

Report on research collaborations and investments in France

Impact

Executive summary

Novo Holdings



Between 2018 and 2022, Novo Holdings invested in 2 companies based in France.



In 2022, the Novo Holdings portfolio included 2 French companies with approximately 125 employees

Novo Nordisk Foundation



Between 2018 and 2022, the Novo Nordisk Foundation (NNF) financed 6 projects with French applicants, totaling EUR 11 million.



58 young French researchers have been awarded a grant to attend the Copenhagen Bioscience Conferences.



In 2022 the Novo Nordisk Foundation funded 1 senior researcher and 9 young researchers, PhDs and Postdocs, in projects involving French applicants.

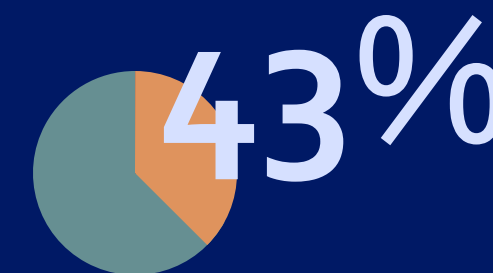
Grant recipients

85

The Foundation's grant recipients collaborates with many international project's partners, including 85 French based universities and university hospitals.



Between 2018 and 2022, NNF grant recipients collaborated with 20 French companies. 11 are in the biotechnology sector, and 9 of the companies have less than 50 employees.



Between 2018 and 2022, NNF grant recipients have co-authored 621 publications with researchers located in France. 43% of the publications are among the top 10% most cited in their field.

9/10

9 out of 10 top French universities collaborate with NNF grantees

Introduction

This report is presented in two parts;

- Activities that Novo Nordisk Foundation (NNF) grant recipients have with institutions or organisations in France.
- An overview of Novo Holdings' investments in France.

This report showcases NNF's contribution to the French academic community and industry.

Through figures and case studies, it demonstrates the different kinds of relationships and activities between NNF grant recipients and French academic and industry partners. Data in the presentation are based on activities between 2018 and 2022 (inclusive).



Novo Nordisk Foundation



The history of the Novo Nordisk Foundation



The Novo Nordisk Foundation dates back to 1922, when Nobel laureate August Krogh returned home from the United States and Canada with permission to produce insulin in the Nordic countries. This marked the beginning of the development of world-class diabetes medicine in Denmark and the establishment of several foundations that, many years later, merged into today's Novo Nordisk Foundation.

1952 – the **Novo Foundation** was established as the owner of the Novo Terapeutisk Laboratorium.

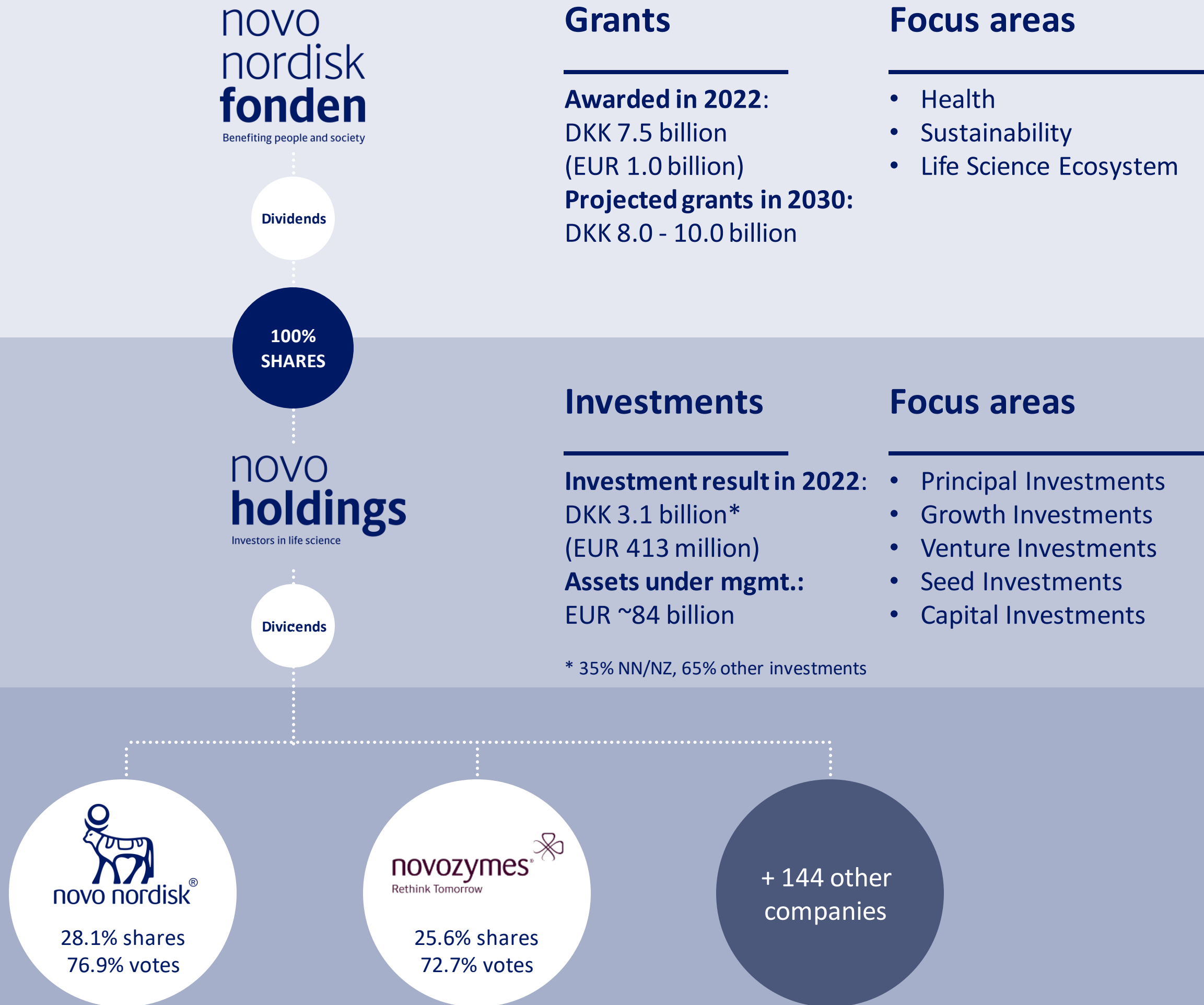
1989 – the Novo Foundation and the Nordisk Insulin Foundation were merged into **Novo Nordisk Foundation** as part of the merger between the two firms Novo Terapeutisk Laboratorium and Nordisk Insulinlaboratorium in Novo Nordisk A/S.

In 2022 the **Novo Nordisk Foundation** awarded 695 grants with a total amount of EUR 1.0 billion.

For more information, please see the [Impact Report 2022](#)

1922 – the **Nordisk Insulin Foundation** was established as the owner of the Nordisk Insulinlaboratorium. The founders agreed that the profit from the sale of diabetes medicine should be used for scientific and humanitarian purposes.

The Novo Nordisk Foundation is an independent Danish enterprise foundation



Facts about the Novo Nordisk Foundation

1

The world's
largest
measured in assets:
EUR **84** billion

3

The world's
third largest
measured in grants

2022 in numbers

Awarded DKK
7.5 billion
EUR 1.0 billion

Paid out DKK
5.2 billion
EUR 693 million

695
Grants awarded

3,070
Applications
received

18%
Success rate for
research applications
in open calls

Investment result 2022
3.1 DKK billion
EUR 413 million

Our vision to improve people’s health and the sustainability of society and the planet is pursued through a three-pronged mission

Improving the lives of people by progress research and innovation in prevention and treatment of cardiometabolic and infectious diseases



Theme 1: Preventing cardiometabolic disease



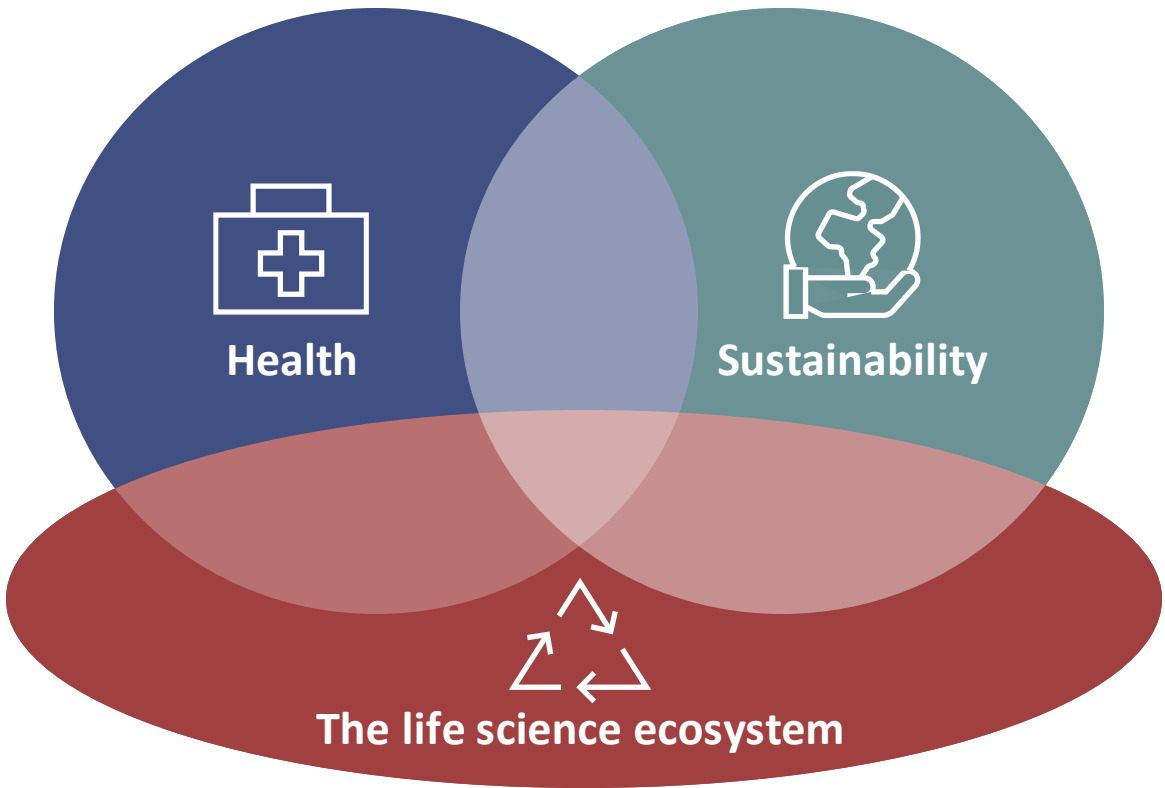
Theme 2: Understanding and managing cardiometabolic disease



Theme 3: Fighting inequity in health



Theme 4: Strengthening epidemic preparedness



Improving the sustainability of society by advance knowledge and solutions to support the green transition in society



Theme 1: Sustainable and high-yield agriculture



Theme 2: Sustainable food for healthy diets



Theme 3: High-impact climate change mitigation technologies



Theme 4: Supporting society in the green transition

Invest in scientific research, education and innovation to enable a world class life science ecosystem



Theme 1: Fundamental research



Theme 2: Enabling research infrastructures and technologies



Theme 3: Translational capacity and societal impact



Theme 4: Education and science capital



French academic and
industry collaborations
involving NNF grant
recipients 2018-2022

6 projects funded by NNF include French researchers as applicants

The Novo Nordisk Foundation has in the last five years (2018-2022) funded 6 projects that have had 2 main applicants and 4 co-applicants from France. Co-applicants are members of the international group applying for a NNF grant. The total funding allocated to these projects is EUR 11 million.

The funded projects span research areas including Biomedicine, Biotechnology, Innovation and Nat-Tech. 5 projects were awarded in open competition, while 1 was awarded as a standalone grant.

- **Technical University of Denmark, Max Planck Institute for Chemical Ecology and Université Toulouse III - Paul Sabatier** have received funding for the project Synthetic Autocrine Systems for Insects.
- **Aarhus University, French Institute of Health and Medical Research and University of Southern Denmark** have received funding for a project within cancer research



Fostering the development of research talent at all levels

In 2022 the Novo Nordisk foundation supported 1 researcher, 3 PhDs and 6 Postdoc positions at French based research institutions through projects involving French applicants.

The Copenhagen Bioscience Conferences are a series of scientific conferences within biomedicine and biotechnology. They bring together some of the world's top researchers and young talent to discuss the latest scientific results and topics within their field. The purpose of the conferences is to enable participants to build an international network and to exchange knowledge and ideas.



Since 2014, **58** young French researchers have been awarded a grant to attend the Copenhagen Bioscience Conferences for young research talent.

“An opportunity that facilitate high level training for PhD students and postdocs”

NNF applicant, 2015

NNF Grant recipients' collaborations with French partners

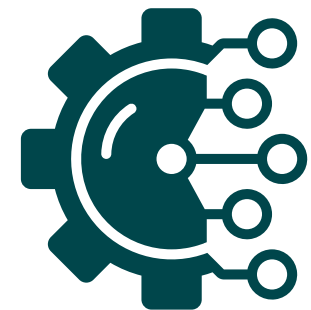
Between 2018 & 2022...



The Foundation's grant recipients have collaborated with many international project's partners, including **239** collaborations between Danish and French partners.



85 of those partners are universities and university hospitals.



20 French companies co-authored at least one scientific article with grant recipients from the Novo Nordisk Foundation.

Case stories

A university collaboration



In 2022, NNF funded an international research collaboration between **Technical University of Denmark, Aix-Marseille University** and **University of Copenhagen**. The research will target development of language models for CAZymes sequence data sets, graph representations of carbohydrates, and new transformer-based architectures to model enzyme sequence-carbohydrate interaction, in iteration with an unprecedented experimental enzyme function exploration program on a new large glycan library.

Modulation of tumor microenvironment to combat cancer



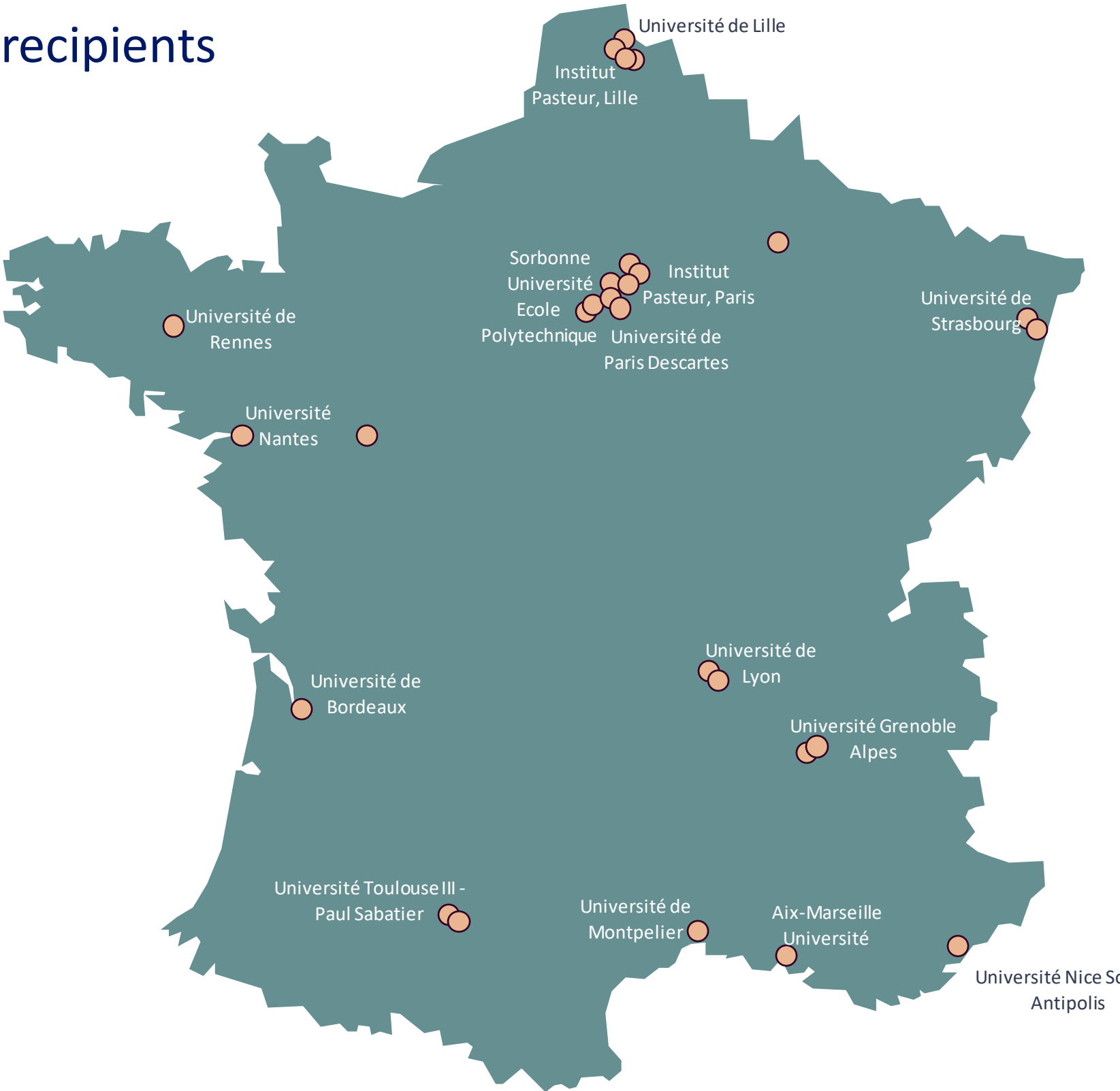
In 2022, NNF funded a project with applicants from **Aarhus University, French Institute of Health and Medical Research** and **University of Southern Denmark**. The purpose of this project is to develop new therapeutic Tim4-binding antibodies that is capable of depleting Tim4+ macrophages. They will engineer the antibodies to exert their therapeutic effect by inducing cell death via an antibody-dependent cellular cytotoxicity mechanism.

NNF Grant recipients’ collaboration with top French universities

9 out of 10 top French universities collaborate with NNF grant recipients

		Project collaborations	Publication collaborations
1	Université Paris Sciences et Lettres	0	8
2	Université de Paris	0	85
3	University of Montpellier	0	26
4	Sorbonne University	1	63
5	Université Paris-Saclay	0	54
6	Institut Polytechnique de Paris	0	0
7	University of Bordeaux	0	23
8	Université Toulouse III - Paul Sabatier	0	30
9	Université Paris-Est Créteil Val de Marne	0	2
10	University of Strasbourg	0	39

Source: Novo Nordisk Foundation, CWTS Leiden Ranking 2022



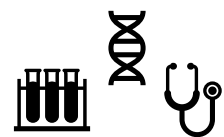
Publication collaborations between NNF grant recipients and French partners



Between 2018 and 2022, NNF grant recipients have co-authored **621** publications with researchers located in France.



The highest number of French partners come from Université de Paris (85 publications) followed by Institut National de la Santé et de la Recherche Médicale (68 publications) and Sorbonne University (63 publications).



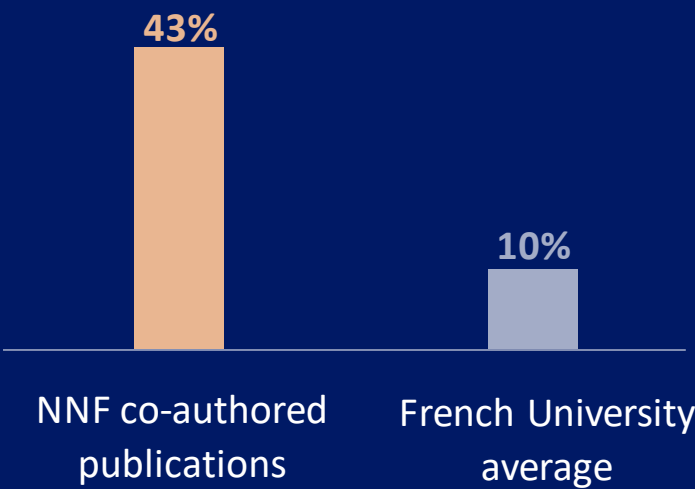
57.25% of the co-authored publications are within the research areas *Medicine* and *Biochemistry, Genetics & Molecular Biology*.



43% of the co-authored publications are within the top 10% most cited publication in their research field. The national average among the top French universities is 10%.

NNF grants contribute to research excellence

Share of co-authored publications among the top 10% most cited world-wide in the same research field and year



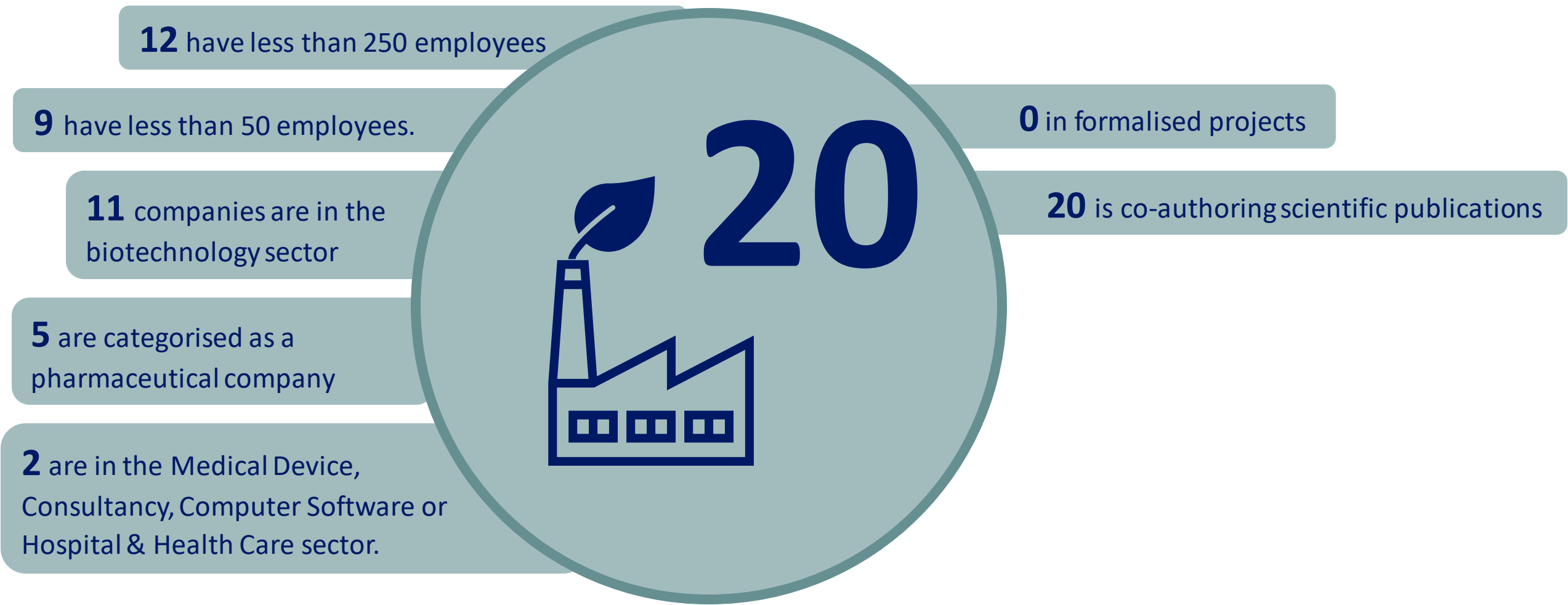
In 2020, Karine Clément was awarded the Jacobæus Prize

Professor Karine Clément from France is awarded the Jacobæus Prize 2020 for her clinical research in metabolic disease. She receives the Prize in recognition of her important contributions to the development of novel methods and models used in the clinical work with disorders such as obesity and type 2 diabetes.

The purpose of the Prize is to promote medical research and it is awarded annually to a distinguished international researcher, who is invited to give a lecture on his or her research on a topic within physiology or endocrinology.

Researchers receiving grants from the Novo Nordisk Foundation collaborate with French companies

In total 20 companies collaborate with NNF grant recipients



The NNF Dashboard on Grants and Impact

The NNF Dashboard is your gateway to information about the entire value chain of grant development, starting with Calls & Applications, through to awarded grants and their impact. In addition to visualising numbers on awarded grants, gender distribution of grant holder and grant recipients host institutions, the NNF Dashboard provides insights and details on the overall development year-to-year.

For more information, please visit

<https://novonordiskfonden.dk/facts-and-figures/>





Novo Holdings A/S in France

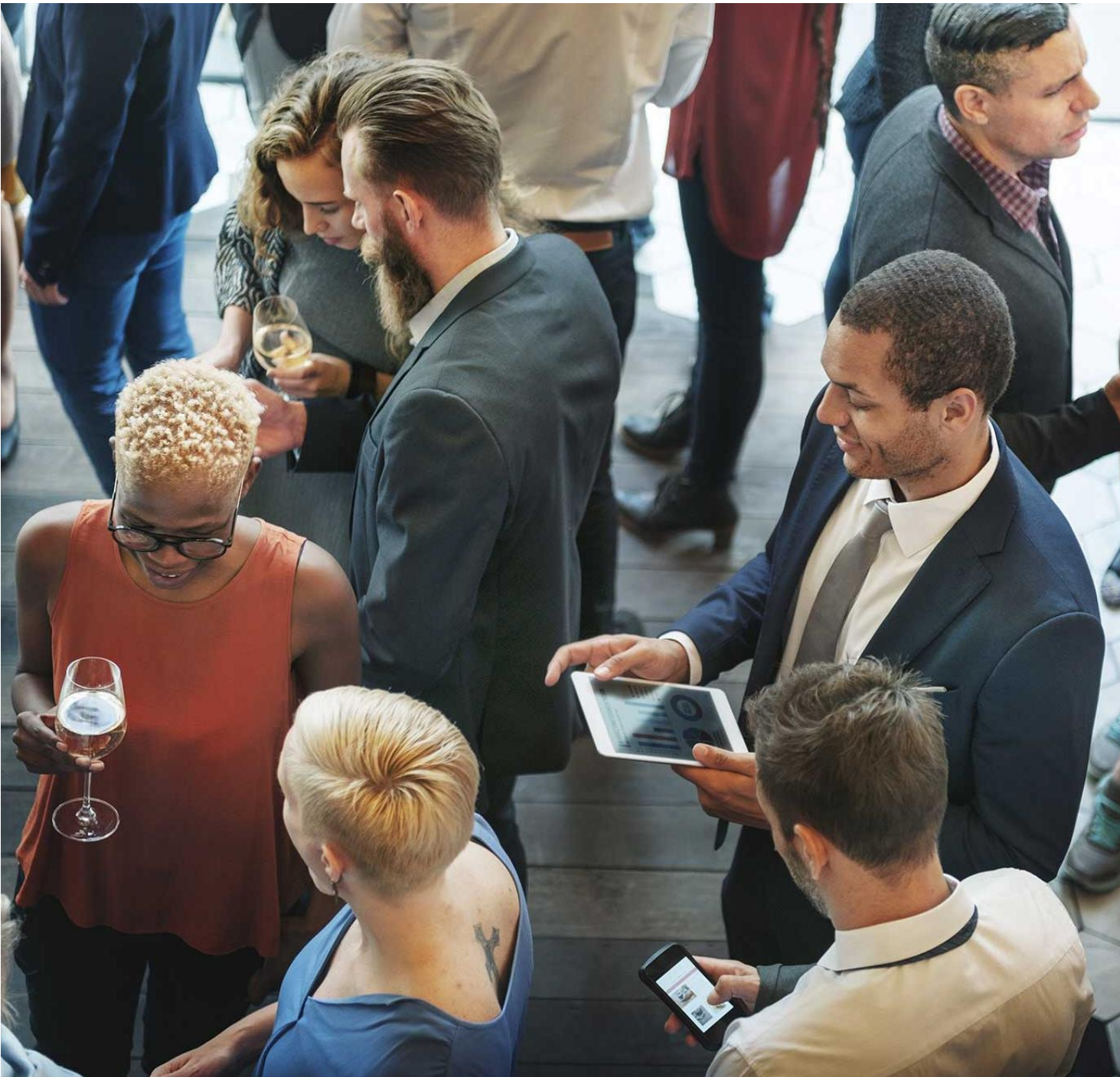
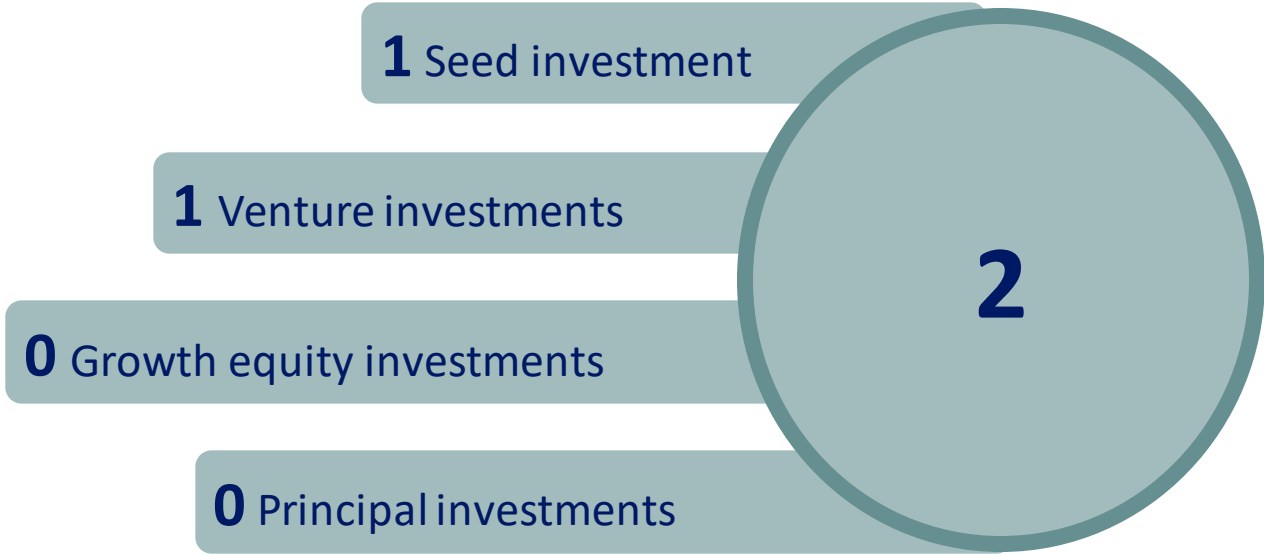
Our mission

Novo Holdings is to be a supportive owner of the Novo Group companies and to make a growing and positive impact on health, science and society by generating attractive long-term returns on the assets of the Novo Nordisk Foundation.

Novo Holdings A/S Investments in France

Novo Holdings A/S has in the period 2018-2022 invested in **2 French companies**. In 2022, the portfolio included 2 companies with approximately 125 employees.

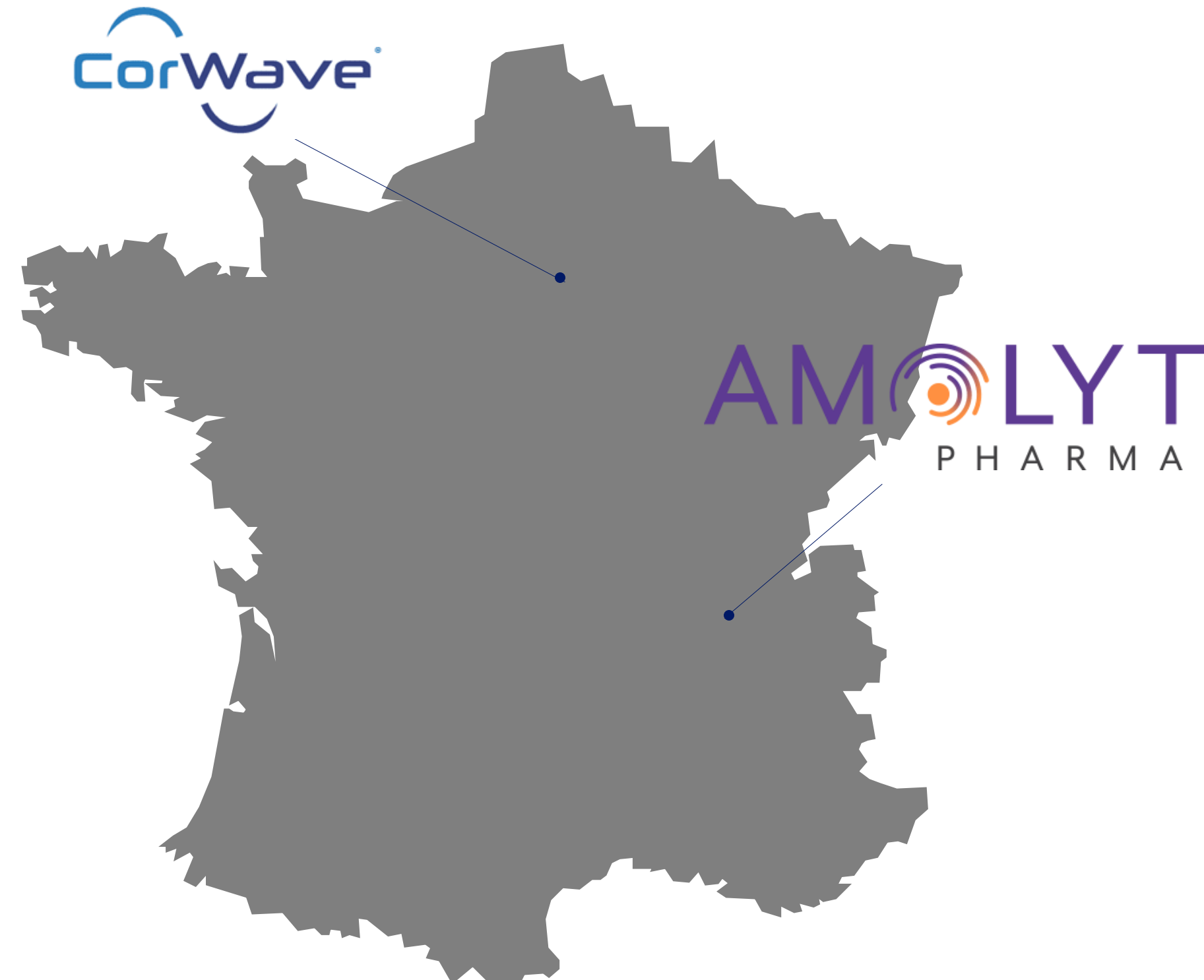
Companies in the current portfolio



Novo Holdings A/S Investments in France

Amolyt Pharma develops innovative therapeutic peptides for rare endocrine and metabolic diseases. Their ambition is to become a leading rare disease company with U.S. and European operations to support global development of products. The firm completed a €67 million Series A financing round led by LSP and including Novo Ventures.

CorWave is a French company developing innovative cardiac assist devices. Its technology stands out from other LVADs (left ventricular assist devices) currently on the market due to its physiologic design, which is enabled by its disruptive wave membrane. The firm raised EUR 35 million in a Series C financing. Novo Seeds participated in the round alongside other existing investors



Appendix and additional slides

Methods and sources

Methods:

- Collaborations were defined as either a project collaboration or a publication collaboration funded by NNF with at least one French collaborator/ French institute
- University ranking was based on the time period 2018-2022, across all sciences, with institutions with at least 100 publications, and based on the PP(top10%)
- Publications were defined as publications with at least one French and one Danish author
- French industry collaborators were defined as collaborations with companies registered in the France
- French research partners were defined as successful NNF grant applications with at least one French co-applicant
- The number of French attendees at the Copenhagen Bioscience Conference series were defined as applicants and attendees registered to a French research institute
- Novo Holdings A/S investments in France were defined as investments in companies with their headquarter located in France

Sources:

- Researchfish (NNF grant data)
 - Research publication collaborations
 - Company project collaborations
 - Publications
- Data Warehouse, NORMA and OMADA (NNF grant application data)
 - Co-applicants
 - Copenhagen Bioscience PhD programme applicants
- The Leiden Ranking 2022
 - University rankings
 - Publication impact data
- Novo Holdings A/S
 - Investment data