



First-Half 2018 Financial Results

September 27, 2018



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Today's speakers



Frédéric Cren, MA/MBA, Chairman, CEO and Co-Founder



Pierre Broqua, Ph.D., CSO and Co-Founder



Jean Volatier, MA, CFO

Summary

- ▶ **First-Half 2018 highlights**
- ▶ **Pipeline update**
- ▶ **Financials**
- ▶ **Near-term catalysts**



First-Half 2018 Highlights

First-Half 2018 Highlights

Lanifibranor program

- ▶ Continuation of the clinical development of lanifibranor and confirmation of its good safety profile
- ▶ Increased and extended protection of lanifibranor with the grant of a new patent in the United States
- ▶ Decision to open new clinical sites in the United States in order to secure patient enrolment in the Phase IIb NATIVE study in NASH with lanifibranor and increase visibility in the United-States

Odiparcil program

- ▶ Continued progress with the Phase IIa iMProveS study with odiparcil in the treatment of MPS VI and evolution of the development plan to shorten time to market

Collaboration with AbbVie and Boehringer-Ingelheim

- ▶ Decision by AbbVie to finance the entry into the Phase I trial of ABBV-157, the clinical drug candidate resulting from the partnership between the two companies

Yap-Tead program

- ▶ Launch of the preliminary toxicology studies to select a clinical drug candidate from the Yap-Tead oncology program for potential entry into Phase I/II

Financials

- ▶ Successful capital increase, consolidating the Company's cash position to €75.9 million
- ▶ Revenue in line with forecasts at €1.3 million

Pipeline update

Recent achievements and upcoming milestones

	2018	2019
Lanifibranor	<ul style="list-style-type: none"> ✓ 2 year carcinogenicity study results ✓ US fibrosis indication patent ✓ US IND ✓ First patient in NAFLD Phase II 	<ul style="list-style-type: none"> ▶ Results Phase IIb SSc ▶ Last patient Phase IIb NASH ▶ Last patient Pr Cusi study in NAFLD patients with TD2M
Odiparcil	<ul style="list-style-type: none"> ✓ MPS VI biomarker study results ✓ Juvenile tox results ▶ Rare pediatric disease designation MPS VI 	<ul style="list-style-type: none"> ▶ Results Phase IIa MPS VI ▶ Launch of Phase I/II in children
Collab.	<ul style="list-style-type: none"> ▶ Start Phase I with ABBV-157 	<ul style="list-style-type: none"> ▶ Results Phase I ABBV-157
Discovery	<ul style="list-style-type: none"> ✓ Yap-Tead: Vivo POC 	<ul style="list-style-type: none"> ▶ Yap-Tead: start of GLP tox
Finance	<ul style="list-style-type: none"> ✓ Capital increase 	

Lanifibranor – Systemic Sclerosis (SSc) and Nonalcoholic steatohepatitis (NASH)

A new generation pan-PPAR agonist for a safe and efficacious treatment of fibrotic conditions

Lanifibranor: increased and extended protection

Previous IP

- ☑ Composition of matter patent protecting lanifibranor in 59 countries including US, Europe, Japan , China,...
 - Limit of exclusivity August 2031 including 5-year extension

Newly granted patent

- ☑ Use patent granted in the United States countries protecting the use of lanifibranor in several fibrotic diseases including NASH and SSc
 - Limit of exclusivity June 2035

Pending patent procedure

- ▶ European use patent expected in 2019 protecting the use of lanifibranor in several fibrotic diseases including NASH and SSc
 - Limit of exclusivity June 2035

Lanifibranor: a strengthened safety profile

Safety package

- ✓ 6 month tox in rodents
- ✓ 6 month tox data in primates
- ✓ 12 month tox data in primates
- ✓ 100 healthy volunteers treated in Phase I trials and 56 patients treated in Phase IIa study

Recently generated data

- ✓ First DSMB for NATIVE trial in NASH recommending to continue the trial as planned. Second one planned in October
- ✓ Three positive DSMBs for FASST trial in SSc recommending to continue the trial as planned. No more DSMB planned before head-line results planned for early 2019
- ✓ Rat and mice carcinogenicity study finalized. QC reports confirm the positive safety profile. Next steps include submitting the results to FDA

Update on FASST Phase IIb study in SSc



Trial design

Principal investigator

- ▶ Principal investigators: Pr Allanore (Hôpital Cochin, Paris) and Pr Denton (University College of London)
- ▶ Other: Pr Matucci (Florence University, Italy), Pr Distler (University of Erlangen, Germany), Pr Distler (Universitaet Zurich, Switzerland)
- ▶ US scientific advisors: Pr John Varga (Northwestern University), Pr Dinesh Khanna (Michigan University)

Status

- ✓ Last patient recruited in October 2017
- ▶ Last Patient Last Visit anticipated mid-October 2018
- ▶ Data-base lock planned for January 2019

Inclusion criteria

- ▶ MRSS (Modified Rodnan Skin Score) between 10 and 25
- ▶ SSc diagnosed from less than 3 years

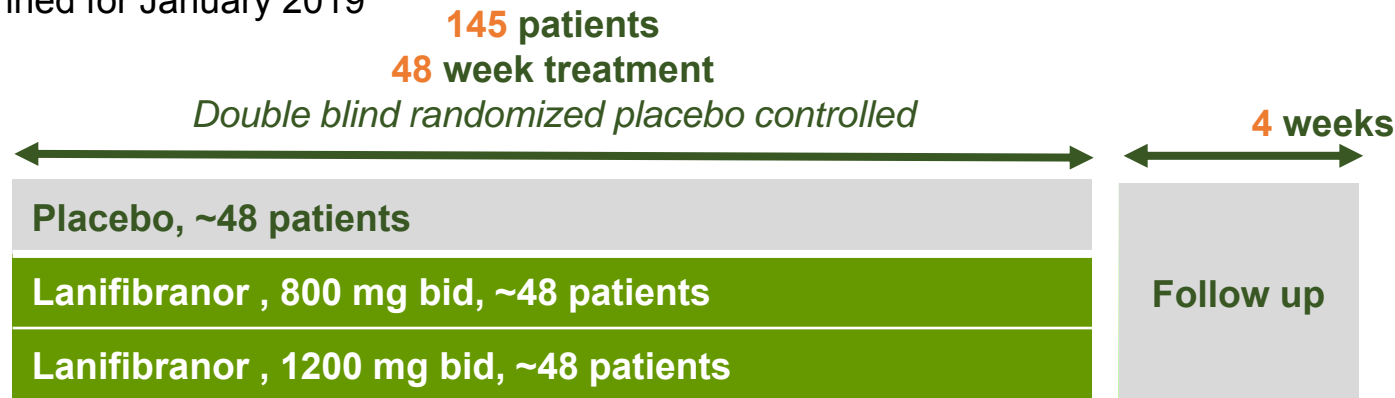
Primary endpoint

- ▶ Mean change of the MRSS from baseline to 48 weeks

Key secondary endpoints

- ▶ MRSS responder rate, change from baseline in FVC%, digital ulcers, severe organs involvement, safety

Clinicaltrials.gov identifier: NCT02503644



FASST study on track to deliver head-line results early 2019

Update on NATIVE Phase IIb study in NASH (I/III)



Trial design

Principal investigator

- ▶ Pr Francque (Universitair Ziekenhuis, Antwerpen, Belgium)

Status

- ▶ Trial enrolling
- ▶ Results expected first half 2020

Randomisation

- ▶ 1/1/1, stratification on T2DM patients
- ▶ Study powered with 75 patients per group

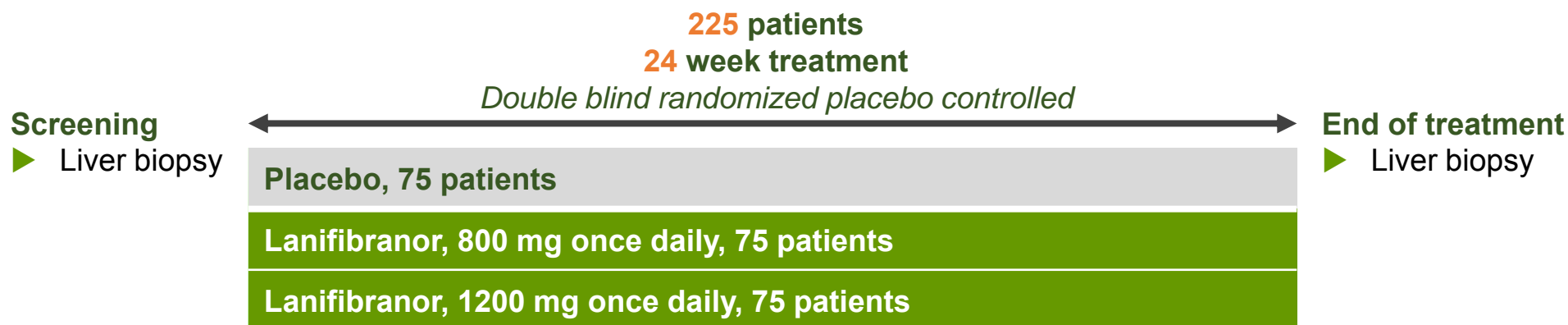
Inclusion criteria

- ▶ Liver biopsy
- ▶ Moderate to severe patients with an inflammation and ballooning score of 3 or 4
- ▶ Steatosis score ≥ 1 and fibrosis score < 4 (no cirrhosis)

Primary endpoint

- ▶ Decrease from baseline ≥ 2 points of the inflammation and ballooning score without worsening of fibrosis
- ▶ Central reading for pre- (before randomization) and post treatment biopsy

Clinicaltrials.gov identifier: NCT03008070



More information on: <http://www.native-trial.com/>

NATIVE: update on actions implemented to secure recruitment (II/III)

Status at end of :	December 2017	June 2018	September 2018
# of sites activated at the end of the period	36	66	71
# of sites screening at the end of the period	17	49	57
# of patients screened over the period	51	186	106
# of patients randomized over the period	25	42	31
71 sites activated / 343 patients screened / 98 patients randomized / 29% screening success			

- ▶ Site opening increased by almost 100% in H1 2018 which led to an increase in screens
- ▶ Newly opened sites still have to deliver
- ▶ Increased number of randomized patients over the last three months

NATIVE: update on actions implemented to secure recruitment (III/III)

- ▶ To secure patient recruitment, the Company has decided to open several sites in the United States, to transform it into a global study and increase its visibility in the United-States.
- ▶ We believe the opening of new sites in the U.S. has the potential to enhance our capacity to complete our enrollment plan and we estimate this new country will provide further clinical background in light of our end of Phase IIb meeting with the FDA.
- ▶ In addition new sites will be opened in the currently active countries
- ▶ We anticipate to publish headline-results for first half 2020 rather than second half of 2019 as previously announced

Update on US investigator-initiated Phase II study in T2DM patients with NAFLD (I/II)

Nonalcoholic fatty liver disease (NAFLD) develops in ~70% of patients with type 2 diabetes mellitus (T2DM):

- ▶ Diabetes becomes more difficult to control and often needs more medication
- ▶ About 40% develop the more severe form of the disease with hepatocyte necrosis (ballooning) and liver inflammation (steatohepatitis or NASH)
- ▶ About 15-20% develop moderate to severe fibrosis

Coexistence of T2DM and NAFLD leads to worse insulin resistance at multiple levels:

- ▶ In adipose tissue, insulin resistance increases the flux of fatty acids to the liver with severe hepatic steatosis and hepatocyte « lipotoxicity »
- ▶ Hepatic insulin resistance is associated with a failure to suppress hepatic VLDL secretion, increased de novo lipogenesis (DNL) and more severe atherogenic dyslipidemia characterized by
 - Elevated plasma triglyceride levels; Low plasma HDL-cholesterol concentration; Smaller and denser LDL particles

Lanifibranor selection for this study was motivated by its panPPAR mechanism of action that can potentially address all key features of NAFLD and NASH:

- ▶ Insulin-sensitivity improvement
- ▶ Steatosis reduction
- ▶ Anti-inflammatory activity
- ▶ Anti-fibrotic activity

A positive study result would further reinforce lanifibranor as the ideal drug for NAFLD and NASH patients with type 2 diabetes

Update on US investigator-initiated Phase II trial in T2DM patients with NAFLD (II/II)

Trial design

Principal investigator

- ▶ Pr. Kenneth Cusi (University of Florida)

Randomisation

- ▶ Randomized (1:1), double-blind, placebo-controlled
- ▶ Non-obese subject control group for the metabolic and imaging procedures
- ▶ N= 64 calculated assuming a 35% relative reduction of IHGT⁽¹⁾

Status

- ✓ IND approved
- ✓ First Patient First Visit: August 2018
- ▶ Head-line results: early 2020

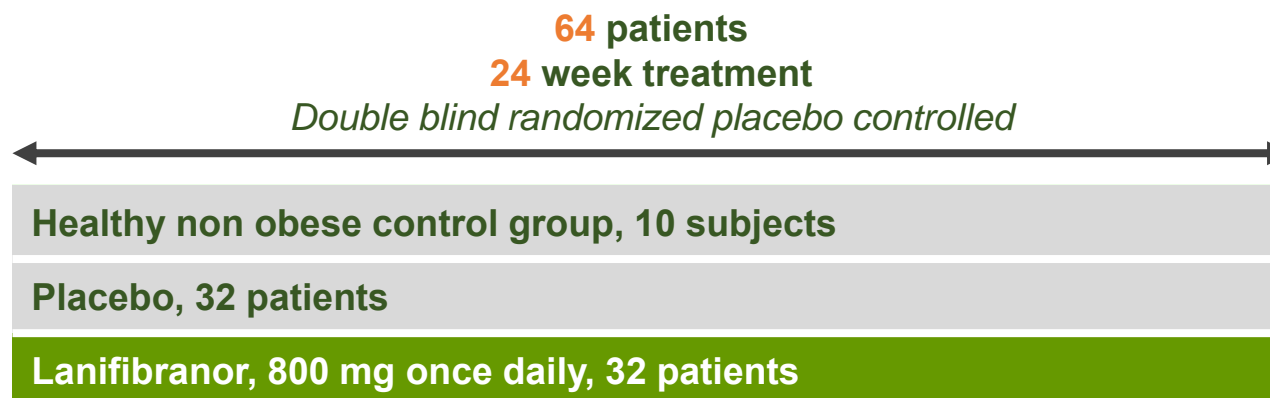
Primary endpoint

- ▶ Change from baseline to week 24 in IHTG

Key secondary endpoints

- ▶ Proportion of responders (IHTG, NAFLD resolution)
- ▶ Change in hepatic fibrosis (MRE⁽²⁾, biomarkers)
- ▶ Change in metabolic outcomes (insulin sensitivity, DNL⁽³⁾, glycemic control, lipids)
- ▶ Safety

Clinicaltrials.gov identifier: NCT03459079



(1) Intrahepatic triglycerides (2) Magnetic resonance elastography (3) De-novo lipogenesis

PanNASH initiative: a group of well recognized international experts working to promote NASH and PPARs approach



- ✓ Creation of panNASH™, a committee of international independent experts aiming to play an active role in developing and disseminating their NASH expertise among the scientific community, patients and other key stakeholders within the healthcare system. The committee includes European and American medical experts in areas related to NASH such as hepatology, diabetes and cardiology, along with renowned scientific experts focused on promoting a better understanding of the physiopathological mechanisms involved in NASH.

Specialty	Country	Member	Affiliation
Hepatology	Belgium	Pr. Sven Francque	Antwerp University Hospital
Hepatology	Germany	Pr. Frank Tacke	University Hospital Aachen
Hepatology	Switzerland	Pr. Jean-François Dufour	University Clinic Bern
Hepatology	United States	Pr. Manal Abdelmalek	Duke University
Hepatology	United States	Pr. Gyongyi Szabo	University of Massachusetts
Diabetology	Germany	Pr. Michael Roden	Heinrich Heine University
Diabetology	United States	Pr. Kenneth Cusi	University of Florida
Cardiology	UK	Pr. Christopher Byrne	University of Southampton
Cardiology	United States	Pr. Frank Sacks	Harvard T.H. Chan School of Public Health

Odiparcil

*The first oral therapy to treat five forms of
mucopolysaccharidosis (MPS): MPS I, II, IV, VI and VII*

Odiparcil: clinical strategy update

- ▶ Development of a promising biomarker approach to support odiparcil's development and registration in MPS VI
- ▶ Continued progress of the Phase IIa iMProveS study for the treatment of MPS VI
- ▶ Evolution of the development plan to shorten time to market

Development of a promising biomarker for MPS VI confirming the limited efficacy of ERT in reducing leukoGAGs

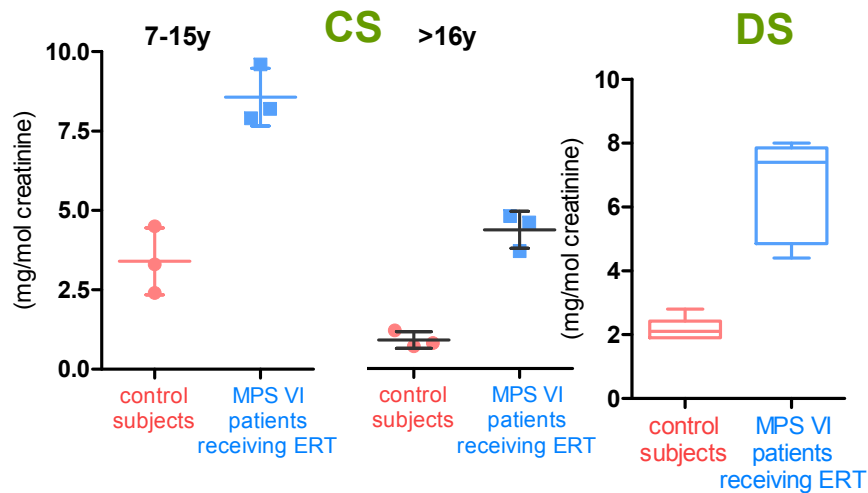
Leukocytes are promising cells: low invasiveness of collection procedure and intracellular glycosaminoglycans (GAG) levels are increased in animal model of MPS where Odiparcil decreases intra-cellular GAG level

Objectives of Inventiva's non-interventional study: develop a robust quantification method to measure intracellular heparan sulphate (HS), chondroitin sulphate (CS) and dermatan sulphate (DS) in leukocytes and an activity biomarker to be used in clinical trials

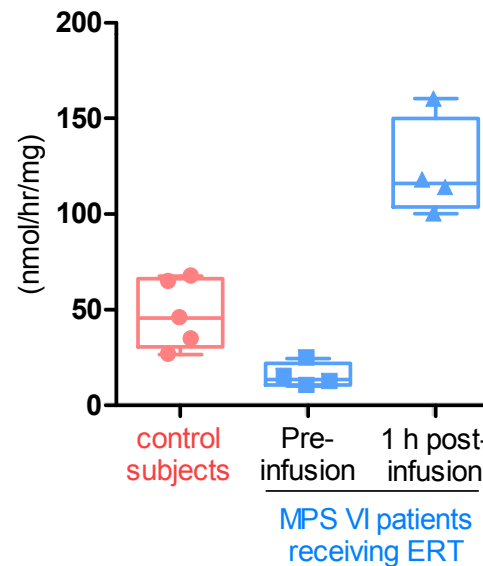
Population: 6 MPS VI patients on Enzyme Replacement Therapy (ERT) and 6 age matched control subjects not affected with MPS

Investigational site: Dr. Paul Harmatz (PI), UCSF Benioff Children's Hospital in Oakland (CA, USA)

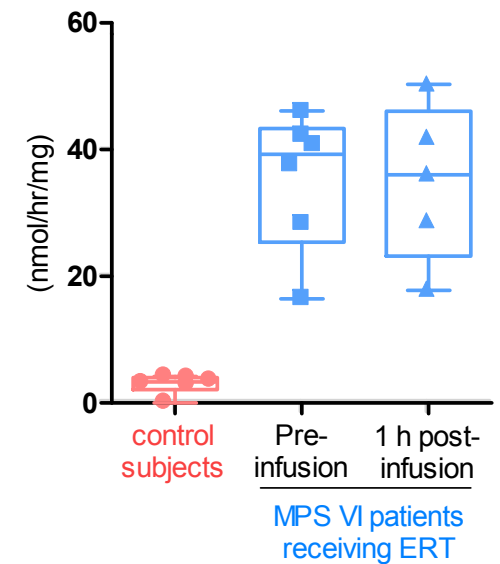
MPS VI patients treated with ERT have increased CS and DS levels in urine



ARSB activity in leukocytes is increased by 8 fold after ERT infusion



MPS VI patients treated with ERT have increased CS (and DS levels) in leukocytes



MPS VI patients treated with Naglazyme maintained a high level of intracellular DS and CS levels in leukocytes compared to age matched healthy volunteers suggesting the possibility to further reduce this level with odiparcil

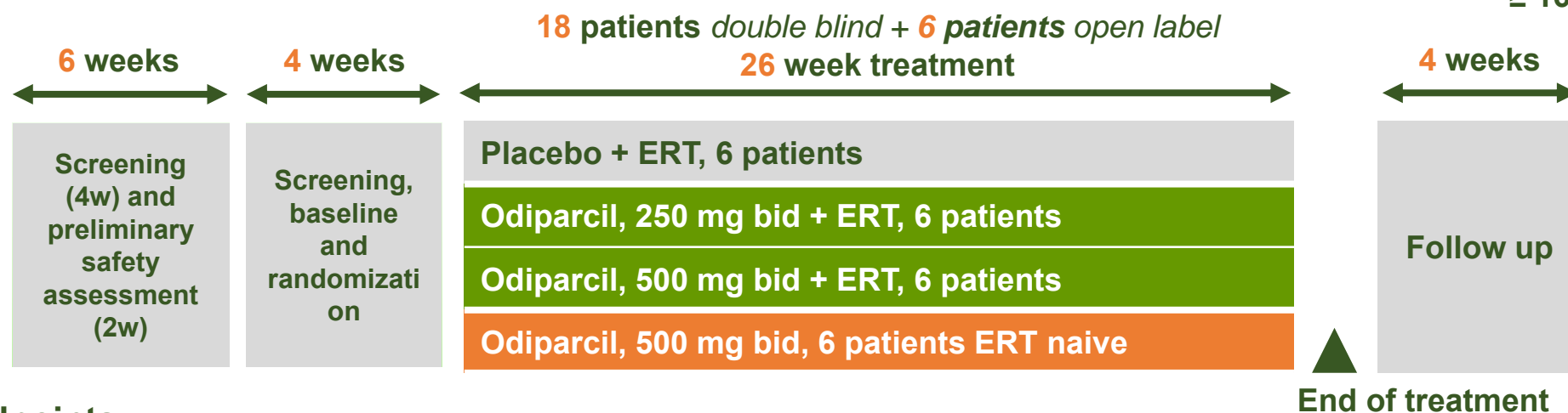
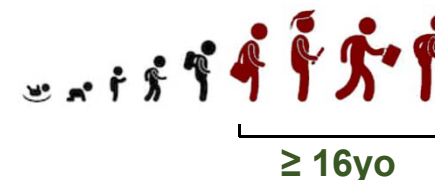
Update on iMProveS Phase IIa study in MPS VI patients

Phase IIa

- ▶ Phase 3 enabling study with evidence for dose selection and PK / PD response characterization
- ▶ **Clinicaltrials.gov identifier:** NCT03370653

Population

- ▶ Receiving ERT (N=18)
- ▶ Not receiving ERT (N=6)



Endpoints

Safety

- ▶ Clinical and biological assessments (standard tests)

Pharmacokinetics

- ▶ Odiparcil plasma levels

Efficacy

- ▶ Leukocyte, skin and urinary GAG content
- ▶ Activity and mobility tests (6 minutes walk test, upper limb function, shoulder mobility range)
- ▶ Cardiac, vascular and respiratory functions
- ▶ Eye impairment, hearing capacity, pain assessment, quality of life questionnaires

Status

- ▶ Design discussed with EMA (2016)
- ▶ Recruiting

- ▶ EU, multicenter: UK, Germany, France, Portugal
- ▶ Head-line results: second half of 2019

Odiparcil: evolution of the development plan

- ▶ In July 2018 FDA published a draft guidance⁽¹⁾ on the evidence necessary to demonstrate the effectiveness of new drugs intended for slowly progressive low-prevalence rare diseases that are associated with substrate deposition and caused by single enzyme defects
- ▶ Notably *“specific drug-induced substrate reduction in relevant tissues can have a reasonable likelihood of predicting clinical effectiveness ... substrate reduction can be seen as reasonably likely to predict clinical benefit and can serve as the basis for accelerated approval”*
- ▶ Inventiva has generated a promising biomarker approach to support odiparcil development and registration in MPS V
- ▶ The development plan is currently being reviewed in order to shorten time to market

We believe the new FDA draft-guidance provides an opportunity to accelerate time to market for odiparcil

(1) “Slowly Progressive, Low-Prevalence Rare Diseases with Substrate Deposition That Results from Single Enzyme Defects: Providing Evidence of Effectiveness for Replacement or Corrective Therapies Guidance for Industry”, U.S. Department of Health and Human Services, Food and Drug Administration / Center for Drug Evaluation and Research (CDER) / Center for Biologics Evaluation and Research (CBER), Juillet 2018

Collaborations with

abbvie



Update on collaborations with AbbVie and Boehringer Ingelheim



RORy collaboration

- ▶ RORy program addresses large markets currently dominated by biologics and could prove to be superior to biologics
- ▶ AbbVie has decided to move the drug candidate ABBV-157 into Phase I studies
- ▶ With the decision to enter into Phase I with ABBV-157 and the discovery of a back-up to this lead candidate, the work of Inventiva's team to discover new orally available ROR inverse agonists is completed
- ▶ Inventiva remains eligible to future multiple milestones payments and sales royalties on all ROR molecules identified during the collaboration

ABBV-157: decision on to enter into Phase I studies



Fibrosis collaboration

- ▶ Multi-year R&D collaboration and licensing partnership
- ▶ Joint team until pre-CC stage. BI to take full responsibility of clinical development and commercialization
- ▶ Inventiva eligible to up to €170m in milestones plus royalties
- ▶ Following the validation of this new target supporting its therapeutic potential in fibrotic conditions, Boehringer Ingelheim exercised the option to jointly develop this target triggering a milestone payment of €2,5m
- ▶ The collaboration has entered into the screening phase and the first molecules identified are currently being optimized by the Inventiva and Boehringer-Ingelheim teams

Program has progressed-as planned with first screening performed

Yap-Tead program

YAP-TEAD: update on program progress

The Hippo pathway: a newly discovered oncogenic signaling pathway, where Inventiva has established a leading position

- ▶ The program addresses both rare cancers (malignant mesothelioma, uveal melanoma, ...) as well as large cancers (NSCLC, TNBC, hepatoblastoma, hepatocellular carcinoma,...)
- ▶ Molecules inhibiting the yap-tead interaction have the potential to overcome drug resistance and tumor escape mechanism
- ▶ Two non-dilutive grants secured and large academic network in place

Recently generated data

- ✓ *In vitro* data on transactivation and proliferation
- ✓ Data showing Inventiva's molecule block yap-tead target genes
- ✓ *In vivo* data in xenograft and PDX models with efficacy as stand-alone treatment or in combination with standard of care
- ✓ Two molecules identified with properties allowing to start non-GLP tox
- ✓ Two patents filed covering one chemical family
- ✓ Back-up program ongoing and new molecules with optimized properties identified

The program is expected to enter into Phase I/II-enabling preclinical development in 2019

Financials

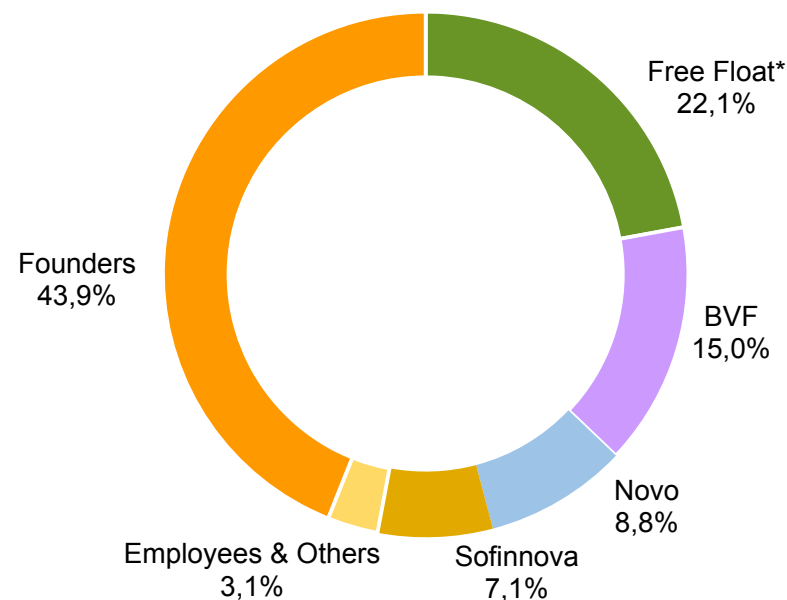
Strong cash position and shareholder base

Key financials



ISIN code	FR0013233012
Market	Euronext Paris
Shares outstanding	22.257.277
Market cap (September 25 2018)	€174m
Cash position (June 30 2018)	€75.9m compared to €59.0m in December 2017. Successful €48.5m Euronext IPO (February 2017) and €35.5m private placement (April 2018)
Revenues in H1 2018 (June 30 2018)	€1.3m compared to €2.7m in H1 2017
R&D expenditures in H1 2018 (June 30 2018)	€15.9m compared to €13.2m in H1 2017

Shareholder base



*Including Perceptive Advisors

Analyst coverage

Jefferies	Peter Welford
Société Générale	Delphine Le Louët
Gilbert Dupont	Jamila El Bougrini
KBC	Lenny Van Steenhuyse
LifeSci Capital	Patrick Dolezal

H1 2018: financial position

Income Statement

<i>In thousands of euros</i>	First half 2018	First half 2017
Revenue	1,301	2,658
Other recurring operating income	2,754	2,596
R&D costs	(15,926)	(13,242)
Marketing – Business development	(107)	(238)
G&A	(3,056)	(2,668)
Recurring operating loss	(15,035)	(10,893)
Non-recurring operating loss	(1 141)	(449)
Operating loss	(16,175)	(11,343)
Net financial income (loss)	(116)	224
Income tax	22	1,337
Net income/(loss) for the period	(16,269)	(9,781)

Cash Position

Key Figures <i>(in thousands of euros)</i>	First half 2018	First half 2017
Cash & cash equivalents	75,972	59,051

Highlights

- ▶ **Revenues of €1.3M compared to €2.7M in H1 17**
 - Significant progress in the collaborations with AbbVie and Boehringer Ingelheim leading to lower resources
- ▶ **20% increase in R&D investment, €15.9M vs €13.2M in H1 17**
 - Continued efforts dedicated to the development of lanifibranor (NASH and SSC) and odiparcil (MPS) through clinical studies
 - R&D expenses accounted for 83% total operating expenses – 2/3^d related to clinical development
- ▶ **Consolidation of the cash position reaching €76.0M vs €59.1M as of 12.31.2017**
 - Successful €32.5 million private placement on April 17, 2018 (*net proceeds*) via the issuance of 5,572,500 shares to European / American investors, consolidating the shareholders base
 - Net cash flow in operating activities at - €15.3M vs - €11,7M reflecting the increasing R&D effort

Financial Calendar

- ▶ **November 13, 2018 : Publication of Q3 2018 financial results (revenues and cash) (*after market closing*)**

Near-term catalysts

Recent achievements and upcoming milestones

	2018	2019
Lanifibranor	<ul style="list-style-type: none"> ✓ 2 year carcinogenicity study results ✓ US fibrosis indication patent ✓ US IND ✓ First patient in NAFLD Phase II 	<ul style="list-style-type: none"> ▶ Results Phase IIb SSc ▶ Last patient Phase IIb NASH ▶ Last patient Pr Cusi study in NAFLD patients with TD2M
Odiparcil	<ul style="list-style-type: none"> ✓ MPS VI biomarker study results ✓ Juvenile tox results ▶ Rare pediatric disease designation MPS VI 	<ul style="list-style-type: none"> ▶ Results Phase IIa MPS VI ▶ Launch of Phase I/II in children
Collab.	<ul style="list-style-type: none"> ▶ Start Phase I with ABBV-157 	<ul style="list-style-type: none"> ▶ Results Phase I ABBV-157
Discovery	<ul style="list-style-type: none"> ✓ Yap-Tead: Vivo POC 	<ul style="list-style-type: none"> ▶ Yap-Tead: start of GLP tox
Finance	<ul style="list-style-type: none"> ✓ Capital increase 	

Q&A

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Lanifibranor: a next generation panPPAR agonist for a safe and efficacious treatment of fibrotic conditions

Activity

- ▶ Unprecedented chemical structure with moderate and balanced panPPAR agonist activity (PPAR α , PPAR γ and PPAR δ)
- ▶ Oral administration
- ▶ Efficacy demonstrated in preclinical models of insulin resistance, dyslipidemia, steatosis, ballooning, inflammation and liver fibrosis. Anti-fibrotic activity also demonstrated in skin, kidney, lung
- ▶ 100 healthy volunteers treated in Phase I trials and 56 patients treated in phase IIa study
- ▶ Phase IIa demonstrated Pan-PPAR agonist activity supporting dose selection for the NASH and systemic sclerosis (SSc) clinical trials

IP

- ▶ Composition of matter patent granted in 59 countries: LOE⁽¹⁾ August 2031 including 5-year extension
- ▶ Use patent granted in US covering several fibrotic diseases including NASH and SSc: LOE⁽¹⁾ 2035
- ▶ ODD granted in SSc in the US and EU

Safety

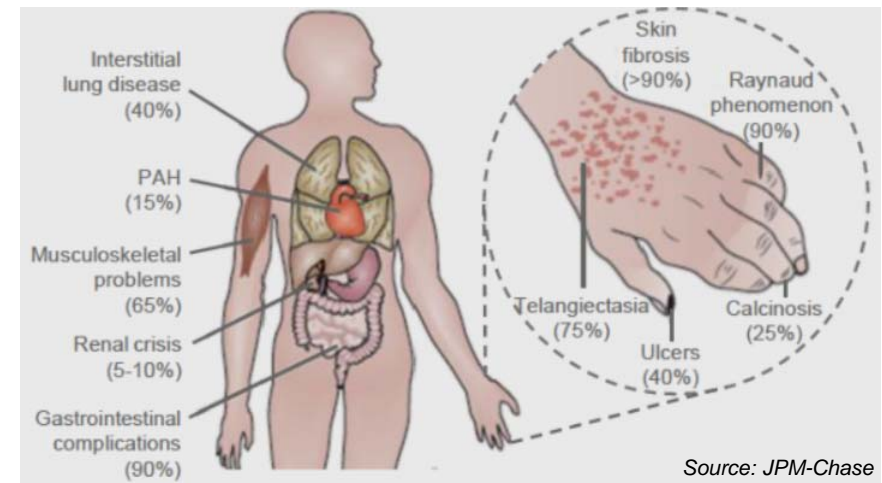
- ▶ Favorable safety profile different from other PPAR compounds demonstrated in 6-month rodent and monkey studies
- ▶ 52 weeks toxicity studies in primates and two years carcinogenicity studies in rats and mice completed
- ▶ Safety profile in phase I and phase IIa T2DM studies similar to placebo

(1) LOE: Limit Of Exclusivity

Systemic sclerosis overview

A severe disease with no approved treatment ⁽¹⁾

- ▶ SSc is an autoimmune disease with microvascular damage and progressive fibrosis of the skin and visceral organs
- ▶ There are two subtypes:
 - Limited cutaneous (lcSSc; ~60% of patients): restricted skin involvement, but with major internal organ involvement
 - Diffuse cutaneous (dcSSc; ~ 40% of patients): extensive skin and organ involvement
- ▶ Current treatments include: immunosuppressant agents, corticosteroids as low-dose, or specific therapies targeting the symptoms (endothelin-receptor antagonists to treat digital ulcers, ACE inhibitors to treat renal crisis, ...)
- ▶ High burden cost to society and of drugs approved in symptomatic indications
- ▶ Modified Rodnan Skin Score (MRSS) accepted by FDA and EMA as an end-point for marketing approval
- ▶ Potential for conditional approval



Patients: more than 170,000 patients diagnosed and a total market potential > €1.8bn ⁽²⁾ by 2030

USA



~102,000 patients ⁽²⁾

Europe Top 5



~67,000 patients ⁽²⁾

Japan

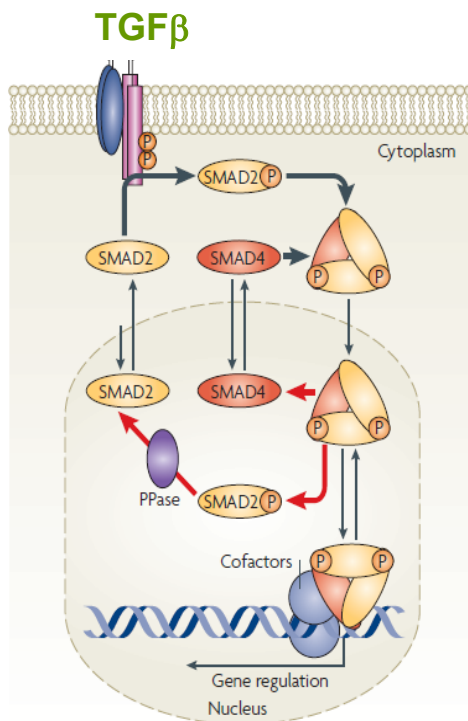


~4,800 patients ⁽²⁾

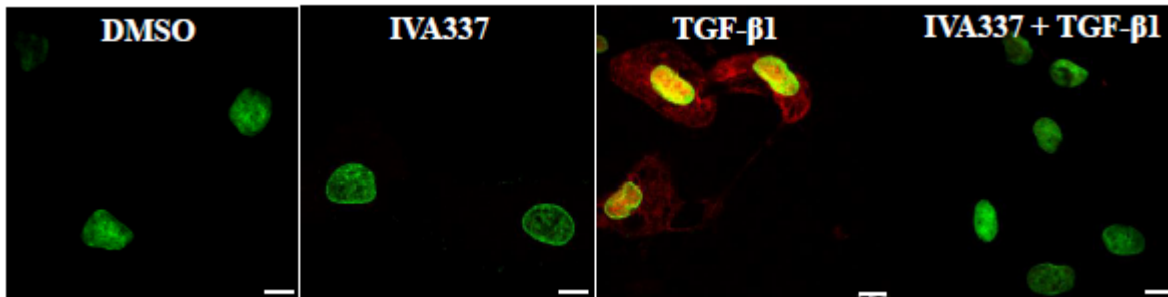
Mortality rate is greater than in any other rheumatic disease⁽³⁾

Source: (1) Eular SSc Trials and Research Group, EUSTAR, SSc Research Foundation, Canadian SSc research group ; (2) Venture Valuation 2015. (3) ACR 2017 SSc Disease education

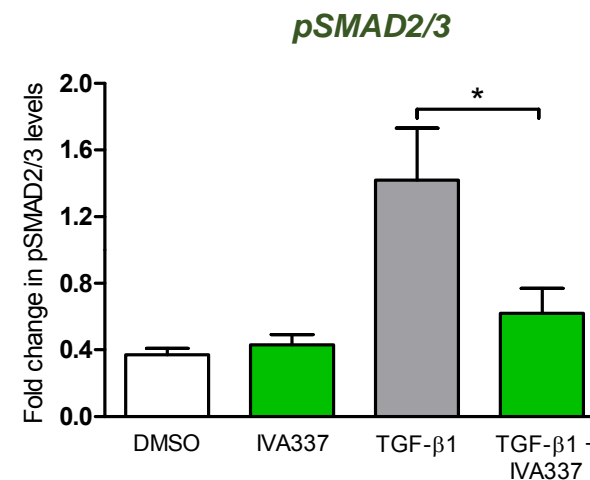
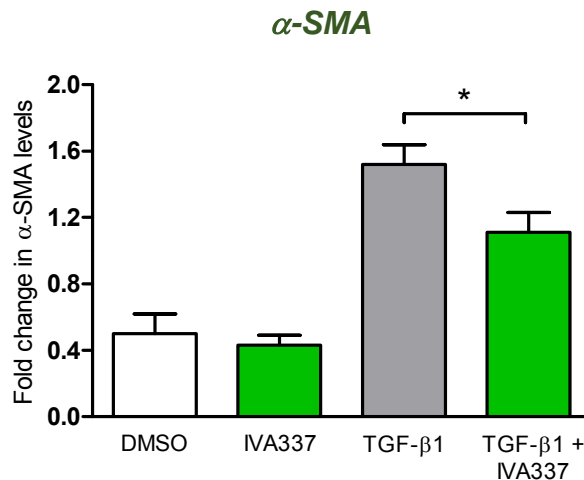
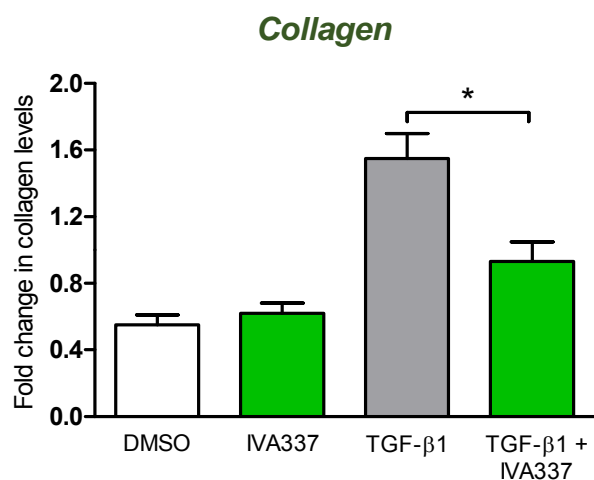
Lanifibranor inhibits TGF β signaling in fibroblasts from SSc patients



- Fibroblast to myfibroblast differentiation drives effective fibrosis across multiple organs and tissues and is largely regulated by TGF- β through the SMAD2/3 pathway



- Lanifibranor blocks pSMAD2/3 accumulation in the nucleus, the differentiation of fibroblasts into myfibroblasts (α -SMA) and the production of collagen from SSc fibroblasts

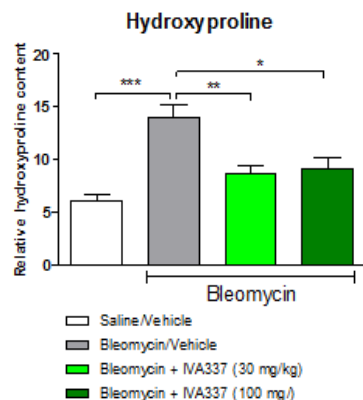


Source: Ruzehaji N. et al., Ann. Rheum. Disease 2016

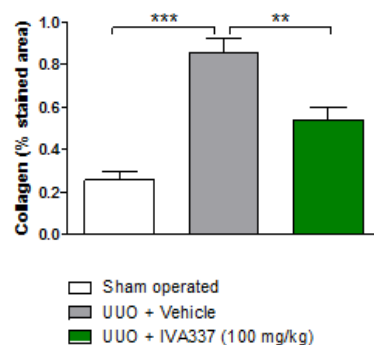
Lanifibranor has demonstrated anti-fibrotic activity in multiple models and several organs that are relevant to SSc

Lanifibranor positively impacts the most relevant clinical features of SSc

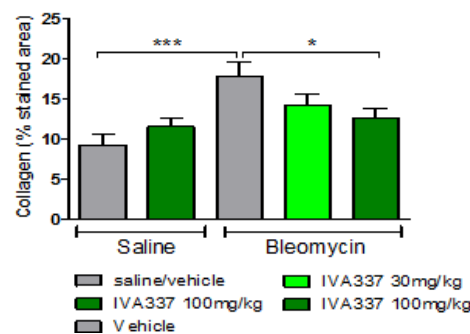
Lanifibranor reduces established skin fibrosis



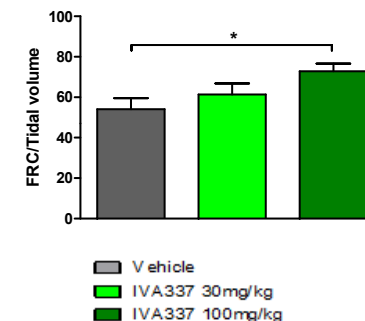
Lanifibranor reduces kidney fibrosis



Lanifibranor reduces lung fibrosis

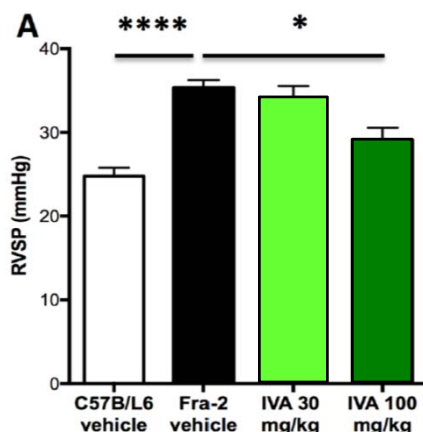


Lanifibranor restores lung functional capacity

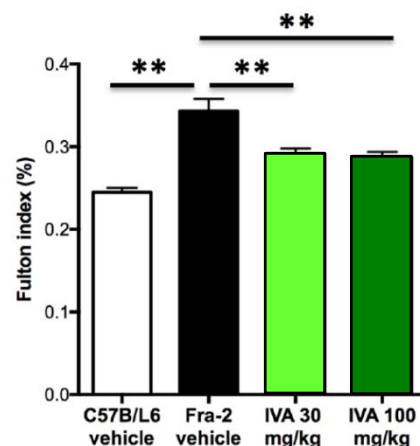


Lanifibranor positively impacts vascular remodeling in the Fra2 model

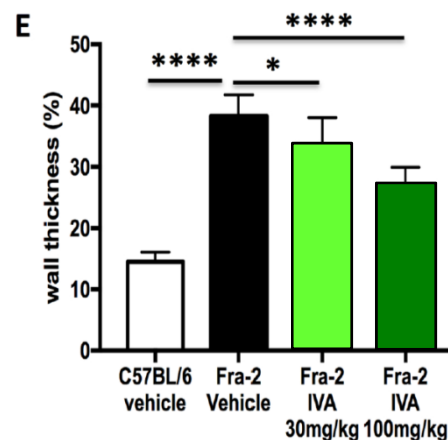
Lanifibranor RSVP⁽¹⁾



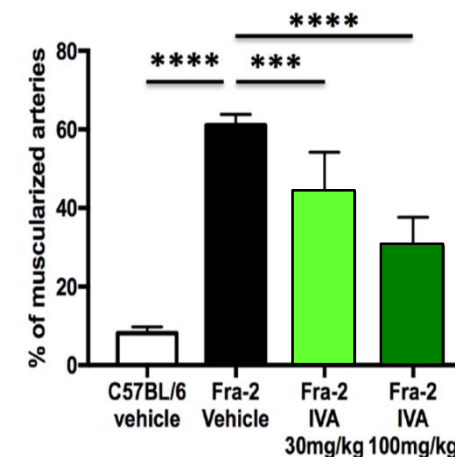
Lanifibranor reduces Fulton index



Lanifibranor reduces vessel wall thickness

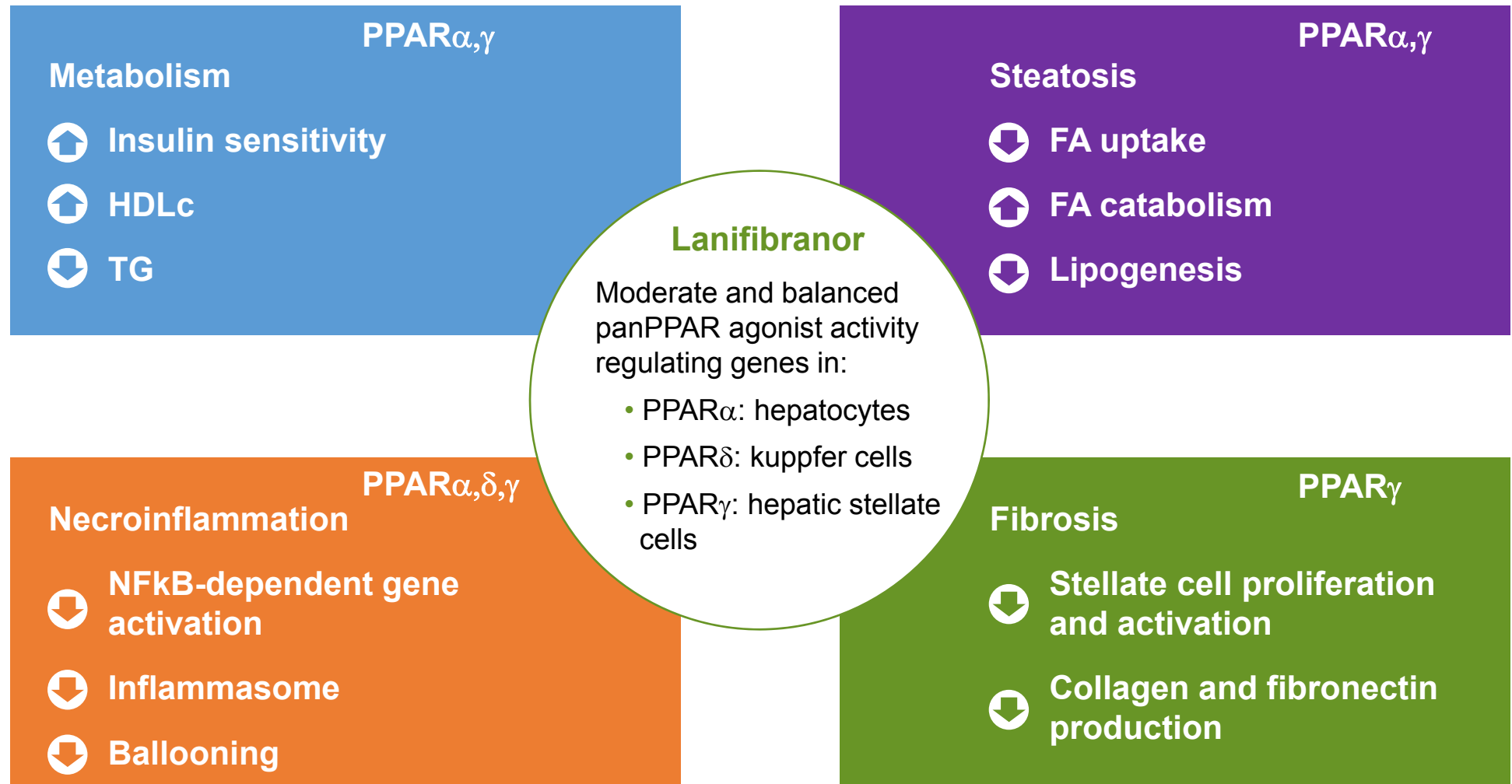


Lanifibranor reduces vessel muscularization



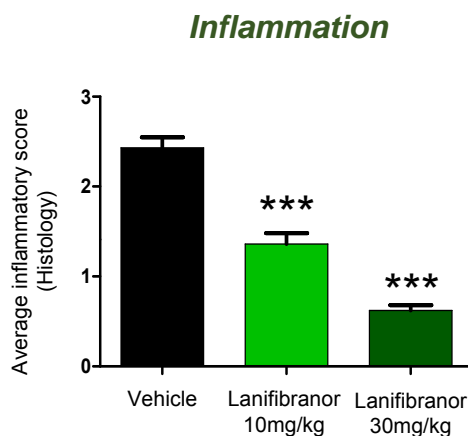
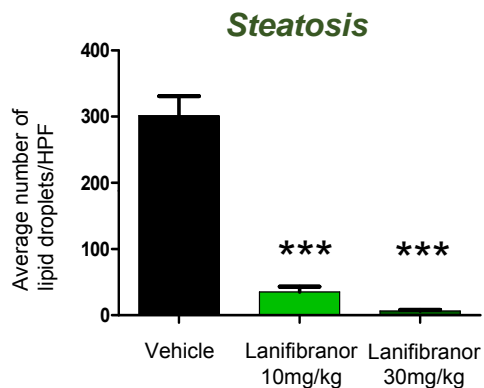
Source: Company data and * Ruzehaji N. et al., Ann. Rheum. Disease 2016; ; (1) RSVP: Right Ventricular Systolic Pressure

Lanifibranor: a mechanism of action addressing all the key features of NASH

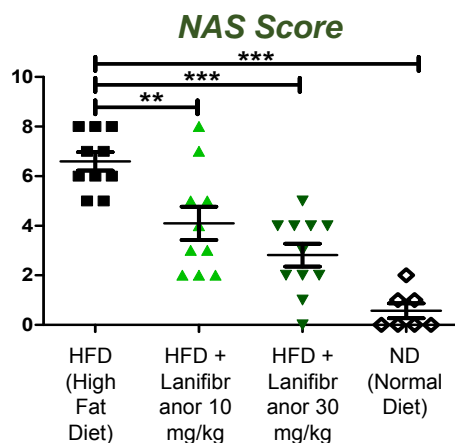
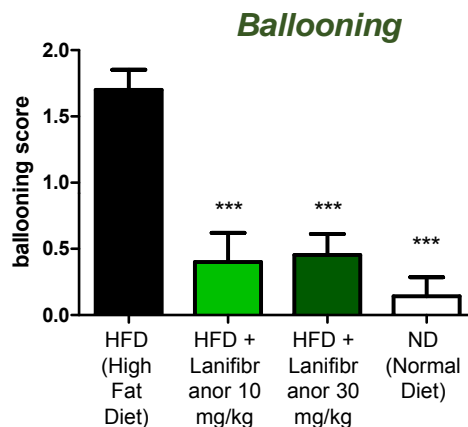


Lanifibranor significantly reduces steatosis, inflammation, ballooning and fibrosis in preclinical models

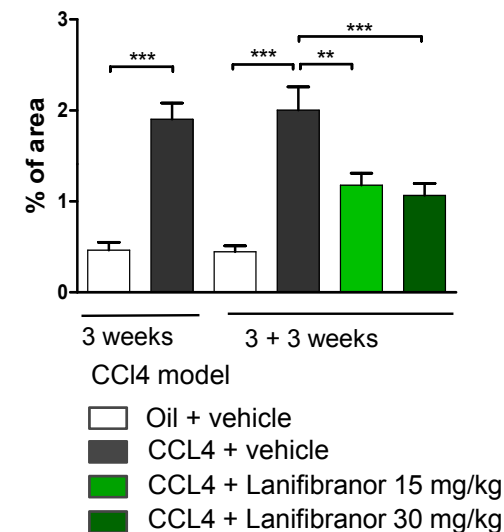
Lanifibranor inhibits steatosis and inflammation in the MCD model



Lanifibranor significantly reduces ballooning and the NAS score in the foz/foz model



Lanifibranor reverses established liver fibrosis



Lanifibranor positively impacts all NASH-relevant liver lesions

Source: Company data; The new-generation Pan-Peroxisome Proliferator-Activated Receptor Agonist IVA337 Protects the Liver From Metabolic Disorders and Fibrosis; Hepatology Communications, June 2017

MPS are devastating diseases with high unmet medical needs

MPS diseases are inherited lysosomal storage diseases

Autosomal recessive disorder characterized by accumulation of glycosaminoglycan(s) (GAG) due to lack of an enzyme

Seven distinct clinical types based on the enzyme affected

Odiparcil could be the first substrate reduction therapy for five forms of MPS:

- **MPS I:** ~3,000 / 4,000 patients⁽¹⁾
- **MPS II:** ~2,000 patients⁽¹⁾
- **MPS IV** type A: ~2,000 patients⁽¹⁾
- **MPS VI:** ~1,100 patients⁽¹⁾, increased frequency in Turkish and Portuguese subpopulations⁽²⁾
- **MPS VII:** very rare

MPS have devastating clinical consequences: example MPS I, II and VI

Consequences	MPS I	MPS II	MPS VI
▶ Mental retardation	✓	✓	
▶ Coarse facies, short stature	✓	✓	✓
▶ Dysostosis multiplex	✓	✓	✓
▶ Joint stiffness	✓	✓	✓
▶ Spinal cord compression	✓	✓	✓
▶ Organomegaly	✓	✓	✓
▶ Poor vision (corneal clouding)	✓	✓ ⁽¹⁾	✓
▶ Hearing loss	✓	✓	✓
▶ Cardiac/respiratory disease	✓	✓	✓
		▶ Pebbled skin ▶ Diarrhoea	▶ Odontoid hypoplasia ▶ Kyphoscoliosis, genu valgum

(1) Retinal degeneration with no corneal clouding



Kathleen (MPS I)



Scotty (MPS II)



Karima (MPS VI)

Source: (1) MPS society; (2) Valayannopoulos V, Nicely H, Harmatz P, Turbeville S; Mucopolysaccharidosis VI. Orphanet J Rare Dis. 2010 Apr 12;5:5.

Odiparcil, the first orally available therapy to treat several forms of MPS

Activity

- ▶ Mechanism of action via modulation of GAG synthesis which accumulation triggers MPS
- ▶ Oral administration
- ▶ Odiparcil reduction of GAG intracellular accumulation demonstrated in in vitro and in vivo relevant models
- ▶ Odiparcil widely distributed in tissues that are poorly treated by enzyme replacement therapy
- ▶ Odiparcil has the potential to replace current ERT treatments, especially in MPS VI patients
- ▶ 1,809 healthy volunteers and patients treated in 32 phase I and II clinical trials for up to 16 weeks
- ▶ US biomarker study finalized and Phase IIa study in MPS VI ongoing


IP

- ▶ Use patent filed in 2013 and granted in EU (Nov. 2015) and the US (Feb. 2017)
- ▶ LOE 2039 including 5-year extension
- ▶ MPS VI ODD granted in the US and in the EU

Safety

- ▶ Favorable safety profile as demonstrated in non-clinical toxicological studies and clinical studies
- ▶ Multiple phase I and phase II clinical studies allowing the commencement of a POC study in MPS VI patients

Odiparcil has the potential to positively differentiate versus current enzyme replacement therapies

	Odiparcil 	Aldurazyme, Elaprase, Naglazyme, Vimizim, Mepsevii    	HSCT (Hematopoietic stem cell transplantation)
Effect on mobility	✓	✓	✓
Eye, cartilage, bones, heart valves, spinal cord compression	✓	✗	✗
Safety	✓	✓	✗
Dose regimen	✓	✗	✗
Distribution type	Oral	Intravenous Infusion	Transplantation

Source: Company evaluation