



Theranexus

SHIFTING THE LINES AGAINST CENTRAL
NERVOUS SYSTEM DISORDERS

EURONEXT GROWTH



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A detailed description of the Company's business, financial situation and risk factors relating to the Company and the initial public offering is included in the prospectus of Theranexus (the "Prospectus") which received the approval of the Autorité des marchés financiers (the "AMF") under n°17-545 on October 10, 2017, comprised of the registration document (document de base) registered by the AMF on September 27, 2017 under n°1.17-068 and a securities note (note d'opération) dated October 10, 2017 (which contains, in particular, the summary of the Prospectus) to which you are invited to refer to. Copies of the Prospectus are available on the AMF website (www.amf-france.org) as well as on the Company's website (www.theranexus.com).

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This document contains certain forward-looking statements. These statements are not guarantees of the Company's future performance. These forward-looking statements relate to the Company's future prospects, developments and marketing strategy and are based on analyses of earnings forecasts and estimates of amounts not yet determinable. Forward-looking statements are subject to a variety of risks and uncertainties as they relate to future events and are dependent on circumstances that may or may not materialize in the future. Forward-looking statements cannot, under any circumstance, be construed as a guarantee of the Company's future performance and the Company's actual financial position, results and cash flow, as well as the trends in the sector in which the Company operates, may differ materially from those proposed or reflected in the forward-looking statements contained in this document. Even if the Company's financial position, results, cash-flows and developments in the sector in which the Company operates were to conform to the forward-looking statements contained in this document, such results or developments cannot be construed as a reliable indication of the Company's future results or developments.

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YOUR CONTACTS



Franck Mouthon

Co-founder and Chairman and CEO

- Franck Mouthon holds a degree in life sciences from the École Normale Supérieure (ENS-Ulm), a master's degree in biology from the ENS and Paris VI, VII and XI interuniversity programme, and is an alumni of the medical virology programme at the Institut Pasteur.
- Graduate of the HEC Challenge + entrepreneur programme.
- Joined the Life Sciences Department of the French Alternative Energies and Atomic Energy Commission (CEA) in 1995 where he worked on neurodegenerative diseases.
- Founded CEA spin-off Theranexus in March 2013 with Mathieu Charvériat.
- Administrator of France Biotech.



Thierry Lambert

CFO

- Thierry Lambert holds a degree in business administration from Birmingham University and an MBA from INSEAD.
- 5 years of experience at PwC.
- 4 years of experience in syndicated and corporate finance.
- 5 years as Chief Financial Officer for listed companies Naturex and then Safe Orthopaedics.
- Joined Theranexus in 2017.





CONTENTS

1

THERANEXUS: SHIFTING THE LINES AGAINST CENTRAL NERVOUS SYSTEM DISORDERS

2

A DISRUPTIVE APPROACH TO THE CENTRAL NERVOUS SYSTEM

3

THE CAPACITY TO GENERATE DRUG CANDIDATES TO RESPOND TO UNMET NEEDS WITH THREE DEVELOPMENTS ALREADY UNDERWAY, A BLOCKBUSTER POTENTIAL

4

AN AGILE ORGANIZATION WITH CAREFULLY-MANAGED FINANCING NEEDS

5

SHORT AND MID-TERM VALUE CREATION BACKED BY AN INNOVATIVE PLATFORM



WHO WE ARE

A French biotech that specializes in
the central nervous system

A DISTINCTIVE *BUSINESS MODEL*

- **AN ATTRACTIVE PROFILE** within the Biotech sector
- Higher likelihood of **SUCCESS**
- **FASTER** access to the market...
- ... at **LOWER COSTS**

AN ESTABLISHED PORTOFOLIO

- **3 DRUG CANDIDATES***
- **BLOCKBUSTER POTENTIAL**
- **STRATEGIC MARKETS** for pharmaceutical laboratories

* 1 in phase II and 2 ready to enter into clinical development



CENTRAL NERVOUS SYSTEM DISORDERS: A PUBLIC HEALTH PRIORITY

Central Nervous System disorders are one of the **1st causes of disability around the world**

More than **one billion** ^[1] **people** are affected, i.e. **nearly 1 person in 5**

The cost in treating these disorders around the world is estimated at **more than €2,000 billion per year**, i.e. the equivalent of the gross domestic product of a country like France ^{[1]; [2]}



Sleep disorders
Alzheimer's disease
Parkinson's disease
Neuropathic pain
Dementia
Epilepsy
Psychiatric disorders
Multiple sclerosis
...

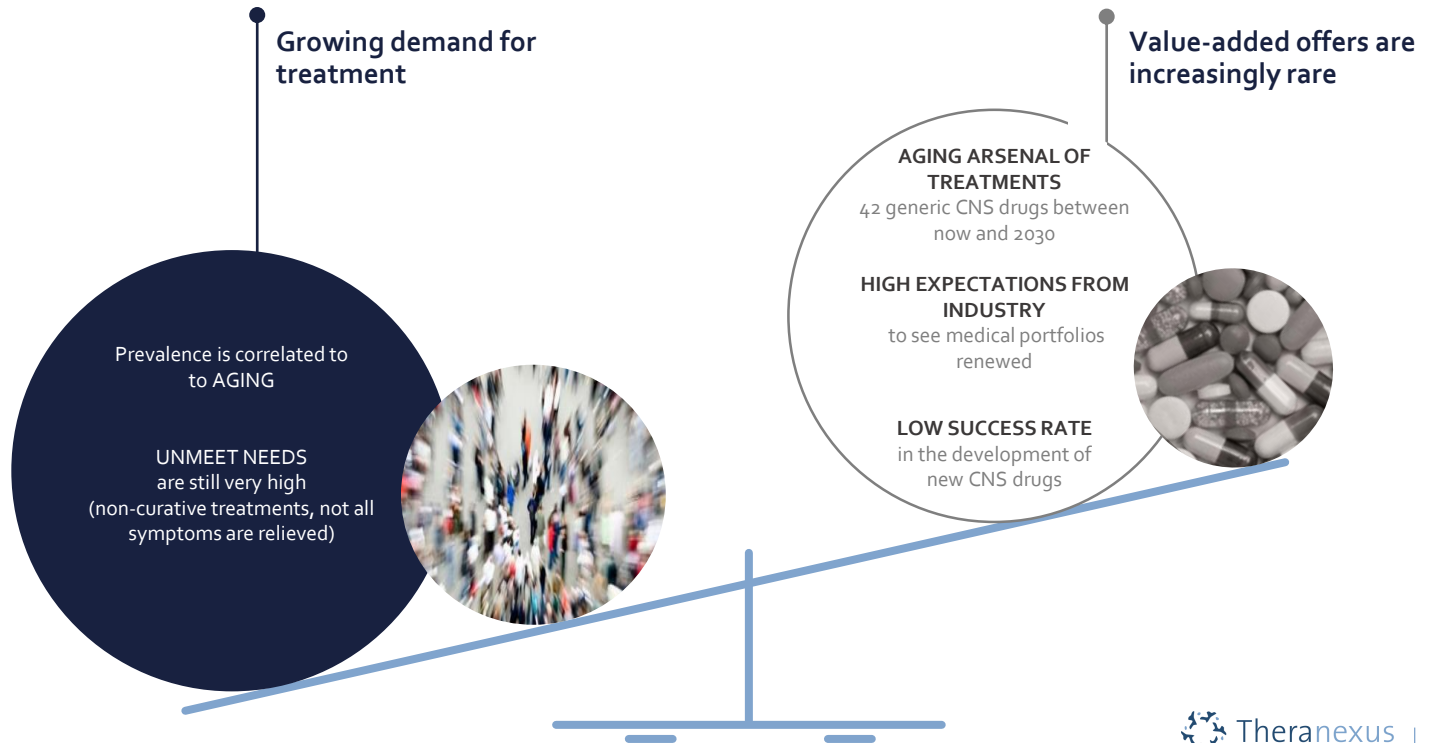
Unmet medical needs for many major conditions

[1] WHO / Neurological Disorders: Public Health Challenges 2015

[2] Source: Gustavsson et al., Eur Neuropsychopharmacology 2011



INDUSTRY INNOVATION FILTERS WHILE MEDICAL NEEDS ARE DRAMATICALLY GROWING





BREAKTHROUGH INNOVATION AT THE HEART OF THE THERANEXUS APPROACH



CNS DRUGS:

1 molecule for **1** action on **1** family of cells (neurons)



THERANEXUS DRUG CANDIDATES:

2 separate molecules combined for **2** actions on **2** families of cells (neurons + glial cells)



INNOVATION: COMBINATIONS OF MOLECULES TO OPTIMIZE THE EFFICACY OF STANDARD OF CARE TREATMENTS



THERANEXUS PLATFORM: PROPRIETARY, SCALABLE & VERSATILE

CNS DRUGS

DRUG SEEN AS THE 1ST LINE-TREATMENT

Condition with a strong unmet need for improved efficacy (with the current arsenal of therapeutics)

*CNS drugs
1st line- treatment
for CNS* conditions*



Action on the neuron

GLIAL CELL MODULATOR

DRUG REPOSITIONED AS A MODULATOR

Optimization of the glial network



*Theranexus
library of
27 glial cell
modulators*

THN

XXX



3 major advantages



Ambition to achieve superiority at all stages (*Best in class*)



New monopoly on use (*patent*)

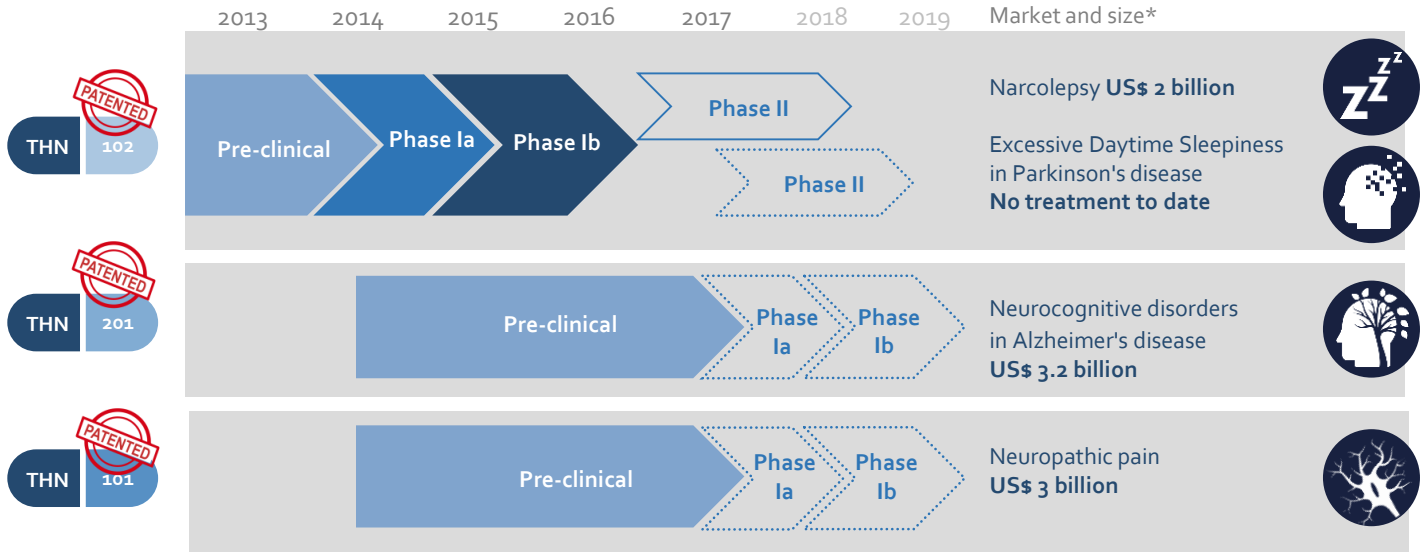


Higher probability of success, greater flexibility and shorter time-to-market

*Central Nervous System



3 DRUG CANDIDATES IN JUST 4 YEARS



Phase in progress — Next phase - - - - -

THN XX

OUR AMBITION: STEADY RELEASE OF NEW DRUG CANDIDATES IN THE YEARS AHEAD

*All published figures are taken from Datamonitor reports (NP, dementia) and company annual reports (Jazz Pharmaceuticals, Teva)



CONTENTS

1

1 THERANEXUS: SHIFTING THE LINES AGAINST CENTRAL NERVOUS SYSTEM DISORDERS

2

2 A DISRUPTIVE APPROACH TO THE CENTRAL NERVOUS SYSTEM

3

3 THE CAPACITY TO GENERATE DRUG CANDIDATES TO RESPOND TO UNMET NEEDS WITH THREE DEVELOPMENTS ALREADY UNDERWAY, A BLOCKBUSTER POTENTIAL

4

4 AN AGILE ORGANIZATION WITH CAREFULLY-MANAGED FINANCING NEEDS

5

5 SHORT AND MID-TERM VALUE CREATION BACKED BY AN INNOVATIVE PLATFORM



TWO MAJOR FAMILIES OF CELLS IN THE CENTRAL NERVOUS SYSTEM (CNS)

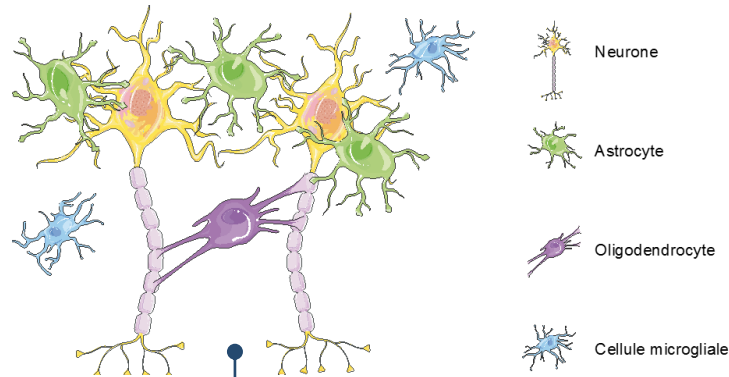
Neurons:

Cellular components that control our emotions, our mental activity, our memory, our senses, the way we feel pain, and even our motricity, etc.

Glial cells:

Able to respond quickly to neuron needs by providing the molecules needed for their metabolism

Astrocytes play a key role in neuronal communication



NEURONS DO NOT WORK INDEPENDENTLY BUT AS PARTS OF A CELLULAR CONTEXT



A DISCOVERY STEMMING FROM 10 YEARS OF RESEARCH

NEURON CENTRIC APPROACH

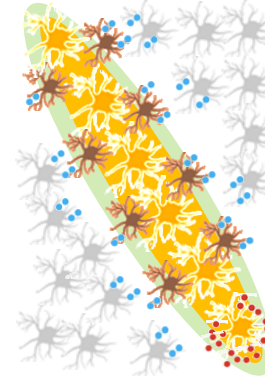
Suboptimal glial network
Limits the efficacy of the CNS drug



Neuronal and glial network with outside stimulation (psychotropic drug) leading to the overdevelopment of the glial network (suboptimal) which limits the efficacy of the drug

Theranexus

Glial network close to natural state
Improves the efficacy of the CNS drug



Neuronal and glial network with outside stimulation and connexin modulator (drug candidate)



OPTIMIZED SIZE FOR THE GLIAL NETWORK (ASTROGLIAL CELLS) WHICH IS FUNDAMENTAL FOR REGULAR NEURONAL ACTIVITY



TRANSFORMING RESEARCH TO INNOVATION

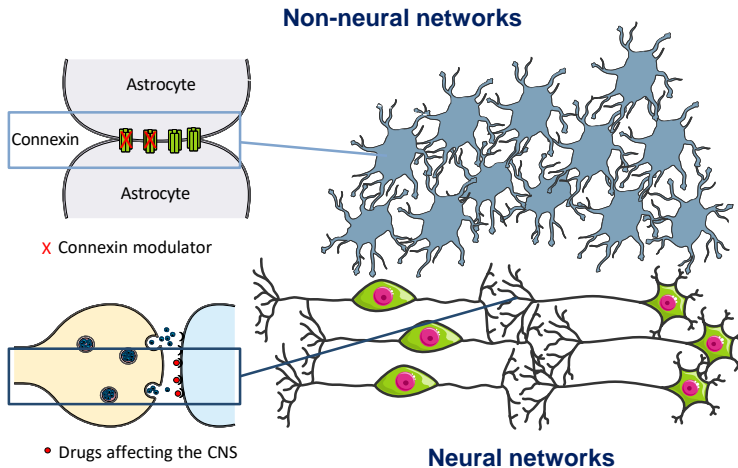
PRINCIPLE:

Enhance neuron action with the modulation of glial cells

APPLICATION:

Combine medication that targets neurons with a medication that optimizes neuroglial interaction

Connexin modulator



The modulation of glial connexins optimizes the neuroglial interface to **improve the way in which neurons react to CNS drugs**

Giaume et al., *Nat Rev Neurosci*, 2010
Rouach et al., *Science*, 2008

Picoli et al., *J Biomol Screen*, 2012
Duchêne et al., *Sleep*, 2016
Charvériat et al., *Front Cell Neuro*, 2017

CNS drug
(Psychostimulant, antidepressant, anxiolytic, etc.)

Action on neurotransmitter systems

THE CHALLENGE: MAXIMISE NEURON RESPONSE TO EXISTING DRUGS BY TARGETING THE ENVIRONMENT



CONTENTS

1

1 THERANEXUS: SHIFTING THE LINES AGAINST CENTRAL NERVOUS SYSTEM DISORDERS

2

2 A DISRUPTIVE APPROACH TO THE CENTRAL NERVOUS SYSTEM

3

3 THE CAPACITY TO GENERATE DRUG CANDIDATES TO RESPOND TO UNMET NEEDS WITH THREE DEVELOPMENTS ALREADY UNDERWAY, A BLOCKBUSTER POTENTIAL

4

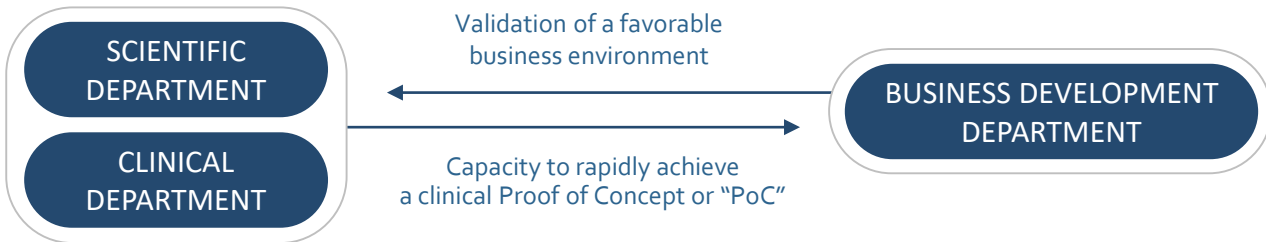
4 AN AGILE ORGANIZATION WITH CAREFULLY-MANAGED FINANCING NEEDS

5

5 SHORT AND MID-TERM VALUE CREATION BACKED BY AN INNOVATIVE PLATFORM



DRUG CANDIDATES SELECTED FOR THEIR CLINICAL AND ECONOMIC VALUE



4 selection criteria

- Patent-free CNS drug as the 1st-line treatment
- Demonstrated efficacy
- Clear room for improvement
- PoC within reach

IN VIVO SELECTION OF THE BEST COMBINATION of CNS drugs
selected with a glial cell modulator



THN102: A DRUG CANDIDATE FOR 2 CONDITIONS

Modafinil



Flecainide



Narcolepsy

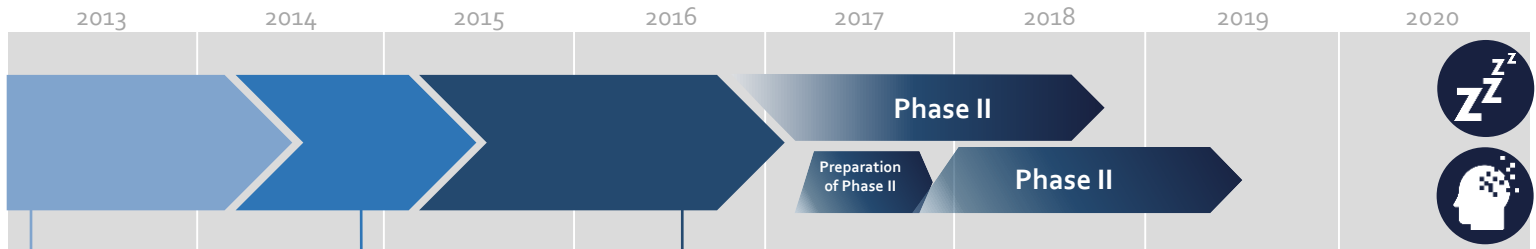


Parkinson's disease

Excessive daytime sleepiness ± cataplexy	SYMPTOMS	Excessive daytime sleepiness
Orphan disease: 300,000+ patients (France, Germany, United Kingdom, Italy, Spain, United States)	PREVALENCE	Close to 1 million patients (G7) 30 to 50% of patients diagnosed with Parkinson's
Modafinil 4 drugs on the market, none of which fully address both symptoms	STANDARD OF CARE TREATMENT	NONE No approved treatment to date
US\$ 2 billion (annual treatment cost/patient of around US\$ 20k)	MARKET	-
7 drug candidates undergoing clinical trials None of which aim to prove their superiority over the standard of care treatments	RESEARCH	4 drug candidates undergoing clinical trials, all of which only target neurons.



THN102: THE MOST ADVANCED COMBINATION OF THE PORTFOLIO



Pre-clinical safety

Safety pharmacology study over a period of 24 hours

>> **Proof of efficacy in pre-clinical models in the treatment of sleepiness and cataplexy, proof of tolerance**

Phase Ia

Randomized double blind trial on 9 healthy volunteers to compare THN102 with Modafinil and a placebo

>> **Proof of tolerance in human subjects**

Phase Ib / Proof of concept

Cross-over study (3 treatments out of 5) carried out at the Hôpital des Armées using 20 healthy volunteers deprived of sleep for 40 consecutive hours

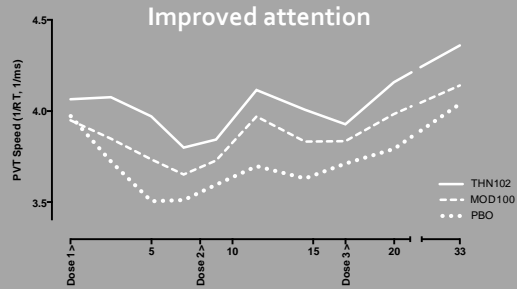
>> **Clinical proof that the combination is superior to the standard of care treatments (Modafinil used alone)**



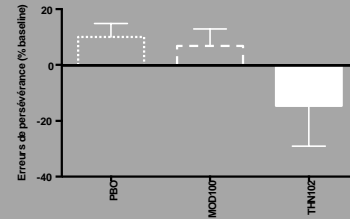
THN102: SUPERIOR RESULTS OF THE COMBINATION OVER MODAFINIL ALONE AT THE END OF PHASE IB

EFFICACY

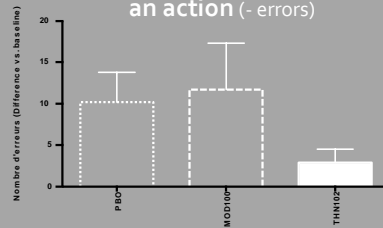
(sleep deprivation)
vs placebo
and Modafinil



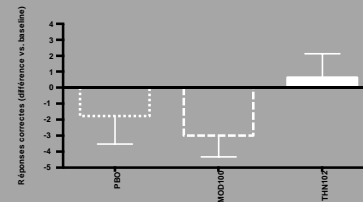
Improved mental flexibility (- repeated errors)



Improved capacity to repress/moderate an action (- errors)



Improved working memory



TOLERANCE vs Modafinil


	MOD 100 (n=12)	THN102 (n=35)
Fatigue	83%	70%
Headache	50%	23%
Nausea	33%	14%

**SIGNIFICANT IMPROVEMENT IN
AWARENESS AND ATTENTION AND
GOOD TOLERANCE OF THE PRODUCT**



THN102: 1ST DRUG CANDIDATE IN PHASE II

BEST IN CLASS

Modafinil  Flecaïnide

zzz **Narcolepsy**

Launch of the study Phase IIa in 2016

Double blind trial to compare 3 treatments:
Modafinil 300 mg/day alone or combined with two doses of FLECAINIDE, 3 and 27 mg/day

Cross-over study over three periods: each patient is randomly given each of the three treatments over three periods of two weeks each

Primary efficacy endpoint : ESS (Epworth Sleepiness Scale)

Trial carried out on **42 narcoleptic patients**
20 patients already recruited on 3 sites

Results expected in Q3 2018 (Narcolepsy)

BEST IN CLASS

Excessive daytime sleepiness in patients diagnosed with **Parkinson's**

Regulatory package ready for a start to Phase IIa in Q4 2017

Double blind trial to compare 2 doses of THN102 to the placebo

Cross-over study over three periods: each patient is randomly given THN102 or the placebo over three periods of two weeks each

Primary efficacy endpoint : ESS (Epworth Sleepiness Scale)

Study carried out on **60 patients** diagnosed with Parkinson's (some of whom possibly in the United States)

Results expected in Q2 2019 (Parkinson's)



THN102: DRUG CANDIDATE AS A FIRST-LINE TREATMENT

4 drugs on the market:

Inadequate response to both symptoms (sleepiness + cataplexy)



	Provigil® Modafinil	Nuvigil® ArModafinil	Xyrem® SOX	Wakix® Pitolisant	Target label THN102	Target THN102
Marketing authorization label (1) (2) (3) (4)						
Sleepiness	Yes	Yes	Yes	Yes	Yes	↗MOD
Cataplexy	No	No	Yes	Yes	Yes	→SOX/PIT.
Administration	2 doses / day	1 dose / day	2 doses / night	1 dose / day	-	1 dose / day
ANSM (5) drug database	N/A	-	Class III	N/A	-	N/A
HAS* efficacy/safety ratio (1) (3) (4)	High	-	High	Moderate		High
Price in the EU (US\$/year) (6) (average in 5 countries)	2,600	-	11,850	12,250		
Price in the US (US\$/year) (7)	36,000	8,600	120,500	-		
Sales peak (US\$ million) (8)	2,100		1,108	ND		

**BLOCKBUSTER
POTENTIAL,
EFFECTIVE ON THE
TWO MAIN
SYMPTOMS**

Estimate of benefits/risks of products currently on the market compared with the target profile for THN102 and the annual cost of treatments on the market (US\$ - rounded figures)

* French National Authority for Health

(1) Transparency Commission Recommendation, CT-4626

(2) FDA Label

(3) Transparency Commission Recommendation, CT-2921

(4) Transparency Commission Recommendation, CT-14970

(5) ANSM drug database at 15/06/2017, includes GHB and its salts



(6) France: Cnamts; UK: BNF; Italy: AIFA; Spain: MSSSI; Germany: Apoteke

(7) US Rx List internet drug index

(8) Jazz Pharmaceuticals Investor Presentation of 06/06/2017



THN₂₀₁ & THN₁₀₁: TWO NEW MAJOR CONDITIONS TARGETED WITH VERY HIGH INDUSTRIAL STAKES

THN 201	THN 101
 Neurocognitive disorders linked to Alzheimer's disease	 Neuropathic pain
Impairment of memory, judgment, orientation	Permanent background pain, with occasional stabbing pains, burning sensation and twinges
15 million patients in 2015 (G7) 19 million between now and 2030 45% undiagnosed patients	70 million patients (Europe, US, Japan)
DONEPEZIL	AMITRIPTYLINE
US\$3.2 billion (annual cost of treatment/patient US\$4-5k)	US\$3 billion (annual cost of treatment/ patient US\$3-4k)
23 drug candidates in clinical trials	32 drug candidates in clinical trials



THN₂₀₁ & THN₁₀₁: TWO NEW MAJOR CONDITIONS TARGETED WITH VERY HIGH INDUSTRIAL STAKES

DONEPEZIL | MEFLOQUINE

THN 201

Target profile:

Label for **neurocognitive disorders linked to Alzheimer's**

Performance target: THN₂₀₁ versus DONEPEZIL:

- **Improved cognitive function**
- **Delayed need for institutionalization**

AMITRIPTYLINE | MEFLOQUINE

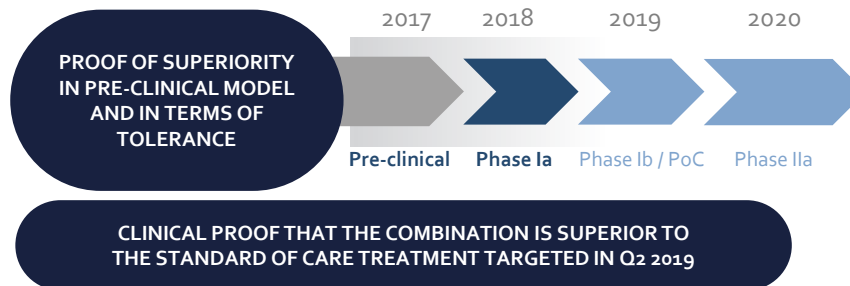
THN 101

Target profile:

Label for **neuropathic pain**

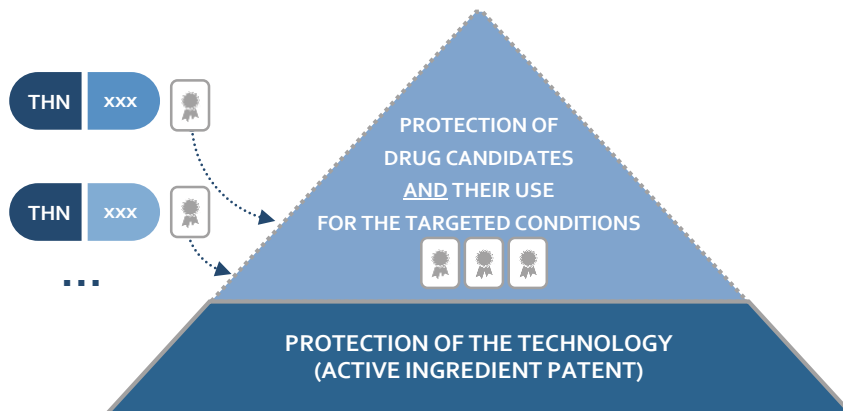
Performance target: THN₁₀₁ versus AMITRIPTYLINE:

- **Reduction in pain intensity**
- **Increase in the number of patients experiencing a 50% reduction in pain**
- **Better tolerance profile**





INNOVATION THAT IS FIRMLY PROTECTED BY AN INTELLECTUAL PROPERTY STRATEGY

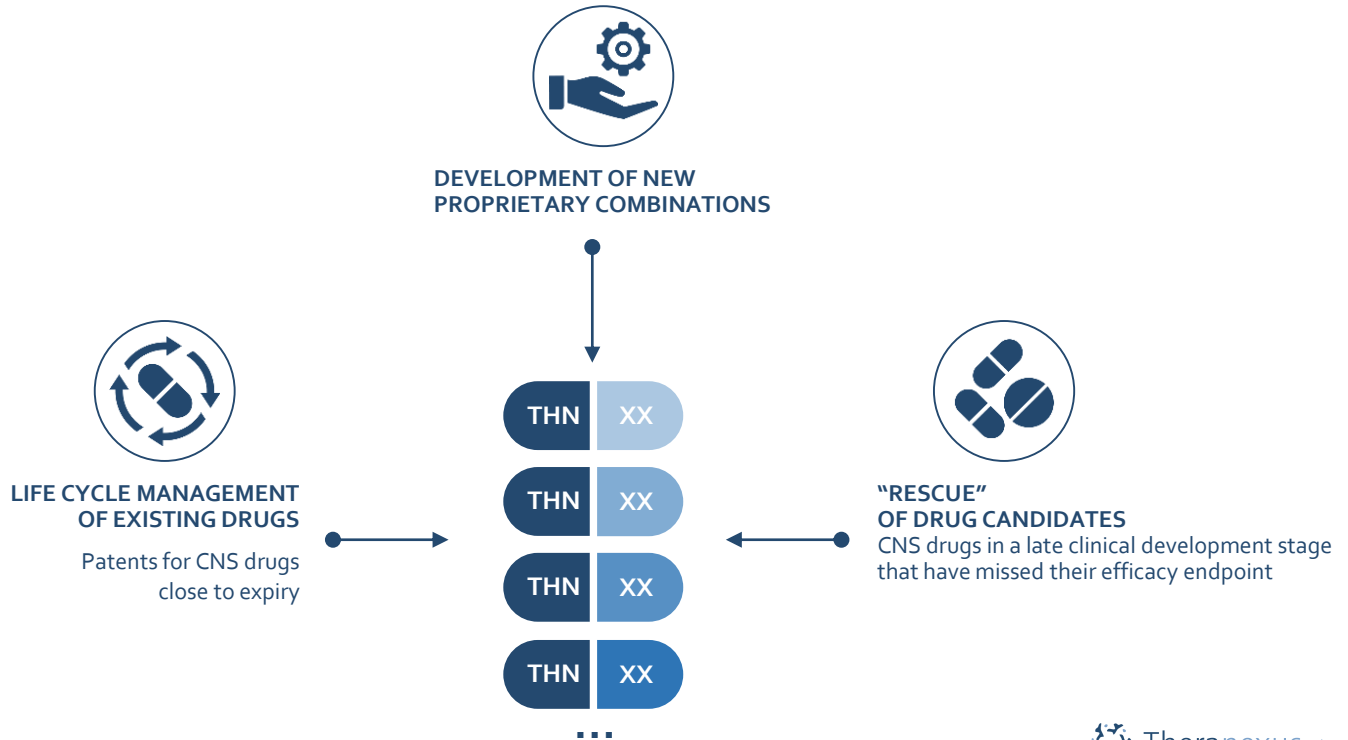


	Family of patents 1 (platform patent)	Family of patents 2	Family of patents 3	Family of patents 4
Products	Anti-connexin agent + psychotropic molecule	THN201 Dementia	THN102 Narcolepsy / Parkinson's	THN101 Neuropathic pain
Expiry date	2029	2032	2034	2036
Geographic regions targeted				

FREEDOM TO EXPLOIT DRUG CANDIDATES
FREEDOM TO DEVELOP NEW COMBINATIONS



A GLOBAL STRATEGY ADAPTED TO THE NEEDS OF PHARMACEUTICAL COMPANIES





CONTENTS

1

THERANEXUS: SHIFTING THE LINES AGAINST CENTRAL NERVOUS SYSTEM DISORDERS

2

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3

THE CAPACITY TO GENERATE DRUG CANDIDATES TO RESPOND TO UNMET NEEDS WITH THREE DEVELOPMENTS ALREADY UNDERWAY, A BLOCKBUSTER POTENTIAL

4

AN AGILE ORGANIZATION WITH CAREFULLY-MANAGED FINANCING NEEDS

5

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A COMPLEMENTARY TEAM IN AN AGILE ORGANIZATION



Franck Mouthon CHAIRMAN & CEO



Werner Rein CMO



Mathieu Charvériat CSO



Julien Veys CBDO



Thierry Lambert CFO



High profile partners

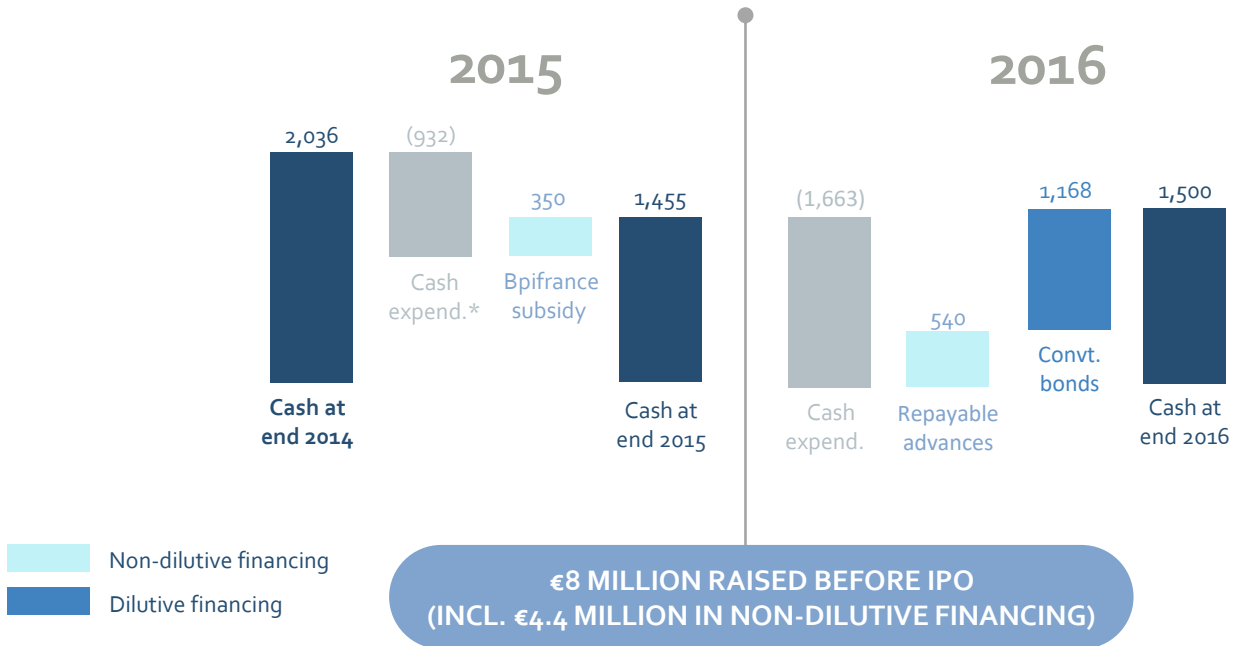


11 EMPLOYEES DEDICATED TO KEY FUNCTIONS



CONTROLLED CASH EXPENDITURE

2015 & 2016 cash flows (in € thousands)



* Net flows from operations + Net flows from investments + Financial interest paid + Repayments of loans



SUCCESS OF IPO ON EURONEXT GROWTH : €20,4 MILLION RAISED

IPO

First Listing 30.10.2017

Share price set : €15,50

Market capitalization : €47,5 million

Issued shares : 1.315.947

Capital increase of €20,4 million

Total shares of 3.119.143

Euronext Growth

ISIN : FR0013286259

Mnemo: ALTHX





GOVERNANCE & SHAREHOLDERS

BOARD OF DIRECTORS



Franck Mouthon
Theranexus, Chairman and CEO



Mathieu Charvériat
Theranexus, Deputy CEO



Dominique Costantini
Independent director



Luc-André Granier
Independent director



AURIGA
AMORÇAGE TECHNOLOGIQUE
Auriga, represented
by **Florian Denis**



cea investissement
AMORÇAGE TECHNOLOGIQUE
CEA-Investissement,
represented by **Celia Hart**

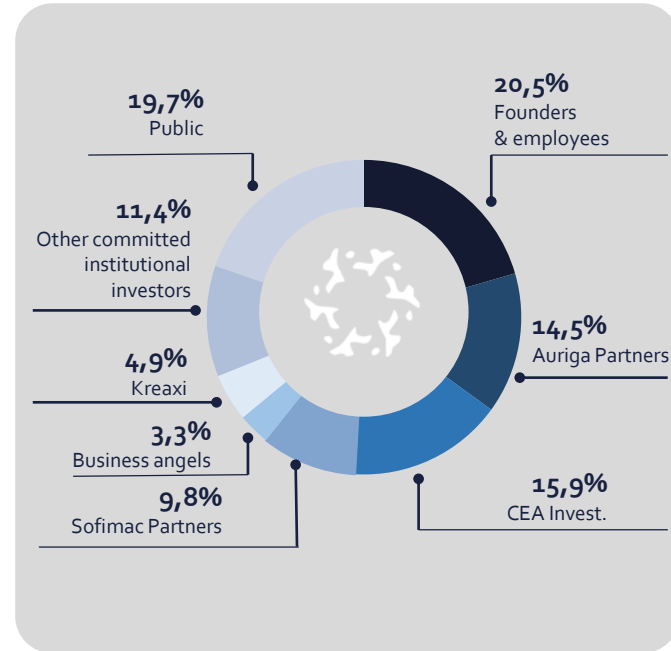


SOFIMAC partners
capital investissement
Sofimac Partner, represented
by **François Miceli**



kreaxi
Kreaxi, represented
by **Gwenaël Hamon**
(non-voting member)

SHAREHOLDERS





CONTENTS

1

THERANEXUS: Shifting the lines against central nervous system disorders

2

A DISRUPTIVE APPROACH TO THE CENTRAL NERVOUS SYSTEM

3

THE CAPACITY TO GENERATE DRUG CANDIDATES TO RESPOND TO UNMET NEEDS WITH THREE DEVELOPMENTS ALREADY UNDERWAY, A BLOCKBUSTER POTENTIAL

4

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5

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STRONG INTEREST AMONG INDUSTRY PLAYERS FOR THE FIRST 3 CONDITIONS TARGETED

CONDITION	DATE	SELLER	BUYER	PROFILE	DEVELOPMENT STAGE	UP FRONT (US\$ m)	MILESTONES (US\$ m)	ROYALTIES (US\$ m)
Narcolepsy	2014	Aerial	Jazz	NCE ^[1]	Phase II	125	272	NC
	2013	Concert	Jazz	LCM ^[2]	Pre-clinical	5	115	NC
Neuropathic pain	2015	Convergence	Biogen	NCE	Phase II	200	475	NC
	2015	Spinifex	Novartis	NCE	Phase II	200	500	NC
	2012	Concert	Avanir	LCM	Phase I	NC	200	NC
Alzheimer's disease	2016	Chase Pharma	Allergan	Combination	Phase I/II	125	875	NC
	2013	Lundbeck	Otsuka	NCE	Phase II	150	675	NC
	2012	Adamas	Forest	Combination	Phase II	60	95	NC
Other neurological disorders	2014	Avanir	Otsuka	Combination	Market	3,500	-	-

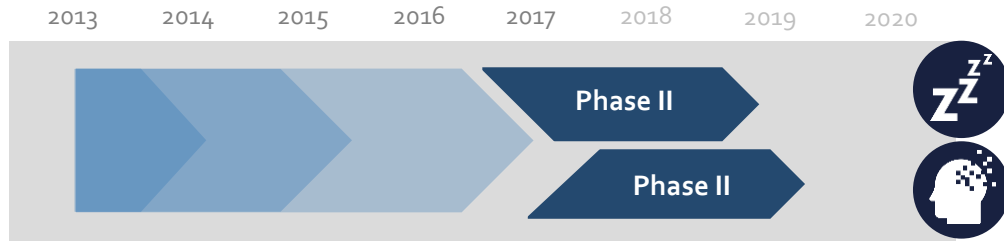
TURNING POINT IN VALUE AT THE END OF PHASE II
(BETTER RATIO OF DEVELOPMENT COSTS
TO IMMEDIATE AND SUBSEQUENT REVENUES)

[1] New Chemical Entity

[2] Life Cycle Management



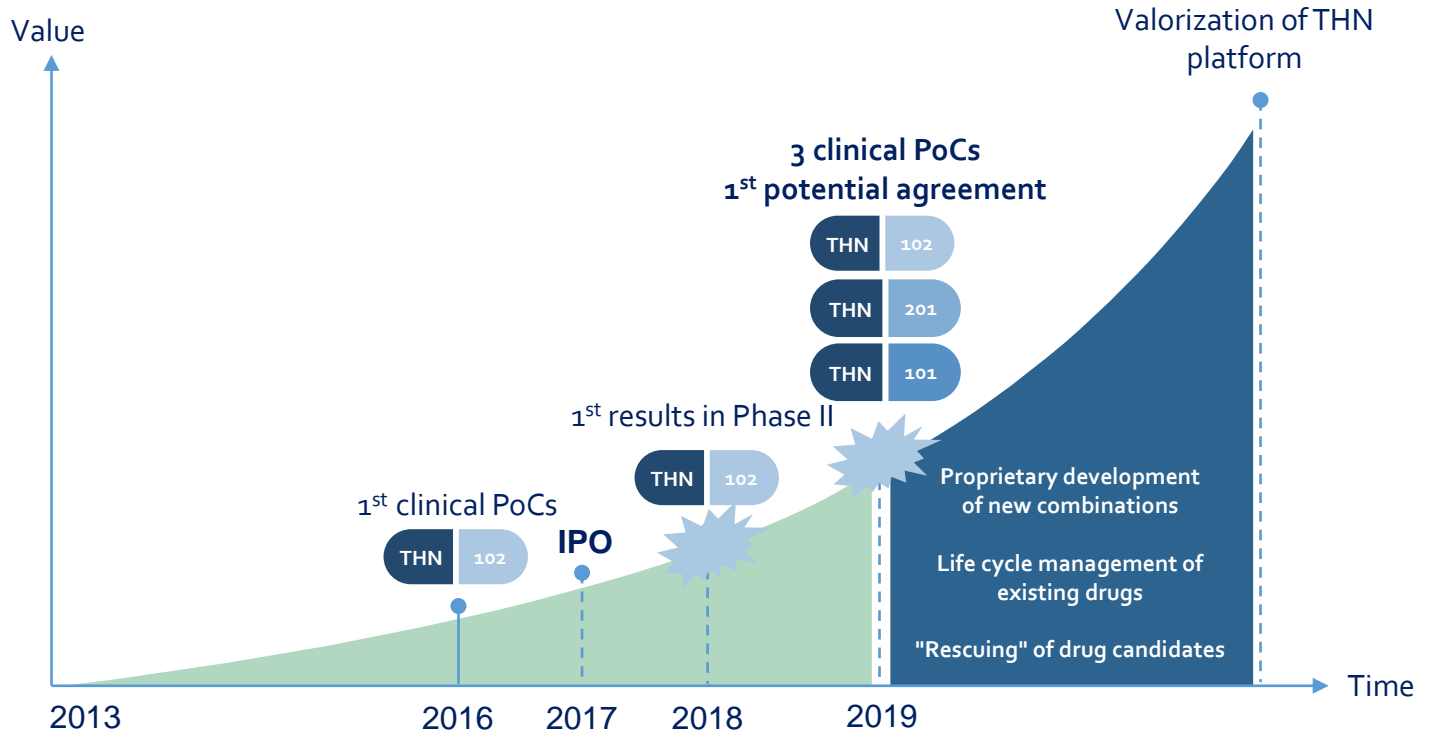
THN102: A FIRST SOURCE OF VALUE CREATION

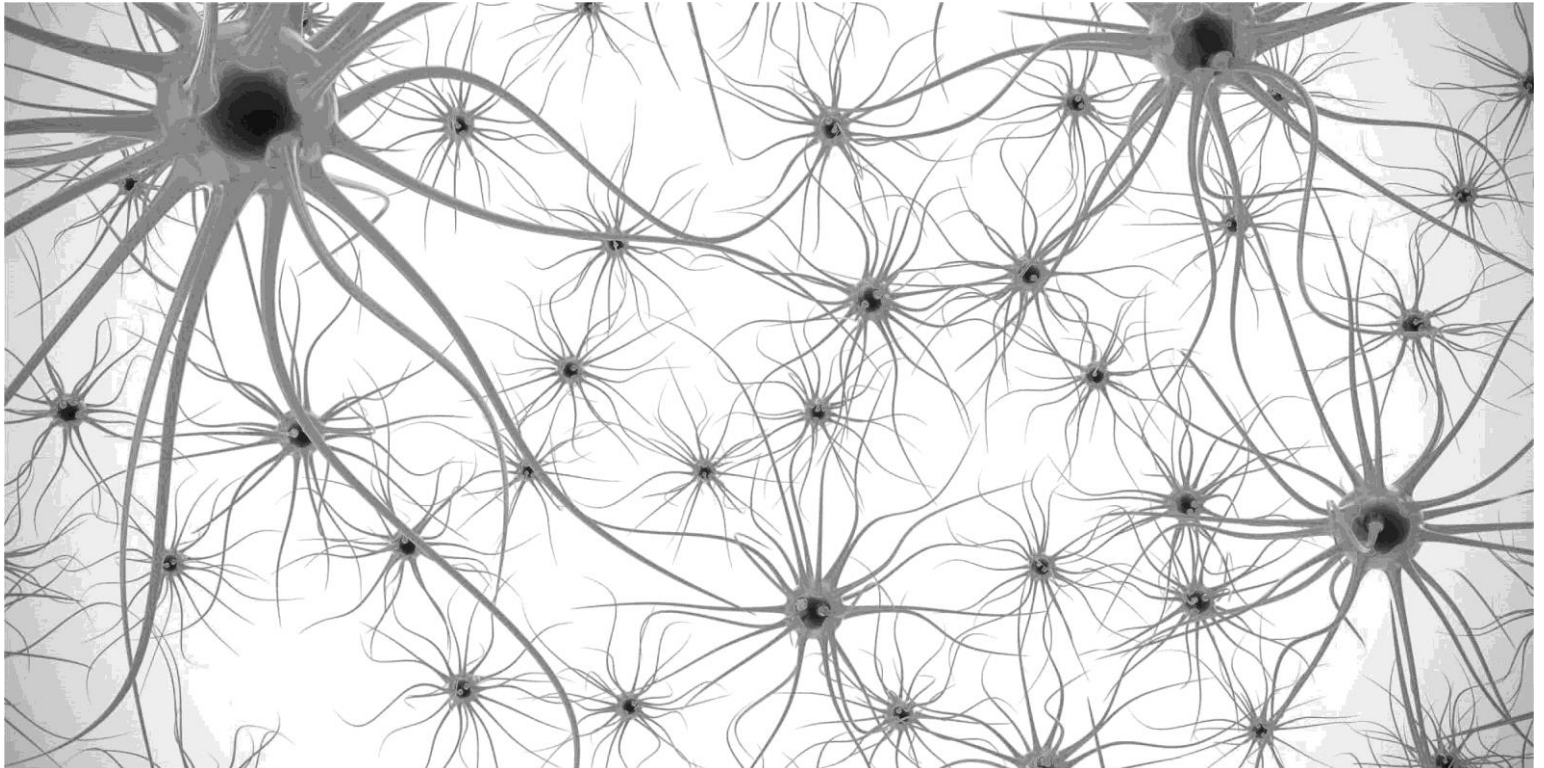


OPPORTUNITY FOR STRONG VALUE CREATION BETWEEN NOW AND 2019



A DUAL SOURCE OF VALUE CREATION IN THE SHORT AND MEDIUM TERM





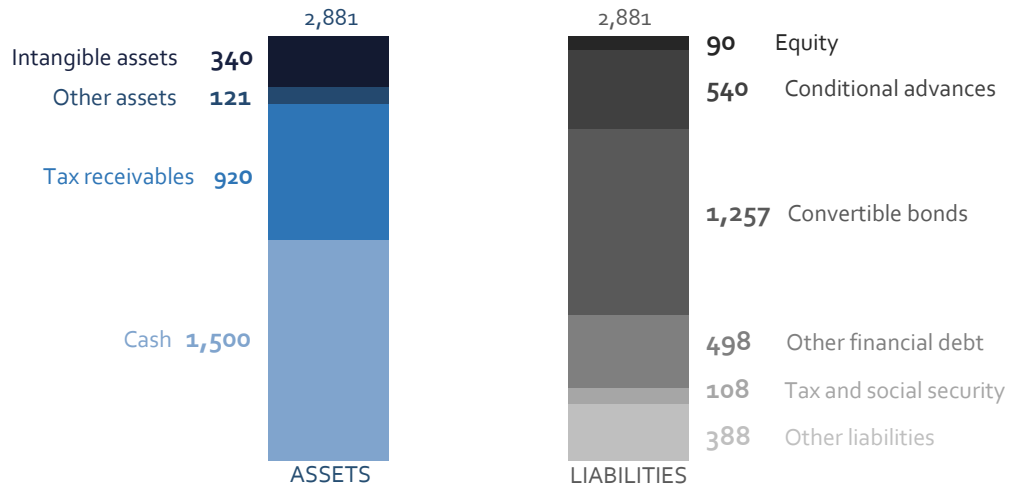
Theranexus

APPENDIX



BALANCE SHEET STRUCTURE

Balance sheet at 31/12/2016 (in € thousands)



A HEALTHY AND ROBUST FINANCIAL STRUCTURE



Epworth Sleepiness Scale (ESS)

Situation <input checked="" type="checkbox"/> Please tick box	0 No chance of dozing	1 Slight chance	2 Moderate chance	3 Definitely would doze
Sitting and reading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Watching TV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sitting inactive in a public place (e.g. Theatre or a meeting)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
As a passenger in a car for an hour without a break	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lying down to rest in the afternoon when circumstances permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sitting and talking to someone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sitting quietly after lunch without alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In a car, while stopped for a few minutes in traffic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Scored from 0 (no sleepiness) to 24 (highly severe sleepiness)
 - Below 8: you have a healthy level of daytime sleepiness.
 - From 9 to 14: you have a sleep debt, you need to improve your sleep hygiene.
 - More than 15: you have a high level of excessive daytime sleepiness. You need to improve your sleep hygiene and consult your doctor for further medical help
- The average score for an untreated patient with narcolepsy is 18



THN102 competitive landscape: 7 drug candidates for the treatment of narcolepsy undergoing clinical trials



Company	Molecule	Brand	Dev. stage	Mechanism of action
Jazz pharma	JZP-110	-	P ₃	NA / DA recapture inhibitor
Jazz pharma	JZP-258	-	P ₃	Xyrem® with reduced sodium content
Avadel	FT218	-	P ₃	Xyrem with sustained release
Taisho pharma	TS-091	-	P ₂	HIS H ₃ receptor inverse agonist
Balance Tptx	BTD-001	-	P ₂	GABA-A blocker
Jazz pharma	JZP-507	-	P ₁	Xyrem® with reduced sodium content
Jazz pharma	JZP-386	-	P ₁	Deuterated Xyrem

Principal drugs and drug candidates indicated for the treatment of narcolepsy (source: informa Medtrack – June 2017) – Com: marketed; GABA: gamma-aminobutyric acid; HIS: histamine; NA: noradrenaline; DA: dopamine; 5HT: serotonin.

NONE OF WHICH OUTPERFORMS MODAFINIL IN CLINICAL TRIALS



THN102 competitive landscape : 4 drug candidates for the treatment of excessive daytime sleepiness in Parkinson's disease undergoing clinical trials



Company	Molecule	Brand	Dev. stage	Mechanism of action
Jazz pharma	JZP-110	-	P2	NA / DA recapture inhibitor
Benevolent AI	Bavisant	-	P2	HIS H ₃ receptor agonist
Novartis	LML134	-	P1	HIS H ₃ receptor inverse agonist
Eli Lilly	LY3154207	-	P1	RD1 allosteric modulator

Principal drugs and drug candidates indicated for the treatment of excessive daytime sleepiness in Parkinson's disease (informa Medtrack – clinicaltrials.gov July 2017); HIS: histamine ; NA: noradrenaline; DA: dopamine ; D1R: dopamine receptor D1.

NO PROJECTS AT A LATER STAGE THAN THN102
COMBINATIONS AND DRUG CANDIDATES THAT ONLY TARGET NEURONS