

Corporate Presentation

November 2021



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Poxel's Investment Highlights

To discover, develop and commercialize innovative therapies for patients suffering from **serious chronic and rare diseases** with underlying **metabolic** pathophysiology



- TWYMEEG[®] (Imeglimin) approved and launched for Type 2 Diabetes in Japan
- Strategic focus on rare metabolic Indications and NASH
- Clinical Stage Pipeline with Global Operations
- Highly Experienced Management
 Team in Metabolic Diseases

POXEL LISTED EURONEXT



Robust Mid-to-Late Stage Metabolic Pipeline

Focus on Rare Metabolic Diseases and NASH



1. Includes: China, South Korea, Taiwan, Indonesia, Vietnam, Thailand, Malaysia, Philippines, Singapore, Myanmar, Cambodia, Laos. 2. Deuterium-modified thiazolidinediione. 3. AMP-kinase. 4. X-linked AdrenoLeukoDystrophy.





 1. Japan plus: China, South Korea, Taiwan, Indonesia, Vietnam, Thailand, Malaysia, Philippines, Singapore, Myanmar, Cambodia,
 2. Deuterium-modified thiazolidinediones.

 3. AMP-kinase (allosteric activators) /

Laos

* X-linked adrenoleukodystrophy (ALD).



TWYMEEG[®] (Imeglimin): Approved in Japan

Partnered in Asia¹ with Diabetes Market Leader, Sumitomo Dainippon Pharma

June 23rd Approval in Japan triggered:

- 3rd and final tranche of **EUR 13.5 million** from IPF loan received June 30, 2021 0
- Milestone payment of ~EUR 13.2 million (USD 15.8 million)² from Sumitomo Dainippon Pharma in July 0
- Japan launch on Sept 16, 2021
- Potential sales-based payments and escalating royalties on net sales

Business Opportunity Japan: Maximize Product Profile

- Sumitomo Dainippon Pharma #1 diabetes franchise; FY20 USD 890 million⁴
- DPP4i's are prescribed to 80% T2D patients⁵
- TWYMEEG can be prescribed as add on therapy, on top of DPP4i's, and as monotherapy
- TIMES program observed to show robust efficacy with favorable safety and tolerability profile
- The patent estate for Imeglimin extends to 2036 (including potential 5 year patent term extension), with other patent applications ongoing
- 1. Including: Japan, China, South Korea, Taiwan, Indonesia, Vietnam, 2. Currency exchange rate at the date of the approval (23 June 2021). 4. Thailand, Malaysia, the Philippines, Singapore, Myanmar, 3. Cambodia, and Laos 2017
 - Currency exchange rate at the date of the agreement (30 Oct
 - 5. IQVIA data FY2016 and NDB data FY2016

Sumitomo Dainippon Pharma fiscal year April-March





Strategy to Pursue Treatments for Rare Diseases

Poxel Molecules can Target Key Nodes in Pathways Driving Several Rare Diseases

Why Rare Disease ?

- High unmet needs, limited treatment options; > 90% of rare diseases are without an FDA approved treatment¹
- Efficient and lower cost development: faster timelines; higher probability of success; favorable regulatory environment
- Market opportunity:
 - almost 1 in 10 people have rare diseases³
 - premium pricing supported by prior orphan drug approvals
 - ability for Poxel to commercialize and capture greater economics

Why Poxel ?

- Scientific fit more than 1,100 rare diseases have a <u>metabolic basis</u> "inborn errors of metabolism"⁴; D-TZD and AMPK approaches modulate pathways driving multiple diseases
- Proven R&D capabilities
- Capacity to pursue additional rare disease programs
- Close connections with relevant patient advocacy and KOLs

https://www.iqvia.com/-/media/iqvia/pdfs/institute-reports/orphan-drugsin-the -united-states-exclusivity-pricing-and-treated-populations.pdf?_=154844532268



Genetic and Rare Diseases Information Center; National Ctr. Advancing Trans Sciences; FAQs About Rare Diseases; Last updated 11/30/2017. <u>https://rarediseases.info.nih.gov/diseases/pages/31/faqs-about-rare-diseases</u>
 Genet Med 2019: 21:102-106: 5. Metabolites 2019: 9:242-





^{1.} IQVIA Institute for Human Data Science. Orphan Drugs in US: Exclusivity, Pricing and Treated Populations. 2018 Dec.

Non-Alcoholic Steatohepatitis (NASH)

No Approved Medicines - Poxel has Two Clinical Stage First-in-Class Oral Therapies



Estimated Market Opportunity: >\$20B by 2025





Rare Metabolic Diseases

Accelerating & Expanding Rare Metabolic Disease Programs

Starting with existing platforms:

PXL065 - D-TZD's*

PXL770 - AMPK Activator

*Deuterium-modified thiazolidinediones.



Harnessing AMPK and D-TZD Platforms to Address Rare Diseases with Metabolic Pathophysiology Two Programs Approaching Clinical Development for ALD



1. Mitochondrial Pyruvate Carrier 2. Long chain Acl-CoA Synthetase-4 .

Two First-in-Class Advanced Lead Molecules

PXL065

- Deuterium stabilized *R*-stereoisomer of pioglitazone*
- Preclinical:
 - no (PPAR γ –driven) weight gain/fluid retention
 - metabolic and anti-inflammatory efficacy
- Clinical
 - o completed Phase 1
 - o confirmed selective R-pio exposure
 - good safety profile in >130 human exposures (Phase 1 plus ongoing Destiny-1 NASH trial)
- Composition of matter IP
- 505(b)(2) regulatory path; open IND in ALD/AMN



PXL770

- Proprietary direct allosteric AMPK activator*
- Preclinical:
 - Metabolic, anti-inflammatory, cytoprotective efficacy in NASH, diabetes, kidney, CV models
- Clinical



- human target engagement and efficacy demonstrated (diabetes and NAFLD)
- well tolerated with favorable safety profile>200 human exposures up to12 weeks
- Composition of matter IP



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Adrenoleukodystrophy

A Not-so-Rare Orphan Neurometabolic Disease

Genetics

- Monogenic, X-linked mutations in ABCD1 gene
- Gene encodes a transporter present in peroxisomes required for metabolism of very long chain fatty acids (VLCFA)
- Males more severely affected

Prevalence

Estimated US Prevalence* 20,000 – 29,000



Diagnosis

 Newborn screening – increasingly common (now >60% of newborns in US)





 Clinical presentation followed by measurement of VLCFA and genotyping

U.S. National Library of Medicine

* Based on published and newborn screening incidence rates of 1/12,000-1/17,000; Bezman L, Ann Neurol 2001; 49:512-17; Kemper AR, Genet Med. 2017; 19:121-26; Schmidt JL, Am J Med Genet 2020; 182A:1906-12; https://rarediseases.org/rare-diseases/adrenoleukodystrophy.



ALD Clinical Features and Disease Course

Two Major Overlapping Subtypes

Addison's Disease

Cerebral ALD (C-ALD): Damage to brain white matter; cognitive impairment; loss of vision/hearing; impaired balance-movement; death

Adrenomyeloneuropathy (AMN): Slowly progressive; impaired gait-balancemovement; bladder-bowel dysfunction; also affects women



C-ALD Lesions (MRI)



Treatment Approaches

No Approved Pharmaceutical Therapies

- Adrenal insufficiency → glucocorticoid replacement therapy
- Early stage (early onset) C-ALD \rightarrow HSCT
- Advanced or later onset C-ALD \rightarrow no effective options
- AMN:
 - o physical therapy
 - o supportive care
 - major target for future therapies



PO



Clinical Trial Measures & Outcomes

Several Potential Surrogates for Longer Term Benefits

umol/L plasma

157 R² = 0.61

200

Fotal amplitude (mm)

- **Biomarkers**
 - o VLCFA
 - Neurofilament light chain (Nfl)
- MRI imaging (C-ALD)
- Functional tests
 - o 6 minute walk; timed upand-go", others
 - o postural body sway
- Disability scores; patient reported outcomes
 - EDSS, ALDS, SSPROM, others



2. Engelen et al. 2020 Ann Clin Trans Neurol; 7:2127-

3. Engelen et al. 2020 Front Physiol; doi 10.3389/fphys.2020.00786



Poxel Platforms – Potential to Target ALD Pathophysiology



D-TZD's: Rationale and Strong Preclinical Data

- Pioglitazone attenuates neuroinflammation and confers neuroprotection:
 - non-human primates with Parkinson's disease¹
 - rodent acute brain ischemia², spinal cord injury³
- Pioglitazone efficacy achieved in ABCD1-null mice⁴
- MPC or ACSL4 inhibition implicated as a therapeutic approach in neurodegeneration⁵⁻⁸
- PXL065 is active in ALD/AMN patient-derived cells and in ABCD1-null mice:



J Neuroinflamm 2011; 8:91
 Exp Neurol 2009; 216:321 Exp Neurol 2017; 293:74 Brain 2013;136:2432-43
 Sci Trans Med 2016; 8:368ra174
 Neural Regen Res 2017;12:1807-8
 Neurosci Lett 2021; 745:135627
 Brain Behav Immunity 2021; 93:312-



ABCD1 Null Mouse Model

Spinal Cord Suppression

of Elevated VLCFA (C26:0)

N=12-15; Dose =15 mg/kg QD

D-TZD's: Clinical Results Support Pursuit of ALD/AMN

Leriglitazone - Human PoC with PPARy - Related AEs

- Phase 2/3 trial in adult AMN patients (n=116; 96 week)[∆]
 - Primary Endpoint: 6 min walk test *Failed (*differences "observed in early symptomatic pts")
 - Secondary/Exploratory: Body Sway Significant (p=0.036; p=0.003) improvements

SSPROM & EDSS – *Positive effect*

Cerebral ALD - Positive effect

	Pioglitazone	OH Charlen Charlen Leriglitazone (M-IV Pio Metabolite)	PXL065	
MoA	PPARγ agonist & Non-genomic effects (MPC, other)*	PPARγ agonist & MPC inhibition**	Minimal PPARγ activity Non-genomic effects (MPC, other)*	
Relationship to Pio	Parent molecule	M-IV metabolite of Pio	R-Pio (1/2 of pio mixture)	
Known or expected side effects (PPARγ)	weight gain (≈3 kg), edema, & risk of bone fracture	weight gain (5.8 kg [∆]), edema [∆]	No significant PPARγ–related side effects expected	
	PXL065 and other D-TZD's: Potential for superior efficacy with reduced side effects		^A Minoryx press release Feb. 2021; Am Acad Neu 2021 presentation; *Both Pio isomers have simila mitochondrial pyruvate carrier (MPC) activity; **in-house data and results reported in Minoryx patent WO 2019/234690	

AMPK: Scientific Rationale and Strong Preclinical Data

- Deletion of AMPK in glial cells of ABCD-null mice \rightarrow mitochondrial dysfunction / low ATP¹
- Reduced AMPK in patient-derived cells and brain tissue from ALD patients^{2,3}
- AMPK activation with metformin* elevates ABCD2 levels in patient cell lines and Abcd1-null mice^{3,4}
- J Neurochem. 2016 Jul; 138(1); 10–13.
 PMID

 Published online 2016 Mar 15. doi: 10.1111/jnc.13594
 PMID

 The ABCD's of 5'-Adenosine Monophosphate-activated Protein
 Kinase and Adrenoleukodystrophy



• PXL770 is active in ALD/AMN patient-derived cells and in ABCD1-null mice:

Both PXL065 and PXL770 Mediate Neurologic Benefits

ABCD1-Null Mouse (12 week Treatment)



Poxel Lead Molecules vs. Selected Competitors

Advanced Drug Candidate with Potential for Superior Clinical Results

					VIKING	
		PXL065	PXL770	Leriglitazone*	VK0214 [▽]	ABX-002*
A Bi	Mechanism	Non-genomic D- TZD	AMPK activator	PPARγ (+ other TZD)	Thyroid receptor β	Thyroid receptor β
	Stage	Ph2a – Ready	Ph 2a – Ready	Ph 2b/3	Ph 1b	Preclinical
	Human ALD Cells	 ↓↓↓VLCFA ☆ ABCD2 ☆ mitochondrial respiration 	 ♣ ♣ ♥ VLCFA ☆ ABCD2 ☆ mitochondrial respiration 	No VLCFA or ABCD2 effects reported	VLCFA not reported 企 ABCD2	Not reported
	Biomarker Signal	♣♣ VLCFA - plasma, brain, spinal cord	♣♣ VLCFA - plasma, brain, spinal cord	VLCFA spinal cord (plasma not reported)	♣ VLCFA plasma, spinal cord	VLCFA plasma, brain; <i>spinal cord not</i> reported
	Neuro Histology	Improved	Improved	Improved	Not reported	Not reported
	Neuro- Behavior	Improved	Improved	Improved	Not reported	Not reported
	Other Comments	Clinical safety: >130 exposures plus 505(b)(2)	Clinical safety: (>200 exposures)	+ results in Ph2b/3 weight gain, edema	Phase 1 completed	No clinical experience

* Rodriquez-Pascau Science Trans Med 2021; Am Acad Neuro (AAN) oral presentation 2021; Minoryx 2021 press release

Viking corporate presentation 2021; *Autobahn AAN Poster 2021



In Vivo ABCD1 Null Mice

Planned Phase 2a Studies in ALD/AMN

PXL770 and PXL065 in Two Separate Identical Studies



- Neurofilament light chain validated biomarker of neuronal damage
- Other / exploratory biomarkers
- PK
- Safety

Phase 2a initiation 1Q22 – completion 4Q22 Phase 3 Pivotal trial(s) to begin in 2023



ALD Opportunity Summary

High Unmet Needs, Blockbuster Market Potential

Blockbuster market opportunity

- US prevalence of 20,000-29,000; Global prevalence of 444,000 644,000
- Ability for premium pricing based upon other orphan drugs with similar prevalence
- Potential Regulatory designations:
 - US: Orphan (7 years exclusivity), Fast Track, Breakthrough, Priority Review
 - EU: Orphan (10 years exclusivity), PRIME

Expedited Clinical Development

- Established safety profiles of PXL065 (with 505b2) and PXL770 mitigate risk & may reduce clinical development timelines
- Data from ALD preclinical models for PXL065 and PXL770 suggest significant impact on key biomarkers (VLCFA, neurofilament light chain)
- Potential for accelerated approval based upon biomarkers

Community Engagement

- Established relationships with Key Opinion Leaders
- Collaborations with important patient advocacy groups



NASH

PXL065

Non-Genomic Pathway D-TZD Modulator for Treatment of NASH

Utilizing the 505(b)(2) Regulatory Pathway

PXL770

Direct AMPK Activator



PXL770 and PXL065: Novel, First-in-Class Product Candidates



• First-in-Class - Novel Mechanisms

o ability to target multiple hallmarks of NASH

Clinical validation

- o positive Phase 2a results ('770)
- derived from pioglitazone proven NASH benefits ('065)

• Daily oral administration

o combinable with other approaches

Innovative development approaches

- focus on patients with co-existing diabetes ('770)
- o 505(b)(2) regulatory path ('065)



PXL065 Phase 1 Study Results

15 mg vs. 45 mg Actos^{®1}: Similar R-Pio Exposure; S-Pio Exposure Decreased ~5-fold



- Single (SAD) and repeated (Phase 1b) oral dose studies completed
- Stabilization and sustained higher exposure to R-pio (limited conversion to S-pio)
 - PK dose proportionality; no food effect
 - Tablet formulation qualified in Phase 1b study
- Well tolerated at all doses tested

. Actos is the branded version of pioglitazone and a registered trademark of Takeda Chemical Industries, Ltd.





PXL065 Ongoing Phase 2 in Biopsy-Proven NASH Patients Single Streamlined Study - 505(b)(2) Pathway; Designed to Select Ph3 Dose(s)



Primary Endpoint

• Relative change in liver fat content (MRI-PDFF)

Secondary Endpoints

- Liver histology: NASH resolution without worsening of fibrosis
- Liver enzymes
- Metabolic parameters
- Biomarkers, Safety, PK

PXL770 – NASH Summary

Phase 2a – Results in NAFLD Patients with Diabetes

- First direct AMPK activator studied in human disease
- Well tolerated, acceptable safety profile
- Target engagement established with improvements in multiple NASH-related parameters
- Greater response in patients with T2D opportunity to target a large (45-50%) high risk subpopulation
 - consistent with lower endogenous AMPK "tone" hypothesis
 - additional glycemic benefits with improved insulin sensitivity



Future development in NASH to be evaluated pending PXL065 DESTINY-1 Phase 2 data in NASH and Phase 2 POC results in ALD

* p = 0.004 vs. baseline Δ p = 0.01 vs. placebo

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Upcoming Milestones



Near-Term Milestones to Drive Poxel's Growth



Summary and Investment Highlights

- TWYMEEG[®] (Imeglimin) approved for Type 2 Diabetes in Japan
 - Sumitomo Dainippon Pharma, #1 diabetes company in Japan, launch Sept 2021
 - Potential sales-based payments and escalating royalties on net sales
 - US/Europe: exploring options to move the program forward into Phase 3
- Strategic focus on rare metabolic indications and NASH
 - ALD: PXL065 and PXL770 Phase 2a biomarker Proof-of-Concept results by year end 2022; potential to advance into pivotal trial
 - NASH: PXL065 Phase 2 results anticipated Q3 2022; option to advance either PXL065 or PXL770 as oral, first-in-class addressing large market opportunity
- Cash & cash equivalents: EUR 37.2 million (USD 43.2 million) as of 9/30/2021
 EUR 13.2 million¹ approval milestone received in Q3 2021 from Sumitomo Dainippon Pharma
- Highly experienced management team with extensive metabolic R&D and business expertise & track record in US, EU and Japan



Appendix



Key Financial & Shareholder Information

Market data



Ticker: POXEL

ISIN: FR0012432516

Number of shares: 28,703,692¹

Shareholder ownership²



Key financials

 As of 09/30/21 cash & cash equivalents: EUR 37.2 million (USD 43.2 million)

Bryan Garnier	Jean-Jacques Le Fur		
Degroof Petercam	David Seynnaeve		
Jefferies	Lucy Codrington		
JMP Securities	Jason Butler		
Oddo	Martial Descoutures		



1. As of November 2, 2021.

2. At the date of the presentation, based on the Company's knowledge.

3. And affiliates.

