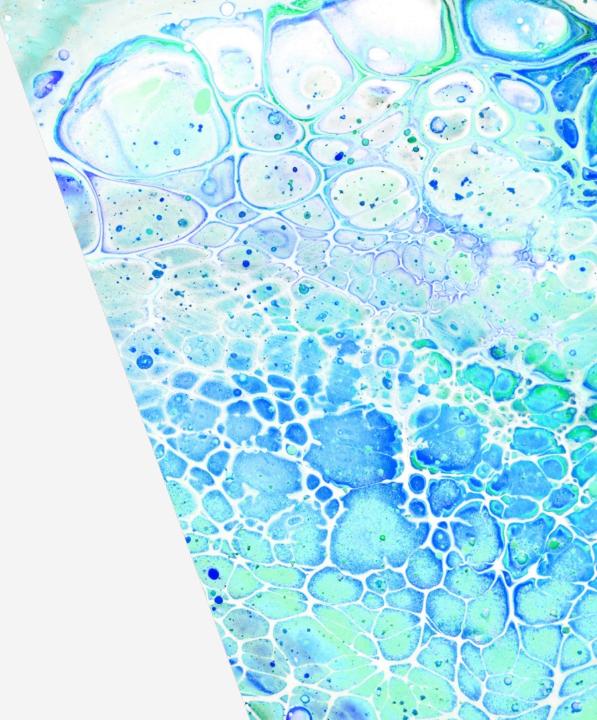
# valbiotis®

A future European leader in 100% plant-based dietary supplements



## valbiotis<sup>®</sup>

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## valbiotis

## Summary

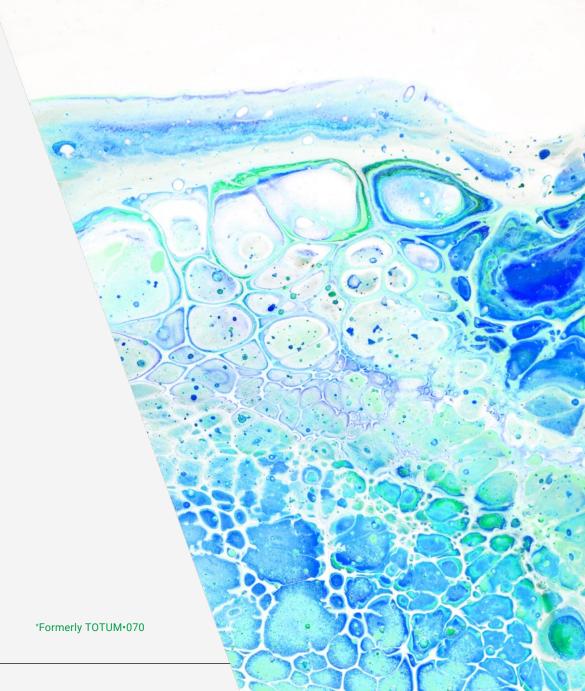
### **Valbiotis**

- Preventing metabolic and cardiovascular diseases: our job
- An expert management
- · An efficient business model
- R&D, the core of our development

### **Development**

- TOTUM 63: to reduce the risk of type 2 diabetes
- **Lipidrive**®\*: to reduce hypercholesterolemia
- TOTUM 854: to reduce blood pressure
- TOTUM•448: to reduce hepatic steatosis
- Microalgae: an exclusive agreement in New Caledonia

### **Financial information & CSR**



## **Profile**

Foundation of the Company in 2014

**Listed on Euronext Growth** 

65 employees

**3 sites in France** Périgny (17),

La Rochelle (17), Riom (63)

+ a subsidiary at Québec City (Canada)

A diversified portfolio with 4 food supplements addressing major cardio-metabolic conditions

Type 2 diabetes, LDL-cholesterol, hypertension, metabolic liver diseases (MASLD, formerly NAFLD)

Active substances protected by **3 patent families** 

At least 61 countries

An innovative approach based on 100% natural products, based on plant extracts

Products supported by a high level of scientific evidence

Own marketing in France www.valbiotis-healthcare.com

Cash position: € 25M

at Dec. 31, 2023

## **Our mission**

Valbiotis is a French scientific research laboratory, specialized in the development and marketing of food supplements for the prevention and fight against metabolic disorders causing cardiovascular diseases.

Our goal: reduce the impact these diseases may have on millions of early stage diagnosed patients in the world, to avoid them from developing a pathology.

Valbiotis has adopted an innovative approach, aiming to revolutionize healthcare by developing a new class of health nutrition products, inspired by evidence-based medicine, designed to reduce the risk of major metabolic and cardiovascular diseases, based on a multi-target strategy enabled by the use of plant-based terrestrial and marine resources.

Internationally, its products are intended to be the subject of licensing agreements with global and regional health and nutrition players. In France, marketing is carried out directly by Valbiotis on:

www.valbiotis-healthcare.com.



# Metabolic and cardiovascular health: considerable markets to conquer

Concerned populations in the USA and in the top 5 European countries



30% of adults

148 million

38% adults with prediabetes in the USA

TOTUM-63

High risk state of developing

Type 2 Diabetes

### **LDL** cholesterol

37% of adults

187 million

adults with moderately elevated LDL cholesterol

**Lipidrive®** 

Formerly TOTUM•070

Raised blood pressure

25% of adults

123 million

adults with moderate elevation of blood pressure

**TOTUM-854** 

Metabolic liver diseases without fibrosis (MASLD\*)

18% of adults

million

adults with MASLD without fibrosis

**TOTUM-448** 

Risk factor
of cardiovascular diseases
(atherosclerosis)

Main cardiovascular risk factor in the world

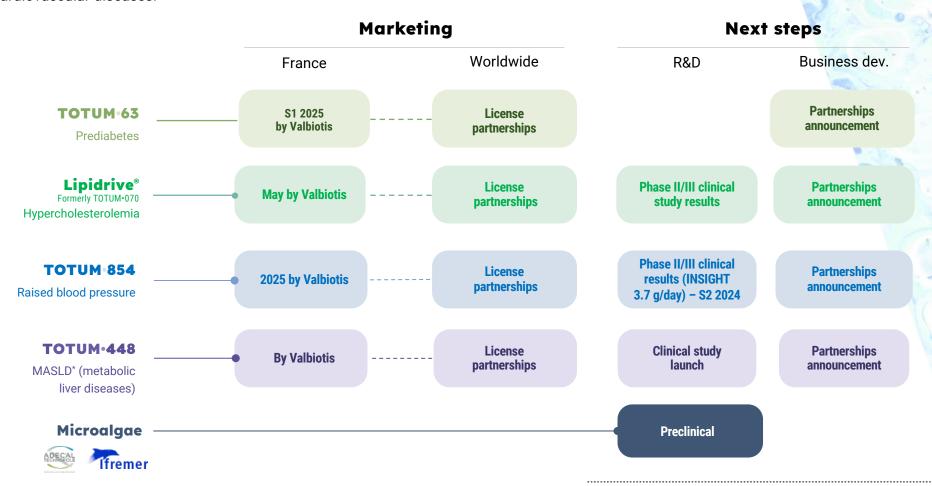
Leads to frequently severe liver damage (MASH\*)

AEC Partners data, 2022.

\*Metabolic-dysfunction-associated steatotic Liver Disease (MASLD) and metabolic-dysfunction-associated steatohepatitis (MASH), new designation of liver metabolic diseases (NAFLD and NASH) since June 2023.

## A mature portfolio, for rapid marketing Clinical evidence for our non-drug active substances

Development of 4 patented active substances, dedicated to reduce the risk of developing chronic complex metabolic and cardiovascular diseases.



\*Metabolic-dysfunction-associated steatotic Liver Disease (MASLD) et metabolic-dysfunction-associated steatohepatitis (MASH) nouvelles dénominations des maladies métaboliques du foie (NAFLD et NASH) depuis juin 2023.

## An expert management team for healthcare innovation

### **Executive Committee**



Sébastien **PELTIER** Chief Executive Officer, co-founder

PhD, HDR



Pascal

**SIRVENT** CSO - Head of discovery, preclinical and translationnal research I PhD, HDR



**CAZAUBIEL** CMO - Head of medical, regulatory and industrial affairs (M.Sc.)

Murielle



Sébastien **BESSY** COO - Head





**Stanislas SORDET** 

CFO - Head of administration and finance



Charlotte **JEZEQUEL** 

CPO - Head of human relations

### Supervisory board



Laurent LÉVY

PhD - Chairman of the Supervisory Board Remuneration Committee CEO, co-founder, NANOBIOTIX



**Agnès TIXIER** 

**Audit Committee** Investment Director then **Executive Director at Crédit Mutuel** Equity for 30 years.



Dr Jean **ZETLAOUI** 

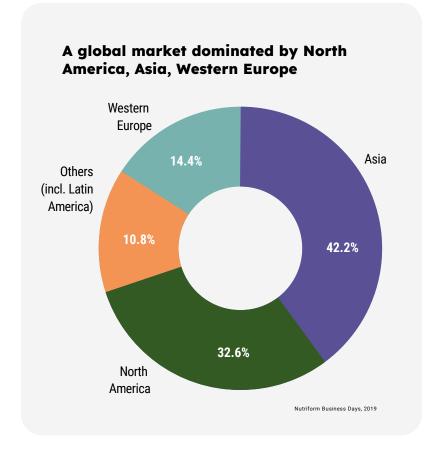
MD. MBA **Audit Committee** Medical Affairs and Clinical **Development Consultant** 

### Food supplements: a strong growth global market

# A €250 billion TO expected in 2025¹

# A 9,6%<sup>1</sup>, annual growth rate in TO supported by:

- A growing focus on health and prevention;
- The raising costs related to healthcare, the seek of alternatives for several problems;
- A segmentation of the offer depending on the specific needs of each population category;
- The popularity of plant-based products, as a complement to modern medicine<sup>2</sup>.



### A high turn over potential<sup>3</sup>

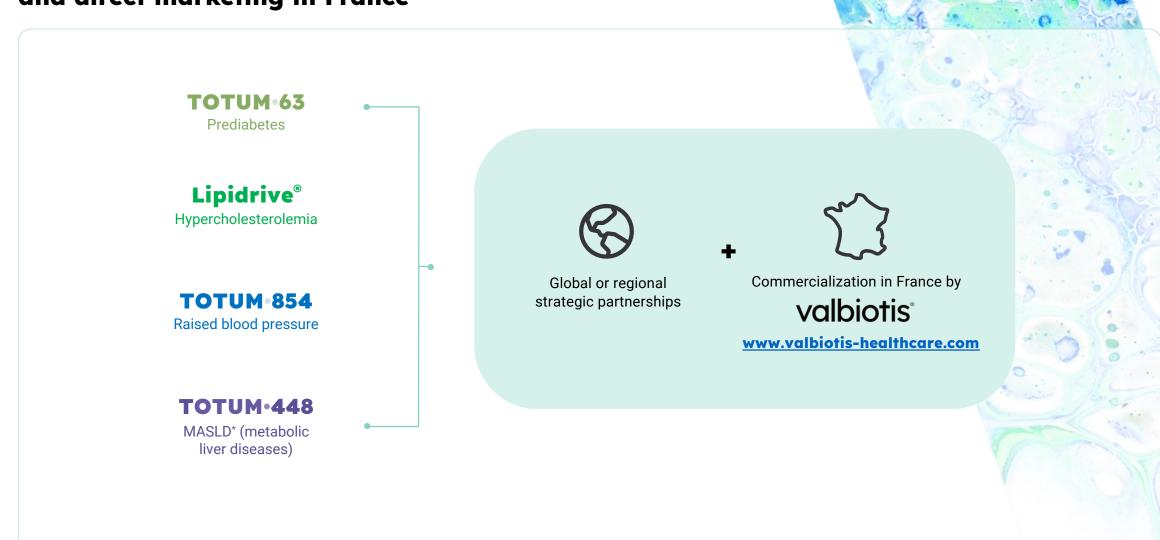
Brand	Company	TO (M€)
USA		
Nature Made	Otsuka	598
Nature's Bounty	The Bountiful Company (NHS)	435
Olly	Otsuka	260
EUROPE		
Centrum	Haleon	106
Doppelherz	Queisser	105
Magne B6	Sanofi	104
ASIA		
Lipovitan	Taisho	387
Dong-e E-jiao	Dong-e E-jiao Group	365
Caltrate	Haleon	327

<sup>&</sup>lt;sup>1</sup> Overview of the food supplements market - 2020-2021, Nutrikeo

<sup>&</sup>lt;sup>2</sup> Vitamins & Dietary Supplements Market trends Overview, PwC Analysis, Technavio 2019, Press

<sup>&</sup>lt;sup>3</sup> Nicholas Hall, Viatmins/Minerals/Food Supplements market (2020)

# A multiplier business model combining licensing partnerships and direct marketing in France



# The French market: a strong demand of natural products and a large need for prevention

French food supplements market forecasted to grow faster than Europe<sup>1</sup>

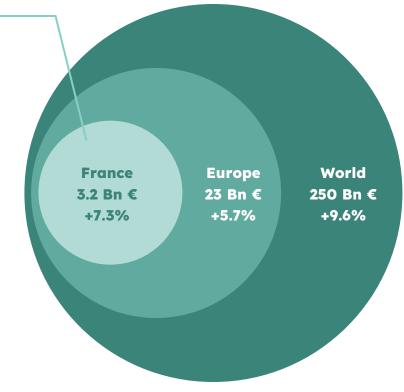
# French market supported by natural products

### 88%

of drugstores with a shelf dedicated to natural health products<sup>1</sup>.

### 93%

of the global revenue growth supported by plant-based products<sup>2</sup>.



Forecasted market size in 2025 and annual growth rate in turn over 2019-2025

Metabolic and cardiovascular risk factors widely spread

Mild to moderate hypercholesterolemia

49% of adults<sup>3</sup>

Mild to moderate raise in blood pressure

29% of adults4

Metabolic liver disease (MASLD\*)

16% of adults<sup>5</sup>

<sup>&</sup>lt;sup>1</sup> Overview of the food supplements market – 2020-2021, Nutrikeo

<sup>&</sup>lt;sup>2</sup> IQVIA, Food supplements in France, 2019

 $<sup>^3</sup>$  Cholesterol LDL  $\ge$  1.0 g/L & Total cholesterol  $\ge$  1.93 g/L, Elevated LDL, pre-HTA and NAFL preliminary market estimation, AEC Partners, 2020.

<sup>4</sup> Ibid, SBP from 120 to 139 mmHg, DBP from 80 to 89 mmHg.

<sup>&</sup>lt;sup>5</sup> Vallet-Pichard A, et al. Épidémiologie de la stéato-hépatite non alcoolique, Étendue du problème et son impact sur la santé publique, Presse Med. 2019.

<sup>\*</sup>Metabolic-dysfunction-associated steatotic Liver Disease (MASLD) and metabolic-dysfunction-associated steatohepatitis (MASH), new designation of liver metabolic diseases (NAFLD and NASH) since June 2023.

# Plant-based products for prevention and early-management are valued by physicians



IFOP survey among French and German general practitioners and gastro-enterologists (2021/2022)<sup>1</sup>

### Physicians unanimously agree on prevention

"Prevention is the heart of medicine. Cardiovascular diseases, obesity, high cholesterol: prevention is always the most important!"

### A clear interest in natural products

"It helps to avoid immediate therapeutic escalation. The main advantage is the low risk of side effects. There is a high demand from patients, it's trendy."

### Multi-target modes of action considered relevant

"Products that have a synergistic and complementary action on several physiological targets are very interesting."

### A strong expectation of clinical data

"Most of these natural products have no proven efficacy. I need to see data. My opinion? If the effectiveness is proven, I am absolutely in favor of these products. It must be effective, otherwise patients will be disappointed."

"It's great to have plant-based alternatives: patients increasingly want natural solutions that are effective, safe and relatively affordable."

<sup>1</sup>METABOLIC DISEASE PREVENTION - Exploratory research & concept test , IFOP HealthCare Methodology: individual interviews of 24 GPs and 12 gastroenterologists (France, Germany; 17 Nov. to 4 Dec. 2021), online community of 15 GPs (France, Germany; 24 to 31 Jan. 2022)

## Natural health products: a very strong consumer trend



#### <sup>1</sup>Opinionway: les français et les compléments alimentaires, 2019 <sup>2</sup>Phytolia, les compléments alimentaires à base de plantes, janvier 20217

### Focus on France ()

### **Consumers are seeking for natural health**

- **40%** of French people take food supplements to avoid taking medication when it is not necessary<sup>1</sup>.
- The natural origin of products is the **2<sup>nd</sup> purchase** after effectiveness<sup>2</sup>.

### **Distributors in tune with their customers**

**88%** of pharmacies have a section dedicated to natural health products<sup>3</sup>.

### A structuring effect on the evolution of the market

**93%** of the growth of food supplement market is accounted by plant-based products<sup>4</sup>.

- "I would like to support my efforts to change my lifestyle with a solution that is effective on my liver and yet natural"5
- "I would like to be able to postpone taking blood pressure medications" 5
- "I would like to be able to treat my cholesterol seriously and effectively with natural products and thus reduce the side effects of the chemical molecules"5

<sup>&</sup>lt;sup>3</sup>Panorama du Marché des compléments alimentaires – 2020-2021, Nutrikeo

<sup>4</sup>IOVIA, Marché des compléments alimentaires en France, 2019

<sup>&</sup>lt;sup>5</sup> Patients' insights, Valbiotis concept research

# A commercial strategy in France targeted at healthcare professionals (general practitioners and pharmacists) and patients/consumers



Targeting of High potential GPs



Targeting of key
pharmacies in the GPs
perimeter



Sizing of commercial field force (16 APM recruited in 2024, 1 Area Director, 1 Medical Expert, Customer Relations department)



Mapping of commercial geographic areas



Targeting
of patients/consumers
with appropriate
online marketing
strategy



### Product ranges: a complete offer accessible to as many people as possible

## **Valbiotis**PRO

- Range of food supplements clinically proven to prevent cardio-metabolic diseases (early stages) (TOTUM).
- Recommended by prescription by the general practitioner following a patient's blood test.
- Presence in pharmacies in pharmacy drawers and over the counter on the advice of the pharmacist and on the e-commerce site.

### In support

## **ValbiotisPLUS**

- Range of natural food supplements to address disorders commonly associated with cardio-metabolic diseases and meeting the needs of patient-consumers.
- Disponibles exclusivement sur le site e-commerce.



www.valbiotis-healthcare.com

# R&D supported by experts, results acknowledged by international learned societies

### Scientific and medical board

Over 900 scientific publications, including prestigious journals: The Lancet, Nature, Diabetes Care.



Pr Samy HADJADJ

MD, PhD, PU-PH

Nantes University Hospital



Bruno GUIGAS

PhD – Associate Prof.

Leiden University

Medical Center

(Netherlands)



Pr Jean-Marie BARD

PharmD, PhD, PUPH

Nantes University Hospital

(Emeritus Prof.)



Thierry MAUGARD

PhD, PU

La Rochelle University



PhD - PU Laval University Hospital INAF (Canada)

**André MARETTE** 



PhD, PU
Clermont Auvergne University

### Scientific results validated by learned societies

**More than 40** communications during scientific congresses since 2016, including:















**10** scientific papers published by international journals since 2021













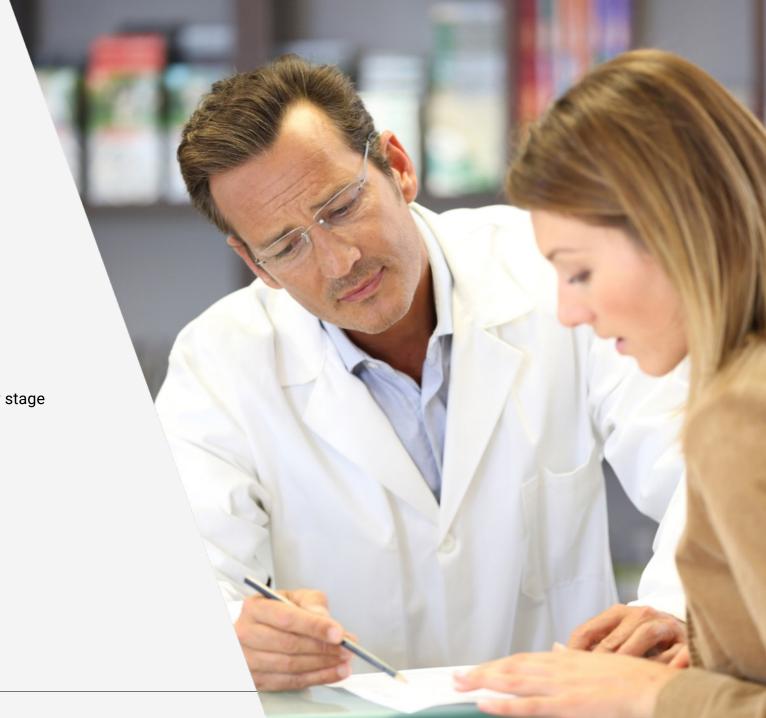


# valbiotis<sup>®</sup>

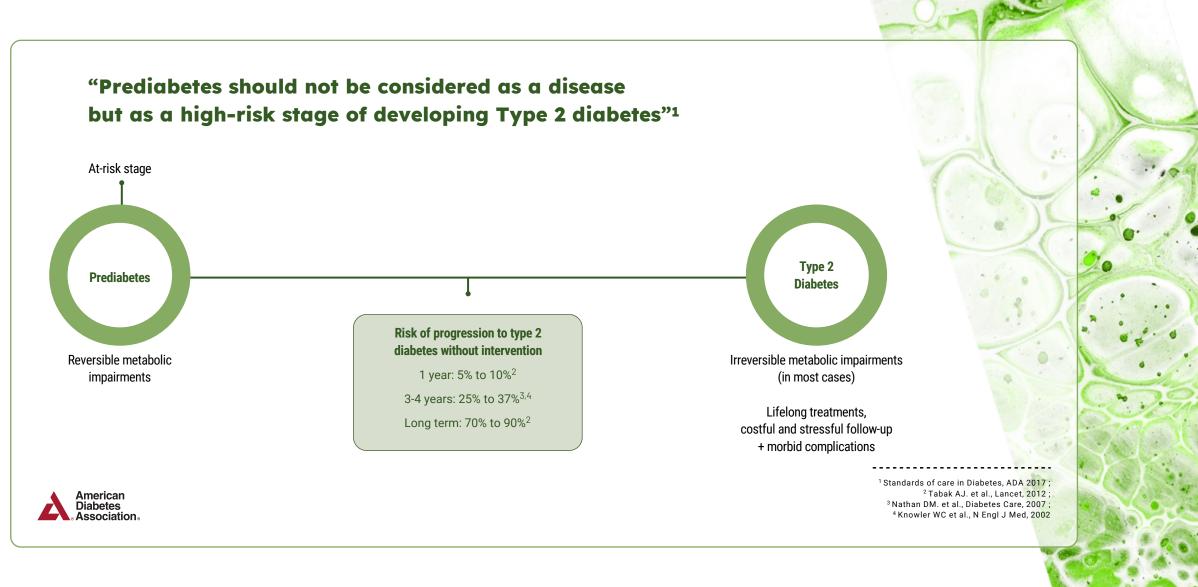
# TOTUM-63

Valbiotis INVESTORS PRESENTATION | @ NON CONFIDENTIAL

For early glycemic disorders, from prediabetes to early stage untreated type 2 diabetes.



# **TOTUM·63:** prediabetes, an opportunity for type 2 diabetes prevention



## TOTUM-63: prediabetes market data



#### 900 million

prediabetics in the world



#### 148 million

adults with prediabetes in the USA and the Top 5 European countries



#### 1 out of 3

adults with prediabetes in the USA and the Top 5 European countries

Incidence of prediabetes

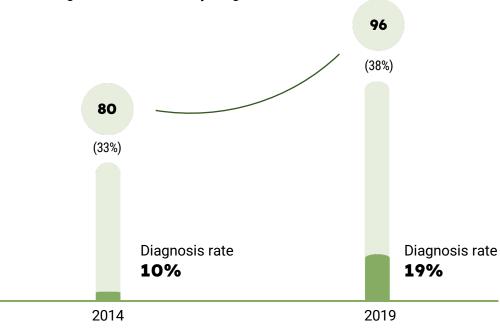


Data AEC Partners, 2019 et 2022.



In the USA, a continuous growth in the number of cases and in the diagnosis rate

In 2019, **96 million** of adults with prediabetes, including **18 million** already diagnosed.



www.cdc.gov/diabetes/data/statistics-report/prevalence-of-prediabetes.html

Center for Disease Control, accessed Oct. 3rd, 2023

## TOTUM·63: prediabetes, a favourable environment for new products

An easy diagnosis in primary care, based on routine blood tests





### Moderate fasting hyperglycemia

Fasting glycemia between:

HbA1c:

Fasting glycemia between:

1.00 and 1.25 g/L  $\geq$  5.7% and < 6.5%

1.10 and 1.25 g/L

\_\_\_\_\_and/or \_\_\_\_\_

### Impaired glucose tolerance

Fasting glycemia between:

1.4 and 2 g/L

2 hours after a 75 g oral glucose intake

## A recognition by international scientific societies and health authorities

- Awareness campaigns
- · Encouragement of prediabetes testing
- · Recommendations for prediabetes management

## **KNOW WHERE YOU STAND**

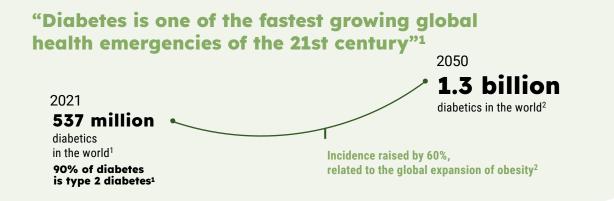
DoIHavePrediabetes.org



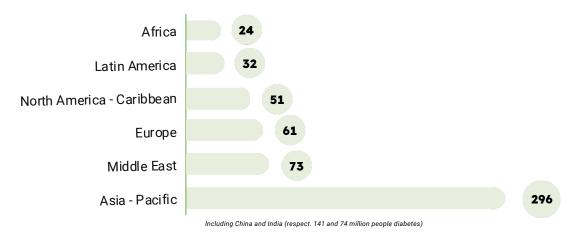




## TOTUM-63: the constantly growing type 2 diabetes market



### People with diabetes in 2021 (million adults)<sup>1</sup>



### First stages of Type 2 diabetes: a large part of the market

Management of diagnosed patients (France and USA<sup>3,4,5,6</sup>)

No treatment

12 to 15%

First line therapy: one oral antidiabetic drug



34 to 46%

Therapeutic escalation: polymedication ± insulin



39 to 54%

<sup>&</sup>lt;sup>1</sup> IDF Diabetes Atlas, 10th edition, International Diabetes Federation, 2021;

<sup>&</sup>lt;sup>2</sup> Global, regional, and national burden of diabetes from 1990 to 2021, with projections of prevalence to 2050

a systematic analysis for the Global Burden of Disease Study 2021, The Lancet, 2023 ;

<sup>&</sup>lt;sup>3</sup> Bringer J et al. Prevalence of diagnosed type 2 diabetes mellitus in the French general population: The INSTANT study. Diabetes Metab 2008;

<sup>&</sup>lt;sup>4</sup> Prévalence et incidence du diabète, et mortalité liée au diabète en France, Anne Fagot-Campagna, InVS, 2010.;

<sup>&</sup>lt;sup>5</sup> Diabetes in America, 3rd edition (chiffres 2007-2010) Cowie CC, et al., NIDDK, 2018, chap. 39

<sup>&</sup>lt;sup>6</sup> Turner L. et al., Ambulatory Treatment of Type 2 Diabetes in the U.S., 1997-2012, Diabetes Care, 2014

## TOTUM-63: the highest evidence-based active substance against prediabetes and untreated Type 2 diabetes (early stage)



For early glycemic disorders, from prediabetes to early stage untreated type 2 diabetes



4 positive clinical studies (2 RCTs), 720 people



Patents: France and international (58 countries)



17 communications in international congresses



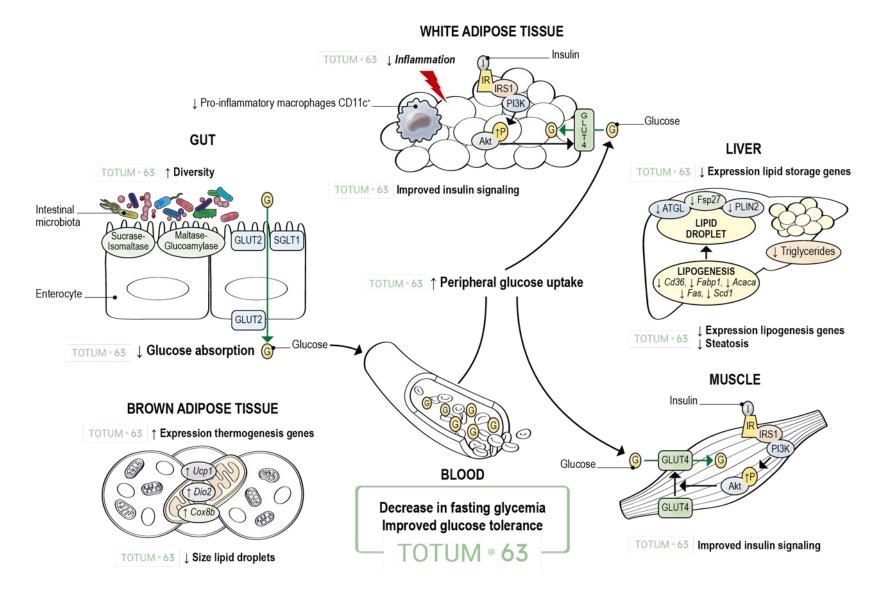
7 publications in international scientific journals



An unparalleled scientific and clinical package for a non-drug active substance

- Multitarget mode of action with clinical evidence (glycated hemoglobin, inflammation, gastrointestinal hormones, post-prandial metabolic response).
- Proven efficacy in all the clinical studies: Phase I/II, Phase II, Phase II/III (reduction of glycemic parameters and insulin resistance).
- Favourable tolerance and safety profile, validated in all studies, compliance over 97%.

## TOTUM-63: a multitarget action on several tissues involved in metabolic regulation



# TOTUM-63 / REVERSE-IT, the international Phase II/III pivotal study in prediabetics and untreated Type 2 diabetics

### Study design

An international multicentric, randomized, placebo-controlled, double blind study.

Dose: 5g/day

Lifestyle advice to all participants 2 regimens: 2 and 3 intakes/day

A 3-month follow-up period, post-supplementation

### **Extended target population**

Prediabetics + early stage untreated type 2 diabetics

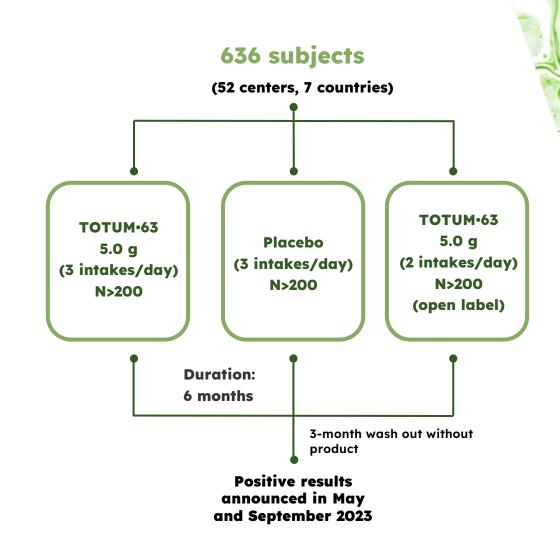
• Elevated fasting glycemia (≥ 1.10 g/L and ≥ 1.26 g/L)
Abdominal obesity: waist circumference ≥ 102 cm (men) and > 88 cm (women)

### **Endpoints**

Primary endpoint: reduction in fasting glycemia, a risk factor for type 2 diabetes, with TOTUM•63, 3 intakes/day, *versus* placebo

Other critera: 2h glycemia (Oral Glucose Tolerance Test, OGTT), HbA1c, insulinresistance score, low grade inflammation.

+ other metabolic parameters of interest



# TOTUM-63 / REVERSE-IT: very good data regarding safety and tolerance, with a very high compliance rate



✓ No safety problem reported during the study

A very favourable tolerance profile

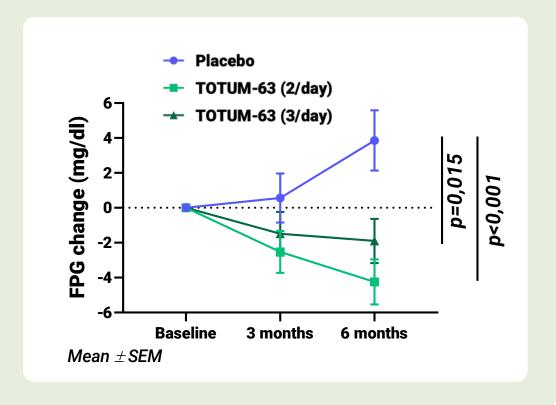
- No reported hypoglycemias
- Good gastro-intestinal tolerance
- ✓ Excellent compliance

> 97% compliance in the 3 groups throughout the study.



# TOTUM-63 / REVERSE-IT: proven efficacy on fasting glycemia vs placebo in 2 and 3 intakes per day (study primary endpoint)

**TOTUM-63**, significantly reduces fasting glycemia after 6 months, *vs* placebo





### Primary endpoint met (3 intakes/day)

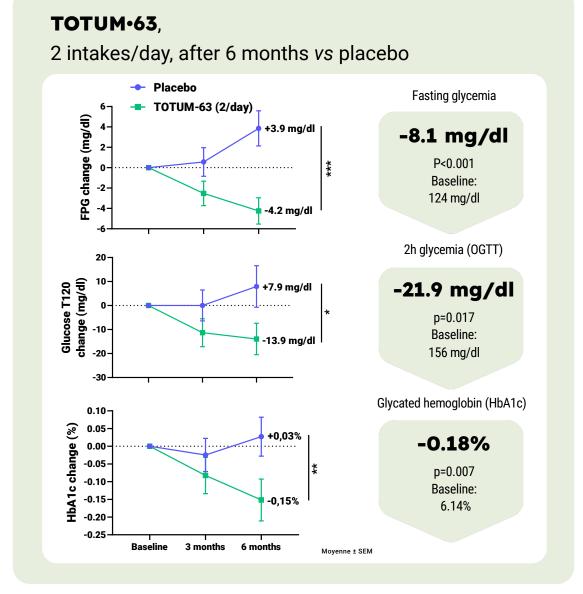
High statistical significativity (ITT and per protocol)



Validation of the 2 intakes/day regimen, the optimal regimen for patients and compliance in real life

No statistical difference between the two regimen

## TOTUM-63 / REVERSE-IT: proven efficacy on the main glycemic markers





Significant reduction of glycemia, without reported hypoglycemia



Significant improvement in glucose tolerance

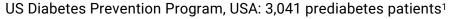


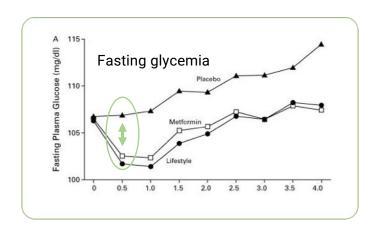
Significant reduction of HbA1c, marker of the microvascular risk, used for monitoring type 2 diabetes

# TOTUM-63 / REVERSE-IT: efficacy levels to be compared to certain antidiabetic drugs in a similar population

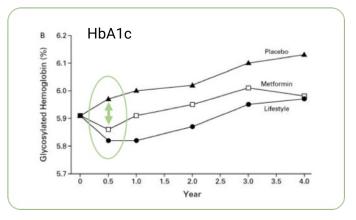
Efficacy of metformin (off label), a first line antidiabetic, in a prediabetic population









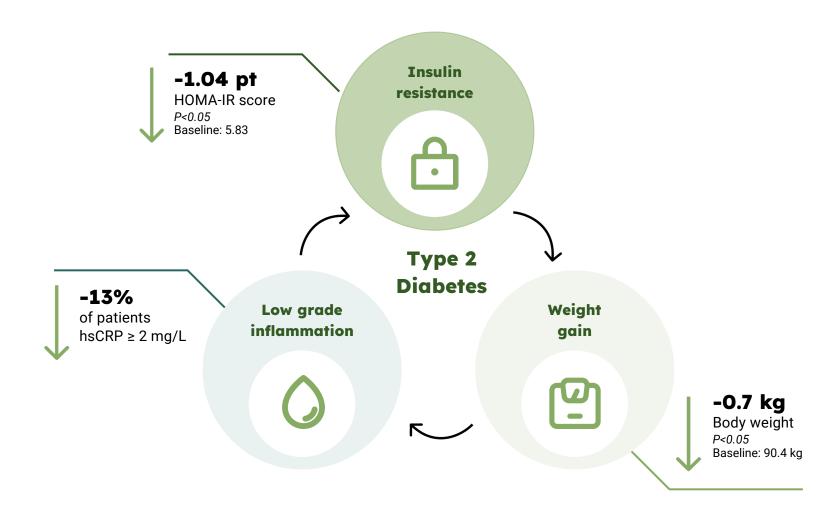




 $<sup>^{\</sup>rm 1}$  Reduction in the Incidence of Type 2 Diabetes with Lifestyle Intervention or Metformin, N Engl J Med 2002

## TOTUM-63 / REVERSE-IT: efficacy on the pathogenesis of type 2 diabetes

TOTUM-63, 2 intakes/day, after 6 months vs placebo



# **TOTUM-63** / REVERSE-IT: progression to type 2 diabetes significantly reduced

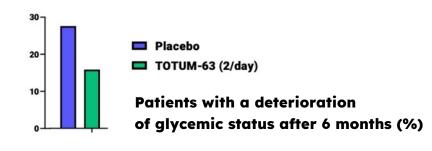
Prediabetics at baseline, having developed type 2 diabetes after 6 months

10 TUM-63
2 intakes/day

Placebo

In new cases of diabetes after 6 months vs placebo.

TOTUM-63
2 intakes/day
3 intakes/day
4 intakes/day
5 intakes/day
6 months vs placebo.





Proven preventive effect in prediabetics

## TOTUM-63 / REVERSE-IT: beyond prediabetes, a proven efficacy in patients with early stage type 2 diabetes

### **TOTUM-63**

2 intakes/day after 6 months compared to baseline

**Fasting** glycemia

(HbA1c)

-7.13 mg/dl

p<0.05 Baseline: 145 mg/dl -0.45%

**Glycated** 

hemoglobin

p<0,.01 Baseline: 6.89

Thresholds for type 2 diabetes 126 mg/dl

6.5%

Results in the sub-population of patients with early stage, untreated type 2 diabetes



Clinical use validated in untreated early stage type 2 diabetics



Remarkable efficacy on HbA1c



## valbiotis<sup>®</sup>

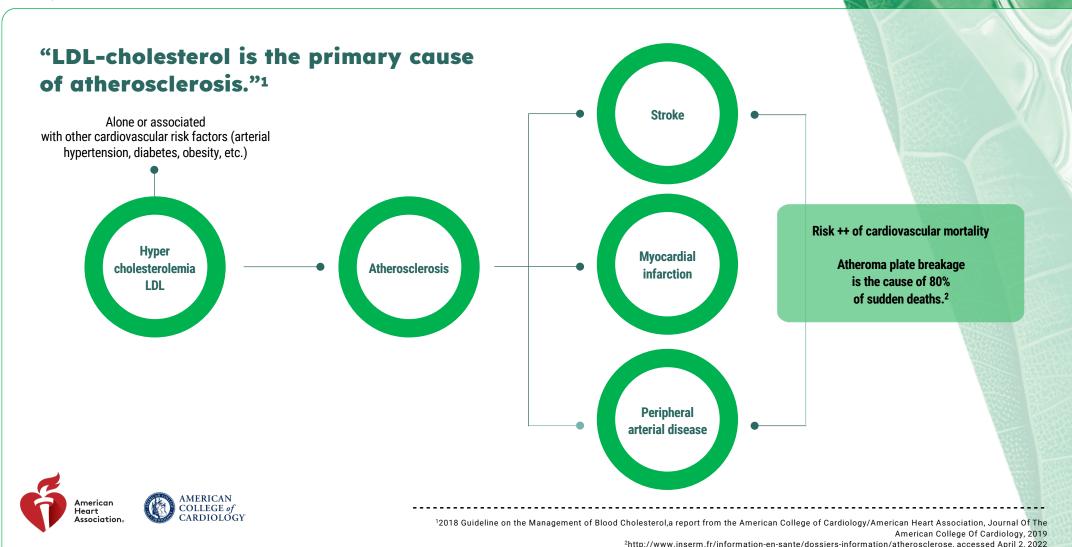
# **Lipidrive**®

For people with mild to moderate LDL hypercholesterolemia, ahead of treatments.



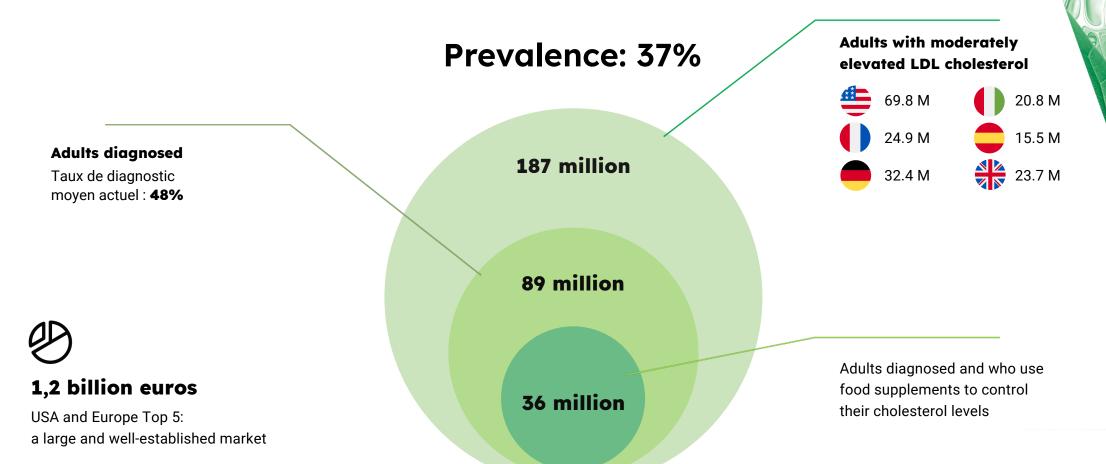
# Lipidrive®\*: LDL hypercholesterolemia, a risk factor for cardiovascular diseases

\*Formerly TOTUM•070



# Lipidrive®\*: mild to moderate LDL hypercholesterolemia: the market data (USA + Europe Top 5)

\*Formerly TOTUM•070



Data AEC Partners, 2022.

## Lipidrive®\*: hypercholesterolemia in France

\*Formerly TOTUM•070



Hypercholesterolemia (high concentration of LDL cholesterol) is one of the main causes of morbidity and healthcare consumption in France<sup>1</sup>.

- 2<sup>nd</sup> cause of death after cancer<sup>2</sup>
- 1st of death among women, all ages combined<sup>2</sup>
- 20% of French adults suffer from excess LDL cholesterol (> 1.6 g/l)

# 1 in 2 French adults have mild to moderate hypercholesterolemia

- **9%** of adults take lipid-lowering treatment
- 7% of adults are on statins
- Only 1 in 2 French people are aware of their hypercholesterolemia

Sources: Santé publique France Ministère de la Santé et de la Prévention

# Lipidrive®: both patients and physicians plebiscite non-drug options to reduce LDL cholesterol

\*Formerly TOTUM•070

**37%** of adults worldwide aged 20 years or over have hypercholesterolemia

### Natural products address medical needs:

- Lack of efficient non-drug options for early/borderline stages, and only moderate satisfaction with current treatments;
- Need to delay initiation of pharmacological treatment and associated side effects;
- Patients do not always accept medical treatment (notably statins).

2/3 of primary care physicians believe in a "pre-stage" to dyslipidaemia (caused by increased LDL cholesterol), that could concern 1 in 5 patients.

International scientific societies approve non-drug approaches, if supported by clinical evidence.



"I know that high cholesterol is a disease that should not be ignored because it is progressive.

I know that there are effective medications, but I have also been told that they can have significant side effects, such as cramps and muscle pain. I would like to be able to treat my cholesterol seriously and effectively with natural products and thus reduce the side effects of the chemical molecules contained in usual medicines."



"We have the need for an additional non-drug option in our clinical toolbox, efficient and well-tolerated, that reduces LDL-cholesterol before the situation worsens."

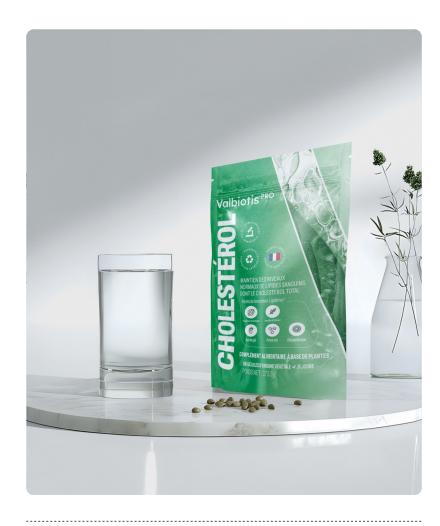
#### Pr. Jean-Marie BARD

PharmD, PhD, PUPH CHU Nantes (Professor Emeritus) Scientific advisor of the HEART study

Sources: Metabolic disease prevention – Exploratory research & concept test – Reporting interviews, Enquête IFOP pour Valbiotis, France, 2021 – US Qualitative Market Research 2022 - Valbiotis concept research

# Lipidrive®\*: an innovative and clinically tested non-drug response

\*Formerly TOTUM•070



Lipidrive® was developed for people with mild to moderate hypercholesterolemia associated with a low to intermediate overall cardiovascular risk, before treatments and as a support to health and diet measures.

Reduce the blood level of LDL cholesterol, and through it the overall cardiovascular risk, without waiting for the situation to deteriorate

### Lipidrive<sup>®</sup>, an innovative non-medicinal active substance:

- 100% natural, based on a patented combination of 5 plant extracts (artichoke leaf, olive leaf, golden chamomile, goji berry, black pepper);
- Without red yeast rice;
- No coloring, gluten-free, allergen-free, preservative-free;
- Designed and developed in France.











Artichoke leaf

Olive leaf

**Golden Chamomile** 

Goji bath

Black pepper

Product marketed in France under the brand Valbiotis®PRO Cholesterol

# Lipidrive®\*: a demonstrated multitarget mechanism of action

\*Formerly TOTUM•070

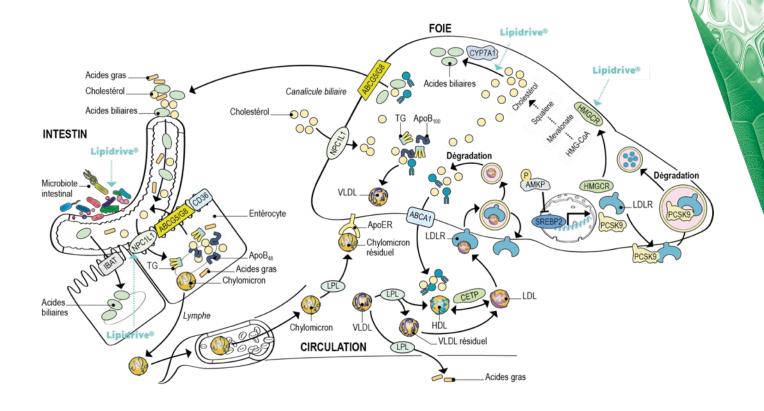
### **Intestine**

 Reduced cholesterol absorption by enterocytes

### Liver

- Reduction in cholesterol production by hepatocytes;
- Reduction of cholesterol storage in hepatocytes.

In humans, Lipidrive® specifically reduces the abundance of bacteria of the Dorea genus, associated with hypercholesterolemia, while preserving the intestinal microbiota.



Sources:

/auquier et al. Nutrients, 2023 : https://www.mdpi.com/2072-6643/15/8/1903

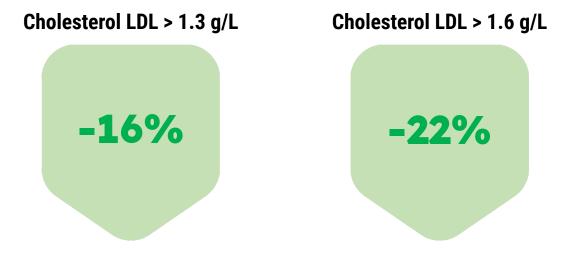
Langhi et al. Nutrients, 2023: https://www.valbiotis.com/wp-content/uploads/2023/12/nutrients-15-05056.pdl Langhi et al. Frontiers in Cardio Med, 2024:

https://www.frontiersin.org/articles/10.3389/fcvm.2024.1342388/full?&utm\_source=Email\_to\_authors\_&utm\_medium=Email&utm\_content=T1\_11.5e1\_author&utm\_campaign=Email\_publication 9 field=9 iournalName=Eraptions\_in\_Continuesculer\_Medicine 9 id=1242399

# Lipidrive®\*: two clinical efficacy studies (HEART and OLALIP), carried out on more than 150 subjects

\*Formerly TOTUM•070

Increased effectiveness on the targeted population from 6 weeks



Efficactive for 93% of patients, positive results were observed in volunteers with mild to moderate excess cholesterol, and not following lipid-lowering treatment.

### **Both studies demonstrated:**

- excellent tolerance revealing no major side effects
- excellent compliance of 97% (average for the two clinical studies)

A Phase II/III study is underway on 180 patients

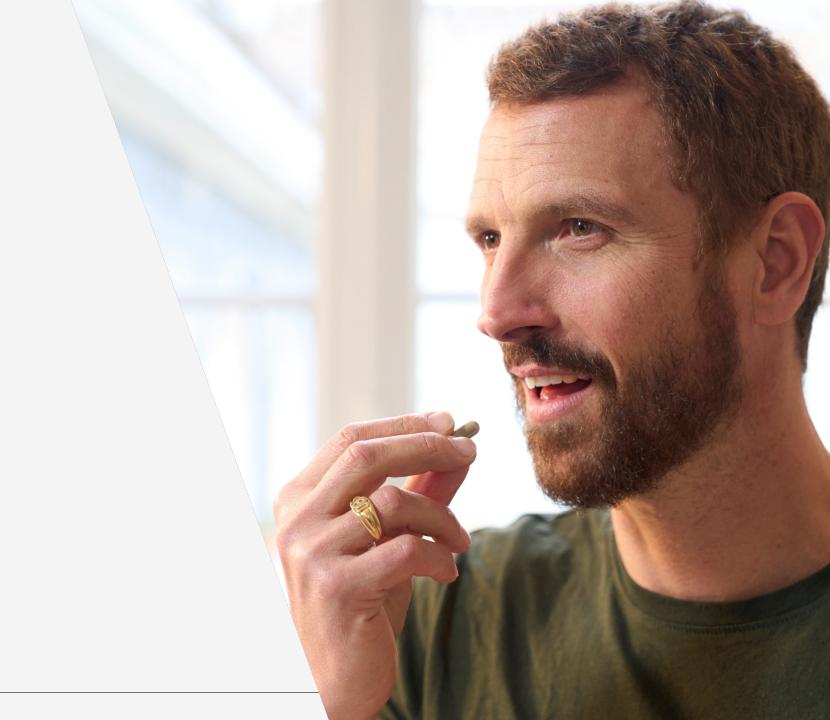
15 communications in congresses

**3 scientific publications** 

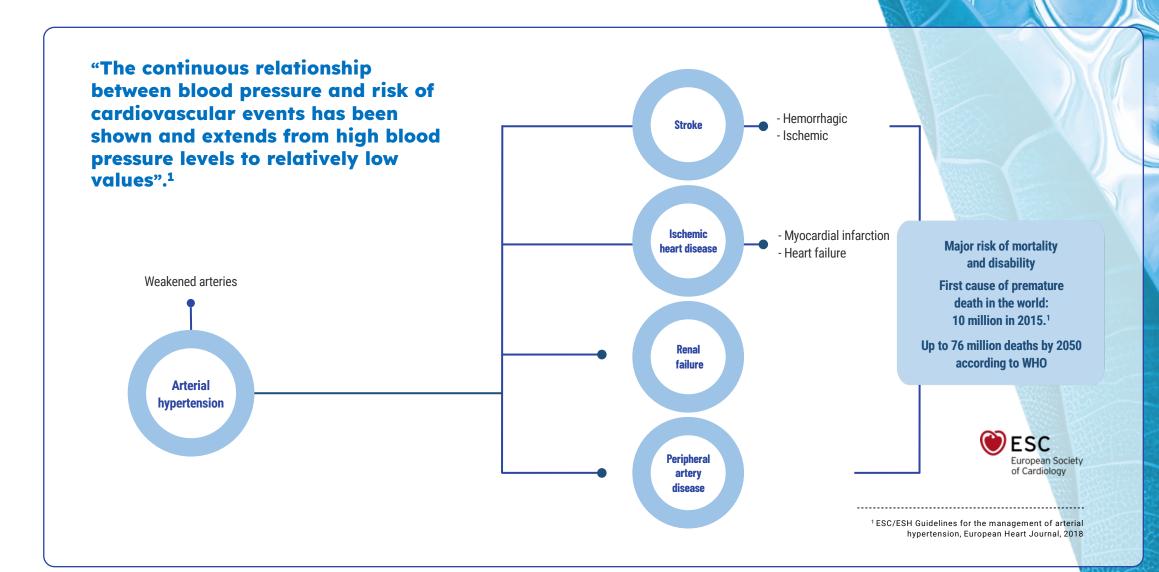
# valbiotis<sup>®</sup>

# **TOTUM-854**

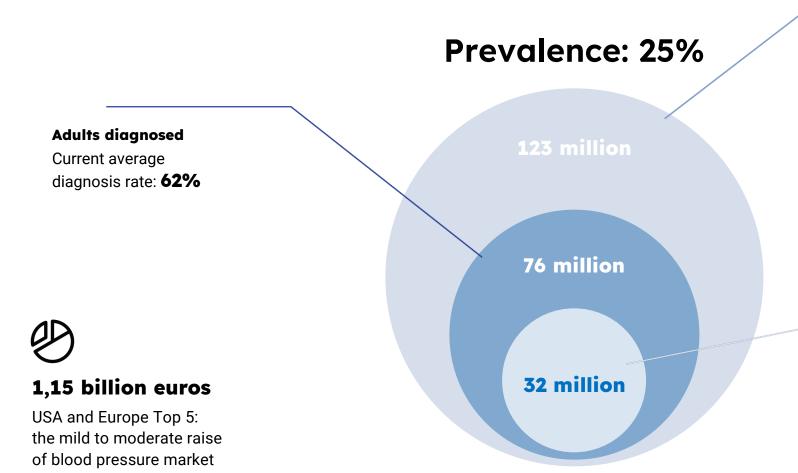
For mild to moderate raise in blood pressure, ahead of treatments.



# TOTUM-854: raised blood pressure, the leading cardiovascular risk factor in the world



# TOTUM-854: mild to moderate elevation of blood pressure, the market data (USA + Europe Top 5)



Adults with moderate elevation of blood pressure

**56.5 M** 

14.9 M

**17.7 M** 

13.9 M

9.6 M

10.4 M

Adults diagnosed and who use food supplements to control their blood pressure

Données AEC Partners, 2022.

# TOTUM-854: non-drug options are needed to control arterial blood pressure, to postpone pharmacological treatment and avoid associated side effects

**1.3 billion** people suffering from arterial hypertension worldwide<sup>1</sup>

## → world 1st chronic disease

The majority of doctors and learned societies have accepted the existence of an early stage of hypertension, affecting approximately **15%** of patients, and characterized by slightly elevated blood pressure values.<sup>2</sup>

## Medical needs remain for early-stage patients:

- Lack of options for patient with a mild raise in blood pressure and/or associated risk (incl. Stage 1);
- Lack of efficient products to delay initiation of pharmacological treatment;
- No natural products recommended so far, mainly because unproven.



"My doctor feels that my blood pressure is becoming too high and is considering taking blood pressure medication in the next few months. I would like to be able to postpone taking such medication."



"With high blood pressure affecting so many people, prescription blood pressure medication is being used more than ever. While medication is effective, there are negative side effects that some people may not be able to tolerate"



"In patients at risk of cardiovascular and metabolic diseases, it is important to act as soon as blood pressure starts to raise. These persons, non-eligible to treatments, should be provided with a non-drug option, clinically proven and well-tolerated, to control blood pressure."

### **Murielle CAZAUBIEL**

Head of Medical, Regulatory and Industrial Affairs, Valbiotis

Arterial hypertension thresholds

- Europe: arterial blood pressure ≥ 140/90 mmHg\* persisting over time², or ≥ 130 /85 mmHg in subjects with metabolic syndrome
- USA: arterial blood pressure ≥ 130/90 mmHg

conres.

https://www.who.int/fr/news/item/19-09-2023-first-who-report-details-devastating-impact-of-hypertension-and-ways-to-stop-it

<sup>2</sup> ESH 2023 guideline

Metabolic disease prevention – Exploratory research & concept test – Reporting interviews, Enquête IFOP pour Valbiotis, France, 2021 – US Qualitative Market Research 2022 - Valbiotis concept research – Dr Andrew Weil Youtube Channel

# TOTUM-854: an active substance for early stage arterial hypertension

### An exclusive combination of 6 plant extracts

For mild to moderate raise in blood pressure, ahead of treatments.





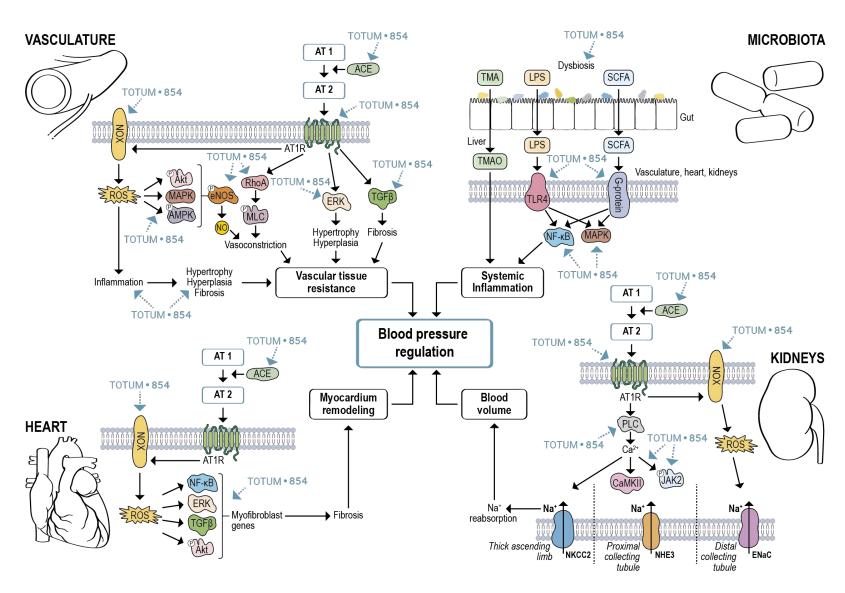
# Scientific and clinical package

### **Already obtained:**

- Bioavailability and characterization of circulating metabolites in human
- Mode of action targeting different biological and tissue mechanisms, demonstrated in humans and preclinically:
  - Reduction in ACE I activity;
  - Protection of vascular cells against inflammation and oxidative stress;
  - Preservation of the vascular structure;
  - Modification of the intestinal microbiota.
- ✓ Proven efficacy in preclinical studies (L-NAME and SHR models)

**Ongoing:** two Phase II/III clinical studies, each led in 400 volunteers, INSIGHT 1 (recruitment completed) and INSIGHT 2 (end of recruitment at a later date).

# **TOTUM-854:** hypothesis currently studied, for a multitarget mode of action on blood pressure regulation





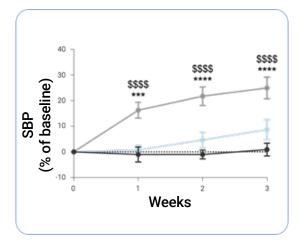
# TOTUM-854: preclinical evidence for the prevention of arterial hypertension

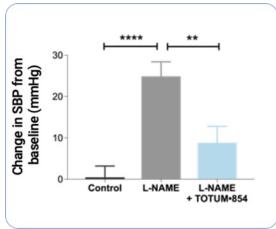
# A broad preventive effect on systolic blood pressure (SBP) and diastolic blood pressure (DBP)

In vivo models reknowned in arterial hypertension

### Induced AHT model (L-NAME)

- Control
- L-Name
- --- L-Name + TOTUM•854





# OBD S\$ \$\$ \*\* I weeks

# Change in DBP from baseline (mmHg) Daseline (mmHg) Control L-NAME L-NAME + TOTUM-854

### Selection in scientific congresses









TOTUM•854 lowers Blood Pressure in L-NAME-Induced Arterial Hypertension in Mice and in Spontaneous Hypertensive Rat Mode ESH/ISH annual congress, poster presentation, 2021 & AHA annual congress, poster presentation, 2021

# **TOTUM-854:** INSIGHT 1 and 2, a large clinical Phase II/III against early arterial hypertension

# **INSIGHT 1**

(Phase II/III)

# Study design

A randomized, placebocontrolled, double-blind study

Population : **400 subjects**Dose: **3.7 g/day** 

Duration: 3 months

# **Target population**

People with mild to moderate elevation of blood pressure, untreated

 Systolic blood pressure between 130 mmHg and 159 mmHg and diastolic blood pressure < 100 mmHg</li>

# **Objectives**

Primary endpoint: reduction in systolic blood pressure, with TOTUM•854 *versus* placebo (measurement in clinical investigation center).

Other endpoints: blood pressure ambulatory measurement over 24h.

## **INSIGHT 2**

(Phase II/III)

**Dose reduction** 

Same design, duration of supplementation and population Tested dose: **2.6 g/day** 

No blood pressure ambulatory measurement over 24h.

# valbiotis<sup>®</sup>

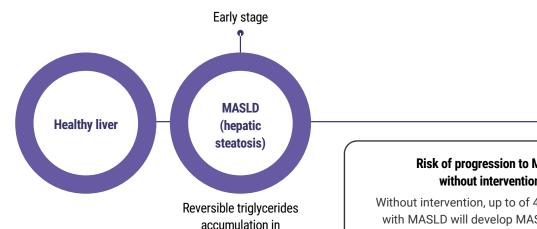
# **TOTUM-448**

For people with a MASLD or an early stage of MASH.



# TOTUM·448: metabolic liver damage, fat accumulation leading to frequently severe hepatic diseases

"The progression from MASLD\* (hepatic steatosis) to MASH\* (steato-hepatitis) dramatically increases the risks of cirrhosis, liver failure, and hepatocellular carcinoma."1



> 5% of hepatocytes1

**Risk of progression to MASH** without intervention

Without intervention, up to of 40% subjects with MASLD will develop MASH, at least, within 8 to 13 years.<sup>2</sup>

MASH (Steato-hepatitis) "Ballooning"

Severe disease

+ inflammation1

Fibrosis, Cirrhosis, Hepatocellular carcinoma.

MASH is now the second most common cause of hepatic transplantation in the USA<sup>3</sup>



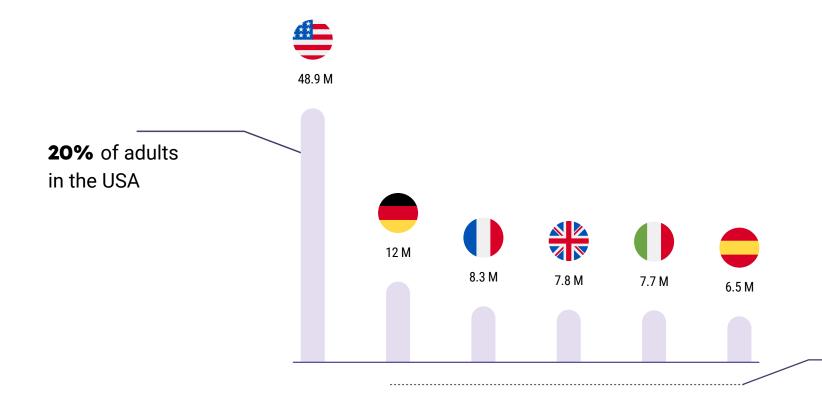


\*Metabolic-dysfunction-associated steatotic Liver Disease (MASLD) and metabolic-dysfunction-associated steatohepatitis (MASH), new designation of liver metabolic diseases (NAFLD and NASH) since June 2023.

<sup>1</sup>Nonalcoholic Fatty Liver Disease and Nonalcoholic Steatohepatitis; World Gastroenterology Organization, 2012. <sup>2</sup>EASL-EASD-EASO 2016 Clinical Practice Guidelines on the management of non-alcoholic fatty liver disease. J Hepatol 2016. <sup>3</sup>Cholankeril G, et al. Liver Transplantation for Nonalcoholic Steatohepatitis in the US: Temporal Trends and Outcomes. Dig Dis Sci. 2017.

# TOTUM·448: metabolic liver diseases (MASLD): the market data (USA + Europe Top 5)

**18%** of adults have a MASLD without fibrosis i.e. **91 million** adults



**16.4%** of adults in Europe (Top 5)

Données AEC Partners, 2022.

# TOTUM·448: there is a lack of natural products for the management of patients with early-stage metabolic liver disease

Prevalence of metabolic fatty liver diseases **doubled** in the last 20 years

MASLD is a clear pre-stage to MASH

### **Medical needs remain:**

- No preventive or therapeutic option, evidence-based, is yet available, while patients struggle to change their lifestyle;
- Strong physicians' expectations for efficient products at early-stages, against hepatic steatosis and inflammation.



"My doctor told me that I have "fatty liver" disease and that it must be treated. He also told me that there are few medications available, except for a drastic change in my diet and physical activity. I would like to support my efforts to change my lifestyle with a solution that is effective on my liver and yet natural."



"There is some evidence that several [natural] ingredients or nutrients help get fat out of the liver, increase the liver function, or stop the liver inflammation. This is really an interesting topic. There is more than weigh loss in this story."



"Metabolic liver diseases have raised rapidly in the population, in the wake of diabetes, obesity or dyslipidemias. But their management remains to be consolidated, and both preventive and therapeutic strategies suffer from a lack of dedicated products, with proven efficacy, at the earliest stages."

### **Pascal SIRVENT**

Head of Discovery, Preclinical and Translational Research, Valbiotis

Sources: Metabolic disease prevention – Exploratory research & concept test – Reporting interviews, Enquête IFOP pour Valbiotis, France, 2021 – US Qualitative Market Research 2022 - Valbiotis concept research

\*Metabolic-dysfunction-associated steatotic Liver Disease (MASLD) and metabolic-dysfunction-associated steatohepatitis (MASH), new designation of liver metabolic diseases (NAFLD and NASH) since June 2023.

# TOTUM-448: high expectations for solutions against MASLD and MASH



# General practitioners and gastro-enterologists currently preoccupied<sup>1</sup>

- MASLD and MASH: recent and rising diseases.
- · No specific treatment available.
- Limited solutions: interventions aiming at weight loss and blood lipid reduction (lifestyle and treatments).
- · A need to act at the earliest stage, on hepatic steatosis.

# A diagnosis to amplify, at the earliest stages (MASLD)

Recommendations for screening<sup>2</sup>

+

Validated diagnosis exams (Fatty Liver Index<sup>3</sup>, liver ultrasonography<sup>2,4</sup>)

<sup>1</sup> METABOLIC DISEASE PREVENTION - Exploratory research & concept test , IFOP HealthCare Methodologie : entretiens individuels de 24 médecins généralistes et 12 gastro-entérologues (France, Allemagne ; 17 nov.au 4 déc. 2021), Communauté en ligne de 15 médecins généralistes (France, Allemagne ; 24 au 31 janv. 2022)

<sup>2</sup> EASL-EASD-EASO 2016 Clinical Practice Guidelines on the management of non-alcoholic fatty liver disease. J Hepatol 2016

<sup>3</sup> Bedogni, G. et.al., BMC Gastroenterology; 2006 ; Hernaez R et al. Hepatology. 2011

<sup>4</sup> Global Guidelines Nonalcoholic Fatty Liver Disease and Nonalcoholic Steatohepatitis, World Gastroenterology Organisation, 2012

# TOTUM·448: a plant-based active substance, to act on early stages of liver metabolic diseases



### An exclusive combination, based on 5 plant extracts

For people with a MASLD or an early stage of MASH.



Patents: France
and international
9 communications
in international
scientific congresses since 2022



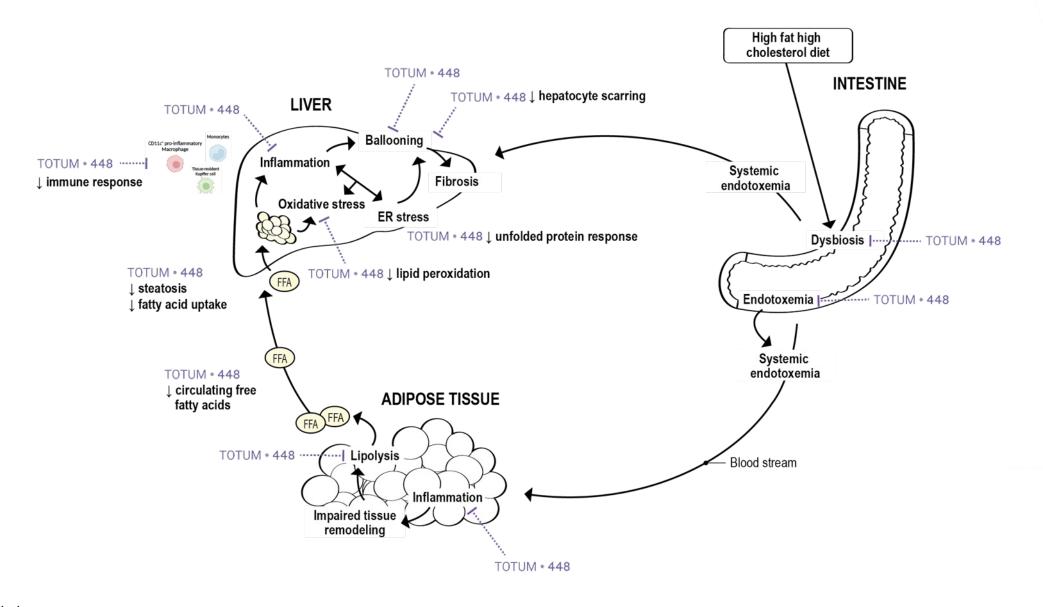
# Scientific and clinical package

### Already obtained:

- ✓ A preclinical program in collaboration with Leiden University (Netherlands) and Hospices Civils de Lyon (France)
- ✓ Positive results on the main markers of disease progression:
  - Reduction of triglycerides storage in the liver (steatosis)
  - Reduction of inflammation
  - Improvement in some markers of fibrosis

**Ongoing:** final clinical strategy and academic partnerships unveiled in the upcoming months.

# TOTUM·448: hypotheses under study for a multitarget mode of action



# TOTUM·448: a plant-based active substance, to act on early stages of liver metabolic diseases

# TOTUM•448 efficacy on the main markers of MASLD and MASH:

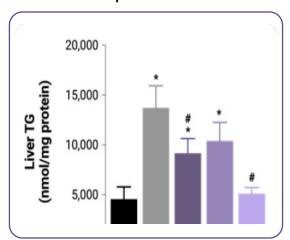
- Hepatic steatosis;
- Blood lipids;
- · Related metabolic parameters;
- · Several markers of inflammation and fibrosis.
- Control
- High-fat diet
- HFD + TOTUM•448 (1.5%)
- HFD + TOTUM•448 (2%)
- HFD + TOTUM•448 (2.5%)

### Selection in scientific congresses

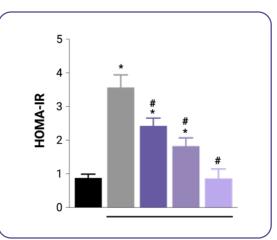


The novel plant-based active principle TOTUM•448 decreases hepatic steatosis and inflammation in diet-induced NAFLD mice Lambooij J et al., Poster #2483, The liver meeting, AASLD, 2022.

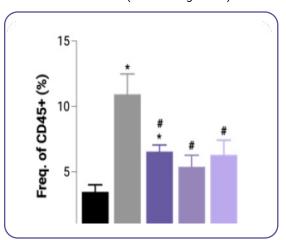
### **Hepatic steatosis**



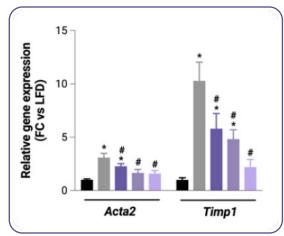
### Insulin-resistance



Inflammation (immune signature)



Fibrosis (molecular markers)



# valbiotis<sup>®</sup>

# **MICRO-ALGUES**

An exclusive program to develop innovative healthcare solutions in New Caledonia.



# Microalgae: an exclusive program to develop innovative healthcare solutions in New Caledonia



# Microalgae

A \$ 3.8 billions global market in 2024, 3.5% annual growth<sup>1</sup>

- Marine plant microorganisms, with a size < 1µm
- · A fast production of biomass
- · A remarkable molecular richness for health applications





valbiotis\*

Prospection and selection since 2013

Expertise in plant R&D

Bank of high-potential strains

**New active substances** for human health

**Discovery** and preclinical research

- New international patents, exclusive and worldwide exploitation rights for Valbiotis<sup>2</sup>
- Regulatory status: "GRAS" / "Novel Food"
- Scale-up and industrial production in New Caledonia, with private operators
- Compliant with the Nagoya Protocol

Global Microalgae Market Growth 2019-2024. Fior Markets, 2019; https://www.fiormarkets.com/report/global-microalgae-market-growth-2019-2024-372987.html <sup>2</sup>Le domaine d'exploitation est défini comme suit : «Nutraceutique, médicaments et dispositifs médicaux en santé humaine et animale dans le cadre strict de la prévention et du traitement des maladies métaboliques suivantes : diabète, dyslipidémie, hypertension artérielle, surpoids, obésité, NAFLD (Non-alcoholic fatty liver disease)».

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# FINANCIAL INFORMATION & CSR



# **Corporate Social Responsibilities (CSR)**

Valbiotis positions itself as a company firmly committed to promoting a more responsible, ethical, and sustainable future.

This commitment goes beyond our initial mission focused on reducing the impact of metabolic and cardiovascular diseases on millions of at-risk individuals worldwide.

# Key commitments for the development of Valbiotis



### Structuring a comprehensive CSR approach following ISO 26000 standards

### Under the direction of a specific steering committee reporting to the CEO

This approach commits us to contribute to sustainable development challenges and to integrate risk management related to social, environmental, and economic issues into all our activities. We commit to initially address these deemed essential issues:

- Respecting the rights of individuals and promoting responsible relationships and working conditions
- Reducing the impact of our activities on the environment
- Developing ethics in our business relationships
- Focusing on local development and the common good

**Manifesto for a sustainable future (in French)** 



### Valbiotis joined the Coq Vert community in 2023

Community of leaders convinced of the need to act and already engaged in the ecological and energy transition.

Launched by Bpifrance, in partnership with ADEME and the Ministry of Ecological Transition, this community advocates to promote the sharing of expertise

Valbiotis INVESTORS PRESENTATION | © NON CONFIDENTIA

# Analysts coverage and shareholders breakdown

Portzamparc\*

Mohamed KAABOUNI

**Invest Securities\*** 

Thibaut VOGLIMACCI-STEPHANOPOLI

**ODDO BHF\*** 

Martial DESCOUTURES

**TP ICAP MIDCAP\*** 

Corentin MARTY





**IStock market indices** 

NEXT BIOTECH • EnterNext© PEA-PME 150

4.0%

Sébastien PELTIER, CEO and co-founder of Valbiotis

+ DJANKA Investissement, controlled by S. PELTIER





95.7%

Free float

Capital breakdown updated as of December, 22, 2023

32.2% of capital held by individual investors (Source: TPI, September, 25, 2023)

<sup>\*</sup>Sponsored research

# Cash and R&D expenses

Cash position: € 25M

(at December 31, 2023)

IFRS in K€, at December 31	2023	2022	
Operating inconme, including	6,809	2,814	
Turn over	4,733	785	
<ul> <li>Grants</li> </ul>	48	137	
<ul> <li>Research Tax Credit</li> </ul>	1,573	1,692	
<ul> <li>R&amp;D expenses</li> </ul>	-7,150	-9,102	
<ul> <li>Sales and marketing expenses</li> </ul>	-2,016	-1,703	
<ul> <li>Overhead costs</li> </ul>	-2,161	-1,651	
Operating profit for the period	-7,180	-12,026	
Operating profit	-7,180	-12,026	
Earnings before tax	-7,368	-12,314	
Net profit	-7,368	-12,312	

