

Report on research collaborations and investments in the United Kingdom

IMPACT

Executive summary

Novo Holdings



Between 2018 and 2022, Novo Holdings invested in 9 companies based in the UK.



In 2022, the Novo Holdings portfolio included 10 UK companies with an overall value of GBP 1.7 billion

Novo Nordisk Foundation



Between 2018 and 2022, the Novo Nordisk Foundation (NNF) financed 17 projects with UK applicants, totaling GBP 34 million.



238 young UK researchers have been awarded a grant to attend the Copenhagen Bioscience Conferences.

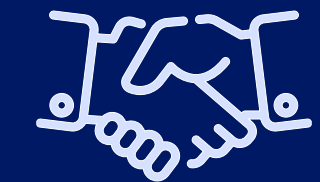


In 2022 the Novo Nordisk Foundation funded 2 senior researchers and 31 young researchers, PhDs and Postdocs, in projects involving UK applicants.

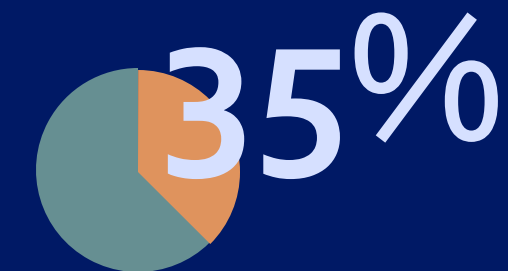
Grant recipients

139

The Foundation's grant recipients collaborates with many international project's partners, including 139 UK based universities and university hospitals.



Between 2018 and 2022, NNF grant recipients collaborated with 70 UK companies. 19 are in the biotechnology sector, and 24 of the companies have less than 50 employees.



Between 2018 and 2022, NNF grant recipients have co-authored 1726 publications with researchers located in the UK. 35% of the publications are among the top 10% most cited in their field.

10/10

10 out of 10 top UK 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 the UK.
- An overview of Novo Holdings' investments in the UK.

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

Through figures and case studies, it demonstrates the different kinds of relationships and activities between NNF grant recipients and UK 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.

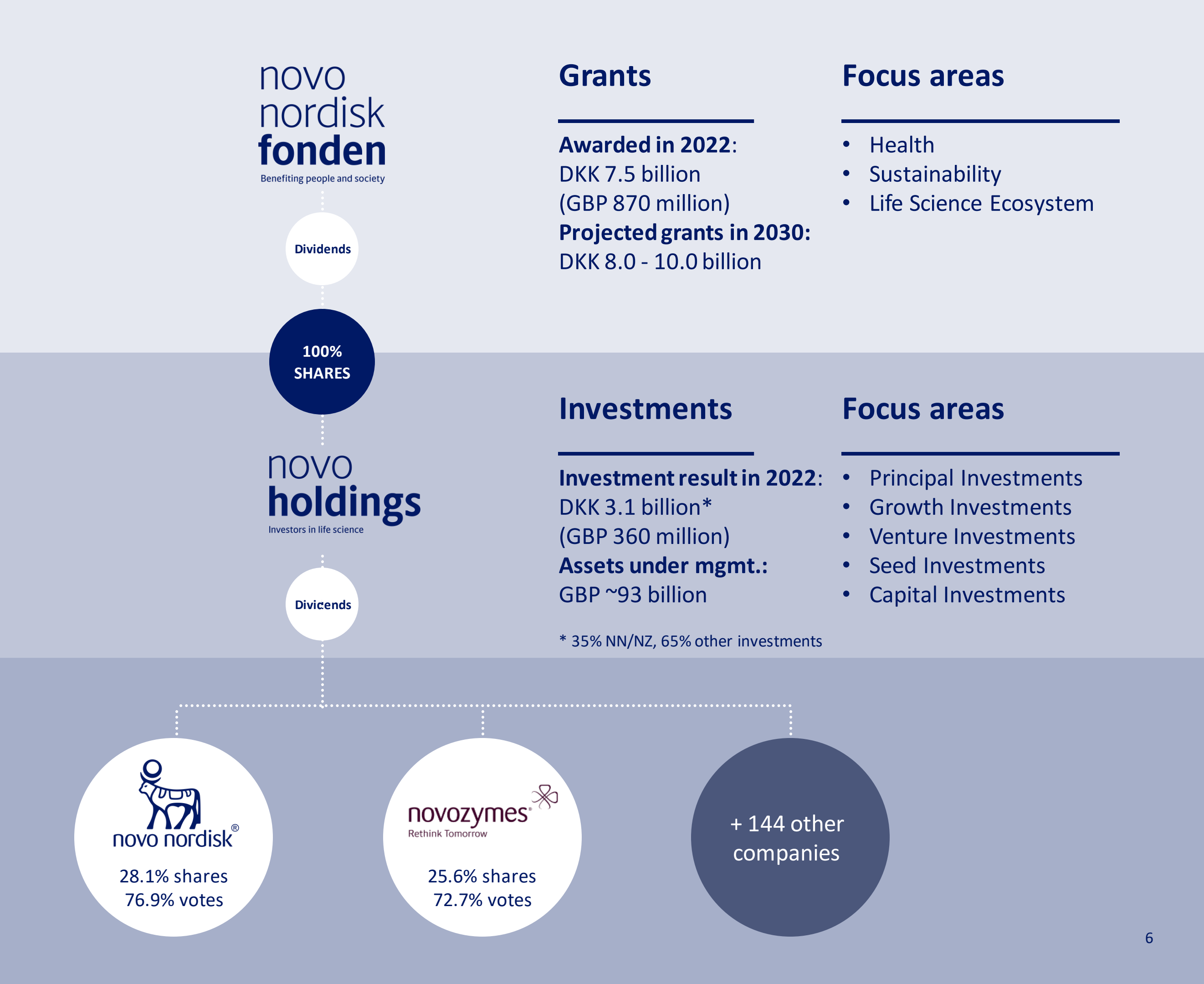
1989 – the Novo Foundation and the Nordisk Insulin Foundation were merged into **Novo Nordisk Foundation** as part of the merger between the two firms Novo Terapeutisk Laboratorium and Nordisk Insulinlaboratorium in Novo Nordisk A/S.

In 2022 the **Novo Nordisk Foundation** awarded 695 grants with a total amount of GBP 870 million.

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:
GBP **93** billion

3

The world's
third largest
measured in grants

2022 in numbers

Awarded DKK
7.5 billion
GBP 870 million

Paid out DKK
5.2 billion
GBP 600 million

695
Grants awarded

3,070
Applications
received

18%
Success rate for
research applications
in open calls

Investment result 2022
3.1 DKK billion
GBP 360 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



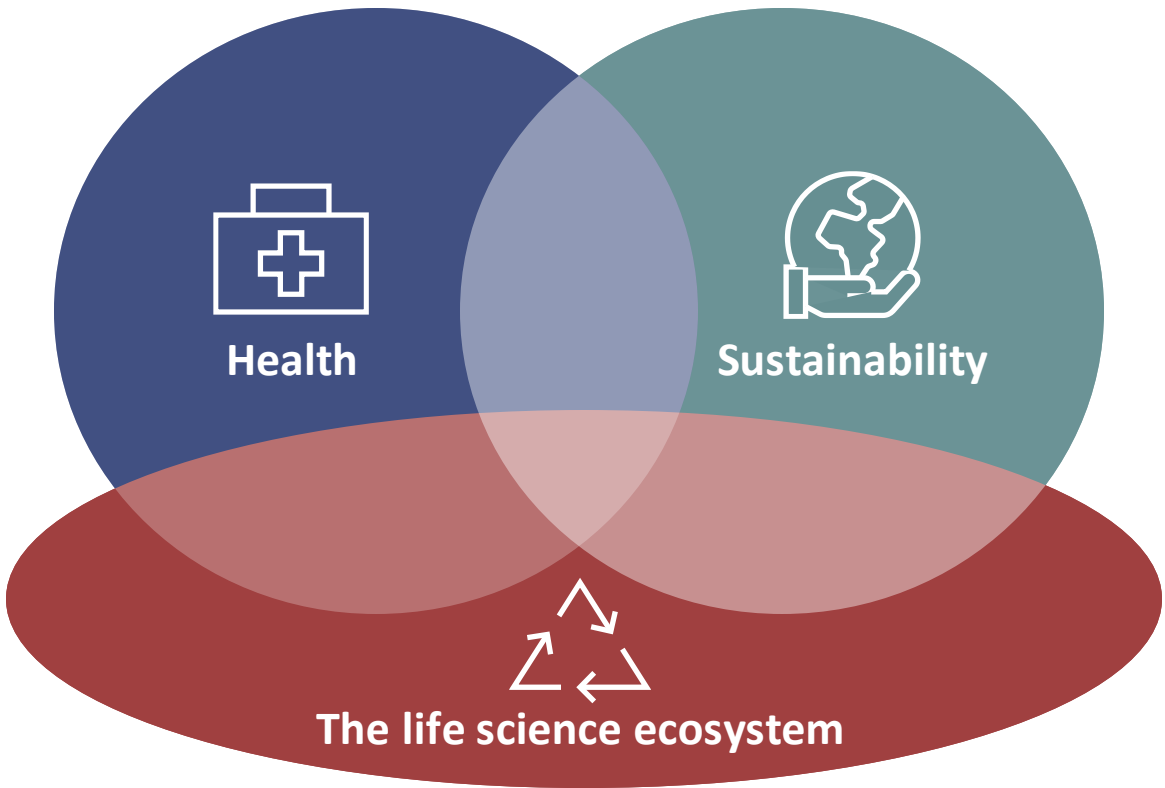
Theme 2: Understanding and managing cardiometabolic disease



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



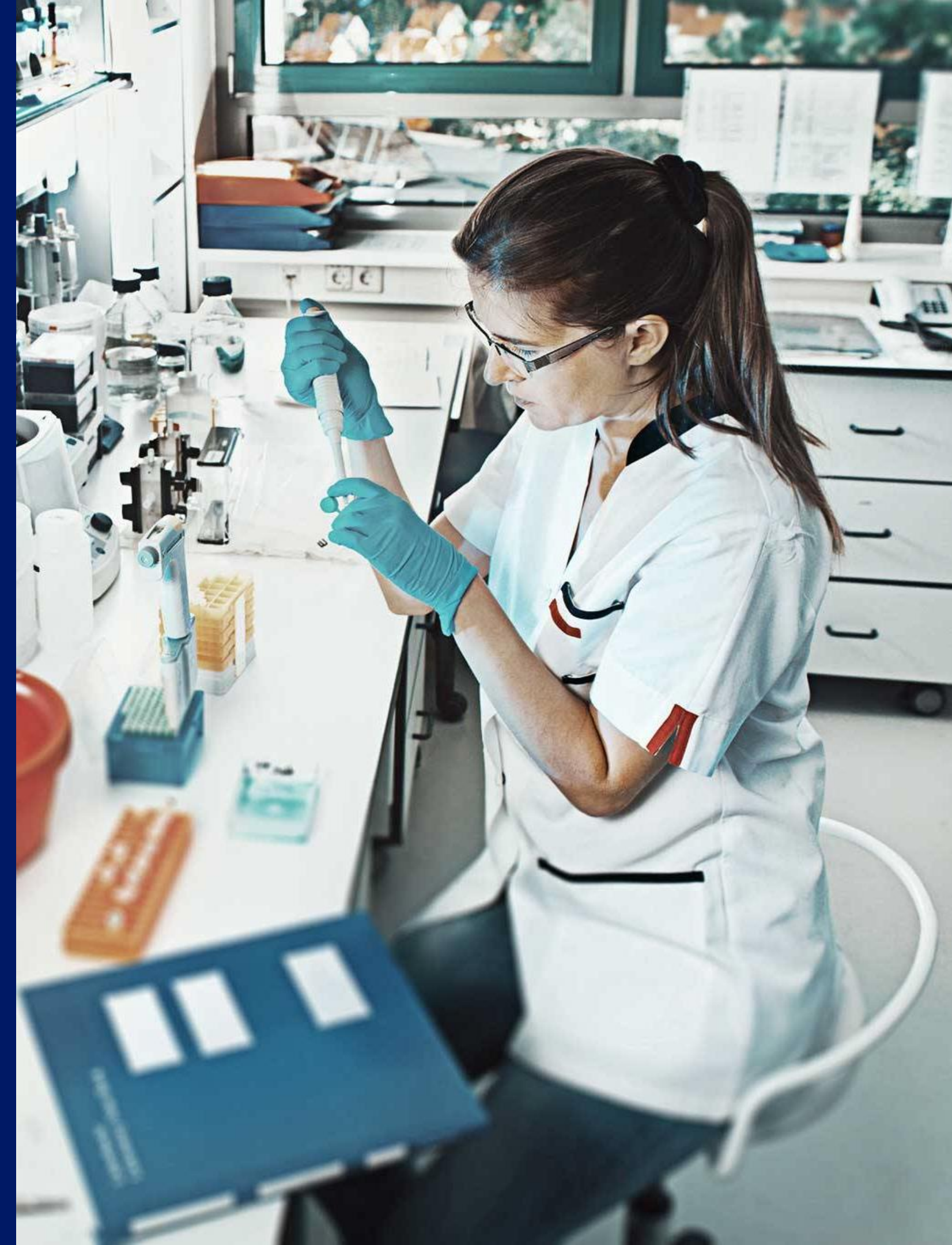
UK academic and industry collaborations involving NNF grant recipients 2018-2022

17 projects funded by NNF include UK researchers as applicants

The Novo Nordisk Foundation has in the last five years (2018-2022) funded 17 projects that have had 9 main applicants and 8 co-applicants from the UK. Co-applicants are members of the international group applying for a NNF grant. The total funding allocated to these projects is GBP 34 million.

The funded projects span research areas including Biomedicine, Biotechnology, Nat-Tech and Innovation. 12 projects were awarded in open competition, while 5 were awarded as a standalone grant.

- **Copenhagen University Hospital** and **University of Cambridge** have received funding for a project within Non-Diabetic Endocrinology.
- **University of Copenhagen** and **University of Cambridge** have received funding for a project investigating how fungi use enzymes to degrade biomass.
- **The Royal Danish Academy** and **London School of Hygiene and Tropical Medicine** have received funding for a project investigating the role of urban planning in influencing the risk of transmitting disease through mosquitoes.



Fostering the development of research talent at all levels

In 2022 the Novo Nordisk foundation supported 2 researchers, 15 PhDs, 16 Postdocs and 24 other staff at UK based research institutions through projects involving UK 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, **238** young UK 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 UK partners

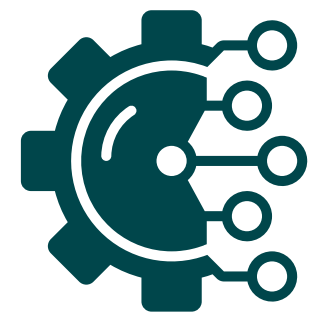
Between 2018 & 2022...



The Foundation's grant recipients have collaborated with many international project's partners, including **402** collaborations between Danish and UK partners.



139 of those partners are universities and university hospitals.



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

Case stories

A university collaboration



A collaboration between the **University of Oxford** and **Novo Nordisk Foundation Center for Protein Research** has resulted in a research article published in Nature. The collaboration discovered a new and fundamental way in which DNA structure is protected following breakage. DNA breakage can cause mutations with severe consequences - for example during development – so these mechanisms of protection and repair are crucial to understanding a range of diseases and disorders.

A university/clinical collaboration



A collaboration between **University College London Hospitals** and **Copenhagen University Hospital** has made it possible to include enough patients for resveratrol treatment trials for the rare diseases metabolic myopathies. It is extremely challenging, and often impossible, to recruit the number of patients needed to complete a treatment study on these diseases. By transferring patients by plane from the UK to take part in trials in Copenhagen from the UK, this collaboration was vital in allowing trials for a potential treatment to progress.

NNF Grant recipients’ collaboration with top UK universities

10 out of 10 top UK universities collaborate with NNF grant recipients

		Project collaborations	Publication collaborations
1	University of Oxford	8	304
2	University of Cambridge	0	169
3	Imperial College London	2	219
4	University College London	1	260
5	London School of Hygiene & Tropical Medicine	0	34
6	King's College London	2	171
7	University of Glasgow	0	62
8	London School of Economics and Political Science	0	5
9	Queen Mary University of London	0	89
10	University of Exeter	1	62

Source: Novo Nordisk Foundation, CWTS Leiden Ranking 2022



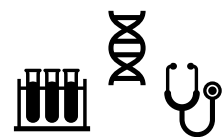
Publication collaborations between NNF grant recipients and UK partners



Between 2018 and 2022, NNF grant recipients have co-authored **1726** publications with researchers located in the UK.



The highest number of UK partners come from University of Oxford (304 publications) followed by University College London (260 publications) and Imperial College London (219 publications).



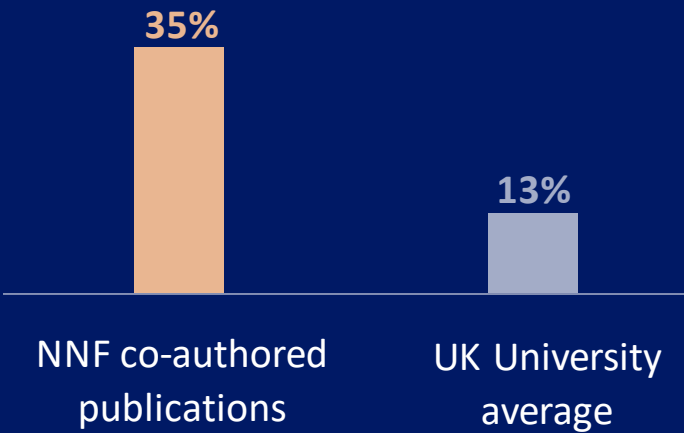
59.65% of the co-authored publications are within the research areas *Medicine* and *Biochemistry, Genetics & Molecular Biology*.



35% of the co-authored publications are within the top 10% most cited publication in their research field. The national average among the top UK universities is.

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



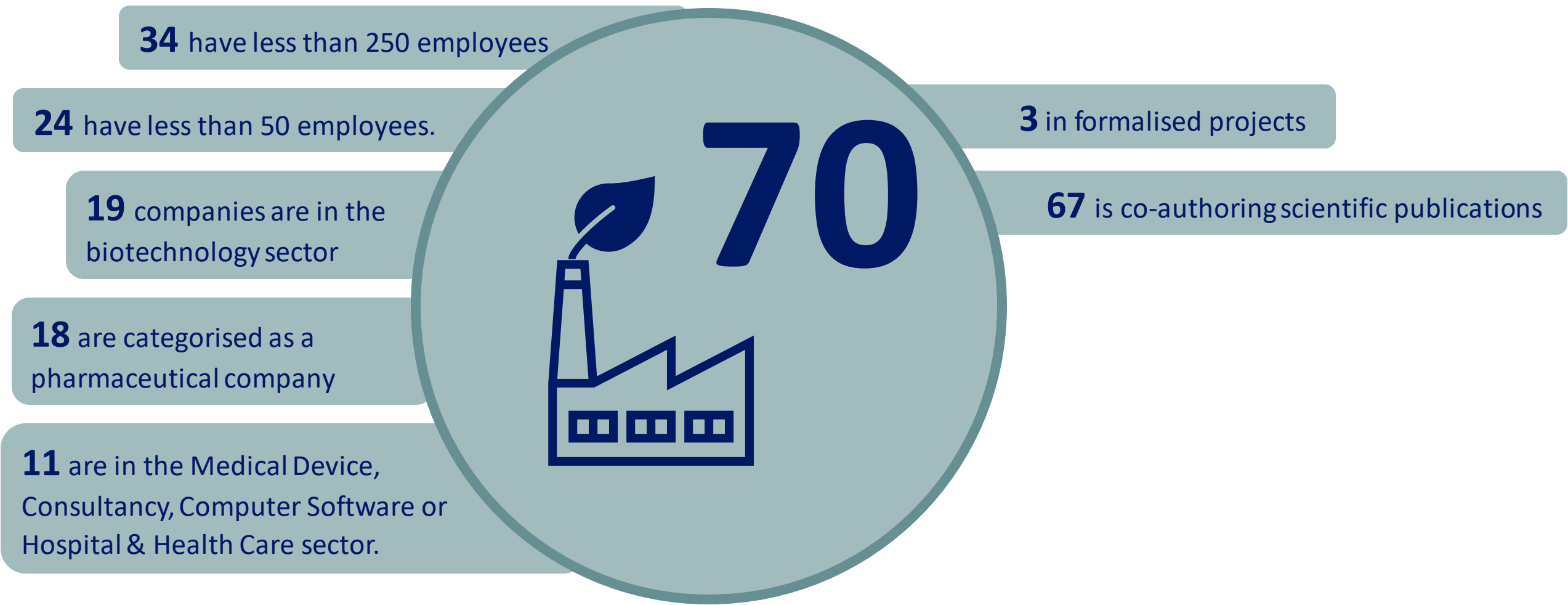
In 2023, Prof. Molly Stevens was awarded the Novo Nordisk Prize

Science of small things does not sound like something that can have a big impact on the world, but nanotechnology has proved this is wrong. Tissue engineering, efficient drug delivery and more sensitive screening for diseases are just a few examples. According to Professor Molly Stevens, the new technologies can democratise access to healthcare. She receives the 2023 Novo Nordisk Prize for her pioneering work in innovative bioengineering approaches to pursue the vision of solving key problems in regenerative medicine and biosensing.

The Novo Nordisk Prize honours active scientists who have made outstanding contributions to advance medical science to benefit people’s lives.

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

In total 70 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 the United Kingdom

Our mission

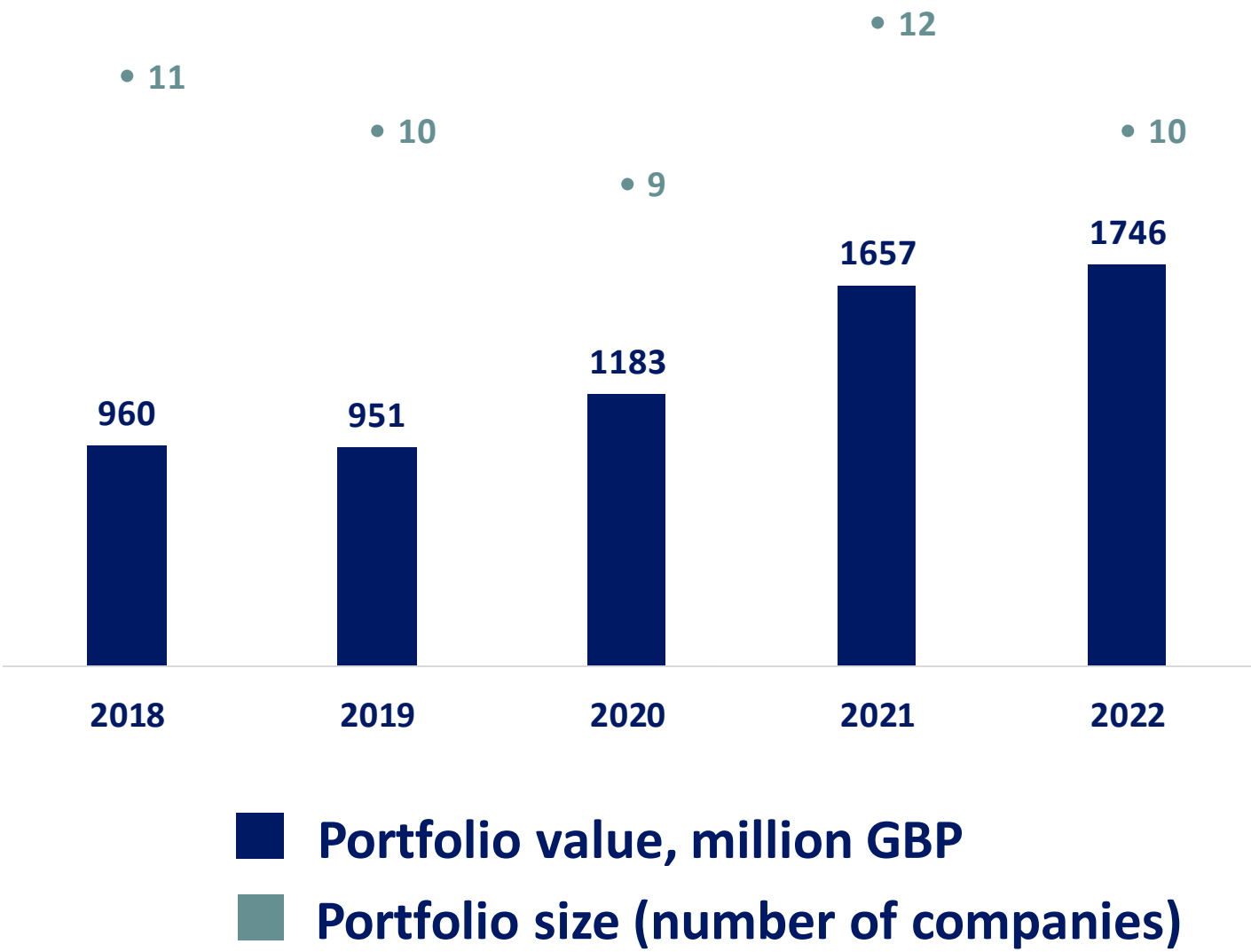
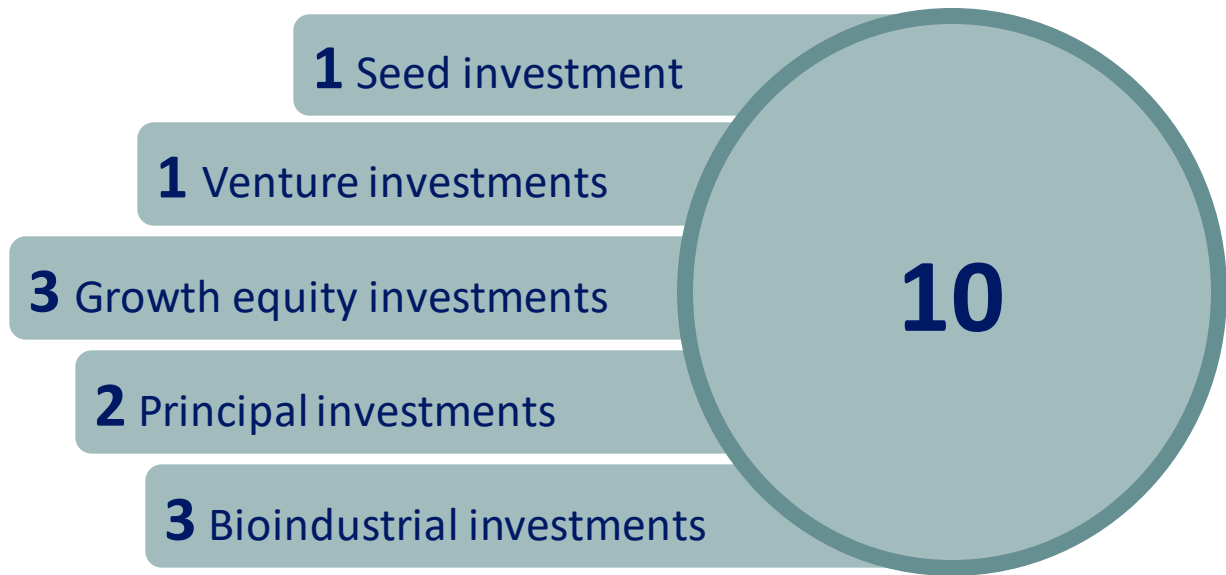
Novo Holdings is to be a supportive owner of the Novo Group companies and to make a growing and positive impact on health, science and society by generating attractive long-term returns on the assets of the Novo Nordisk Foundation.

Novo Holdings A/S Investments in the UK

Novo Holdings A/S has in the period 2018-2022 invested GBP 613 million in **9 UK companies**. In 2022, the portfolio included 10 companies with an overall value of GBP 1.7 billion.

18% of the life science investments made worldwide by Novo Holdings A/S are in UK companies.

Companies in the current portfolio

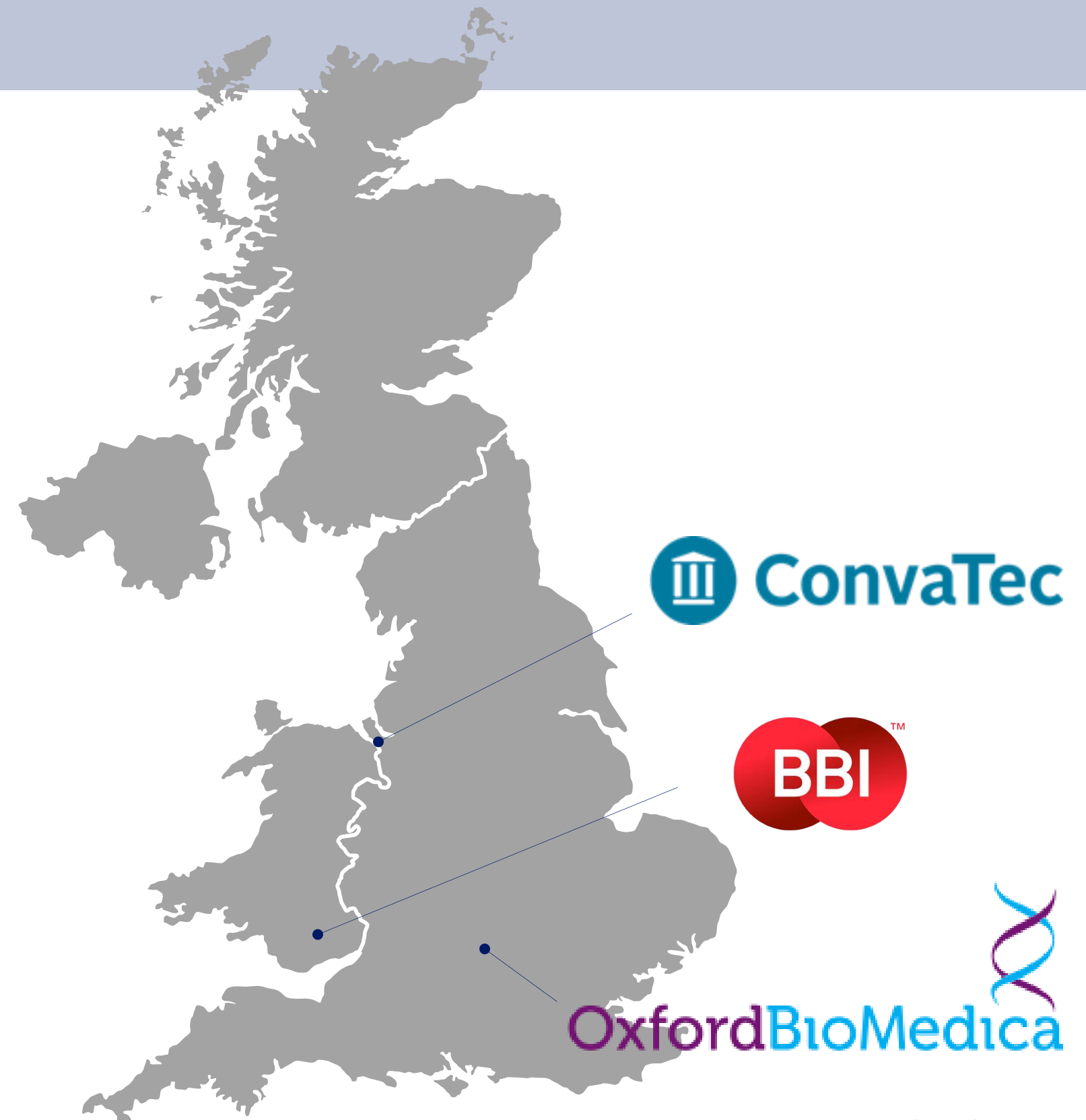


Novo Holdings A/S Investments in the UK

ConvaTec Group Plc, a UK listed global medical products and technologies company with leading market positions in advanced wound care, ostomy care, continence and critical care and infusion devices. Novo Holdings A/S acquired 19.95% of shareholding in March 2017, and at completion of the transaction, Kasim Kutay, CEO of Novo Holdings A/S, joined the Board of Directors of ConvaTec Group Plc.

Oxford Biomedica is a leading gene and cell therapy company focused on developing life changing treatments for serious diseases. Novo Holdings A/S has agreed to invest up to 54 million GBP in new ordinary shares in Oxford Biomedica and will after the capital increase own up to 10.1% of the share capital.

BBI Solutions is a leading supplier of products and services to the global diagnostics and life sciences industries. The business has manufacturing sites spanning four continents and is headquartered in Crumlin, Wales. Novo Holdings A/S acquired BBI Solutions from Exponent for an enterprise value of over 400 million GBP 2021.



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 UK collaborator/ UK 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 UK and one Danish author
- UK industry collaborators were defined as collaborations with companies registered in the UK
- UK research partners were defined as successful NNF grant applications with at least one UK co-applicant
- The number of UK attendees at the Copenhagen Bioscience Conference series were defined as applicants and attendees registered to a UK research institute
- Novo Holdings A/S investments in UK were defined as investments in companies with their headquarter located in the UK

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