#### **UNITED STATES** SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

#### FORM 6-K

Report of Foreign Private Issuer Pursuant to Rule 13a-16 or 15d-16 of the Securities Exchange Act of 1934

For the month of March 2021

Commission File Number: 001-36622

#### **PROQR THERAPEUTICS N.V.**

Zernikedreef 9 2333 CK Leiden

2333 CK Leiden The Netherlands Tel: +31 88 166 7000 (Address, Including ZIP Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F 🗵 Form 40-F 🗆

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

On March 24, 2021, ProQR Therapeutics N.V. (the "Company") announced results from a planned analysis of its Phase 1/2 Stella trial of QR-421a in adults with Usher syndrome and non-syndromic retinitis pigmentosa (nsRP) due to USH2A exon 13 mutations using a webcasted conference call. A copy of the presentation is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

The Company hereby incorporates by reference the information contained herein into the Company's registration statements on Form F-3 (File No. 333-228251 and File No. 333-248740).

#### SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

#### PROQR THERAPEUTICS N.V.

By:

/s/ Smital Shah Smital Shah Chief Financial Officer

Date: March 24, 2021

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99.1 Presentation for webcasted conference call

Number



## QR-421A STELLAR Trial results



March 24, 2021

## **Forward looking statements**

This presentation contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this presentation, including but not limited to, statements regarding our strategy, future operations, future preclinical and clinical trial plans and related timing of trials and results, the design of planned trials for QR-421a and the expected regulatory pathway for this product candidate, including the potential for the Sirius and Celeste trials to serve as the sole registration trials in this indication, research and development, future financial position, future revenues, projected costs, prospects, therapeutic potential of our product candidates, plans and objectives of management, are forward-looking statements. The words "aim," "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "would," "could," "should," "continue," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

Forward-looking statements are based on management's beliefs and assumptions and on information available to management only as of the date of this presentation. Our actual results could differ materially from those anticipated in these forward-looking statements for many reasons, including, without limitation, the risks, uncertainties and other factors in our filings made with the Securities and Exchange Commission, including certain sections of our annual report filed on Form 20-F. These risks and uncertainties include, among others, the cost, timing and results of preclinical studies and clinical trials and other development activities by us and our collaborative partners whose operations and activities may be slowed or halted by the COVID-19 pandemic the likelihood of our clinical programs being executed on timelines provided reliance on our contract research organizations and predictability of timely enrollment of subjects and patients to advance our clinical trials and maintail their own operations; our reliance on contract manufacturers to supply materials for research and development and the risk of supply interruption from a contract manufacturer: the potential for future data to alter initial and preliminary results of early-stage clinical trials; the unpredictability of the duration and results of the regulatory review of applications or clearances th are necessary to initiate and continue to advance and progress our clinical programs; the ability to secure, maintain and realize the intended benefits of collaborations with partners; the possible impairment of, inability to obtain, a costs to obtain intellectual property rights; possible safety or efficacy concerr that could emerge as new data are generated in research and development; and general business, operational, financial and accounting risks, and risks related to litigation and disputes with third parties. Given these risks, uncertainties and other factors, you should not place undue reliance on thes forward-looking statements, and we assume no obligation to update these forward-looking statements, even if new information becomes available in th future, except as required by law



#### **1. Introduction**

Daniel de Boer

#### 2. Results of *Stellar* Phase 1/2

Aniz Girach, MD

## **3. Next steps** Daniel de Boer

4. Q&A

Daniel de Boer, Aniz Girach and Smital Sha



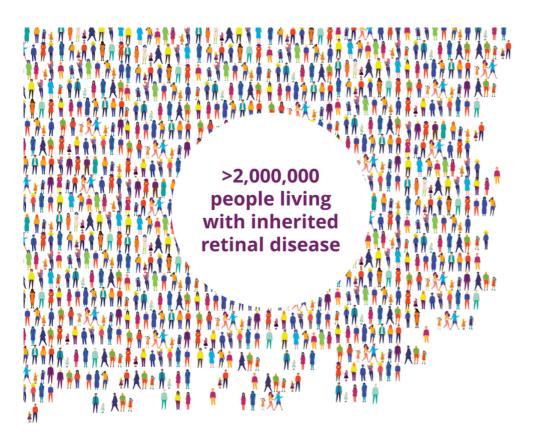
**Daniel de Boer** Founder and Chief Executive Officer



Aniz Girach, MD Chief Medical Officer

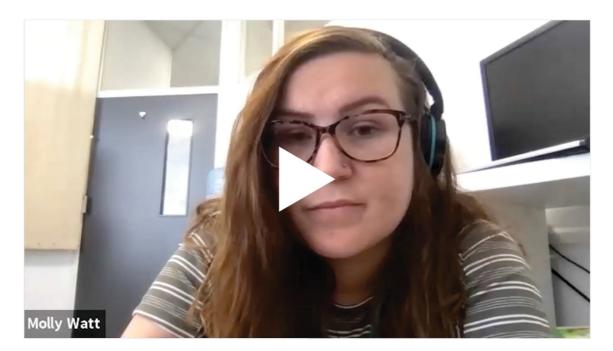


**Smital Shah** Chief Business & Financial Office





## The impact of USH2A mediated vision loss



This video is not available in the pdf. Please <u>register</u> to watch the full presentation.

## **Results of** *Stellar* **Phase 1/2 Tria**

#### By Aniz Girach, MD, Chief Medical Officer

# QR-421a for Usher syndrome and non-syndromic retinitis pigmentosa (nsRP)

- Potential first-in-class RNA therapy
- QR-421a targets Exon 13 mutations in Ush2a ( >16,000 patients)
- QR-421a aims to prevent patients from going blind
- \$7.5M co-funding from Foundation Fighting Blindness



# Usher syndrome / non-syndromic retinitis pigmentosa (nsRP) are slow progressing

QR-421a targets early-moderate and advanced disease

#### Early-moderate disease

Losing visual field from the outside-inward

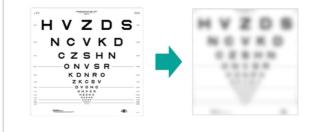




Progression rate varies from patient to patient; best control is the patient's other, untreated eye

#### Advanced disease

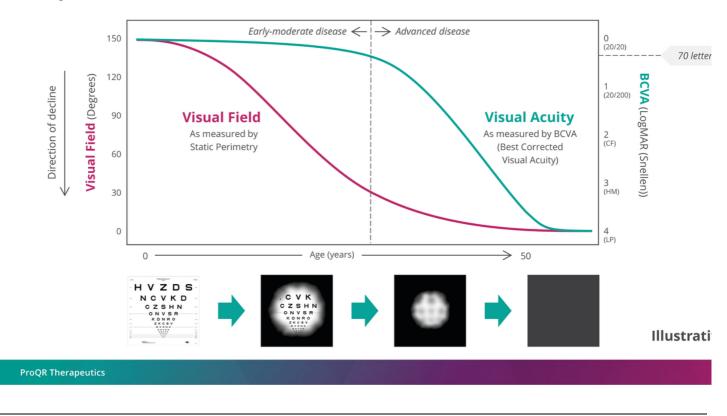
Losing visual acuity (VA)



Illustrati

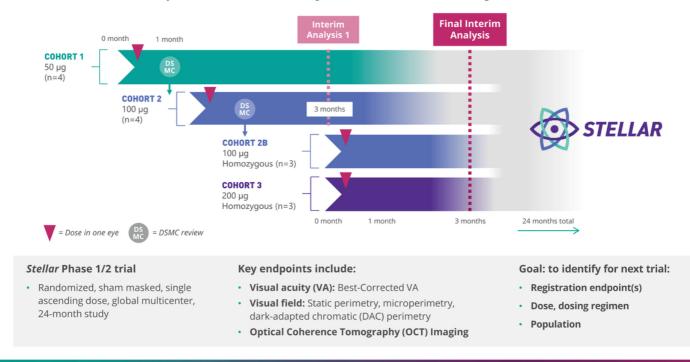
#### Patient baseline disease stage informs endpoint:

VA of less than 70 letters (20/40) at baseline is advanced disease

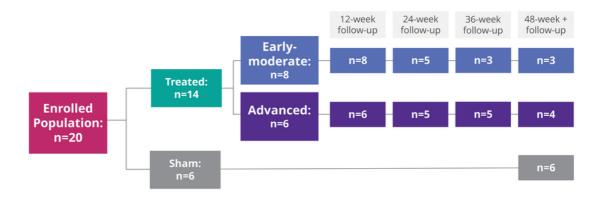


## QR-421a Phase 1/2 trial in Usher & nsRP

Enrollment completed; 2<sup>nd</sup> and final Interim Analysis conducted



#### **Demographics and disposition**



	n	Mean age	Mean VA (TE)	Gender		Genotype		Disease stage		Disease type	
				Male	Female	Homo- zygous	Hetero- zygous	Early- moderate	advanced	nsRP	Usher syndrom
QR-421a treated	14	48	66	4	10	64%	36%	57%	43%	50%	50%
Sham	6	43	68	4	2	17%	83%	67%	33%	67%	33%

Early-moderate disease: baseline VA  $\geq$  70 letters (20/

## Summary of trial results

#### • Trial met its key objectives

- ✓ Well tolerated with no serious adverse events
- ✓ Clinical proof of concept established
  - ✓ Best Corrected Visual Acuity (BCVA) in advanced patients
  - ✓ Static Perimetry in early-moderate patients
  - Concordant improvements in multiple other endpoints
- ✓ Identified key information to take the program forward:
  - ✓ Registration endpoint
  - ✓ Dose and dose interval
  - Optimal study population
- Plan to start Phase 2/3 pivotal trials by YE 2021

## **QR-421a was well tolerated**

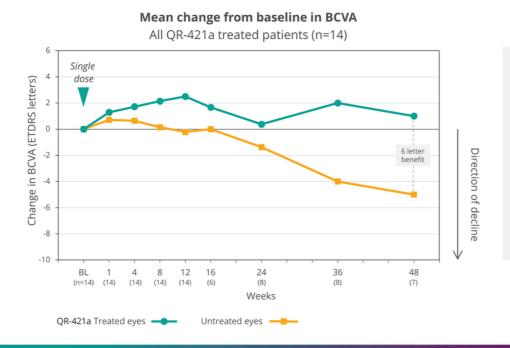
- QR-421a was well tolerated in >3,700 subject follow up days
- No SAEs, no inflammation
- Cataracts occur in >30% patients in natural history of disease
  - 1 patient had worsening of pre-existing cataracts in both the treated and untreated eye with cataract extractions in both eyes
  - Deemed not treatment related by Investigator
- Cystoid Macular Edema (CME) known to occur as part of natural history of disease in >30% of the patients
  - No new occurring cases of CME during study
  - 1 patient with CME at baseline progressed during study, classified as mild, managed with standard of care

## **Advanced population efficacy result**!

Population with progressed visual acuity loss

#### **BCVA stabilization in treated eye**

Mean 6 letter benefit at week 48

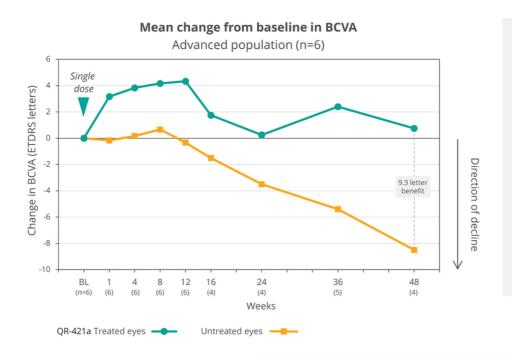


- Stabilization of vision observed in treated eye vs decline in untreated eye in all patients
- 6 letter benefit at week 48, after single dose
- Sustained effect is consistent with the long half-life of QR-421a

H V Z

#### BCVA stabilization driven by advanced populatio

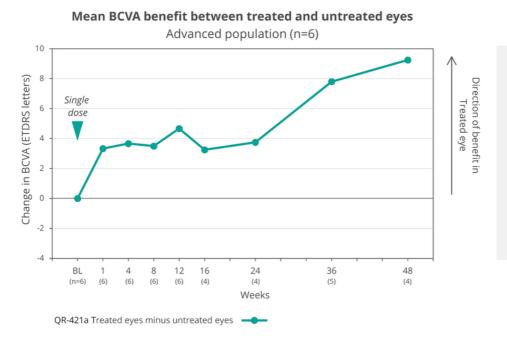
Mean 9.3 letter benefit at week 48



- BCVA response is driven by advanced disease population
- Stabilization of vision in treated eye after single dose
- Deterioration of untreated eye in line with expected natural history of disease
- Mean 9.3 letter benefit at week 48 in the advanced population
- Sustained effect is consistent with the long half-life of QR-421a

HVZ

### **Benefit in BCVA in advanced population**

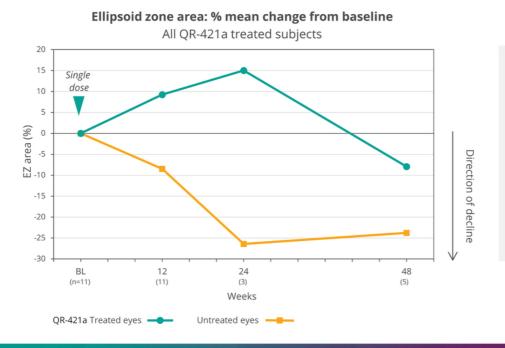


- Difference between treated and untreated eyes demonstrate BCVA benefit in advanced patients
- Response is consistent with disease state
- 9.3 letter benefit at week 48 in the advanced population

N C V

### Stabilization of retinal structure in treated eye

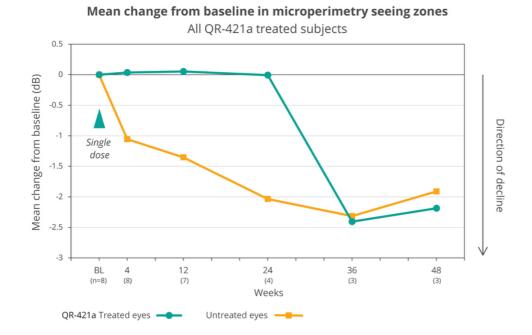
Measured by OCT based Ellipsoid Zone (EZ) in the central macular area



- Stabilization in the treated eyes out to 48 weeks, after single dose
- Deterioration in untreated eyes in line with natural history
- Benefit on OCT provides objective validation of response on BCVA and other endpoints

## Stabilization of microperimetry in treated eye

Measuring retinal sensitivity in central visual field

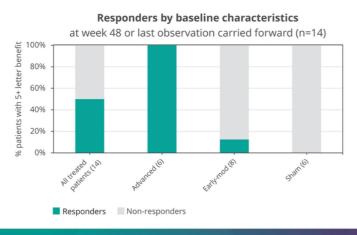


- Stabilization in the treated eyes out to week 24, after single dose
- Durability of response in line with half life of QR-421a
- Steady decline in untreated eye over same period

#### BCVA selected as primary endpoint for advanced population

#### Patient population identified

- ✓ 100% of the advanced patients were responders
- No difference between homozygous and heterozygous genotype
- ✓ No difference between Usher and nsRP



Dose for next trial identified

- No difference between different dose levels, consistent with preclinical data
- All tested doses were active providing great flexibility for dose selection

Responders by baseline characteristics and dose

at week 48 or last observation carried forward (n=7) 100% % patients with 5+ letter benefit 80% 60% 40% 20% 0% Homoseous (2) Heerocygousen Usher(hE3) SOUBINED 100ug (ma) 20048(mm1) Early-moderate Advanced

# Early-moderate population efficacy results

*Population with visual field loss, but minimal visual acuity loss* 

## Visual field: Benefit on retinal sensitivity

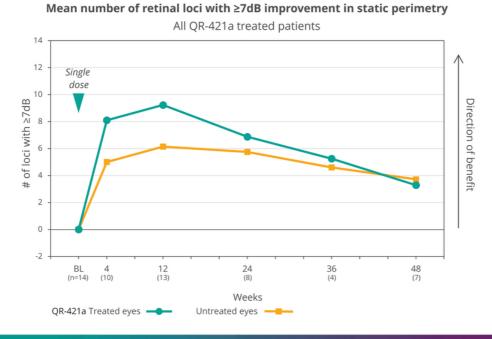
Improvement measured by static perimetry after single dose

Mean total retinal sensitivity improvement using static perimetry All QR-421a-treated patients (n=14) 50 40 Direction of benefit in Single Total retinal sensitivity (dB) dose Treated eye 30 20 10 0 -10 -20 24 (8) BL (n=14) 36 48 4 12 (10) (13) (4) (7)Weeks QR-421a Treated eyes minus Untreated eyes ----

- Analysis: total retinal sensitivity improvement difference between treated and untreated eyes change from baseline
- Benefit observed in treated eyes after single dose
- Benefit sustained for >6 months

#### Improvement in treated eyes on static perimetry

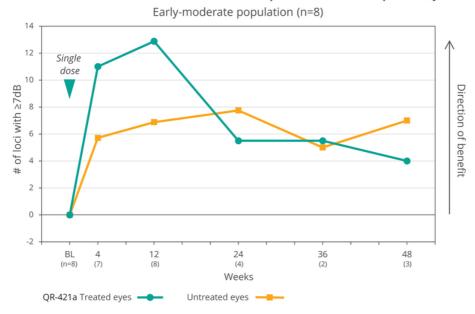
Measuring retinal sensitivity in peripheral visual field



- Benefit observed in treated eyes vs untreated eyes
- Benefit sustained for 9+ months after single dose
- Static perimetry improvement in line with approvable endpoint threshold

# Static perimetry improvement driven by early-moderate population

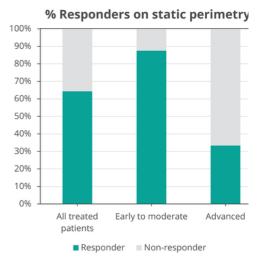
#### Mean number of retinal loci with ≥7dB improvement in static perimetry



- Benefit observed in treated eyes vs untreated eyes after single dose
- Magnitude greater in
  early-moderate population
- Static perimetry improvement in line with approvable endpoint threshold

### Static perimetry selected as primary endpoint for early-moderate population

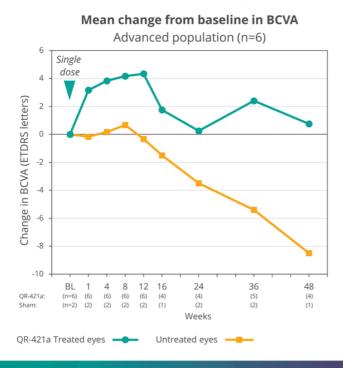
- Benefit in mean total retinal sensitivity improvement observed in all treated eyes
- 7dB analysis in all treated group crossed threshold for regulatory approval with a more pronounced benefit in early-moderate patients
- Effect consistent with half-life with benefit lasting for 24 weeks post a single-dose
- Static perimetry selected as primary endpoint in early-moderate population



**Responder** = subject with more retinal loci improved by  $\geq$ 7dB in the treated eye than ir the untreated eye at week 12

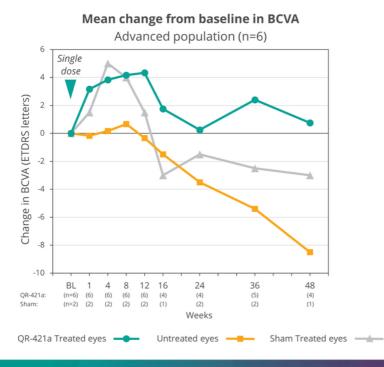
#### Benefit in vision in treated group, not sham grou

Observed in advanced population



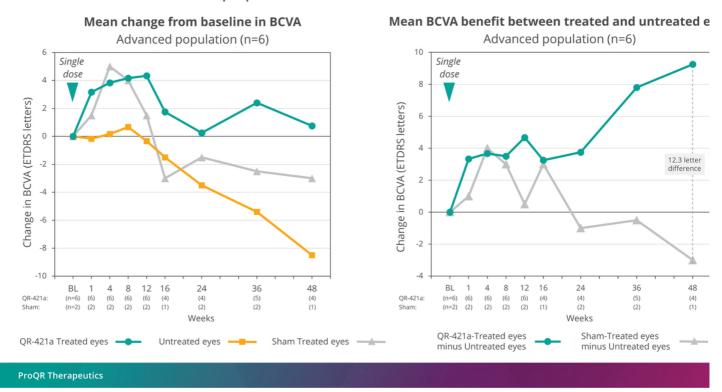
#### Benefit in vision in treated group, not sham grou

Observed in advanced population

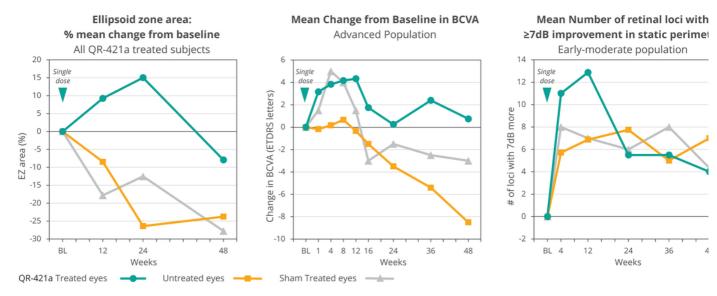


### Benefit in vision in treated group, not sham grou

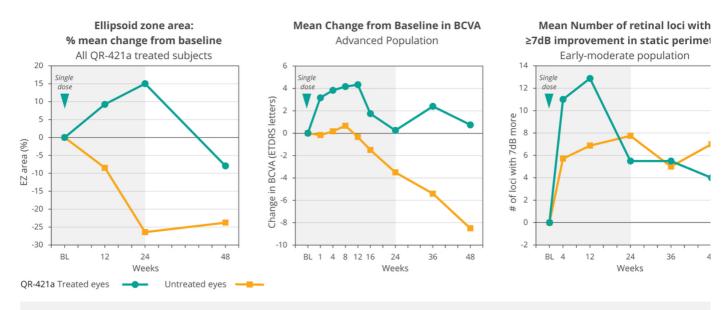
Observed in advanced population



# Sham in line with untreated eye and natural history



### **Dosing interval identified at 6 months**



- Effect sustained for approx. 6 months across endpoints
- Durability in line with half-life and pre-clinical modeling
- Redosing interval established at 6 Months

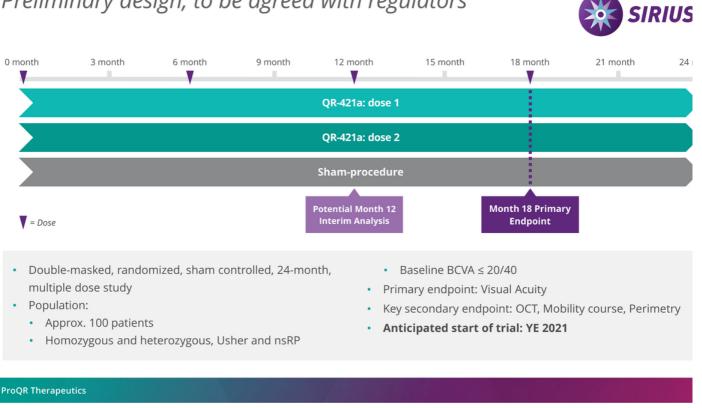
## Summary of Phase 1/2 results

#### QR-421a was well tolerated

- ✓ Clinical proof of concept established, consistent with baseline disease, after single dose
  - ✓ Advanced disease: 100% of patients had a BCVA benefit, 0% in sham group
  - ✓ Early-moderate population: Improvement on Static Perimetry
  - ✓ Supported by key secondary endpoints:
    - ✓ Stabilization of EZ area on OCT imaging (objective measurement)
    - Stabilization of Microperimetry-based retinal sensitivity
  - Dose range and dose interval established
- All information acquired in *Stellar* to design Phase 2/3 studies:
  - Sirius clinical study: a Phase 2/3 study in advanced patients
  - Celeste clinical study: a Phase 2/3 study in early-moderate patients

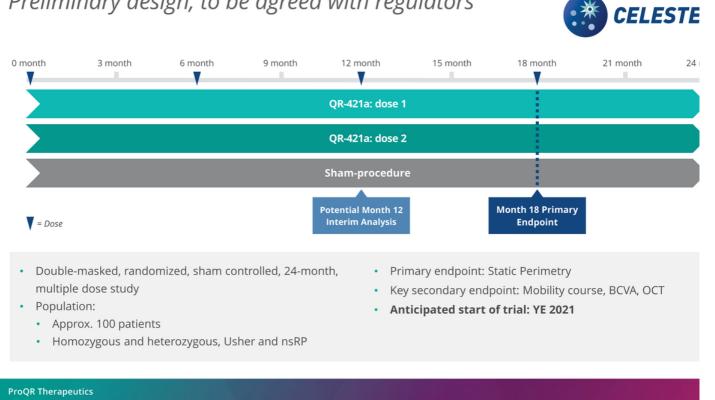
#### **QR-421a planned Phase 2/3 for** *Advanced Patients*

Preliminary design, to be agreed with regulators



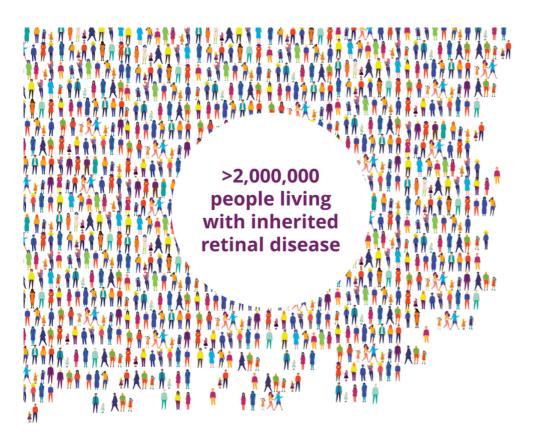
#### **QR-421a planned Phase 2/3 for Early-Moderate patien**

Preliminary design, to be agreed with regulators



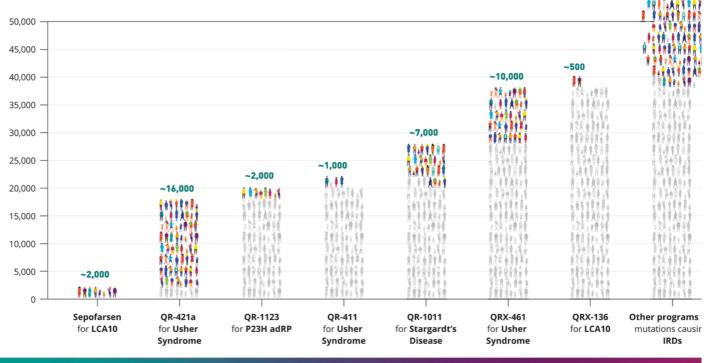


By Daniel A. de Boer, Chief Executive Officer





# Investigational RNA therapies in pipeline for >100,000 IRD patients



## Deep pipeline in ophthalmology

With multiple near-term catalysts



### **ProQR Inherited Retinal Disease Strategy**

Mutation specific medicines for IRDs



#### **Patient focused**

- >2,000,000 patients worldwide without a treatment
- Large unmet need
- Engagement with patient communities globally



#### Proven discovery engine

- >50 molecules in pipeline for IRD causing mutations
- Validated scientific platform
- Favorable therapeutic profile in IRD: long half life, IVT administration



#### Integrated clinical development

- Deep network in IRD specialist clinical sites in Europe and Americas
- Vast experience in ophthalmic development



Strong translational platform

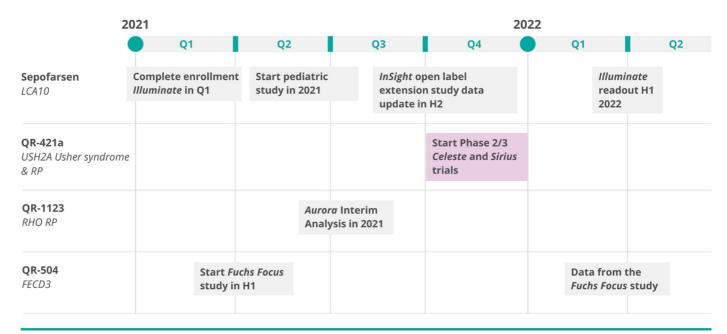
- Predictive translational platform based on human retinal organoids
- In vitro/in vivo correlation



#### Synergistic commercial infrastructure

- ~35 specialist sites across EU and US see >80% of the patients
- Specialized sites see patients with all different IRDs
- Allowing for cross-portfolio synergies
- IVT administration provides access
  advantage

## Full catalyst calendar



Cash runway into 2023



