A no report available as trial did not commence

Studied period (years): (date of first enrolment) (date of last completed) **N/A no report available as trial did not commence**	Phase of development: **Phase 3, non-randomised open label pilot experimental study**

Objectives:
The primary objective is to assess the impact of oral sildenafil administration on echocardiography measurements of pulmonary vascular resistance in neonates with Down Syndrome without CHD.
The secondary objectives are to assess the safety of sildenafil administration in this population.

Methodology:
Open label, non-randomised pilot experimental study with a 1:1 allocation of 40 infants with Down Syndrome without congenital heart disease. Infants to be allocated to the intervention/control arms sequentially in accordance with the following sequence: A (treatment), B (control), A, B, A, B etc.

If parents who provide consent for their baby to participate do not wish for them to be enrolled in the intervention arm, the parents will be offered to enrol in the next available control arm. A maximum of 20 subjects will be allocated to each arm:

Intervention Arm
Infants in the intervention arm will receive oral sildenafil (Revatio 10mg/mL powder for oral suspension) at a starting dose of 0.5 mg/kg TDS increasing to 1.0 mg/kg/dose after 48 hours. This will be continued up to two months of age. Following that, sildenafil will be weaned to BD administration for one week and then OD administration for one week and then discontinued.

Control Arm
Infants in the control arm will receive standard of care. The current standard of care is no routine administration of PVR lowering agents unless the infants require ventilation or pulmonary arterial pressure exceeds systemic pressure on echocardiography.

Number of patients (planned and analysed): **N/A trial did not commence**
Diagnosis and main criteria for inclusion: **1. Antenatal or postnatal diagnosis of Down Syndrome in babies born from a singleton pregnancy at ≥35 weeks gestation.** **2. Babies with a diagnosis of pulmonary hypertension, defined as two or more of the following echocardiography markers being present: (1) A PAAT < 40ms, (2) a PAAT:RVET < 0.25, (3) in the presence of a patent ductus arteriosus (PDA), the demonstration of bidirectional flow across the vessel or right to left flow; or (4) A left ventricular eccentricity index > 1.8.** **3. Must live within**
Test product product, dose and mode of administration, batch number: **Sildenafil (Revatio 10 mg/ml powder for oral suspension) at a starting dose of 0.5 mg/kg TDS increasing to 1.0 mg/kg/dose after 48 hours. This will be continued up to two months of age. Following that, sildenafil will be weaned to BD administration for one week and then OD administration for one week and then discontinued.**
Duration of treatment: **Two months of age.**
Reference therapy, dose and mode of administration, batch number **N/A**

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Criteria for evaluation: Efficacy **N/A** Safety **N/A**		
Statistical methods: **N/A**		

Summary - Conclusions

N/A

Efficacy Results:

N/A

Safety Results:

N/A

Conclusion

This trial did not commence due to feasibility issues associated with funding.

Date of report: 30-Jan-2024