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

WASHINGTON, DC 20549

#### FORM 8-K

#### CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of report (Date of earliest event reported): September 28, 2021

#### **Roivant Sciences Ltd.**

(Exact Name of Registrant as Specified in Charter)

Bermuda (State or Other Jurisdiction of Incorporation)

001-40782 (Commission File Number)

98-1173944 (I.R.S. Employer Identification No.)

Suite 1, 3rd Floor 11-12 St. James's Square London SW1Y 4LB United Kingdom (Address of Principal Executive Offices,

and Zip Code) +44 207 400 3347

Registrant's Telephone Number, Including Area Code

Not Applicable (Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communication pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
N/A	N/A	N/A

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2 of this chapter).

Emerging growth company  $\boxtimes$ 

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

#### Item 8.01. Other Events.

On September 28, 2021, Roivant Sciences Ltd. (the "Company") made available a corporate presentation in connection with the Company's annual R&D Day on Tuesday September 28, 2021. The webcast for this virtual event will begin at 1 p.m. ET and can be accessed at https://tinyurl.com/Roivant. A copy of the corporate presentation is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

#### Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

#### Exhibit Description of Exhibit

99.1 Roivant Sciences Ltd. R&D Day Corporate Presentation, dated September 28, 2021

104 Cover Page Interactive Data File (embedded with Inline XBRL document).

#### 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 hereunto duly authorized.

ROIVANT SCIENCES LTD.

By: /s/ Matt Maisak Name: Matt Maisak Title: Authorized Signatory

Dated: September 28, 2021



## **Roivant R&D Day**

September 28, 2021

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#### Statement of Limitations (1/2)

The following is a series of presentations (the "Presentation") prepared by Roivant Sciences Ltd. and certain of its subsidiaries and affiliates (the "Company").

This Presentation is only for its intended investor audience, and for informational purposes only, and it is not intended for reproduction or any further dissemination without the Company's consent. This Presentation does not constitute an offer to sell or solicitation of an offer to buy securities of any nature whatsoever, in any jurisdiction, and it may not be relied upon in connection with the purchase of securities.

This Presentation It is not intended to form the basis of any investment decision or any other decisions with respect of the proposed transactions (the "Business Combination") contemplated by the Business Combination Agreement, by and among Montes Archimedes Acquisition Corp. (the "SPAC"), and the Company and should not be relied upon in connection with any investment decision. The information contained herein does not purport to be all-inclusive and none of the SPAC, be Company or any of their respective affiliates, directors or officers makes any representation or warrany, veryees or milibation or warrany, expressed reliability of the information contained in this Presentation.

#### Forward Looking Statements

This Presentation may contain forward-looking statements for the purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995 and other federal securities taws. Forward-looking statements include, without limitation, statements regarding the estimated future financial performance, financial position and financial impacts of the Susiness Combination, the statisfaction of closing conditions to the Business Combination, and any related financing, the level of redemption by the SPAC's public stocholders, the timing of the complexity stocholders following the potential transactions, and the jubic stated financing, the level of redemption by the SPAC's public stocholders, the timing of the complexity stocholders following the potential transactions, and the jubic stated financing, the level of redemption by the SPAC's public stocholders, the timing and the stochange without notice, as are statements about market conditions. This Presentation constitutes on the SPAC sublic stochange without finites events and objectives erganding the future of the SPAC and the Company and its affiliates, which may not be realized. Forward-looking statements, including, without limitation, "believe," "anticipate, "continue," "estimate, "may," "project, "expect," "plan," "plotential, "transactive: "without", with and the Company and its affiliates, which may not be realized. Forward-looking statements that representations or indicate future events, trends or prospects to the basence of these sourds contain that as attemptions in of forward-looking, statements that representations or indicate future events, trends or prospects to the absence of these words does and the assence of these submices and that as tatements in a forward-looking statements in a difficute, assence regulated forward-looking statements in a statement state or the resisting and interim results or other preliming interim results or other preliming and results or other preliming and results or assurance regarding any possible progre

regulative approver on the sourcessuity commenciated. All forward-looking statements are based on estimates and assumptions that are inherently uncertain and that could cause actual results to differ materially from expected results. Many of these factors are beyond the SPACs and the Company's ability to complete the Business Combination; (2) the outcome of any legal proceedings that may be instituted against the SPAC and the Company reguring the Business Combination; (3) the inability to complete the Business Combination to the failure to obtain approval of the Business Combination; (4) changes to the proposed structure of the Business Combination (9) the nix that may be rejurited or appropriate as a result of applicable laws or regulations or as a result of the annucement and consummation of the annucement and consummation; (6) the ability to mess Combination; (9) the possibility that the Business Combination; (9) the possibility to accessfully (9) the possibility that the Business Combination; (8) the Business Combination; (9) the Business Co

You are cautioned not to place undue reliance upon any forward-looking statements. Any forward-looking statement speaks only as of the date on which it was made, based on information available as of the date of this Presentation, and such information may be inaccurate or incomplete. The Company undertakes no obligation to publicly update or revise any such statements, whether as a result of new information, future events or otherwise, except as required by law.



#### Statement of Limitations (2/2)

Key Performance Indicators This Presentation may include certain key performance indicators ("KPIs"). Management regularly reviews these and other KPIs to assess the Company's operating results. Realized return on our investments in Vants and technology sold to Sumitomo Dainippon Pharma Co., LLC, (CDS) reflect the value realized directly from the DSP transaction. The Company measures its return on publicly traded Vants by companing the value of its ownership stake in the public Vants against its aggregate investment in those entities. The Company believes these KPIs are useful to investors in assessing operating results and returns on historical investments. These KPIs should not be considered in isolation from, or as an alternative to, financial measures determined in accordance with GAAP. There is no assurance the future investments will achieve similar results.

Use of Projections This Presentation may contain financial forecasts or projections with respect to the SPAC, the Company and their respective affiliates. No representation or warranty, express or implied, is made by the SPAC, the Company or their respective affiliates, or the SPAC's or the Company's or such affiliates' respective directors, officers, employees or advisers or any other person as to the accuracy or completeness of the information contained herein, or any other written, oral or other communications transmitted or otherwise made available to any party in the course of its evailation of the Business Combination, and no responsibility or liability whatoever is accepted for the accuracy or sufficiency therefold for any errors, omissions or misstatements or otherwise, relating thereto. Without limiting the generation of the accuracy or sufficiency therefold for any errors, omissions or misstatements or otherwise, relating thereto. Without limiting the generative of a data, results, calculations and forecasts contained, the second or the relation of the accuracy or contained in this presentation and or otherwise, relating thereto. Without limiting the generative of the accuracy or sufficiency therefold for any errors, omissions or misstatements or otherwise, relating thereto. Without limiting the generative of the accuracy or sufficiency therefold for any errors, omissions or misstatements or otherwise, relating thereto. Without limiting the generative of the accuracy or sufficiency therefold for any errors, omissions or misstatements or otherwise, relating thereto. Without limiting the generative of the accuracy or the information contained in this Presentation and of the information rule on contained of the receivent also acknowledges and agrees that the information that may be required to evaluate a possible investment decision, and does not constitute investment, tax or legal advice. The receivent also acknowledges and agrees that the information contained in this Presentation and or the inform

Industry and Market Data In this Presentation, the Company may rely on and refer to certain information and statistics obtained from third-party sources which they believe to be reliable. The Company has not independently verified the accuracy or complete representation is made as to the reasonableness of the assumptions made within or the accuracy or completeness of any such third-party information. ness of any such third-party inform n. No

Additional Information
The Company has filed a proxy statement / prospectus on Form S-4/A with the SEC relating to the proposed Business Combination, which has been mailed to the SPAC's stockholders. This Presentation does not contain all the information that may be considered concerning the proposed Business Combination and is not intended to form the basis of any investment decision or any other decision in respect of the Business Combination. The SPAC's stockholders and other interested persons are advised to read the proxy statement / prospectus abusiness Combination. The SPAC's stockholders and other interested persons are advised to read the proxy statement / prospectus abusiness Combination. The SPAC's stockholders are abused to be additive proxy statement / prospectus abused ther documents filed in connection with the SEC website at <u>www.sec.gov</u>. ing



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### Roivant: Redefining "Big Pharma" from End to End



#### How We've Executed on Our Vision



in Dece ROIVANT 1. Medicine, Vant launch Sumitovant. 2. Based on

### 8 Consecutive Positive Phase 3 Studies

Study	Drug	Indication	Patients Enrolled	Geography	Topline Results		Primary p- value
PSOARING 1	Tapinarof	Psoriasis	510	<b>V</b>	August 2020	~	P < 0.0001
PSOARING 2	Tapinarof	Psoriasis	515		August 2020	$\checkmark$	P < 0.0001
SPIRIT 1*	Relugolix	Endometriosis	638	54	June 2020	$\checkmark$	P < 0.0001
SPIRIT 2*	Relugolix	Endometriosis	623	1 A .	April 2020	$\checkmark$	P < 0.0001
HERO	Relugolix	Prostate Cancer	934	<b>S</b> (10)	November 2019	$\checkmark$	P < 0.0001
LIBERTY 2	Relugolix	Uterine Fibroids	382	54	July 2019	$\checkmark$	P < 0.0001
LIBERTY 1	Relugolix	Uterine Fibroids	388	54	May 2019	$\checkmark$	P < 0.0001
EMPOWUR	Vibegron	Overactive Bladder	1,530	- E #	March 2019	$\checkmark$	P < 0.001
MINDSET	Intepirdine	Alzheimer's Disease	1,315	\$ M.	September 2017	×	P > 0.05



Note: The FDA has approved relogicix for the treatment of adult patients with advanced prostate cancer and for the management of heavy menstrual bleeding associated with uterine leiomyomas (Btroids) in premenopausal women. The FDA has approved vibegron for the treatment of adult patients with advanced prostate cancer and for the management of heavy menstrual bleeding associated with uterine leiomyomas (Btroids) in premenopausal women. The FDA has approved vibegron for the treatment of adult patients with advanced prostate cancer and for the management of heavy menstrual bleeding associated with uterine leiomyomas (Btroids) in premenopausal women. The FDA has approved vibegron for the treatment of adult patients with overactive bladdee. Otherwise, the dugs noted above in current pipeline are investigational and subject to health authority approval. Tepline results dates are based on corresponding VVD viound the transferred to Sumitoware, a buffetted and thorat, the V vertex that were treatefored to Sumitoware advanced or Vertex that were treatefored to Sumitoware advanced or Vertex that the vertex treatment of advanced to vertex the treatment of the summary advanced to the summary advance

### **Development Pipeline**

		Modality	Preclinical	Phase 1	Phase 2	Phase 3	Registration
۵	TAPINAROF Psoriasis   Dermavant	(B)					►
۵	TAPINAROF Atopic Dermatitis   Dermavant	(O)					
۵	CERDULATINIB Vitiligo   Dermavant	3			►		
Y	IMVT-1401 Myasthenia Gravis   Immunovant	<i>p</i> t			►		
¥	IMVT-1401 Warm Autoimmune Hemolytic Anemia   Immunovant	L.T.			►		
Y	IMVT-1401 Thyroid Eye Disease   Immunovant	Let 1			►		
~	ARU-1801 Sickle Cell Disease   Aruvant	髾			►		
Π	NAMILUMAB Sarcoidosis   Kinevant	<i>pt</i>		►			
	LSVT-1701 Staph Aureus Bacteremia   Lysovant	<u>ki</u> t		►			
۵	CERDULATINIB Atopic Dermatitis   Dermavant	9		►			
۵	DMVT-504 Hyperhidrosis   Dermavant	තී					
۵	DMVT-503 Acne   Dermavant	( <b>D</b> )	►				
~~	ARU-2801 Hypophosphatasia   Aruvant	髾	►				
$\land$	AFM32 Solid Tumors   Affivant	juit .	►				
**	CVT-TCR-01 Oncologic Malignancies   Cytovant	(D)	►				
RO	Note: All drugs in current pipeline are investigational and subject to health authority approval.		Gene Cel	Topical Bi	alonic Small		

## 💩 dermavant"

#### Novel steroid-free topical tapinarof, if approved, could be uniquely positioned to transform two of the largest global immuno-dermatology markets

#### Value Added by Roivant Platform

#### Potential To Transform the Treatment of Psoriasis and Atopic Dermatitis

- · Leveraged platform expertise to expand IP with multiple patents expected to provide protection until at least 2036
- · Once-daily, cosmetically elegant, non-steroidal cream that, if approved, could offer a favorable
- · Hired leadership and provided investment that together delivered Phase 3 success
- combination of treatment effect, safety, durability on therapy, and remittive effect · Psoriasis and atopic dermatitis affect an estimated 8M and 26M patients in the US, respectively
- · Potential to be used across mild, moderate & severe plaque psoriasis, including sensitive areas

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ROIVANT

IG 2, adult patients core of clear (0) or roportion of subjects who achieven riasis Area and Severity Index (P/ h a PGA score of 0, median time daily (QD) treatment at Week 12. 3. Propo

urrent pipelin NG 1 and PS Note: All dru 1. In both PS



## *Only* one-time potentially curative gene therapy for sickle cell disease with demonstrated ability to engraft with reduced intensity conditioning (RIC)

Value	Value Added by Roivant Platform			Well-Positioned Against Competitors <sup>1</sup>				
Longstanding initial asset lic	Longstanding Roivant relationship with CCHMC enabled initial asset license and strong academic-industry			GB	т 🏷	CRISPR	bluet	oirdbio <sup>®</sup>
partitership				~\$2BN m	arket cap ~	\$10BN market ca	ap ~\$1BN ma	arket cap
Manufacturing increased her	g process impr noglobin F exp	ovements have pression and va	enabled so-occlusive	Oxbryta a Chronic	approved therapy R	Developing CTX001 Requires myeloablatio	veloping CTX001 Developing LentiGi uires myeloablation Requires myeloabl	
event (VOE)	eduction			ARU-1801 is <u>onl</u>	y product candidat	e clinically shown t	o engraft with only a	an RIC regi
		meaningf	Hospitalized VOE	s	its with sickle	Total VOEs		
		Pre-treatment (24 mo)	Post-treatment (24 mo)	Reduction (%)	Pre-treatment (24 mo)	Post-treatment (24 mo)	Reduction (%)	
	Patient 1	7	1	86%	41	3	93%	
Updated	Patient 2	1	0	100%	20	3	85%	
manufacturing	Patient 3	6	0 at 18 mos	100%	12	0 at 18 mos	100%	
	Patient 4	8	0 at 12 mos	100%	12	0 at 12 mos	100%	
	<ul><li>Durable e</li><li>No VOEs</li></ul>	ngraftment to 3 to date in most	6+ months in Pa recent patients	tients 1 and 2				
	Note: All drugs in current	pipeline are investigational an	d subject to health authority app	proval. All trademarks are property o	f their respective owners. VCN =	rector copy number.		



## Rapidly initiated multiple Phase 2 trials to develop anti-FcRn antibody IMVT-1401 as a best-in-class or first-in-class subcutaneous injection

#### Value Added by Roivant Platform

- Identified and licensed drug from HanAll Biopharma and expanded potential patient reach by selecting three initial indications with first- or best-in-class potential
- Funded and ran key Phase 1 pharmacodynamic trial, positioning for successful public listing via reverse merger
- Recruited key executive leadership, and board of directors led from inception by Roivant employee

MG WAIHA TED	~364k patients
ITP	
PV	
CIDP	Expanded opportunity >
BP	758k patients
NMO	
GBS	∎US
PMN	Europe

ROIVANT

#### **Clinical Results to Date**

- <u>Myasthenia Gravis</u>: 60% responder rate on the MG-ADL<sup>-0</sup> vs 20% for placebo, and 3.8point mean improvement on myasthenia gravis activities of daily living (MG-ADL, p=0.039)
- Warm Autoimmune Hemolytic Anemia: 1 of 3 patients dosed ≥ 11 weeks achieved an increase in hemoglobin well over 2 g/dL from baseline, which was maintained during treatment
- <u>Thyroid Eye Disease</u>: In Phase 2a, 57% of patients improved by ≥ 2 points on clinical activity score (CAS), and 43% of patients were both proptosis responders\* and CAS responders\*\*; efficacy results in Phase 2b, which was terminated early, were inconclusive

Resuming Clinical Deve	lopment Fol	llowing O	bserved	Increases in
С	holesterol a	Ind LDL		

- In February 2021, Immunovant voluntarily paused dosing in ongoing clinical studies to investigate observed elevated cholesterol levels
- Program-wide data review suggests that lipid elevations are predictable, manageable, and appear to be driven by reductions in albumin, with the 255 mg dose resulting in modest changes to LDL and albumin with potent knockdown in IgG

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 The increases in LDL and reductions in albumin were reversible upon cessation of dosing, and no major adverse cardiovascular events have been reported to date

Nex: All rougs in current pipeline are investigational and ubject to health activity approval. All tademarks, are properly of the inspective exames. Based on internet mapping of 15 this approximation, the internet mapping, an additional two pipelines restored and were and/onized. MAGAL responders defined as patients showing ≥ 2-point improver Proptosis responders improved ≥2mm in study eye without significant deterioration in fellow eye. "CAS responders actived a total CAS accors of 0 or 1. Source: Immunovement 15-K field uner 1, 2021. MG = Mappinghenia Grains, TEQP = Thyroid Eye Disease. WIHA 4 without Automiume Hemotyck Amenia.

### Vant Model Enables Rapid Scaling





#### The Roivant Model for Drug Discovery and Development

stor Audiences Only



#### Entering the Era of Predictive, High-Precision Molecular Medicine



#### The Roivant Vision in Drug Discovery: Small Molecule Drug Design as Engineering



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#### What's Really "Inside" Our Engine?

#### PROPRIETARY TOOLS

**Conformational Genetics** 

Analyze genomic variants to define disease targets and map mutations to 3-D structures to predict novel MOA and conformational mechanism

**Druggability Assessment** 

Predict high-energy water hotspots and druggable pockets using water thermodynamics and mixed-solvent molecular dynamics (MD)

Accurate Structures for Protein Complexes Integrate molecular dynamics with biophysical data

**Binding Energies** Ability to conduct >1,000 in silico binding affinity predictions/day

Beyond Binding (Dynamics and Kinetics) Model complex biological motions, including agonism, allostery, biased signaling, and ternary structures

Atom-by-Atom Design

Visualize atom-by-atom free energy contributions of a ligand binding to a protein

Machine Learning and Generative Models Predict ADMET properties, use of data-driven models to identify novel molecules

Our engine is powered by a supercomputing cluster with over 600 GPUs, allowing us to run thousands of molecular simulations in parallel



**EXPERTISE** 

Expertise Across All Areas of Molecular Simulations Software engineering, high-performance computing, methods development, applications, and experienced drug designers

Software Engineering and Methods Development Own software stack, facilitating the most accurate, fast, and scalable target-specific simulations

Hardware Development Maximize throughput, minimize bottlenecks, and tune hardware to optimize performance for bespoke predictive sciences methods

**Experienced Drug Designers** Leverage medicinal chemistry, modeling, simulation, and biophysics to lead the new era of predictive, high-precision molecular medicines

Laboratory Facilities Evaluate highest value candidates with in-house labs, enabling highest quality and rapid turnaround

Leaders in Computational Drug Discovery Senior scientific leadership team with authorship of over 200 peer-reviewed articles and over 20,000 citations

In-house expertise across critical discovery capabilities can expand our engineering toolset as we pursue different types of hard biological problems

# Roivant Builds Technologies to Transform Biopharma Development and Commercialization



- Datavant seeks to power every exchange of health data, unlocking a massive ecosystem of companies using linked, longitudinal data to improve patient outcomes
- Continued growth across health data network, including >400 organizations and >100 subscription customers
- Powers the advanced use of real-world evidence, patient finding, outcomes research, and commercial analytics
- Customers and partners include Janssen/J&J and other top 20 pharmas, ZS, Medidata, Cigna, Parexel, Symphony Health, Komodo Health, and the NIH

Merged with Ciox Health, providing Roivant with \$320MM in cash and minority equity stake in combined entity<sup>1</sup>





- Lokavant offers software that integrates real-time data from ongoing clinical trials and monitors risks related to time, cost, and quality
- Proprietary data model serves as a "common language" for trial operational data and enables real-time data integration
- Al trained on proprietary dataset of 1,300+ trials designed to identify the most important risks quickly, when there is still time to mitigate them
- Expanded international footprint through partnership with leading Japanese CRO CMIC

## Deployed as Parexel's next generation remote monitoring platform

1. The implied enterprise value of the combined company at the convenion price cap of the new preferred equity investment made concurrently with the merger was \$7.0 billion. This enterprise value implies an equity value of \$6.1 billion (after netting out approximately \$900 million of debt and other adjustments). No assurance can be given that the implied enterprise or equity value is an accurate reflection of the value of the combined business at closing or in the future. At closing of the merger and assuming a \$7.0 billion enterprise value, Roivant's engoing, fully gliuted equity ownership in the combined entity was approximately 12% (without giving effect to certain liquidation preferences held by the preferred equity shareholders).

### Key Near-Term Potential Catalysts

	Tapinarof NDA Filing in Psoriasis	Mid-2021 🗸
A alama a sa a "	Tapinarof Phase 3 Initiation in Atopic Dermatitis	2H 2021 🗸
o dermavant	FDA Approval Decision on Tapinarof for Psoriasis	2Q 2022
	Topline Date from Tapinarof Phase 3 Trials in Atopic Dermatitis	1H 2023
	IMVT-1401 Phase 3 Initiation in Myasthenia Gravis	Early 2022
	Two New Indications for IMVT-1401 to be Announced	By August 2022
	Initiate Pivotal Trial for IMVT-1401 in Second Indication	2022
	First Patient Dosed with Updated ARU-1801 Manufacturing Process	2H 2021 🗸
ARUVANT	Additional Clinical Data from ARU-1801 Phase 1/2	2H 2021 🗸
	ARU-1801 Phase 3 Initiation	1H 2023
kinevant	Namilumab Phase 2 Initiation in Sarcoidosis	1H 2022
) lysovant	LSVT-1701 MAD Initiation	1H 2022
proteovant	Phase 1 Initiation for First Degrader Candidate	2022
	Multiple Additional Degrader Candidates Entering IND-Enabling Studies Each Year	Starting 2022

ige. All trademarks are property of their respective owners. Drugs are investigational and subject to



### **From Chip to Clinic**

Integrating Advanced Simulation and AI Approaches to Design Novel Medicines for Challenging Disease Targets



#### Integrated Drug Discovery at Roivant – From Chip to Clinic





### Leading Computational Discovery Capabilities in Physics and AI/ML

		Sample in silico Assays				
	Computational	<ul> <li>Identify novel binding sites on a protein and assess druggability</li> </ul>				
	Physics	<ul> <li>Predict binding affinity and selectivity of a ligand to a protein, including ternary complexes</li> </ul>				
- Calent		<ul> <li>Simulate conformational dynamics of a protein as it shifts between active and inactive states</li> </ul>				
	Machine Learning	<ul> <li>Machine learning using known protein-protein interactions to design new degraders that can effectively stabilize target-E3 interfaces</li> <li>Hit finding for induced proximity modulators (molecular glues and heterobifunctional molecules)</li> </ul>				
		<ul> <li>Ubiquitin proteasome system map to identify degron motifs</li> </ul>				
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#### Improvements from Combining AI and Physics Approaches



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 $\chi$ : atomic electronegativity that characterizes how strongly an electron is associated with an atom  $J^{(0)}$ : atomic hardness that characterizes how much the atomic charge varies under a external field E: electrostatic potential energy q: atomic charges

### **Roivant Biophysics and Structural Biology Advantage**

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#### **Conformational Modulation Assays with Integrated MD + Biophysics**



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#### Witnessing Relevant Biological Timescales with Atomic Resolution



#### Free Energy Calculations and Atomic Decomposition for Better Designs

Peer to Schrödinger's FEP+ for speed and accuracy of binding free energy calculations. Novel atomic decomposition of binding free energy lets our drug designers "see" areas for improvement.



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#### What Does The Predictive Sciences Platform Enable?

#### The era of predictive, high-precision molecular medicines across multiple modalities

#### Target ID

- Relating genetics to protein conformations
- · Identification of novel MOAs
- · Druggability and Novel Binding Sites
  - Detection of cryptic/dynamic pockets
  - Fragment soaking crystallography
  - · Computational mixed-solvent MD
- Competitive Binders
  - · Agonists
  - Antagonists
- Allosteric Modulators
  - Distal dynamic modulation
  - Conformational stabilization
- Induced Proximity Modulators
  - Heterobifunctional degraders
  - Molecular glue degraders
  - Phosphorylation-inducing molecules





#### Design Cycle - Ideate, Design, Predict, Make, Test, Analyze, Iterate



### Beyond Binding: Conformational Modulation and Induced Proximity

#### **Advanced Simulation Approach**

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# Example of How We Develop Methods to Overcome Critical Bottlenecks: Heterobifunctional Molecules for Protein Degradation



#### Modeling the Ternary Structure is Critical to a Predictive TPD Platform



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### Fully Integrated Binding Simulation with Hydrogen-Deuterium Exchange Data



DISCOVER For Investor Audiences Only
### Conclusions

- Roivant is a fully integrated drug discovery company "From Chip to Clinic"
- We have built an industry-leading computational platform for molecular simulations and AI/ML to overcome critical bottlenecks in drug discovery
- The development of custom apps is key for drugging challenging targets
- Integration of experimental data enables more accurate and biologically relevant simulations
- Pipeline expansion into induced proximity and selective cooperativity opens new opportunities for predictive computational platform





## **Degrading Proteins, Defeating Disease**

## **Degrading Proteins, Defeating Disease**

The power of protein degradation is now being realized!

By harnessing the human body's innate cellular machinery to selectively 'delete' proteins, we aim to create new medicines to treat patients with debilitating diseases

We are pursuing this expansive field with the scientific knowledge, proprietary technologies, business acumen, and risk tolerance required to succeed

ROIVANT DISCOVERY For Investor Audiences Only

proteovant

## Why Targeted Protein Degradation?



## **Unlocking The Vast Opportunity To Expand The Druggable** Proteome By Exploiting the Ubiquitin-Proteasome System (UPS)

Protein degradation via the UPS is a multiple 1 step process: Ubiquitin The degrader simultaneously engages the target chain transfer **Target Protein** protein and E3 ligase complex Optimal orientation of the new ternary complex ensures optimal proximity of the two proteins such E3 Ligase that ubiquitin is transferred from the E3 ligase Catalytic degrader activity complex to the target protein 410 Successful ubiquitination marks the target protein Proteasomal ٨Į degradation for destruction, resulting in degradation by the proteosome (3) Proteovant Degrader Design Capabilities Span an Array of E3 Ligase Modulation Modalities Heterobifunctional Degraders Monovalent Degraders Potential Cart. Future  $\dot{\phi}$ Modalities ROIVANT proteovant

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For Investor Audie

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Protein

tagged for degradation

## Proteovant – Positioned As A Leading Pioneer In Protein Degrader Discovery and Development

- •Formed new Vant focused on the discovery and development of novel targeted protein degraders
- •Assembled a world-class team of discovery scientists, drug developers and business professionals
- Acquired Oncopia Therapeutics



- Cofounded by Dr. Wang, a world-renowned scientist focused on protein degradation at the University of Michigan. Over 15 years, Dr. Wang and his team have developed a deep degrader pipeline and generated a large global IP estate
- Broad initial pipeline of degraders to more than 10 targets oncology and immunology
- Established long-term, exclusive discovery partnership with Dr. Wang and his lab for targeted protein degradation
- •Closed initial \$200 million equity investment with SK Holdings
- •Leveraging Roivant's investments in computational sciences through close collaborations with VantAI (machine learning and focus on protein degrader discovery and development)





## World-Class Executive Team Positioned to Execute on Our Vision



#### **Drew Fromkin**

Chief Executive Officer 30+ years leadership in healthcare co's, serves as Vant Portfolio Operating Partner. Previously CEO Tarveda Therapeutics; CEO of Clinical Data (CLDA – \$1.5 Billion Sale);



#### Helai Mohammad, PhD VP, Cancer Biology

15+ years of experience in oncology research with emphasis on epigenetics. Previously Senior Scientific Director at GlaxoSmithKline



#### Winston Wu, PhD VP, CMC

27+ years of experience in chemistry process development and manufacturing. Previously VP of Chemical Research, Development and Manufacturing at Lexicon Pharmaceuticals





#### **Ruby Holder, MBA**

Chief Strategy Officer 30+ years in healthcare, majority spent as a long-short healthcare portfolio manager. Previously VP of Roivant Governance, Managing Partner & Portfolio Manager at Greywall Asset Management



#### Tiago Girao, CPA

20+ years leading teams in accounting, finance, treasury, IR and other corporate operations functions, Previously CFO of Respivant, CFO of Cytori, and 10+ years of experience in public accounting



# 30+ years in drug discovery and advancement of >20 compounds to the clinic in multiple therapeutic areas. Previously VP of Chemistry and Strategic Outsourcing at Agios, and various leadership roles at Janssen

#### **Christine Stuhlmiller, MBA**

Zhihua Sui, PhD

Chief Scientific Officer

VP, Program Management

17+ years of experience in healthcare, most recently as Executive Director, Global Product Development and Supply Program Management BMS/Celgene.

#### John Athanasopoulos, MBA

#### VP, R&D Operations

20+ years in various research and operational roles biotech, pharma, and academic settings. Previoush held leadership roles at Jnana Therapeutics, C-4 Therapeutics and the Broad Institute

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#### Corey Strickland, PhD

Scott Priestley, PhD

VP, Discovery Chemistry

23+ years leading drug hunting chemistry teams, delivering numerous compounds

across various disease areas. Previously

Director of Discovery Chemistry at BMS

VP, Molecular Technology 25+ years in building structural biology drug discovery platforms across multiple disease areas. Previously Senior Principal Scientist at Merck







### Proteovant's Leading Protein Degrader Discovery and Development Engine Is Fueled By Differentiated Capabilities



## **Selected Pipeline Programs**

- Balanced pipeline of protein degrader targets spanning Oncology and Immunology
- Advancing initial protein degrader programs from the Oncopia acquisition
- Enhancing pipeline with degraders to new targets and novel E3 ligase discovery work through our internal R&D capabilities as well as our collaborations with Dr. Wang and VantAl



#### \* Multiple programs



Drugs are investigational and subject to regulatory approval.



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## VantAI: A Novel Paradigm For Rational Degrader Discovery

Classical small molecule machine learning starts chemistry first - VantAl flips this script

Protein-Contacts Fir	st, Learning From Evolution	Validated In Extensive Benchmarking
I) Look at every possible interface	<ol> <li>Protein-Contacts First: VantAI starts wi protein-protein interfaces, independent specific protein (E3 or POI)</li> <li>Value of Evolution: possible protein interfaces are highly conserved, provid learnings from millions of examples in nature</li> <li>Leveraging Deep Learning: training mo on evolutionary information to learn differences in interfaces         <ul> <li>Models produce VantAI score - scoring similarity of E3-POI interfaces to naturally occurring interfaces</li> </ul> </li> </ol>	th ing bdels • Structure, percent of predicted ternary complexes alike <sup>2</sup> to real, crystalized glue system • >11x accuracy increase, allowing rational molecule design to fill the gap • Real World Discovery Impact
E3 POI - DL model - 0.98	<ol> <li>Close The Gap: optimize towards smal drug-like chemistry de-novo designed t mimic most favorable natural interface:</li> </ol>	<ul> <li>Increase Hit Rate: impact from example<sup>3</sup> project: 6/8 initial compound designs showed &gt;50% degradation for target without previous recorded degradation</li> <li>Faster Pipeline Progress: 5 targets with PoC degradation<sup>4</sup> in &lt;1 year</li> </ul>
	trained Protein Docking using LightDock	(feed on CADDI) of excitational second touth also temperature reported in DDD 43



1 Restrained Protein Docking using LightDock 2 Enrichment: % of predicted temary complexes within 10A Ligand RMSD (based on CAPRI) of crystalized ground truth glue temary complexes reported in PDB (Benchmark structures: 6HOF, 6HOG, 6UML, 5HXB, 5FQD, 6UE5, 6UD7, 6PAI, 6SJ7, 6QOR, 6QOV, 6QOW, 6TD3, 6M90, 6M91, 6M92, 6M93, 6IQN) 3 Prior Vanth Iproject 4 >30% degradation vs control

# Proteovant – Positioned To Lead In Protein Degrader Discovery and Development

- Well-financed to advance pipeline of protein degraders to the next level of value creation
- World-class team assembled to drive discovery and development of optimized protein degraders
- Advancing broad pipeline of protein degraders
  - Long-term, exclusive discovery research partnership in protein degradation established with Dr. Wang
  - Investing in internal discovery to expedite current programs and further expand the pipeline with novel degraders
- Exclusive partnership with VantAI to access unique and proprietary, degraderoptimized machine learning and systems biology



proteovant

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## **Genevant Overview**

#### Industry-Leading Nucleic Acid Delivery Company

- World-class delivery platforms to enable delivery of mRNA, siRNA, gene editing constructs, and other nucleic acids
- Best-in-class proprietary lipid nanoparticle (LNP) platform and proprietary ligand conjugate platform
- · Focused business of collaboration around delivery expertise and technology platforms
- Offers partners attractive potential to deliver payloads to traditionally hard-to-reach tissues/cell types, plus NA design capability
- More than 600 LNP-related issued patents and pending patent applications, directed to individual lipid structure, particle composition, particle morphology, manufacturing and mRNA-LNP formulations

#### Business Model Designed to be Profitable While Building Further Advances in Nucleic Acid Delivery Technology

- Genevant uses its expertise in the delivery of nucleic acid therapeutics to develop optimal delivery systems for its collaborators' identified payloads or target tissues
- Genevant provides collaborators access to validated technology to deliver nucleic acid therapeutics, eliminating the need to build internal delivery expertise or build IP estate from scratch in complex field
- Genevant typically retains ownership or certain rights to delivery-related IP developed in context of collaboration, which can be leveraged for other out-licenses and to build on developments for future deals

Business model exemplified by numerous recent collaborations and licensing deals

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## **Decades of Experience in Nucleic Acid Delivery, Creative Corporate Partnering**



Peter Lutwyche, PhD Chief Executive Officer and President, GSC

- Former CTO, Arbutus • Biopharma; Head of Pharmaceutical Development, QLT
- Developed and commercialized VISUDYNE® at QLT
- · Over 20 years experience in nucleic acid-based products



Pete Zorn President and Chief Legal Officer, GSI

· Former COO, Genevant, Chief Corporate Officer and General Counsel, Albireo Pharma; General Counsel and VP. Communications, Santaris Pharma; General Counsel and SVP, Targacept

James Heyes, PhD Chief Scientific Officer

- Former VP, Drug Delivery, Arbutus Biopharma
- Over 17 years experience in lipid chemistry and nucleic acid drug delivery
- Over 20 issued and published US patents in lipid nanoparticle and ligand conjugate technology

Arbutus

Lilly



Tracy Meffen VP Quality & Regulatory

- · Former Head Quality,
- Arbutus Biopharma . Over 25 years experience in QA and RA management roles at various organizations including Lungpacer, INEX, Lilly and Genzyme

genzyme

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Ed Yaworski **VP** Pharmaceutical Development

- Head of CMC, Arbutus Biopharma
- Over 30 years experience in pharma including 18 years nucleic acid drug delivery
- Inventor of leading nucleic acid delivery technology used in more than a dozen clinical trials



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santaris pharma a/s

Albireo

TARGACEPT





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## Genevant's Lipid Nanoparticle (LNP) Delivery Platform

- Multi-component lipid formulations encapsulating nucleic acid payload(s) within a lipid core
- Limited constraints on NA payload composition, structure or size
- Stable uniform dispersion of colloidal nanoparticles
- Efficient intracellular delivery to cytoplasm via receptor-mediated endocytosis









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## **Genevant has Unparalleled Experience Designing Ionizable Lipids**



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- In a head-to-head study comparing multiple LNP formulations varying only the ionizable lipid, a newer Genevant formulation outperformed third party formulations
- Superior potency and avoidance of immune stimulation relative to others, including the formulation used in Alnylam's Onpattro<sup>®</sup>

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## **Genevant LNP Technology has Entered the Clinic in More than a Dozen Product Candidates Representing Hundreds of Subjects**

#### Clinical Highlights (non-exhaustive)

Company	Product	Indication	Activity	Latest Phase
Alnylam	ONPATTRO (patisiran)	ATTR Amyloidosis	<ul> <li>Safely dosed for up to 25 months in some patients</li> <li>Efficacy of up to 94% TTR knockdown with physiological effect</li> <li>Approved by the FDA August 2018</li> </ul>	Approved
	ARB-1467 (TKM-HBV)	Hepatitis B	<ul><li>Completed Phase 2b trial in HBV patients</li><li>Clear PD effect (knock down of surface antigen)</li></ul>	Phase 2
<b>TArbutus</b> BIOPHARMA	TKM-PLK1	Oncology	<ul> <li>Safely dosed for up to 18 months</li> <li>Evidence of anti-tumor activity based on a decrease in tumor size and a decrease in tumor density consistent with necrosis</li> </ul>	Phase 2
	TKM-Ebola (three LNP products)	Ebola Infection	<ul><li>100% protection in lethal primate model of EVD</li><li>Compassionate use in 2014 Ebola outbreak</li></ul>	Phase 2
moderna	Four Prophylactic mRNA Vaccines	Various infectious diseases	<ul><li>Successful completion of first in human mRNA vaccine trial</li><li>Met primary endpoint of neutralizing Ab titers in healthy subjects</li></ul>	Phase I
C gritstone	GRANITE-001	Oncology	<ul> <li>Personalized oncology vaccine; self replicating RNA payload encoding tumor neoantigens</li> <li>Promising immunogenicity activity and safety data released</li> </ul>	Phase 2
PROVIDENCE	PTX-COVID19-B	SARS-CoV-2	Promising immunogenicity data released	Phase 1

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Favorable safety data in a variety of repeat-dosing schedules

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## **Collaborator Providence Therapeutics Reported Favorable Interim** Phase 1 Antibody Data for mRNA-LNP COVID-19 Vaccine\*

- Data from 60 subjects; two doses, 28 days apart
- · Compelling safety data also reported



favorable-interim-phase-1-trial-data-for-ptx-covid19-b-its-mrna-vaccine-against-covid-19.html

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Both expts: (2 IM doses, 3-week interval). Measurements 14 days post boost. © GENEVANT SCIENCES CORPORATION. 2021. ALL RIGHTS RESERVED vestor Audie nces Only Drugs are inve al and subject to regulatory approval

# Hepatic Stellate Cell (HSC)-Directed LNP: Strong Target-Specific Knockdown

- Building on track record of success, focusing on access to historically challenging tissues and cell types
- Hepatic stellate cells well established as central driver of fibrosis
- In preclinical studies, delivery of siRNA to HSCs via Genevant's LNP demonstrated selective knockdown of mRNA in mice with minimal activity in hepatocytes
- Additional research in lung, muscle, CNS, eye





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## **Genevant LNP Manufacturing Technology**

- Controlled mixing process (not microfluidic or extrusion based)
- Broadly applicable to nucleic acids including plasmid DNA, siRNA, and mRNA
- High encapsulation efficiency
- Rapid, reproducible and robust
- Easily scalable
- Modular design is transferable
- GMP compliant







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## **Genevant's siRNA-Ligand Conjugate Delivery Platform**



## siRNA-GalNAc Conjugates Mechanism of Action



## GalNAc-conjugated ligand mediates siRNA delivery

- GalNAc binds & internalized by ASGPR (<u>As</u>ialoglycoprotein <u>R</u>eceptor);
  - Clears serum glycoproteins via clathrin-mediated endocytosis
  - $\circ~$  High capacity uptake system
  - Highly expressed and conserved across species
- siRNA passively released from endosome and engages RISC
- Results in mRNA cleavage and inhibition of translation

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## First Generation Compared Favorably to Benchmark, RNAi 2.0 Provided Enhanced Potency and Duration of Effect in NHP

- RNAi 2.0 contains intrinsic endosomolytic properties
- Single subcutaneous dose NHP study; all groups used same TTR sequence to allow direct comparison

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- Marked enhancement in potency
- Compatible with GalNAc or other ligand types





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## **Representative Corporate Partnering**

BIONTECH	<ul> <li>Co-develop + co-commercialize specified mRNA-LNP rare disease programs; 50-50 profit/cost share; additional LNP licenses for specified oncology target</li> </ul>
gritstone	<ul> <li>License to LNP for SAM RNA vaccine products for COVID-19</li> <li>License to LNP for SAM RNA vaccine products for specified undisclosed indication</li> </ul>
SAREPTA	Collaboration for LNP-based gene editing therapeutics for specified rare diseases
Takeda	<ul> <li>Collaboration for LNP access to specified targets in hep. stellate cells for liver fibrosis</li> <li>Collaboration for LNP delivery for nonviral gene therapy for specified rare liver diseases</li> </ul>
PROVIDENCE	License to LNP for vaccine containing mRNA encoding for antigen for SARS-CoV-2
🕜 ST PHARM	License to LNP for vaccine containing mRNA encoding for antigen for SARS-CoV-2
Other Recent Transactions (undisclosed)	<ul> <li>Collaboration for LNP-based gene editing therapeutics for specified rare disease</li> <li>Licenses to LNP for mRNA COVID-19 vaccines or therapeutics to universities in the U.S. and abroad</li> </ul>
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#### **Investment Summary**

Poised to TRANSFORM Immuno-Dermatology

#### Transformational 2 in 1 Lead Product Candidate

- > Tapinarof, a novel chemical entity, was shown to have rapid onset and efficacy with clinically meaningful and statistically significant differences observed for all primary and secondary endpoints in pivotal studies.
- ~40% of tapinarof treated patients achieved complete disease clearance (PGA=0) in the long-term extension trial with treatment effect consistent regardless of baseline disease characteristics, severity, and patient demographics.
- Uniquely positioned to potentially transform the two largest global immuno-dermatology markets: psoriasis (\$16.5B in 2019) and atopic dermatitis (\$2.3B in 2019)
- > NDA filed; FDA PDUFA action expected in 2Q 2022
- > Comprehensive commercial planning underway for 2H 2022

#### ) Tapinarof: Phase 3 Program Points to Five Key Attributes

- Treatment Effect Primary efficacy endpoints met in PSOARING 1 and PSOARING 2 (p-values <0.0001); all secondary endpoints achieved including PASI75
- Durability (On Therapy) No evidence of tachyphylaxis observed, suggesting treatment durability during the trials
- Remittive Effect (Off Therapy) PSOARING 3 interim analysis showed median remittive effect of ~4 months (defined as off-therapy maintenance of PGA score of 0 or 1) for some patients during the trials
- > Safety No Tapinarof SAEs reported in Phase 3 program; majority of AEs localized, mild to moderate in nature
- > Tolerability Well tolerated by patients; discontinuation rates due to AEs of 5.6-5.8% across studies; potential to be used across mild, moderate, & severe plaque psoriasis, including sensitive areas

#### Growing Development Pipeline

- > Tapinarof in atopic dermatitis Phase 3 Program initiated 3Q 2021; topline results anticipated 1H 2023
- > Development pipeline addressing additional disease states & indications

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#### **Tapinarof Targets the Two Largest Markets in Immuno-Dermatology**

Psoriasis & atopic dermatitis markets projected to reach ~\$31B in the US and ~\$44B globally by 2026



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Evaluate Pharma Data: Global Psoriasis and Atopic Dermatitis Prescription Drugs Market and Forecast 2019 – 2026 (excluding aesthetic indications); Psoriasis Indication Profile, USA Market Analysis; Atopic Dermatitis I

### **Tapinarof Offers a Transformational 2-in-1 Lead Product Candidate**

Novel MOA delivering a unique & differentiated target product profile

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Sources: 1. Amstrong, AV, et al., JAMA Demandz, 2021;157(6):940-946. doi:10.1001/jamademadd.2021.2007. 2. Leborkh, M. Ac inician's paradigm in the treatment of porotasis. Journal of the American Academy of Demandatory, 53, 559-69, 2005. 3. Kerdel, F., & Zalae, K. An explosition in switching heary for porotasis patients who fail to meet treatment of paradigm in the treatment of porotasis. Journal of the American Academy of Demandatory, 53, 559-69, 2005. 3. Kerdel, F., & Salae, K. An explosition in switching heary for porotasis patients who fail to meet treatment of paradigm in the treatment of porotasis. Journal of the American Academy of Demandatory, 53, 559-69, 2005. 3. Kerdel, F., & Salae, K. An explosition is switching the Termandatory Colling and Termatory 20, 390-403, 2015. 4. Contrast, 2. Edu 2016. J. Kerdel, F., & Salae, K. An explosition is switching the Termatory 2016, and the American Academy of Demandatory Colling, and the American Academy

#### Track Record of Success in Developing & Commercializing Innovative Dermatology Products at Multiple Companies



## Innovative Immuno-Dermatology Pipeline with Global Rights<sup>1</sup>

PRODUCT CANDIDATE	INDICATION	STAGE OF DEVELOPMENT		KEY MILESTONE		
		Preclinical	Phase 1	Phase 2	Phase 3	
CLINICAL STAGE DEVELOPMENT PROGRAMS						
TAPINAROF (DMVT-505)	Psoriasis					NDA submitted; FDA PDUFA action expected in 2Q 2022
A topical therapeutic AhR modulating agent inhibiting several proinflammatory factors	Atopic Dermatitis	_			⇒	Phase 3 Program initiated 3Q 2021; topline results anticipated 1H 2023
CERDULATINIB (DMVT-502)	Vitiligo			$\rightarrow$		Phase 2a completed 1H 2021
A topical dual JAK/Syk inhibitor	Atopic Dermatitis					Phase 2a protocol in development
OXYBUTYNIN/PILOCARPINE (DMVT-504) Oral combination of immediate-release muscarinic antagonist and delayed-release muscarinic agonist	Hyperhidrosis					Phase 2b protocol in development
EARLY-STAGE DEVELOPMENT PROGRAMS						
DMVT-503 A novel mechanism of action for the topical treatment of acne vulgaris	Acne Vulgaris					Preclinical studies ongoing
						A

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1. Excludes certain Asian territories.



#### **Tapinarof: Novel Multi-Modal Mechanism of Action**

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Inhibits inflammatory cytokines, promotes epidermal barrier restoration & decreases oxidative stress



\*Demonstrated in vitro. †Demonstrated ex vivo. ‡Demonstrated in mice models. ARR, any hydrocarbon receptor; Nr2, nuclear factor erythroid 2-related factor 2; TAMA, therapeutic AHR modulating agent; Th, T helper cell 1. Smith SH et al. J Inv Demnato 2017;137:2110–2110. 2; Fuve M et al. J Demnatolgical Sci. 2015;80:83–88. 3. Tsuji G et al. J Invest Demnatol. 2017;132:55–68. 4. Demnavant DOF [DMVT-505 Th2 Polarization; Apr 2015], 5. Demnavant Polarization; Apr 2015], 5. Demnavant Polarization; Apr 2015], 5. Demnavant Polarization;

**PSOARING Program – Executive Summary** Novel & differentiated attributes observed – NDA filed; PDUFA action expected in 2Q 2022

Treatment Effect	) o 0	PSOARING 1 and PSOARING 2 PGA primary endpoints met (P<0.0001) and PASI75 secondary endpoint met In interim analysis (IA) of PSOARING 3 LTE data, 57.3% of patients achieved PGA = 0 / 1 and 39.2% achieved PGA = 0
Durability (On-Therapy)	) 0	Improvement in treatment effect observed with continued use beyond 12 weeks No evidence of tachyphylaxis, suggesting durability with continued use during the trial
Remittive Effect (Off-Therapy)	) o	Approximately 4-month median remittive effect observed among patients entering PSOARING 3 with PGA = 0 (n=78) Other anti-inflammatory compounds demonstrate rapid loss of clinical benefit after drug withdrawal
Safety	0 0 0	AEs consistent with previous studies, no new safety signals identified No treatment-related serious adverse events reported in PSOARING 1, 2 or PSOARING 3 IA Over 2,200 patients have enrolled in 18 clinical trials (phase III trials included all disease severities)
Tolerability	) 0 0 0	Consistent safety and tolerability observed for all skin locations and durations of treatment studied Discontinuation rate due to AEs was 5.6% - 5.8% across studies Greater than 90% of eligible patients from PSOARING 1 and PSOARING 2 enrolled in PSOARING 3

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# **Phase 3 PSOARING Program – Study Design**

Over 1,000 patients enrolled in two identically-designed pivotal trials followed by long-term open-label extension study



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Patients with PGA of 2 (mild) and PGA of 4 (severe) limited to ~10% each of the total randomized population; ~80% of the total randomized population with PGA of 3 (moderate); †Patients electing not to participate in LTE had follow-up visit 4 weeks after complexion of treatment period. BSA, body surface area; LTE, long-term extension; PASI75, 275% improvement in Psoriasis Area and Severity Index; PASI90, 260% improvement in Psoriasis Area and Severity Index; PGA, Physician Global Assessment: On cone daily, 1. Clinicaltrials.gov; NCT03983580. 3. Clinicaltrials.gov; NCT04053387.

# **PSOARING 1 & 2 Pivotal Program – Primary & Secondary Efficacy Results**

Primary efficacy endpoint met, as demonstrated by magnitude of PGA treatment success\* & <sup>†</sup>PASI75



## **Key Safety Highlights**

- > AEs consistent with previous studies, no new safety signals identified, highlights predictability of drug safety profile
- > Folliculitis, nasopharyngitis, contact dermatitis, headache, pruritis and dermatitis most common TEAEs
- > Low study discontinuation rate due to folliculitis (1.8% in PSOARING 1 and 0.9% in PSOARING 2)
- > Favorable tolerability on sensitive sites including face, neck, axillae, inframammary, skin folds, genitalia, and anal crux

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<sup>19</sup>GA score of 0 (clear) or 1 (almost clear) and 22-grade improvement from baseline. <sup>1</sup>PASI75 response: 275% improvement in PASI from baseline ITT, intention-to-treat; Mi, multiple imputation; NDA, new drug application; PGA, Physician Global Assessment; PASI, Psoriasis Area and Severity Index; OD, once daily; SEM, standard error of mean. P-value based upon Cochran-Mantel-Haenzel analysis stratified by baseline PGA score.

# **PSOARING 3 LTE Study – ~40% of Tapinarof Treated Patients Achieved PGA 0**

PGA of 0 corresponds to complete disease clearance

					Data from I	nterim Analysis, 11/25/20
PGA Score of 0 from Baseline			% Patients Achieving PGA of 0 (ITT, OC)			
PROBABLITY OF ACHIEVING PGA=0 RESPONSE	50%	(ITT, OC)		Overall (n=763)	Patients who Entered LTE Trial on Tapinarof 1% QD & <u>Continued</u> on Tapinarof 1% QD ( <b>n=508)</b>	Patients who Entered LTE Trial on Vehicle QD & <u>Started</u> on Tapinarof 1% QD (n=255)
	40% 30%	55.278	Number of Patients Who Entered the Study with PGA ≥ 1	221	139	82
	20%		Number of Patients Who Entered the Study with PGA=0	78	73	5
	0%	(n=763) PSOARING 3	Overall achievement of a PGA=0 during the study, n (%)	299/763 (39.2%)	212/508 (41.7%)	87/255 (34.1%)

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ITT, intention-to-treat, OC, observed cases; PGA, Physician Global Assessment; QD, once daily.

# **Phase 3 PSOARING Program – Rapid Onset of Action**

Statistically significant PASI improvement as early as Week 2



> PASI, a quantitative measure, showed earlier separation than PGA global measures demonstrating reduction in disease activity

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\*Least squares mean. †Denotes statistical significance. ITT, intention-to-treat; MI, multiple imputation; PASI, Ps erity Index; PGA, Physician Global Assessment; QD, once daily; SEM, standard error of mean

# **Phase 3 PSOARING Program – Rapid Peak Pruritis Improvement**

NRS of at least a 4-point reduction achieved as early as Week 2



## **Exploratory Endpoint Achieved**

> Mean baseline peak NRS was 5.7 for tapinarof and 6.1 for vehicle in PSOARING 1 and 5.9 and 6.1, respectively in PSOARING 2

> Clinically meaningful improvement in itch for tapinarof using the gold standard of a minimum 4-point improvement on the NRS scale<sup>1,2</sup>

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"Least squares mean. Peak Pouritus NRS 11-point scale from 'no itch' (0) to worst lich possible' (10) over 24-hour period. In those patients with at least a 4-point peak pruntus NRS at baseline. †Denotes statistical significance ITT, interface-to-teat, NRS, numeric rating scale; OC, observed cases; OD, once daily; SEM, standard error of mean. 1. LeaveNH dt at: Am J Clin Demark 2016;178:17-12; Alter Mala Bet J Demark 2016;178:157-162.

# **Phase 3 PSOARING Program – Tapinarof Achieves Primary Endpoint**

Rapid & complete clearance of psoriasis in patient achieving primary endpoint

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Results shown for one patient are not necessarily indicative of results for other patients, additional trials or other uses

PGA and PASI are global efficacy assessments. Example of one representative target lesion of one tapinarof treated patient from the PSOARING 1 clinical trial. PASI, Psoriasis Area and Severity Index, PGA, Physician Global Assessment.

# Phase 3 PSOARING Program – Tapinarof Achieves Primary Endpoint Lower extremity disease: rapid response in patient achieving primary endpoint



Results shown for one patient are not necessarily indicative of results for other patients, additional trials or other uses

tative target lesion of one tapinarof treated patient from the PSOARING 1 clinical trial. PASI, Psoriasis Area and Severity Index; PGA, Physician Global Assessment. 76 | For Investor Audiences Only. PGA and PASI are global efficacy as nts. Example of one repres

# **Phase 3 PSOARING Program – Tapinarof Clinical Improvement**

Clinical improvement in a patient not achieving regulatory endpoint



Results shown for one patient are not necessarily indicative of results for other patients, additional trials or other uses

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# **PSOARING 3 – Clear or Almost Clear for ~4 months Off Treatment**

Remittive (off-therapy) effect observed among patients entering with PGA=0



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# Phase 3 PSOARING Studies: Most Common Treatment-Related TEAEs ≥ 1%

Consistent & predictable safety profile observed

	PSOARING 1		PSOARING 2			
Patients, n (%)	Tapinarof 1% QD (n=340)	Vehicle QD (n=170)	Tapinarof 1% QD (n=343)	Vehicle QD (n=172)		
Folliculitis	70 (20.6%)	2 (1.2%)	54 (15.7%)	1 (0.6%)		
Contact dermatitis	13 (3.8%)	1 (0.6%)	16 (4.7%)	0 (0%)		
Headache	5 (1.5%)	1 (0.6%)	1 (0.3%)	0 (0%)		
Pruritus	4 (1.2%)	0 (0%)	2 (0.6%)	0 (0%)		
Dermatitis	1 (0.3%)	0 (0%)	4 (1.2%)	0 (0%)		
Key Points						

> Favorable safety profile observed over 52 weeks, AEs consistent with previous studies1.2, no tapinarof-related SAEs

> Most treatment-related events are localized to site of application & mild to moderate in nature

Low overall AE discontinuation rate for patients on tapinarof: <5.8%</p>

Discontinuation due to folliculitis: 1.8% / 0.9% (PSOARING 1 / PSOARING 2); 1.2% (PSOARING 3)

> Consistent & predictable safety profile - over 2,200 patients have enrolled in 18 clinical trials<sup>3</sup>

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Court reflects numbers of patients reporting one or more AEs that map to grouped MedDRA preferred term. A patient is counted once only for each type of AE but could experience >1 event of the AE, QD, once daily; TEAE, treatment-emergent adverse event. 1. Robbins K, et al. J Am Acad Dermatol. 2019; doi: 10.1016/j.jaad.2020.04.181. 3. Dermavant Data on File, Dec 2020.

# **PSOARING 3 LTE Study – Investigator-Assessed Irritation**

Favorable tolerability without regard to site of application or duration of use

Data from Interim Analysis



#### **Key Points**

> Investigators assessed that ≥ 90% of patients had no irritation (score of 0) over 40 weeks of treatment

> Favorable tolerability on sensitive sites including face, neck, axillae, inframammary, skin folds, genitalia, & anal crux

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\*Investigator assessed irritation scores (0-4) assess the presence and overall degree of irritation at the application sites according to the Local Tolerability Scale (dryness, erythema, and peeling) – no irritation (0), mild (1), moderate (2), severe (3), very severe (4). The score ideally represents an 'average' across all application sites. QD, once daily.



# **Tapinarof Atopic Dermatitis Phase 2b Trial – Efficacy Results**

Response rates: 49% of patients achieved IGA clear or almost clear and ≥2-grade improvement and 51% of patients achieved EASI75 after 8 weeks of treatment with tapinarof 1% QD



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"Difference vs vehicle is statistically significant at p-value of 0.05 or lower. NRI analysis to account for higher dropout rates in vehicle (or grant, BID, hoice daily, IGA, Investigator Global Assessment; EASI, Eczema Ana and Severthy Index; ITT, intention to text, NRI, non-responder imputation; 200, or eads). T. Peppera J, et al. J An Accel Several Dermalout 2019/S89-88 and Dermanivant (DD) (EGR 20321; 1): Eduard 1): Z. Paler Ass, et al. S(NI) Tacous Mecinice, 2018;2:800.

# **Phase 3 ADORING Program – Study Design**

Two identically-designed pivotal trials followed by long-term, open-label extension



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# Lack of Topical Innovation Offers Tapinarof Unprecedented Opportunity

Establishing a potential new topical benchmark in psoriasis & atopic dermatitis

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Sources: 1. PsO Market - ClinicalInias.gov. (NCT03556202, NCT03598790, NCT03624127, NCT03611751, NCT03895372, NCT03431974, NCT02969018, NCT02776033, NCT02886236, NCT03396399, NCT03956355, NCT03963580, NCT04211368, NCT04411368, NCT04411368,

# **U.S. Psoriasis Market Highly Concentrated & Readily Accessible**

80% of market value concentrated in tight payer, prescriber & geographic clusters



# **Extensive Market Research Supports Early Access & Adoption**

More than 500 HCPs, >300 patients, & 65 payer interviews (~200M+ covered lives)



nts and plans (i.e., these are not all "unique" payers/ plans)

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"Due to the anonymity of participants across payer organizations, there is likely overlap of participants and pr "Exemple plans included in prior research, not exhaustive Sources: Phase 2 Dualistive research conducted by Triangle Insights, November 2018. Phase 3 Price Sen Value Prop Qualitative research conducted by Triangle Insights, November/December 2020 & January 2021 rch conducted by Triangle Insights, June 2020. Phase 3 HCP 💩 dermavant

# 94% of HCPs Believe Tapinarof Can Address an Unmet Need in Psoriasis

Prescribers have a CLEAR & PRESENT understanding of the limitations of the current standard of care, TCS



No head-to-head trials of tapinarof have been conducted against other psoriasis treatments

ists (n = 50)

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Source: Interviews conducted by Triangle Insights, Novemb 1. What aspect of this product do you find most attractive?

mber 2020 & January 2021 with dem

# **Payer & Prescriber Interests Aligned in the Need for Topical Innovation**

Tapinarof could offer payers the opportunity to manage spend with INNOVATION vs. RESTRICTION



# Key Attributes Have Potential To Set New Benchmark for Topical Innovation



90 | For Investor Audiences Only. Source: Qualitative market research conducted by Triangle Insights, January 2021 with dermatologists (n = 50) 1. What aspect of this product do you find most attractive?

# **Tapinarof's Prescriber, Payer & Patient Benefits are Uniquely Aligned**

Versatility may fundamentally change the psoriasis treatment paradigm



Tapinarof has not been studied in combination with other drugs No head-to-head trials of tapinarof have been conducted against other psoriasis treatments

91 |For Investor Audiences Ohly-2020 with dematologists (n = 19), NP/Pas (n = 7), & patients (n = 10), 4. Noe, M., et al. J Drugs Dermatol. 2019, 18(8); 745-750; 5. Wu, et al., Journal of Investigative Dermatological Treatment. 2019, 30 (5): 446-453



# **Strategic Partnerships with GSK & Thermo Fisher Support Global Supply**

Agreements ensure a high quality & predictable supply of drug substance and drug product



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# Experience with Tapinarof:

- o Thermo Fisher: Phase 3 clinical & registration batches
- o GSK: Phase 3 clinical, registration batches, additional clinical & non-clinical studies

- Commercial launch & supply sites for both drug substance & drug product
- o Sites capacity sufficient to support tapinarof commercial demand
- o Structured metrics driven collaboration, solid compliance history, & quality management
- Robust site level business continuity programs & risk management planning
- Leverage global procurement & sourcing network at each site

# **Tapinarof IP Summary: Patent Protection Until at Least 2036**

	US Patent 10,195,160 expires 2036 (Formulation): covers all the viable emulsion/cream formulations that were studied by GSK, its predecessor & their CROs over many years of development <ul> <li>Claims have very broad ranges regarding the critical components of the formulation</li> <li>Claims cover the commercial formulation and variations thereof</li> </ul>
•	US Patent 10,426,743 also expires 2036 (Method of Use): covers treating inflammatory diseases, including specifically PsO & AD, using the formulations covered in the '160 patent
	US Patent 10,647,649 expires in 2038: covers the commercial API synthesis, novel intermediates and high purity API crystal form produced by the synthesis
	<ul> <li>The '160, '743, &amp; '649 Patents may be eligible for listing in FDA's Orange Book</li> <li>ANDA filers would have to invalidate or design-around these patents in order to obtain approval before the patents expire</li> </ul>
·	<ul> <li>Foreign counterpart applications to the '160 Formulation and '649 API Synthesis Patent Applications are issued or pending in other major market countries</li> <li>The Japanese formulation patent has issued and the European Examination Report indicated the claimed formulation subject matter is novel and inventive</li> <li>Once issued, natural expiration dates will be in 2036 for the formulation patents and in 2038 for the API synthesis patents</li> </ul>

\* The remitive effect encourages payers to consider innovative contracts that cap annual refills or involve risk-sharing for the patient outcomes. 94 | For Investor Audiences Only. Source: N=17 payer interviews conducted by Triangle Insights Group, March and April 2021





# Folliculitis Examples From PSOARING 1 & 2

Most treatment-related events are localized to site of application & mild to moderate in nature



Results shown for two patients are not necessarily indicative of results for other patients, additional trials or other uses

97 | For Investor Audiences Only. Examples of two representative target lesions of two tapinarof treated patients from the PSOARING 1 and 2 clinical trials.



# Forward-looking statements

This presentation contains forward-looking statements for the purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995 and other federal securities laws. The use of words such as "may," "might," "will," "expect," "plan," "anticipate," "believe," "estimate," "intend," "future," "potential," "continue" and other similar expressions (as well as other words or expressions referencing future events, conditions, or circumstances) are intended to identify forward-looking statements. For example, forward-looking statements include statements Immunovant makes regarding its business strategy, its plans to develop and commercialize its product candidates, the potential safety and efficacy of Immunovant's current or future product candidates, including batoclimab for Myasthenia Gravis, Thyroid Eye Disease and Warm Autoimmune Hemolytic Anemia, its expectations regarding timing, the design and results of clinical trials of its product candidates, Immunovant's plans and expected timing with respect to regulatory filings and approvals, the size and growth potential of the markets for Immunovant's product candidates, and its ability to serve those markets. All forward-looking statements are based on estimates and assumptions by Immunovant's management that, although Immunovant believes to be reasonable, are inherently uncertain. All forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those expressed or implied by such forward-looking statements. Such risks and uncertainties include, among others: initial results or other preliminary analyses or results of early clinical trials may not be predictive final trial results or of the results of later clinical trials; the timing and availability of data from clinical trials; the timing of discussions with regulatory agencies, as well as regulatory submissions and potential approvals; the continued development of Immunovant's product candidates, including the timing of the commencement of additional clinical trials and resumption of current trials; Immunovant's scientific approach, clinical trial design, indication selection and general development progress; tuture clinical trials may not confirm any safety, potency or other product characteristics described or assumed in this presentation; any product candidates that Immunovant develops may not progress through clinical development or receive required regulatory approvals within expected timelines or at all; Immunovant's product candidates may not be beneficial to patients, or even if approved by regulatory authorities, successfully commercialized; the potential impact of the ongoing COVID-19 pandemic on Immunovant's clinical development plans and timelines; Immunovant's business is heavily dependent on the successful development, regulatory approval and commercialization of its sole product candidate, IMVT-1401; Immunovant is at an early stage in development of IMVT-1401; and Immunovant will require additional capital to fund its operations and advance IMVT-1401 through clinical development. These and other risks and uncertainties are more fully described in Immunovant's periodic and other reports filed with the Securities and Exchange Commission (SEC), including in the section titled "Risk Factors" in Immunovant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 filed with the SEC on August 9, 2021. Any forward-looking statement speaks only as of the date on which it was made. Immunovant undertakes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.



# Rethinking possibilities in autoimmune disease

Our vision: Normal lives for people with autoimmune diseases



Love Trailblazing



Bolder Faster



Voices



# Anti-FcRn Market: Potential therapeutic benefit across wide range of indications

# Fifteen indications announced by at least one anti-FcRn program



# NEUROLOGY

Myasthenia Gravis Chronic inflammatory demyelinating polyneuropathy Myositis Autoimmune encephalitis Myelin oligodendrocyte glycoprotein antibody disorders (MOG-antibody disorder)



### RHEUMATOLOGY

Primary Sjögrens Syndrome Lupus Nephritis Systemic lupus erythematosus Rheumatoid arthritis



Source: https://www.clinicaltrials.gov/



### DERMATOLOGY

Bullous pemphigoid Pemphigus foliaceus/ Pemphigus vulgaris

# HE Wa

# HEMATOLOGY

Warm autoimmune hemolytic anemia Hemolytic disease of the fetus and newborn Idiopathic thrombocytopenic purpura



# ENDOCRINOLOGY

Thyroid eye disease

# Despite available treatment options, people with Myasthenia Gravis report significant unmet needs



#### **Reliable treatment options**

- Variable time to response for existing treatments (e.g. steroids, immunosuppressants, IVIg)
- Trade-offs between safety risks and therapeutic benefit with some therapies

**Flexible treatment options** 

· Most patients feel that their

condition is uncontrolled Different patients need more or

less intensive therapy

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### **People-centered treatment delivery**

- Desire to feel like a person not a patient
   Considerations for chronic disease management (i.e., simple,
- at-home self-administration)



#### Significant impact on quality of life

- Even well controlled patients report lifestyle accommodations
- · Anxiety around response and duration

Source: Analysis – Social Media Review MG n=975 / Qualitative research – MG patient journey n=28 / MG Patient Advisory Council n=6 / MG Patient Quantitative Survey (n=50)

# Dosing approach preferences

# 94% of respondents with Myasthenia Gravis prefer chronic versus intermittent dosing



# Batoclimab's (IMVT-1401) differentiated attributes provide a unique opportunity to address patients' unmet needs



Reliable treatment options



Flexible treatment options





Significant impact on quality of life

Batoclimab

# Flexible dosing potential:

Deep, rapid IgG suppression in the short-term; adjustable IgG suppression in the long-term

# Subcutaneous route of administration:

Designed and developed for simple subcutaneous injection to provide human-centric, give and go dosing experience



Developing Gene Therapies for Rare Diseases
# Aruvant represents a growth opportunity developing potentially curative gene therapies for rare diseases



**ARU-1801** Lentiviral gene therapy for sickle cell disease

- Ongoing Phase 1/2 trial
- · Clinical data demonstrating curative potential
  - Up to 100% reduction in vaso-occlusive events (VOEs)
  - Durable responses for more than three years
- Toxicity advantage vs other gene therapies: Requires non-myeloablative chemotherapy



### ARU-2801 AAV gene therapy for hypophosphatasia

- Preclinical data: durable increases in tissue non-specific alklaline phosphatase (ALP) levels through 18 months
- Potential one time Rx to replace chronic ERT standard of care



106 All product candidates are investigational and subject to regulatory approval.

# Experienced team in gene therapy, clinical development and manufacturing



Will Chou, MD, MBA Chief Executive Officer

## UNOVARTIS

- Global Commercial Head Kymriah
- Head Lymphoma Clinical Development Kymriah
- Clinical, CMC, regulatory and commercial leadership for first approved CAR-T



Palani Palaniappan, PhD Chief Technology Officer



- Operations Head 25 years technical ops leadership
- Multiple gene therapy development programs
- Successful rare disease approvals
  Novel assay
- Novel assay development, CMO management

107 All trademarks are the property of their respective owners.



Stan Musial, MBA Chief Financial Officer



- Chief Business Officer and Chief Financial Officer
- Financial executive with 25+ years experience
- CFO of multiple privately-held and publicly-held biotechnology
- companiesCommercial launch and execution



E. Blair Clark-Schoeb SVP, Communications



- SVP, Communications
   20+ years communications leadership (public relations, investor relations, patient advectors
- advocacy & government affairs) • Multiple rare disease programs (Friedreich's Ataxia, Hereditary Angioedema,

Huntington's Disease)



Meghan Kelton Executive Director, Human Resources



- Head, People, Organization & HR Site, Novartis Gene Therapies
   15 years HR experience
- 15 years HR experience Senior Professional HR and Society or HR Management Senior certifications



# The major complication of sickle cell disease are vaso-occlusive events (VOEs) which are painful and costly



A person with sickle-cell disease with intensifying back pain receives a blood transfusion. Credit: Ilana Panich-Linsmar/NYT/eyevine

- VOEs are episodes of extreme pain caused by vasoocclusion that can last several days
- 95% of hospitalizations for SCD are due to VOEs<sup>1</sup>
- VOEs can lead to severe complications and progressive organ damage<sup>2</sup>
- Increased frequency of pain crises is associated with decreased survival<sup>3</sup>
  - Life expectancy of SCD remains in mid 40s





ARU-1801 is a one-time potentially curative therapy for SCD with a differentiated toxicity profile.

Uses self-inactivating lentiviral vector that contains a proprietary  $\gamma$ -globin gene for a novel, highly potent variant of fetal hemoglobin (HbF): HbF<sup>G16D</sup>



✓ — ✓ — ✓ — Unique potency allows ARU-1801 to engraft with only reduced intensity conditioning (RIC).

Potential for curative reduction in disease burden.

- VOE reduction up to 100%
- Durable engraftment over three years



# ARU-1801 uses a patient's own stem cells to make a unique fetal hemoglobin





## ARU-1801's unique attributes enable a potential differentiated product profile

More hemoglobin F per vector copy Proprietary G16D point mutation drives higher HbF payload per vector copy

High HbF<sup>G16D</sup> potency HbF<sup>G16D</sup> may have a more potent anti-sickling effect than endogenous HbF

### Preserved stemness

Proprietary manufacturing component enables more true stem cells in each dose

111 All product candidates are investigational and subject to regulatory approval

## Engraftment with RIC

>

Potential for clinical efficacy at lower VCN

## RIC has potential benefits for patients, providers, and payors

Reduced intensity conditioning (RIC) with melphalan 140mg/m<sup>2</sup> may provide significant clinical benefit compared to the busulfan-based regimen used by the other leading SCD gene therapy candidates, including the potential for lower risk of secondary malignancy

	Note: no head-to-head studies of these products have been conducted		
	Busulfan 3.2 mg/kg/day (Used by myeloablative gene therapies)	Melphalan 140 mg/m² (Used by ARU-1801)	
Neutropenia Recovery Time	20 days <sup>1</sup>	7 days²	
Platelet Recovery Time	28 days <sup>1</sup>	8 days²	
Neurotoxicity	Seizure prophylaxis required <sup>3</sup>	No seizure prophylaxis required <sup>4</sup>	
Ovarian Failure	70 - 80% <sup>5</sup>	<b>30 - 40%</b> <sup>5</sup>	
Chemo Administration	4 days <sup>6</sup> daily PK monitoring	1-hour infusion <sup>4</sup>	
Days in Hospital (Median)	44 days <sup>6</sup>	0-5 days <sup>7</sup>	
Potential for Outpatient Administration	Low <sup>3</sup> (longer cytopenias, multiple infusions)	High <sup>7</sup> (common in multiple myeloma)	
Backup Collection	Required <sup>8</sup>	Not required <sup>9</sup>	
Risk if No Engraftment	Rescue transplant required <sup>8</sup>	No rescue required <sup>9</sup>	



## Recent events in 2021 reinforce importance of safety in GTx, an area where ARU-1801 is uniquely differentiated

### **BLUE events and findings**

### 2<sup>nd</sup> AML case in SCD study

- Vector was very unlikely a factor in either AML/MDS case<sup>1,2</sup>
- Busulfan conditioning and baseline risk identified as possible causes<sup>1,2</sup>

MDS case in CALD study

Known risk of specific retroviral promoter sequence in Skysona vector<sup>3,4</sup>

- ARU-1801 uses RIC melphalan<sup>5</sup>
- Lower exposure to alkylating chemotherapy associated with lower risk of oncogenesis<sup>6-8</sup> ٠
- ARU-1801 does not use retroviral promoter sequences<sup>5</sup> ٠
- Prior to CALD case, >250 patients treated with lentiviral gene therapies in autologous stem ٠ cells with no insertional oncogenic events9
  - Tisdale Blood Advances 2020 Bluebird bio press release and conference call March 2021 Bluebird bio Q2 earnings call, 8/9/2021 Eichler et alt. New England J of Medicine 2017 ARU-1801 IND
- Greene MH et al. Ann Intern Med. 1986 Sep;105(3):360-7. Tucker MA et al. J Natl Cancer Inst. 1987 Mar;78(3):459-64. Cuzick J et al. Br J Cancer. 1987 Mar;75(5):523-9. Tucci et al, poster presentation, EHA 2020



# Before treatment with ARU-1801, patients had numerous VOEs despite SOC treatment



# Significant improvement to date in VOEs including 100% resolution in recently treated patients



## Market research showed GTx with RIC grows addressable population and is favored choice vs myeloablative options



ARU-1801	Path Forward			
	✓ \$	First patient dosed with updated manufacturing process	H2	
		~	ARU-1801 Ph 1/2 data	H2
			Initiate ARU-1801 pivotal study	H1:23
117				



ARU-2801 is a onetime gene therapy for hypophosphatasia (HPP) that could replace a potential blockbuster enzyme replacement therapy (ERT) SOC and deliver potentially curative efficacy, without the limitations of chronic administration

ARU-2801 is an adeno-associated virus gene therapy designed to treat hypophosphatasia, a devastating, ultra-orphan disorder that affects multiple organ systems and leads to high mortality



Durable and sustainable increases in tissue nonspecific alklaline phosphatase (ALP) levels through 18 months



Potential for reduction in disease burden

- Significant increase in survival and lifespan (18 months vs 3 weeks)
- Amelioration of bone defects with development of mature bone
- · Normalization of body weight and bone density

ARUVANT

# Hypophosphatasia (HPP) is a devastating and potentially fatal orphan disorder with no gene therapy treatments available

HPP is caused by mutation in the *ALPL* gene and is characterized by low or no expression of tissue non-specific alkaline phosphatase (TNS-ALP)

#### Mutant TNSALP impairs bone mineralization...

- In HPP, TNS-ALP, is mutated and cannot convert pyrophosphate (PPi) to phosphate (Pi)
- This results in limited hydroxyapatite formation, and therefore limited bone mineralization



 1.
 J Pediatr. 2019 Jun;209:116-124.e4. doi: 10.1016/j.jpeds.2019.01.049. Epub 2019 Apr 9.

 2.
 Fraser D: Hypophosphatasia. Am J Med. 1957, 22: 730-46. 10.1016/0002-9343(57)90124-9.

 3.
 Ann Hum Genet . 2011 May;75(3):439-45. doi: 10.1111/j.1469-1809.2011.00642.x. Epub 2011 Mar 24

#### ...leading to severe musculoskeletal compromise

- Severe forms result in respiratory failure from chest hypoplasia, seizures, and limb deformity
- Left untreated, 50% of severe perinatal / infantile-onset patients die within first year of life







## SOC ERT for HPP, Strensiq, requires chronic administration and patients experience injection site reactions leaving high unmet need

Chronic, frequent injections

- Up to 6x SC injections/week for a lifetime<sup>1</sup>
- Doses need to be matched with patient weight<sup>1</sup>

"Every injection is the most dreaded experience. It's like asking to inject fire into your body."

- HPP patient

AEs at injection site

- 74% injection site reactions<sup>2</sup>
- Lipodystrophy shown in 28% of patients, including 70% of juvenile-onset patients<sup>1</sup>

"I wouldn't hesitate with something new if it meant less injections." – HPP patient

1. Strensiq FDA Label
 2. Strensiq EPAR Product Information
 Drugs are investigational and subject to regulatory approva





## In HPP murine models, ARU-2801 treatment results in high, durable ALP levels and survival to 18 months (vs 3 weeks untreated)

High ALP levels in HPP model (Akp2<sup>-/-</sup>mice)

### Durable 18-month OS of 70%





## Introduction

- We are developing an anti-GM-CSF monoclonal antibody (namilumab) for sarcoidosis and potentially other autoimmune rare diseases
- Sarcoidosis is a systemic, multi-organ disease that results from a dysregulated immune response, with poor treatment options
- Our goal is to significantly improve the treatment of sarcoidosis with a convenient and well-tolerated 1x monthly injection
- We expect to initiate a Phase 2 clinical trial for pulmonary sarcoidosis in the first half of 2022



## Sarcoidosis – Rare Autoimmune Disease

- Characterized by the accumulation of granulomas in organs and lymph nodes, believed to be due to an exaggerated antigen-driven immune response
- The resulting inflammation leads to organ dysfunction, irreversible scarring, and overall poor quality of life<sup>1</sup>
- ~200k have sarcoidosis in the US<sup>2</sup>
- Pulmonary sarcoidosis is the most common clinical manifestation (>90% of cases) and the most common cause of death<sup>3</sup>
  - Declining pulmonary function

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- Breathlessness, fatigue, cough, and pain

Baughman, et al. Annals ATS 2016 Denning, et al. European Respiratory Journal 2013 Sauer, et al. Annals ATS 2017; Baughman, et al. Sa

nd Diffuse Lung Diseases 1997



## **Inadequate Treatment Options for Sarcoidosis**

- Goal of therapy is to prevent or control organ damage, relieve symptoms and improve patients' quality of life
- · Corticosteroids are first-line therapy, but have significant side effects with long-term dosing
- Immunosuppressive therapy (methotrexate, azathioprine) and biologics (TNF inhibitors) are steroid-sparing 2L and 3L options, but slow onset, poor tolerability, safety risks, inconsistent effectiveness, and/or reimbursement challenges limit their use
  - None are FDA approved for use in sarcoidosis<sup>1,2</sup>





Korsten, et. al Current Opinion in Pulmonary Medicine 2013 Foundation for Sarcoidosis Research: "Sarcoidosis Treatment Guideli

### **GM-CSF** is a Key Pathogenic Cytokine in Sarcoidosis

- GM-CSF is a pro-inflammatory cytokine that plays a key role in the promotion and maintenance of sarcoid granuloma inflammation<sup>1</sup>
- GM-CSF activates macrophages and other immune cells, which drive inflammation and tissue damage<sup>2</sup>
- Upregulated GM-CSF forms granulomas in sarcoidosis in vitro models<sup>3</sup>
- GM-CSF knockout mice unable to form granulomas in response to tuberculosis and succumbed to the disease<sup>4</sup>
- GM-CSF over-expression in rat lung promotes macrophage granuloma formation, fibrosis, and tissue damage<sup>5</sup>
- GM-CSF is significantly elevated in patients' bronchoalveolar lavage fluid and lung tissue, and correlated with disease severity<sup>6</sup>



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 Ishioka S, et al. Sarcoidosis, Vasculitis, and Diffuse Lung Diseases 1996. 2. Itoh A, et al. Respirology 1998. 3. Crouser ED, et al. Am J Respir Cell Mol Biol 2017. 4. Szeliga J, Daniel DS, Yang CH, et al. Tuberculosis 2008; Beecher et al. Immunity 2016. 5. Xing 2, et al. J. Clin. Invest 1996. 6. Itoh A, Yamaguchi E, Furuya K, et al. Thorax 1993; Crouser ED, et al. Am J Respir Crit Care Med 2009; Itoh A, et al. Respirology 2008

## Namilumab

- Namilumab is a fully human anti-GM-CSF monoclonal antibody with broad potential in autoimmune diseases
- In multiple Phase 2 studies, anti-GM-CSFs have been well-tolerated and have demonstrated the potential to improve symptoms in autoimmune diseases including rheumatoid arthritis and giant cell arteritis<sup>1</sup>
- Namilumab has been studied in ~300 patients to date and was demonstrated to be welltolerated with decreased disease activity compared to placebo in rheumatoid arthritis<sup>2</sup>
- Namilumab has been studied using the least frequent subcutaneous dosing in the anti-GM-CSF class (Q4W)
- Namilumab has the potential to be the preferred option for pulmonary sarcoidosis
- Kinevant has completed a robust planning campaign for a Phase 2 trial of namilumab in pulmonary sarcoidosis expected to be initiated in the first half of 2022



Drugs are investigational and subject to regulatory approval. 1. Kiniksa Announces Positive Data from Phase 2 Trial of Mavrilimumab in Giant Cell Arteritis, October 2020. GSK Presents New Efficacy and Safety Data of an Anti GM-CSF Antibody in Patients with Rheumatoid Arthritis, October 2018. 2. Taylor P, et al. Arthritis Res Therapy 2019; Tanaka S et al. International J Pharmacol Therapy 2018; Papp KA et al. J Dermatol 2019; Huizinga TW et al. Arthritis Res Ther. 2017; Unpublished Ph 2 results ankylosing spondylitis

## Limited Pipeline Competition for Pulmonary Sarcoidosis

Condidate	Spancar	Machaniam of Action	Development Phase	
Candidate	Sponsor	mechanism of Action	Phase 1/2	Phase 2
ATYR1923	aTyr	NRP2 modulator	Completed	
СМК389	Novartis	IL-18 Antibody		Initiated
Inhaled VIP	Relief	Immunosuppressant		Announced

Sources: clinicaltrials.gov; aTyr Pharma press release dated September 13, 2021; Relief Therapeutics press release dated September 2, 2021



## Summary

- · Sarcoidosis is a significant unmet clinical need
- Preclinical studies and patient samples indicate GM-CSF likely contributes to the pathogenesis of sarcoidosis
- Namilumab has the potential to significantly improve the treatment of sarcoidosis
- We are building a world class team with drug development expertise in respiratory and autoimmune diseases
- A well-tolerated and effective, steroid-sparing, therapy for sarcoidosis has blockbuster commercial potential<sup>1</sup>
- We plan to initiate a Phase 2 study in pulmonary sarcoidosis in first half of 2022
- We plan to evaluate indication expansion opportunities for namilumab beyond pulmonary sarcoidosis



Drugs are investigational and subject to regulatory approval. 1. Market research.



