ARCUTIS BIOTHERAPEUTICS

Bioscience … Applied to the Skin

Cowen Healthcare Conference
March 2020

Legal Disclaimers

This presentation and the accompanying oral presentation contain “forward-looking” statements that are based on our management’s beliefs and assumptions and on information currently available to management. Forward-looking statements include all statements other than statements of historical fact contained in this presentation, including information concerning our current and future financial performance, business plans and objectives, current and future clinical and preclinical development activities, timing and success of our ongoing and planned clinical trials and related data, the timing of announcements, updates and results of our clinical trials and related data, our ability to obtain and maintain regulatory approval, the potential therapeutic benefits and economic value of our product candidates, competitive position, industry environment and potential market opportunities.

Forward-looking statements are subject to known and unknown risks, uncertainties, assumptions and other factors including, but not limited to, those related to the success, cost and timing of our product candidate development activities and ongoing and planned clinical trials; our plans to develop and commercialize targeted therapeutics, including our lead product candidates ARQ-151 and ARQ-154; the progress of patient enrollment and dosing in our clinical trials; the ability of our product candidates to achieve applicable endpoints in the clinical trials; the safety profile of our product candidates; the potential for data from our clinical trials to support a marketing application, as well as the timing of these events; our ability to obtain funding for our operations, development and commercialization of our product candidates; the timing of and our ability to obtain and maintain regulatory approvals; the rate and degree of market acceptance and clinical utility of our product candidates; the size and growth potential of the markets for our product candidates, and our ability to serve those markets; our commercialization, marketing and manufacturing capabilities and strategy; future agreements with third parties in connection with the commercialization of our product candidates; our expectations regarding our ability to obtain and maintain intellectual property protection; our dependence on third party manufacturers; the success of competing therapies that are or may become available; our ability to attract and retain key scientific or management personnel; our ability to identify additional product candidates with significant commercial potential consistent with our commercial objectives; and our estimates regarding expenses, future revenue, capital requirements and needs for additional financing.

Moreover, we operate in a very competitive and rapidly changing environment, and new risks may emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed herein may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. Further information on these and other factors that could affect these forward-looking statements is contained in our final prospectus dated January 30, 2020, which was filed with the U.S. Securities and Exchange Commission (SEC), and other reports filed with the SEC from time to time. You should not rely upon forward-looking statements as predictions of future events. Although our management believes that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur. We undertake no obligation to publicly update any forward-looking statements, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. Neither we nor any other person makes any representation as to the accuracy or completeness of such data or undertakes any obligation to update such data after the date of this presentation. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

A Different Approach to Dermatology Drug Development

At Arcutis Biotherapeutics, we:

- Focus on **validated biologic targets**
- Exploit recent innovations in inflammation and immunology to bring **best-in-class molecules** to bear
- Built an **industry-leading team** of experts in medical dermatology development and commercialization
- Address **significant unmet needs** in immuno-dermatology, potentially addressing millions of patients

Allows us to develop and commercialize differentiated products at **rapid pace**, at **lower cost**, while **maximizing probability of success**

Arcutis is Building a Robust Dermatology Pipeline

Multiple "Pipeline in a Molecule" Opportunities

	Preclinical	Phase 1	Phase 2	Phase 3	Commercial Rights
Topical Roflumilast Cream *(ARQ-151)*	**Plaque Psoriasis**				*Worldwide*
	Atopic Dermatitis				*Worldwide*
Topical Roflumilast Foam *(ARQ-154)*	**Seborrheic Dermatitis**				*Worldwide*
	Scalp Psoriasis				*Worldwide*
ARQ-252 Cream *(JAK1 Inhibitor)*	**Hand Eczema**				*U.S., EU, Japan, Canada*
	Vitiligo				*U.S., EU, Japan, Canada*
ARQ-255 Suspension *(JAK1 Inhibitor)*	**Alopecia Areata**				*U.S., EU, Japan, Canada*

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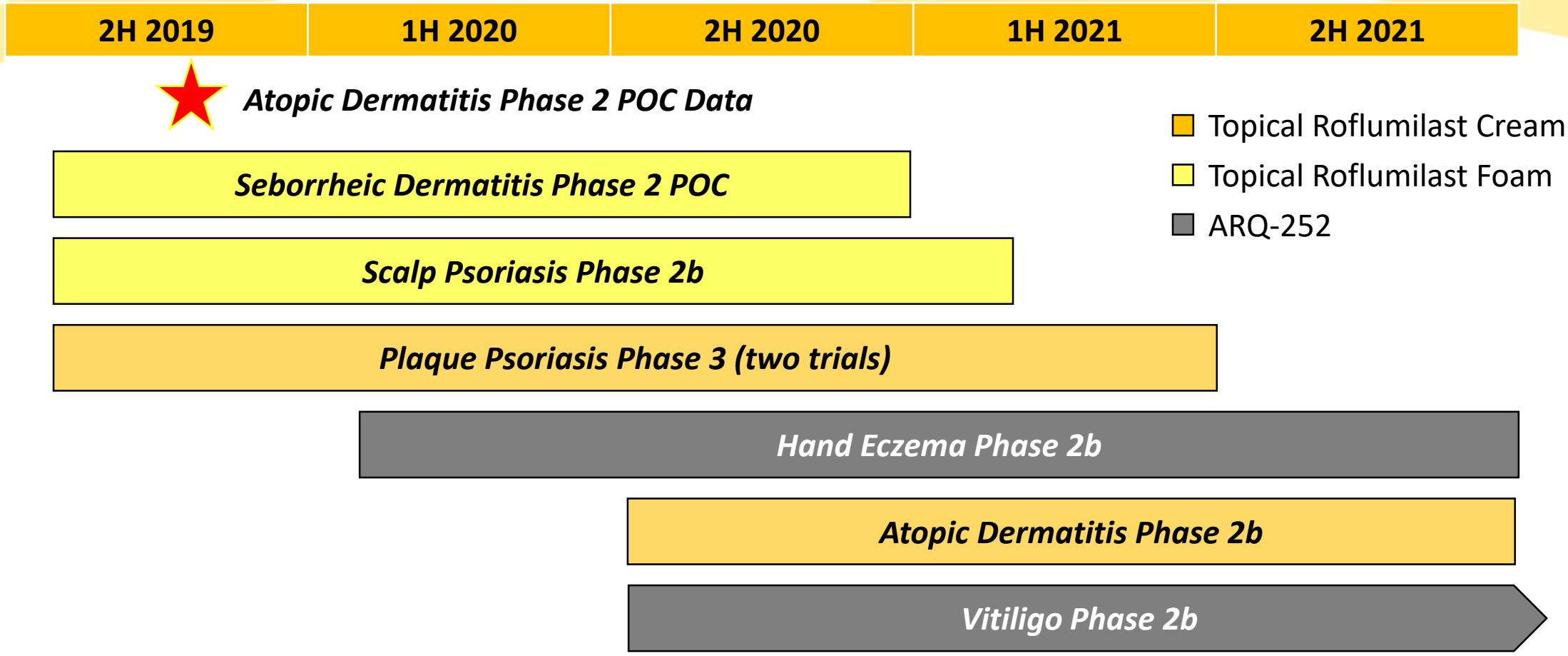
We Expect a Steady Flow of Significant Clinical Catalysts 2019-2021



Significant Unmet Needs in Treatment of Plaque Psoriasis

- > 90% of US patients continue to be treated with topical drugs
- Existing topical therapies have numerous shortcomings
  - High potency steroids
    - Effective but limited treatment duration (2 to 8 weeks)
    - Risk of HPA suppression, stretch marks, skin thinning, spider veins, etc.
    - Can’t be used in thin skinned areas like face/intertriginous
  - Vitamin D analogs (e.g., calcipotriene)
    - Less efficacious than high potency steroids
    - Frequently irritating, contraindicated for sensitive areas like face/intertrigious
- Ideal topical treatment would offer efficacy of high potency steroids, ability to use chronically, and ability to use in all body areas

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Topical Roflumilast May Address Unmet Needs in Plaque Psoriasis

- Efficacy in treating plaque psoriasis across multiple endpoints
- Efficacy similar to high potency steroids or Otezla
- Rapid onset: efficacy as early as week 2
- Efficacy in treating plaques in intertriginous areas
- Efficacy in treating itch associated with psoriasis
- Well tolerated
- Simple, easy to use once-a-day cream or foam

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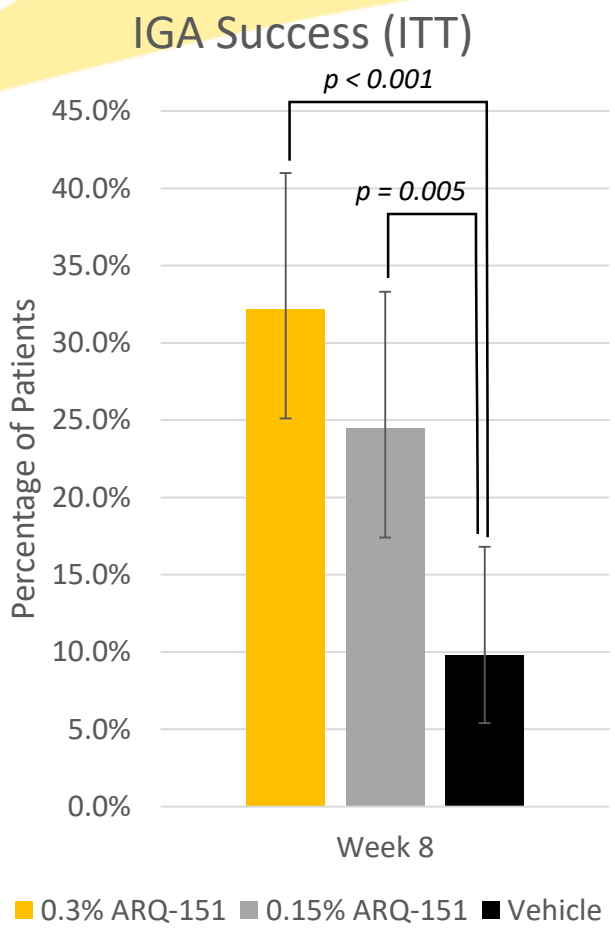
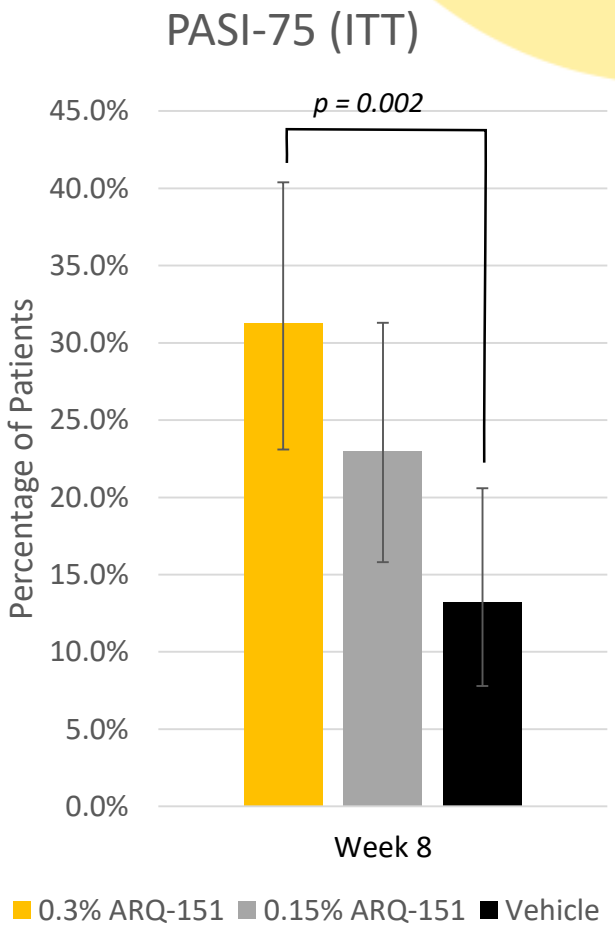
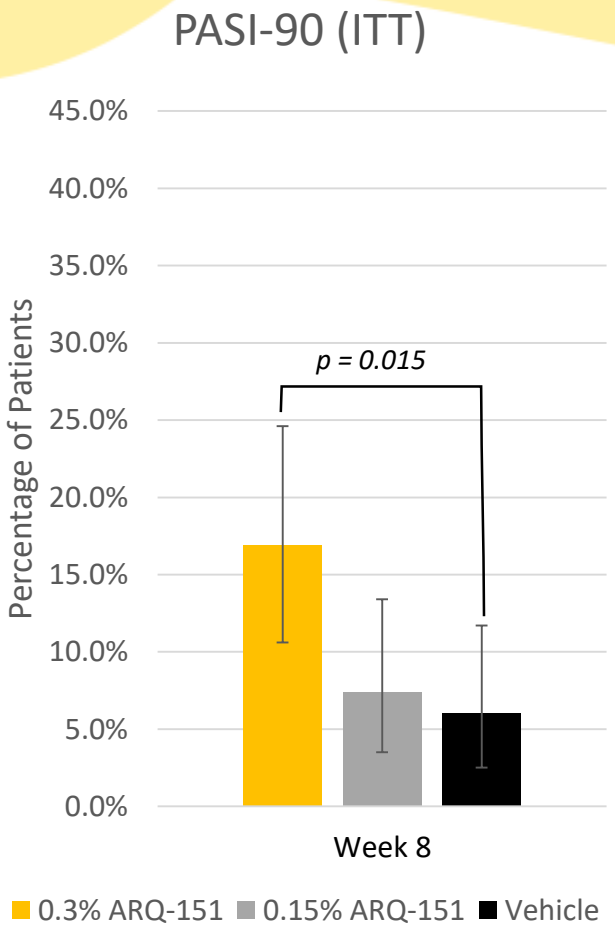
Statistically Significant Separation from Vehicle on Key Psoriasis Efficacy Endpoints







ITT = Intent to treat

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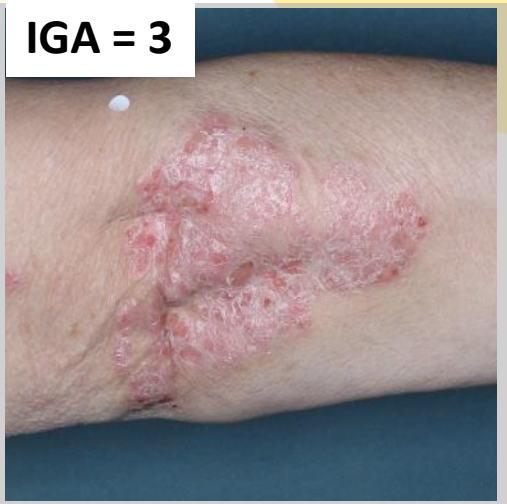
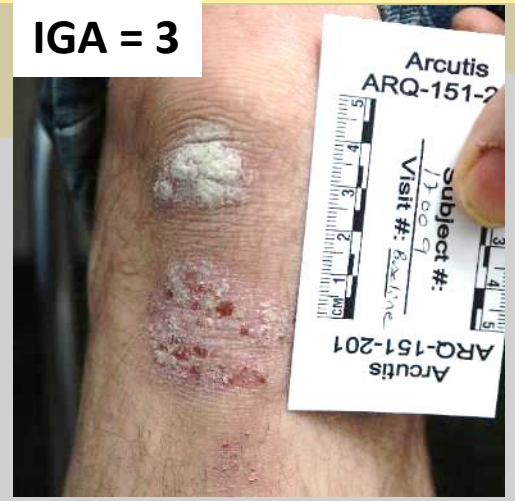
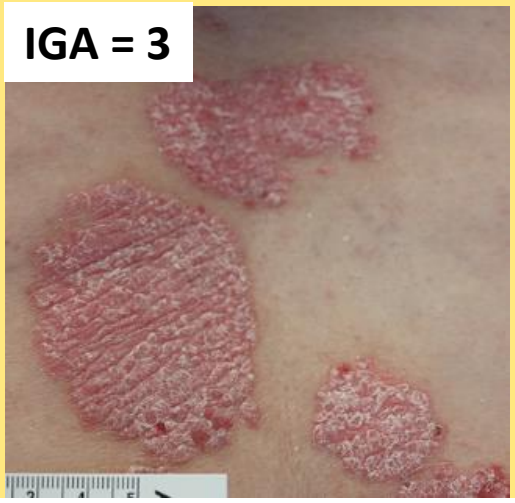
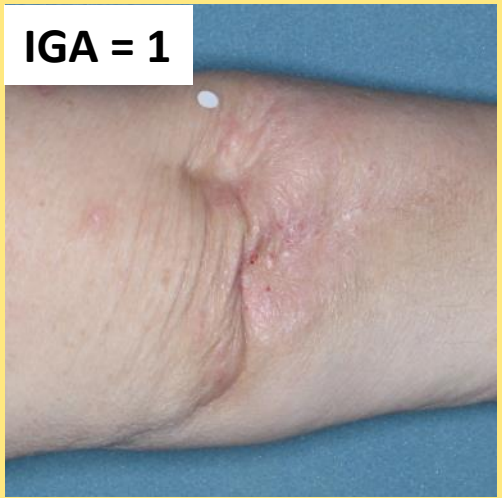
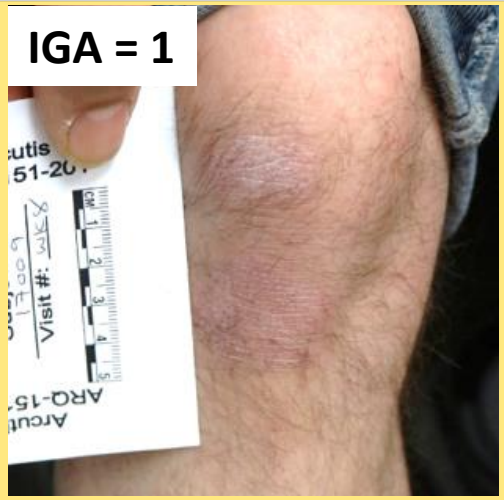
Phase 2b Psoriasis Study

	Vehicle	Topical Roflumilast 0.15%	Topical Roflumilast 0.3%
Baseline	IGA = 3 	IGA = 3 	IGA = 3 
Week 8 of Treatment	IGA = 3 	IGA = 1 	IGA = 1 

Low Rates of Adverse Events in Plaque Psoriasis

- 94% of subjects treated with topical roflumilast 0.3% completed full 12 weeks
- Treatment-related AEs rare (< 7%) and balanced across study arms
- Only 1 discontinuation on topical roflumilast due to an AE
- Only 2 SAEs on topical roflumilast, both unrelated to treatment
- No evidence of local tolerability issues (burning, stinging)
- Low rates of side effects typical of oral PDE4 inhibitors
- Supported by extensive oral roflumilast experience: ~ 1M patient years of exposure

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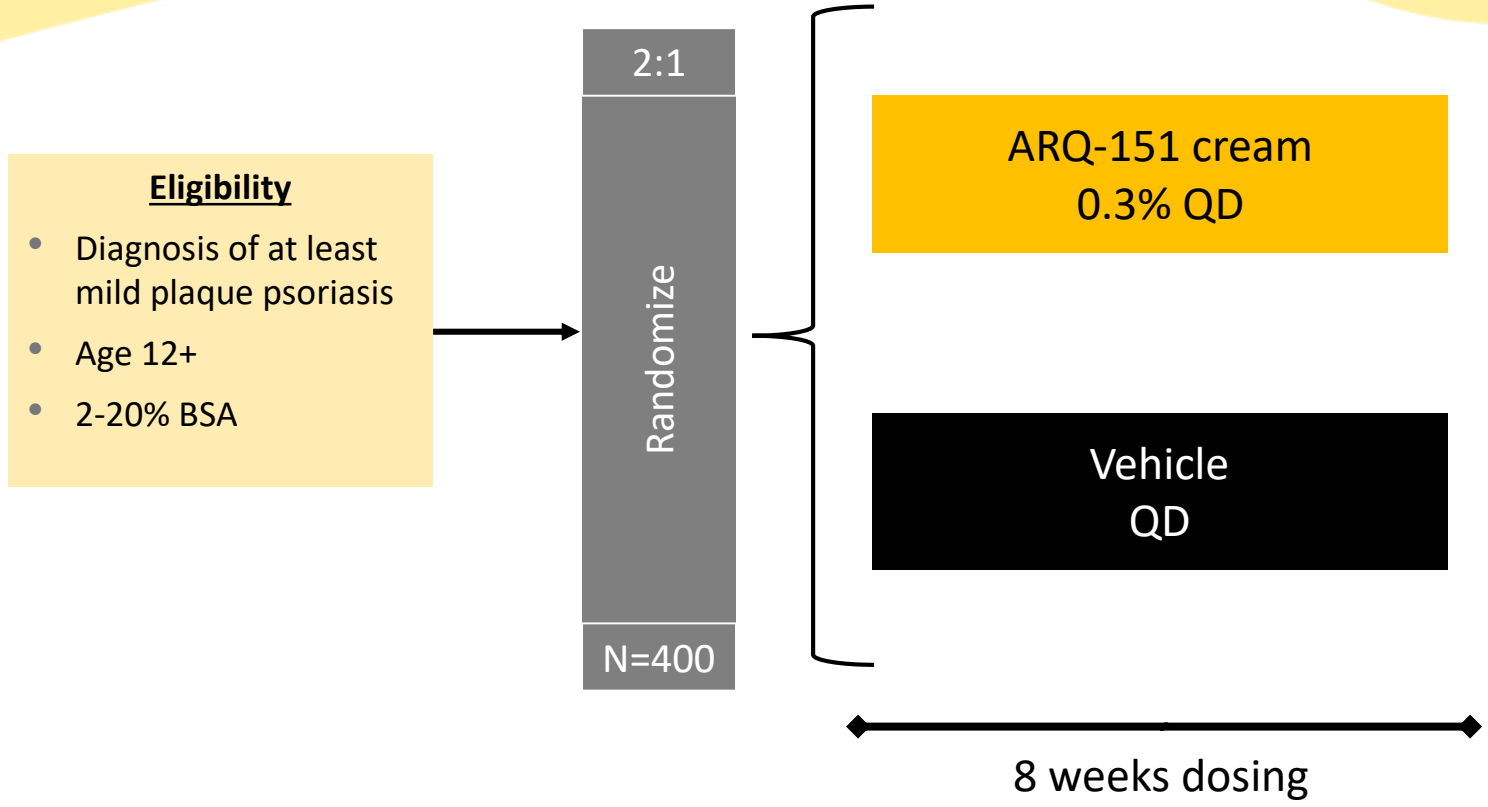
ARQ-151 – Psoriasis – DERMIS-1/2 Phase 3 Studies

Randomized, Double-blind, Vehicle-controlled Multicenter Studies
(Two identical parallel Phase 3 studies)



Eligibility

- Diagnosis of at least mild plaque psoriasis
- Age 12+
- 2-20% BSA

Endpoints

- Primary: IGA Success at Week 8
- Secondary:
  - PASI-50, PASI-75 and PASI-90
  - Intertriginous-IGA (I-IGA) Success
  - WI-NRS (itch)
  - Psoriasis Symptom Diary (PSD)
- Safety & tolerability

IGA Success & I-IGA Success = Clear or Almost Clear with at least a 2-grade improvement from baseline

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Significant Unmet Needs in Treatment of Atopic Dermatitis

- At least 60% of AD patients are children
  - 15-20% of all children in U.S. affected
- Topicals dominate treatment
  - Low- to mid-strength steroids most commonly used
  - Calcineurin inhibitors can be used for maintenance therapy
  - Side effect concerns with both steroids and calcineurin inhibitors
  - Eucrisa causes frequent burning at application site
- For moderate-to-severe disease, first biologic (Dupixent) has a high response rate but use is very limited

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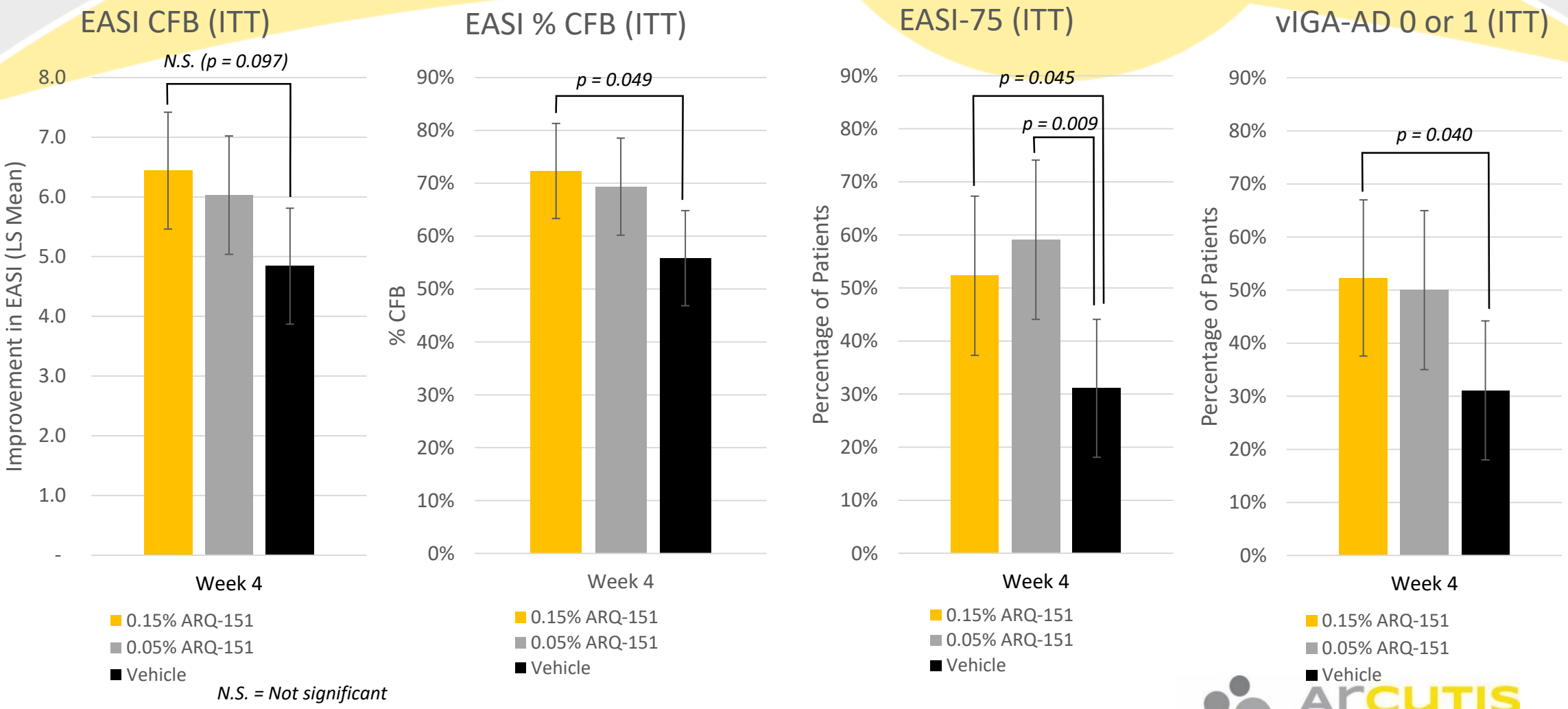
Topical Roflumilast May Address Unmet Needs in Atopic Dermatitis

- Proof of concept in treating atopic dermatitis across multiple endpoints
- Efficacy similar to topical JAK inhibitors or mid-potency steroids
- Well tolerated
- Simple, easy to use once-a-day cream
- Plan to initiate Phase 2b in atopic dermatitis in 2H20

Consistent Evidence of Efficacy Across Endpoints



N.S. = Not significant

Low Rates of Adverse Events in AD

- 95% of subjects on topical roflumilast completed study
- Treatment-related AEs rare (< 5%) and balanced across study arms
- Only one discontinuation on topical roflumilast due to an AE
- Only 1 SAE on topical roflumilast, deemed unrelated to treatment
- No evidence of local tolerability issues (burning, stinging)
- No evidence of side effects typical of oral PDE4 inhibition

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Significant Need For New Therapies for Seborrheic Dermatitis

- Common disease affecting ~ 2% of population
  - Characterized by red, flaking, greasy-looking itchy patches mostly on scalp, face and chest
- Standard of care is topical anti-fungals or low-/mid-potency steroids
  - Up to one-third of severe patients have an inadequate response
  - Concerns over use of steroids on face (e.g. skin thinning, cataracts, glaucoma)
- Topical roflumilast foam may address unmet needs
  - Topical roflumilast is a potent anti-inflammatory and anti-pruritic activity
  - Foam formulation suitable for treatment of scalp and face
- Enrolling Phase 2 proof of concept study, top line data 2H20

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We Expect Topical Roflumilast to be Highly Differentiated

Potential target product profile

- Symptomatic improvements similar to high potency steroids
- Ability to use chronically
- Little or no application site reaction
- Ability to use everywhere, including the face, scalp and intertriginous regions
- No boxed warning

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Topical JAK1 Inhibition a Promising Approach to Inflammatory Dermatologic Diseases

- Topical JAK inhibitors have shown symptomatic improvement in multiple dermatological disorders
  - But JAK inhibitors carry risk of hematological adverse events and immunosuppression
- Our topical JAK inhibitor (ARQ-252) may be “best in class”
  - Highly potent and highly selective inhibitor of JAK1
  - Oral study shows highly potent JAK1 inhibitor with good side effect profile
- Plan to enter clinic with ARQ-252 in 1H20
  - Plan Phase 2b study in hand eczema 1H20
  - Plan Phase 2a proof-of-concept in vitiligo in 2H20
  - Ongoing formulation work on “deep penetrating” formulation for alopecia areata

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~5 Million Patients Currently Treated Topically by Dermatologists in US

US Patient Populations (Millions)

	Psoriasis	Atopic Dermatitis	Seborrheic Dermatitis
Prevalence	8.6	19.2	6.5
Rx treated	3.5	6.3	
Topically treated	2.5	5.4	
Rx treated by derm	2.8	1.2	1.7
Topically treated by derms	**2.0**	**1.0**	**1.7**

<u>Additional opportunities to unlock value of our molecules</u>:

- US patients treated by other specialties (e.g., PCPs or pediatricians)
- Ex-US markets

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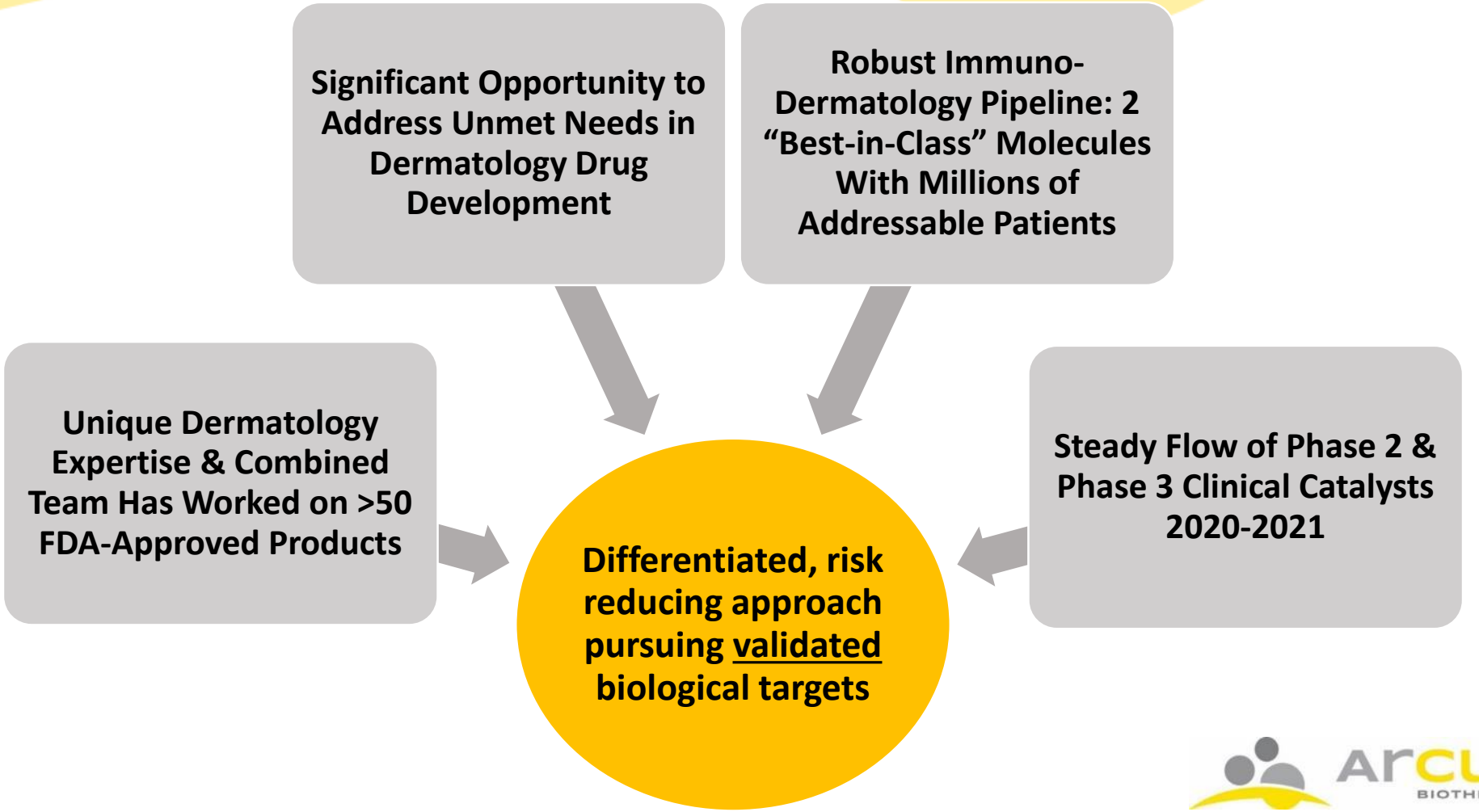
Arcutis Enjoys Strong IP Protection

- ARQ-151/154 covered by multiple patents and pending patents
  - 5 issued U.S. patents and 4 pending U.S. patents covering ARQ-151/154 formulation will expire not earlier than June 2037 (without PTE)
  - Patent in Japan and Canada; pending patents in Australia, Brazil, China, Europe, Hong Kong, India, Israel, Japan, Mexico, New Zealand, and PCT
  - Additional formulation and PK provisional patents pending or filed
  - Arcutis also has rights to issued topical roflumilast patents licensed from AstraZeneca
- ARQ-252/255 covered by composition of matter patents
  - Issued U.S. composition of matter patents; will not expire earlier than 2033 (without PTE)
  - Opportunity for formulation patents and other additional protection

Developing Differentiated Medicines; Maximizing Probability of Success



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Leadership Team Has Developed or Commercialized More than 50 FDA-Approved Products

Frank Watanabe, MA – President and CEO
- Former COO and Co-Founder at Kanan Therapeutics
- Former VP, Strategy and Corporate Development at Kythera
- Former Executive at Amgen and Eli Lilly

Howard Welgus, MD – Chief Medical Officer
- Former CMO at Nycomed U.S., Thesan, Verrica
- Former VP and Head of Dermatology & Arthritis TA at Pfizer
- Former Professor of Dermatology, Washington University

Ken Lock, MBA – Chief Commercial Officer
- Former senior marketing lead for inflammation at Gilead
- Former head of U.S. Dermatology Marketing at Amgen
- Sales and marketing leadership roles at Amgen, Gilead, Wyeth

Keith Klein, JD – General Counsel
- Former General Counsel, Unity Biotechnology, Sienna Biopharmaceuticals, Kythera Biopharmaceuticals
- Former Senior Associate General Counsel, Amgen

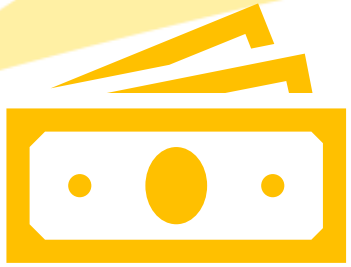
John Smither – Chief Financial Officer
- Former CFO of Kythera, Unity, Sienna; interim CFO, Kite
- Independent Director, eFFECTOR, Achaogen
- Former Executive at Amgen and Audit Partner, Ernst & Young

David Osborne, PhD – Chief Technical Officer
- Former CSO of Tolmar
- Former VP Product Development at Dow Pharmaceutical
- Former VP Product Development at Atrix

Patricia Turney, MBA – SVP, Manufacturing
- Former VP External Supply and Manufacturing at Amgen
- Former head, Manufacturing Site Operations, Amgen Breda
- Manufacturing, Engineering, EH&S, R&D, and Quality leadership roles at Amgen

Financial Position

As of January 31, 2020



~$265M[1]

Pro forma cash, cash equivalents, and marketable securities (as of 1/31/20)

Guidance

Expect pro forma cash, cash equivalents, and marketable securities to fund planned operations through 2021[1]

~38M[1]

Pro forma common shares outstanding (as of 12/31/19)

Analyst Coverage[2]

Goldman Sachs

GUGGENHEIM

COWEN

CANTOR Fitzgerald

1 Financials, guidance, and shares outstanding include ~$183M gross proceeds from the public offering of common shares closed 2/4/20 (includes greenshoe exercise).
2 The foregoing list includes the names of all brokerage firms known by the company as of 2/26/20 to have analysts covering the company. This list may not be complete and is subject to change as firms add or delete coverage. Please note that any opinions, estimates or forecasts regarding the company made by these analysts are theirs alone and may not represent the opinions, estimates or forecasts of the company.

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Thank You