A Multicenter, Phase 2, Dose-Escalation/Dose-Expansion Study of Dabogratinib (Formerly TYRA-300) in Children With Achondroplasia With Open Growth Plates: BEACH301

SAT-474

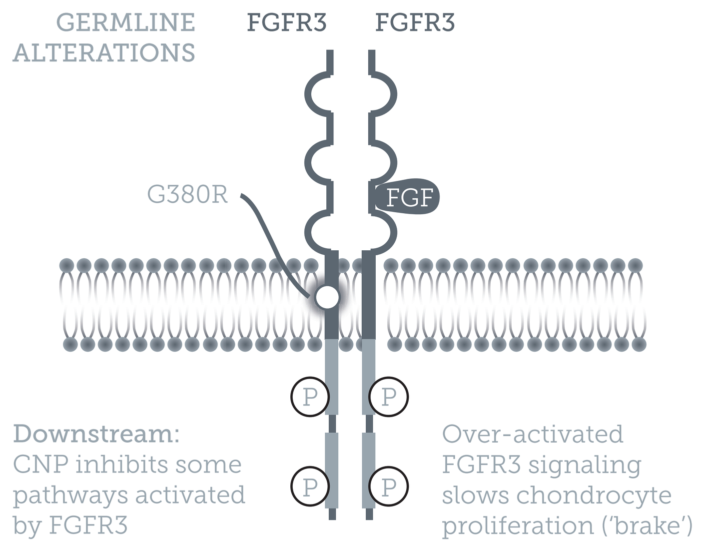
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BACKGROUND

- Achondroplasia is the most common form of heritable skeletal dysplasia, affecting approximately 250,000 people worldwide[1,2]
- Achondroplasia is caused by a gain of function mutation in the *FGFR3* gene (most commonly G380R) leading to overactivation of FGFR3 signaling[1-4]
- Aberrant FGFR3 signaling inhibits chondrocyte proliferation and differentiation, resulting in impaired endochondral ossification and abnormal skeletal development (Figure 1)[2,3,5]
- Individuals with achondroplasia can experience lifelong morbidity, with early-life complications including foramen magnum stenosis, recurrent otitis media, sleep-disordered breathing, and ongoing impact across childhood and adulthood including obesity, skeletal complications, chronic pain, surgeries, and effects on function and psychosocial well-being[1,3,6,7]
- Inhibiting FGFR3 may benefit children with achondroplasia. Approved CNP analogs indirectly modulate this pathway,[2,8,9] while pan-FGFR inhibition has demonstrated encouraging safety and efficacy, supporting direct FGFR inhibition[10]
 - Dabogratinib is an oral, highly selective FGFR3 inhibitor designed to directly target the underlying driver of achondroplasia while minimizing off-target effects[11]
 - By avoiding the toxicities associated with inhibition of FGFR1, FGFR2, and FGFR4, dabogratinib may provide greater efficacy with a larger therapeutic window than non-isoform selective FGFR inhibitors[12]
 - Dabogratinib is being evaluated in children with achondroplasia in the phase 2 BEACH301 study (NCT06842355)[13]

Figure 1. Aberrant FGFR3 Signaling in Achondroplasia



GERMLINE ALTERATIONS
FGFR3
FGFR3
G380R
FGF
P
Downstream:
CNP inhibits some pathways activated by FGFR3
Over-activated FGFR3 signaling slows chondrocyte proliferation ('brake')

Gain-of-function *FGFR3* mutations (eg, G380R) lead to overactivation of FGFR3 signaling (via an increase in steady-state levels of receptor),[4] inhibiting chondrocyte proliferation and impairing endochondral bone growth.

METHODS

- BEACH301 (NCT06842355) is a phase 2, multicenter, open-label, dose-escalation/dose-expansion study to evaluate the safety, tolerability, and potentially effective dose(s) of oral dabogratinib QD in children aged 3 to 10 years with achondroplasia with open growth plates[13]
- Dabogratinib is administered at weight-based dose levels (0.125-0.625 mg/kg), with dose escalation per protocol-defined criteria
- The study includes 3 cohorts (Figure 2)
 - Sentinel Safety Cohort
 - Cohort 1: Treatment-naïve
 - Cohort 2: Received prior growth-accelerating therapy

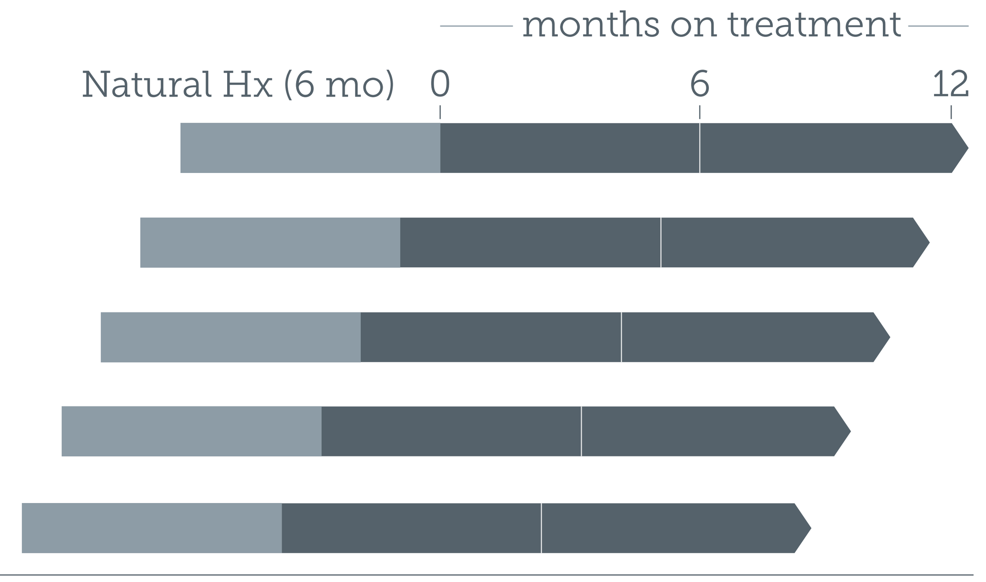
Figure 2. Study Design of BEACH301

Sentinel Safety Cohort
ACH age 5-10
No run-in
Anticipate n=~25 total enrollment

	DOSE (mg/kg)
✓	0.625
✓	0.50
✓	0.375
✓	0.25
✓	0.125

Cohorts 1 and 2*

N=*	DOSE (mg/kg)
6	0.625
6	0.50
6	0.375
6	0.25
6	0.125



months on treatment
Natural Hx (6 mo)
0
6
12

*Cohort 1 (6-mo run-in)
Treatment naïve;
ACH age 3-10

*Cohort 2 (6-mo run-in)
Received prior growth-accelerating therapy; ACH age 3-10

✓ Indicates that the dose level has been cleared by an independent Data Safety Monitoring Committee.*Dose decisions based on 6 participants. Additional participants may be assigned at discretion of Sponsor.
Schematic representation of the study design, illustrating cohort structure and weight-based dabogratinib dosing.

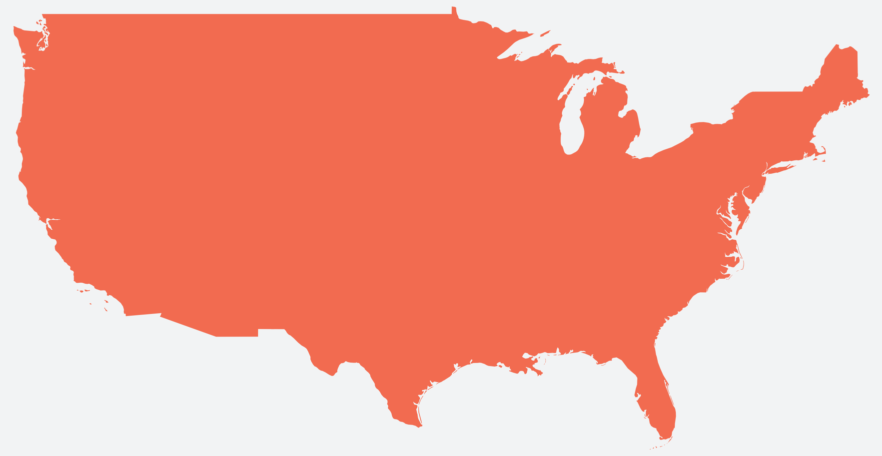
Participant Criteria[13]

Key Inclusion Criteria	Key Exclusion Criteria
• Children aged 3 to 10 years of age • Molecularly confirmed achondroplasia with *FGFR3* G380R mutation • Radiographically confirmed open growth plates by bone age X-ray • Ability to stand and ambulate independently • Sentinel Safety Cohort only: aged 5 to 10 years old (inclusive) • Cohort 1 only: aged 3 to 10 years old (inclusive) and are naïve to prior growth-accelerating therapy • Cohort 2 only: aged 3 to 10 years old (inclusive) and have received prior growth-accelerating therapy • Ability to take oral medication	• Presence or history of any concurrent disease or condition that would interfere with study participation, safety evaluations, or any uncontrolled or untreated condition that could impact pediatric growth • Endocrine condition that alters calcium/phosphate homeostasis • Prior limb lengthening surgery or planned or expected to have limb lengthening surgery while enrolled in the study • History or current evidence of corneal or retinal disorder/keratopathy • Presence of guided growth hardware (eg, 8 plates). Planned or anticipated orthopedic surgeries

Study Endpoints[13]

Primary Endpoints	Secondary Endpoints
• Incidence of treatment-emergent AEs • Change from baseline in AGV	• Change from baseline in height z-score • Comparison of single- and multiple-dose sparse pharmacokinetic parameters, including but not limited to C_{max}, T_{max}, $AUC_{0\text{-last}}$, AUC_{Tau}, $AUC_{0-\infty}$, Vd/F, CL/F, and $t_{½}$ • Change from baseline in anthropometric measurements, including but not limited to standing height, sitting height, upper arm length, lower arm length, tibial length, femur length, arm span proportionality (arm span/height ratio), and upper segment/lower segment ratio with dabogratinib

BEACH301 SITE LIST



UNITED STATES

- Torrance, CA
- Aurora, CO
- Wilmington, DE
- Baltimore, MD
- Chevy Chase, MD
- Columbia, MO
- St. Louis, MO
- Durham, NC
- Nashville, TN
- Dallas, TX
- Madison, WI



CANADA

- Toronto
- Edmonton
- Ottawa
- Montreal



AUSTRALIA

- Parkville



EUROPE

- Paris, France
- Utrecht, Netherlands
- Vitoria, Spain
- Madrid, Spain
- Stockholm, Sweden



UK

- Sheffield
- London
 - Great Ormond Street Hospital
 - Guy's and St Thomas' NHS Foundation Trust

Site list reflects participating centers as of September 25, 2026.

Abbreviations

ACH, achondroplasia; AE, adverse event; AGV, annualized growth velocity; $AUC_{0\text{-last}}$, area under the curve from time zero to the last measurable concentration; AUC_{tau}, area under the curve from time zero to tau; $AUC_{0-\infty}$, area under the curve from time zero to infinity; CL/F, apparent clearance; C_{max}, maximum plasma concentration; CNP, C-type natriuretic peptide; FGFR, fibroblast growth factor receptor; Hx, history; mo, month; QD, once daily; $t_{½}$, half-life; T_{max}, time to maximum concentration; Vd/F, apparent volume of distribution.

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