

LIFE SCIENCE IN MEDICON VALLEY

– a survey of companies in the sector



1 150 companies

65 500 employees

12 000 new jobs in five years

Investments for +45bn
DKK in new facilities

900 border commuters



This report offers a summary of six analyses conducted between 2019-2022.

Medicon Valley Alliance



Greater Copenhagen
LIFE SCIENCE
analysis initiative

LIFE SCIENCE IN MEDICON VALLEY

– a survey of companies in the sector

This analysis has been prepared by Øresundsinstitutet as part of the Interreg-project Greater Copenhagen Life Science Analysis Initiative. The report contains results compiled throughout the duration of the project, from 2019-2022.

Project members: Jenny Andersson, Kristoffer Dahl Sørensen, Sofi Eriksson, Camilla Neve, Anna Palmehag, Emil Persson and Johan Wessman.

Project manager for analytics: Jenny Andersson

Overall project manager: Johan Wessman

Translation: Justina Bartoli

Cover photo: News Øresund

December 2022

GREATER COPENHAGEN LIFE SCIENCE ANALYSIS INITIATIVE was an EU-project aimed at increasing knowledge about the region's life science cluster. The focus was on the demand for labourers, future expertise needs, and more. The project received funding through the EU-programme Interreg Öresund-Kattegat-Skagerrak and ended on 30 June 2022. The project's lead partner was Medicon Valley Alliance, and Øresundsinstitutet was a partner. Region Skåne and Region Zealand co-funded the project.



MEDICON VALLEY is the bi-national life science cluster spanning Eastern Denmark and the Skåne region of Southern Sweden. Today, the Danish-Swedish region is marketed internationally with the name 'Greater Copenhagen', and its increasing population has reached more than four million residents. In Sweden, the same geographical area is often called the 'Øresund Region'.

TABLE OF CONTENTS

1. Introduction	4
2. 10 highlights	6
3. Fact & figures about Medicon Valley	10
4. Company survey.....	12
5. Beacons	16
6. Upcoming investments.....	18
7. Need for expertise	20
8. Life science municipalities	22
9. Science parks	24
10. Research and education	26
11. Transregional activities	28
12. Appendix	30



PHOTO: NEWS ØRESUND

MEDICON VALLEY'S COMPANIES:**+300**

new life science companies
have been founded over the past
five years – that's more than one
new company per week

+12 000

new regional jobs were cre-
ated in the past five years by
the life science companies
identified

MEDICON VALLEY IS GROWING

A total of around 65 500 people work in private companies in the Danish-Swedish life science cluster Medicon Valley. In total, Medicon Valley comprises around 1 150 companies. The companies identified have created around 12 000 new jobs regionally over the past five years. During that same period, around 300 new life science companies were founded – that's more than one new company every week. Life science companies in eastern Denmark are investing over DKK 45bn, now and in the coming years, in order to expand their production plants, R&D facilities and other sites in the region; the investments are expected to create 4 000 new jobs. These are just a few of the central findings from the Interreg-project Greater Copenhagen Life Science Analysis Initiative from 2019-2022 presented in this report.

This report compiles the principal results of the analysis work conducted in the Interreg-project Greater Copenhagen Life Science Analysis Initiative, which was jointly headed by Medicon Valley Alliance and Øresundsinstituttet from 2019-2022. Five reports on the region's life science cluster were produced during the project's duration.

The Danish-Swedish Medicon Valley in the Øresund Region is one of the EU's leading life science clusters. Academic strengths on both sides of the Øresund Strait include research in cancer, diabetes, and fertility. The region is home to large, global pharma-, medtech-, and contract manufacturers in proximity to universities, hospitals, research facilities, and small enterprises in science parks.

Of a total of 65 500 regional employees, around 58 000 work in private life science companies in eastern Denmark, and around 7 500 work in the private life science sector in Skåne. Ca 700 life science companies were identified in eastern Denmark; there are around 450 life science companies in Skåne. In total, Medicon Valley comprises around 1 150 companies. In the past five years, 300 new life science companies have been created in the region,

and 12 000 new regional jobs been generated. Novo Nordisk is the region's largest life science company. The report identifies 38 so-called 'beacon companies', which are defined as companies with more than 250 regional employees in Medicon Valley.

Employees in the region cross the Danish-Swedish border for work, and companies and researchers in both countries collaborate despite bureaucratic national barriers. There are over 900 border commuters in Medicon Valley. Most commute from Skåne to eastern Denmark.

Medicon Valley is home to nine science parks and startup environments. 39 per cent of the total 1 150 life science companies in the region – around 450 companies – are or were previously located in one of the region's science parks.

Life science companies in Medicon Valley need access to various competences. On the whole, these expertise needs are largely linked to the STEM subjects (Science, Technology, Engineering and Mathematics), commercial and regulatory expertise, and IT. This was shown in two survey questionnaires in which around 50 companies in eastern Denmark and around 130 companies in Skåne were questioned.

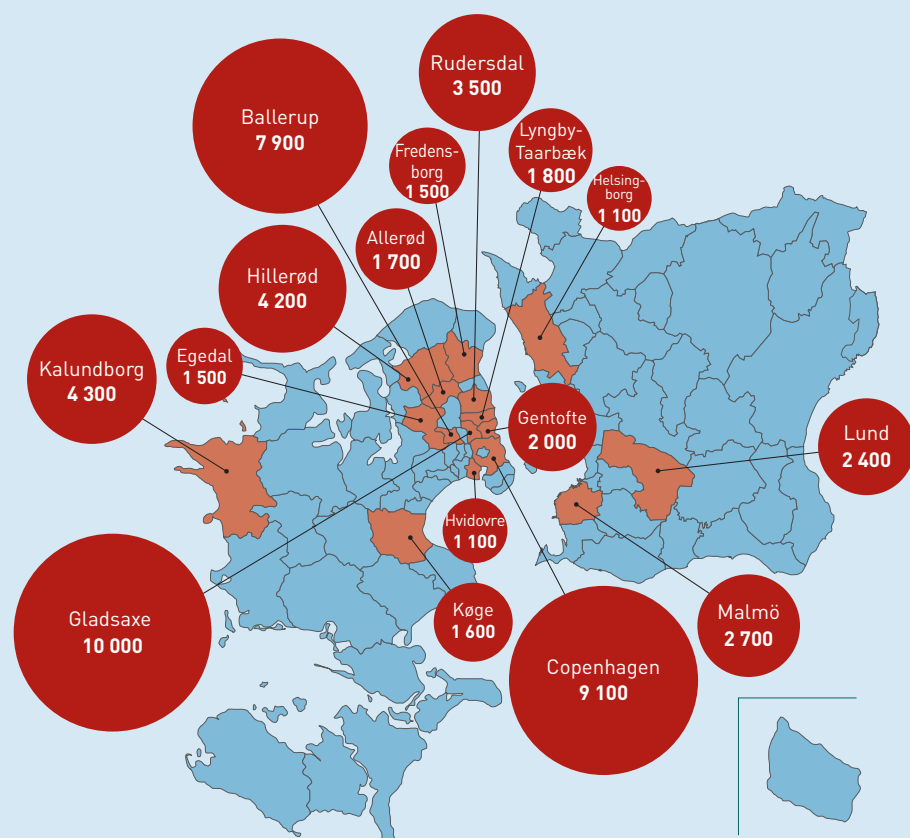


PHOTO: NEWS ØRESUND

10 HIGHLIGHTS FROM THE GREATER COPENHAGEN LIFE SCIENCE ANALYSIS INITIATIVE

16 LIFE SCIENCE MUNICIPALITIES

More than 1 000 employees work in private life science companies in 16 municipalities in the Danish-Swedish Medicon Valley. These municipalities are particularly important for the life science sector in the region, as around 86% of the ca 65 500 people employed regionally work in a company located in one of these 16 municipalities. Company structure varies from one municipality to the next, with especially strong startup activity in Copenhagen, Lyngby, Hørsholm and Lund because of their proximity to incubators, science parks, the healthcare sector, and universities. Large production facilities and headquarters are located both close to and far from the Copenhagen area. Gladsaxe Municipality, Copenhagen Municipality, and Ballerup Municipality are the three largest life science municipalities in Medicon Valley. Read more on page 22.



2.

1 150 LIFE SCIENCE COMPANIES WITH 65 500 REGIONAL EMPLOYEES IN MEDICON VALLEY

The Danish-Swedish Medicon Valley in the Øresund Region is one of the EU's leading life science clusters. The majority of the companies and their employees are active of the Danish side of the Øresund.

58 000 of the total ca 65 500 employees in Medicon Valley work in private life science companies in eastern Denmark; that corresponds to ca 88% of all employees in the cluster. Around 700 life science companies are located in eastern

Denmark. At the same time, around 7 500 of the total ca 65 500 employees in private life science companies in Skåne; that corresponds to ca 12% of all employees. There are around 450 life science companies in Skåne.



Novo Nordisk is the region's largest company

With its 18 300 employees in the region, the Danish pharmaceutical company Novo Nordisk is not only the largest life science company in eastern Denmark, but in the entire Medicon Valley cluster. Over the coming years, the company will be scaling up several of its production- and R&D facilities in eastern Denmark. The largest investments are being made in Kalundborg: by 2027, the company will have invested DKK 18bn in facilities there. Read more on p 16.



38 companies employ more than 250 people regionally

In Medicon Valley, 38 life science companies have over 250 employees in the region. 32 of those companies are on the Danish side of Medicon Valley, whilst the other six are on the Swedish side. These companies are particularly important for the economy of the Øresund Region, the growth and export of the life science sector, and for competence exchange between large companies and startups across the region. Read more on page 17.



3.

+900 BORDER COMMUTERS

The life science sector's labour force moves back and forth in Medicon Valley, and companies need a flexible, open labour market for their recruitments. A total of over 900 border commuters were identified in the region. At least 800 people commute from Skåne to work at life science companies in eastern Denmark. At least 100 people commute from eastern Denmark to life science sector in Skåne. These figures are the result of extensive contact between Øresundsinstituttet and life science companies in 2020-2021.

+45 MIA. DKK IN CONSTRUCTION INVESTMENTS

The life science sector in Medicon Valley has seen significant investment capacity and belief in the future in recent years. This is apparent in various ways, including that life science companies are investing more than DKK 45bn in expanding their production plants, research facilities, and/or offices and domiciles regionally. More than 4 000 new jobs in the region are expected to be generated through the investments on both sides of the Øresund. Read more on page 19.

Examples of investments in facilities in Medicon Valley:

- 18bn DKK are being invested by Novo Nordisk in expanding its existing plants and constructing four new facilities in Kalundborg.
- 17bn are being invested by Fujifilm Diosynth Bio-technologies in expansion of a plant in Hillerød.
- 1.5bn DKK are being invested by LEO Pharma in undertaking its largest-ever factory project in Ballerup.
- 1.5bn DKK are being invested by Chr. Hansen in building out a 175 000m² plant in Kalundborg.
- 1.2bn DKK are being invested by AGC Biologics in building out a new 19 000 m² plant in Søborg.



PHOTO: NEWS ØRESUND

4.

9 SCIENCE PARKS AND STARTUP ENVIRONMENTS IN A TOTAL OF 685 000 M²

Science parks and incubators in Medicon Valley have been scaling up their office- and lab facilities in recent years, and they are continuing to expand in order to give more square meterage to new and existing member companies. Nine science parks and/or startup environments in the region are completely or partially focused on life science. Together, these actors hold around 685 000 m². The largest of the science parks are Ideon and Medicon Village in Lund and DTU Science Park in Lyngby and Hørsholm.



PHOTO: NEWS ØRESUND

5.



PHOTO: NEWS ØRESUND

6.

39%

of the total 1 150 life science companies in Medicon Valley – that is, around 450 companies – are or were previously located in a science park in the region. Read more on page 15.

+20

At least 20 Danish CEOs/managing directors work in large, medium-sized and small life science companies in Skåne. The number of Danish directors has risen since 2017.

7.



Søren Bregenholt, CEO of Alligator Bioscience in Lund.



Dorte X. Gram, CEO of PILA PHARMA in Malmö.

PHOTOS: NEWS ØRESUND

3 RESEARCH AREAS OF EXCELLENCE

8.

Cancer, diabetes and reproduction are three research areas of excellence in Medicon Valley. World-class research is conducted in all three, and there are multiple links across the strait.

There are around 600 researchers in **CANCER RESEARCH** at the hospitals in Region Skåne, Region Hovedstaden and Region Sjælland, and there is also extensive research at the universities, in the industry and at the Danish Cancer Society's research institute in Copenhagen. Within cancer research, it is relatively common for researchers and research groups to collaborate across the strait, but researchers call for more structural collaboration.

DIABETES RESEARCH has strong historical links to the Øresund Region, as the predecessor to today's Novo Nordisk was founded in Copenhagen in 1923. Today, research centres on both sides of the Øresund bring together diabetes research, and many of the largest players have joined forces in the Interreg-collaboration DiaUnion.

REPRODUCTION RESEARCH has also traditionally been strong in the Øresund Region, and there has long been extensive exchange across the strait within the Interreg-project ReproUnion 2.0 and its earlier iterations. Today, a unique biobank is being constructed, the aim with which is to include 5 000 couples from Denmark and Sweden and get to the bottom of involuntary childlessness.



PHOTO: NEWS ØRESUND

COMPETENCE NEEDS ARE LINKED TO THE STEM SUBJECTS

Life science companies in Medicon Valley need access to various competences. Overall, these expertise needs are largely linked to the STEM subjects (Science, Technology, Engineering and Mathematics), commercial and regulatory expertise, and IT. This was shown in two survey questionnaires in which around 50 companies in eastern Denmark and around 130 companies in Skåne were questioned.

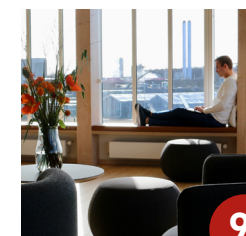


PHOTO: HELIX LAB

9.

€47mn

Between 2015-2022, the EU-programme Interreg Öresund-Kattegat-Skagerrak granted just under €47mn to 18 joint Danish-Swedish development projects in the life sciences. Funds for the Interreg-projects come from the EU's European Regional Development Fund.

10.



MEDICON VALLEY IN FACTS AND FIGURES

MEDICON VALLEY

The Danish-Swedish Medicon Valley in the Øresund Region is one of the EU's leading life science clusters. Academic strengths on both sides of the Øresund Strait are in cancer, diabetes, and fertility research. The region is home to large, global pharma-, medtech-, and contract manufacturers in proximity to universities, hospitals, research facilities, and small companies in science parks. The region's labour force crosses the Danish-Swedish border, and companies and researchers in both countries collaborate despite bureaucratic national barriers. Below are some selected results of the Interreg-project Greater Copenhagen Life Science Analysis Initiative from 2019-2022.

65 500

regional employees in private life science companies in Medicon Valley



PHOTO: NEWS ØRESUND

1 150

life science companies identified regionally

300

new life science companies have been founded over the past five years – more than one new company started every week

12 000

new regional jobs created in the past five years by the life science companies identified

900

border commuters identified in the sector. Most commute from Skåne to eastern Denmark

The data is based on the reports from the Greater Copenhagen Life Science Analysis Initiative: *Life Science in Skåne* (2020), *Life Science Across the Øresund* (2021) and *Life Science in Eastern Denmark* (2022).



... EASTERN DENMARK

58 000

of the total ca 65 500 employees work in private life science companies regionally in eastern Denmark; that corresponds to ca 88% of all employees in the cluster.

Over the past five years, 10 500 of the ca 12 000 new jobs in the cluster were created regionally in eastern Denmark; that corresponds to ca 87.5%.

Most life science employees work in Gladsaxe, Copenhagen, and Ballerup Municipalities.

Around 700 life science companies were identified in eastern Denmark. That corresponds to 60% of Medicon Valley's companies being located in eastern Denmark.

Around 200 new life science companies were started in eastern Denmark from 2017-2021. Most are in Copenhagen.

Pharma is the largest subsector in eastern Denmark with around 29 000 employees.

... SKÅNE

7 500

of the total ca 65 500 total employees work in private life science companies regionally in Skåne; that corresponds to ca 12% of all employees in the cluster.

Over the past five years, 1 500 of the ca 12 000 new jobs in the cluster regionally have been created in Skåne, Skåne, in southern Sweden. That corresponds to ca 12.5%.

Most life science employees work in Malmö, Lund, and Helsingborg Municipalities.

Around 450 life science companies were identified in Skåne; this corresponds to around 40% of Medicon Valley's companies being in Skåne.

Around 100 new life science companies were started in Skåne from 2015-2020, most of them in Lund.

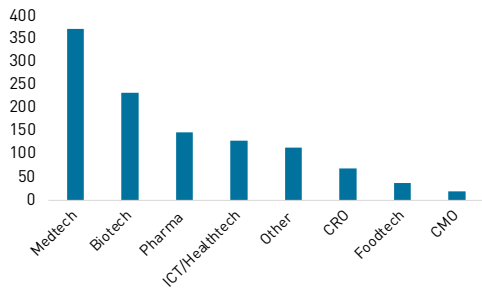
Medtech is the largest subsector in Skåne, with around 3 100 employees.

MEDICON VALLEY HAS SEEN 22% EMPLOYMENT GROWTH OVER THE PAST FIVE YEARS

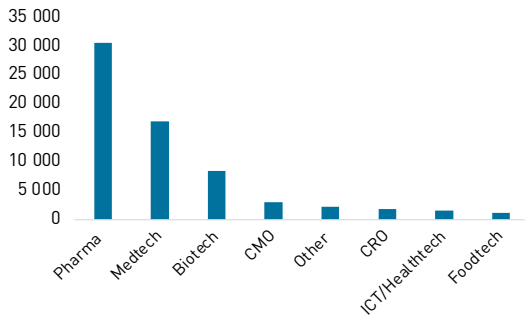
The life science sector in Medicon Valley is in an expansion phase. After two decades with major closures, especially on the Swedish shores of the Øresund, the sector has entered a new growth period on the whole. From 2015-2020, around 1 500 new jobs were created regionally in the sector in Skåne, and around 10 500 new jobs were created regionally in the sector in eastern Denmark between 2017-2021 – primarily in the Copenhagen area. A total of 12 000 new jobs were created in Medicon Valley, corresponding to a 22% employment growth. About one fifth of those positions were created in newly started companies on both sides of the Øresund. On the whole, most companies in Medicon Valley are in medtech, whilst the greatest number of employees by far are in pharma. Most of the startups founded in the past five years are in biotech and healthtech, which are subsectors on which the region's science parks and incubators also have a particular focus. Nearly 40% of all of Medicon Valley's companies are located in a science park or an incubator, or they have been at some point.

A THIRD OF THE LIFE SCIENCE COMPANIES IN MEDICON VALLEY ARE MEDTECH COMPANIES – BUT MOST EMPLOYEES ARE IN PHARMA

Number of life science companies in Medicon Valley



Number of employees in the life science companies in Medicon Valley



Sector	Number of companies in Medicon Valley	Number of employees in Medicon Valley 2021/2022	Percentual change of employees in Medicon Valley 2015-2021/22	Change in employees in Medicon Valley 2015-2021/2022	New companies in Medicon Valley since 2015/2017	Employees in new companies in Medicon Valley since 2015/2017
Pharma	148	30 560	13%	3 469	24	166
Medtech	373	16 957	23%	3 184	49	197
Biotech	233	8 440	38%	2 326	102	468
CMO	19	3 011	47%	965	3	925
Other	114	2 181	19%	347	35	112
CRO	69	1 747	60%	654	14	123
ICT/healthtech	129	1 560	123%	860	59	300
Foodtech	38	1 141	19%	179	14	209
Total	1 123	65 597	22%	11 984	300	2 500

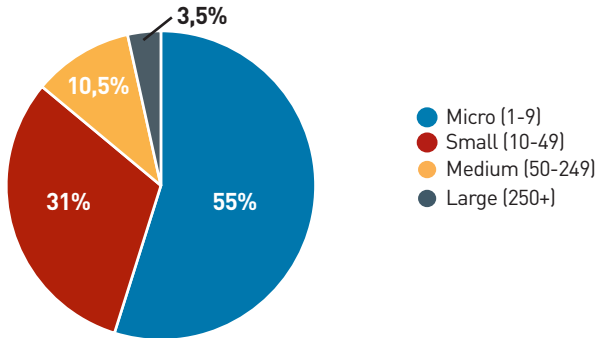
Number of employees according to most recent available data from 2015-2022. This data was previously used in the reports *Life Science in Skåne (2020)* and *Life Science in Eastern Denmark – the Danish Part of Medicon Valley (2022)*. Source: Statistics Denmark, Statistics Sweden, Bisnode, Central Business Register, and data from the companies. Contract manufacturing organisations (CMO) and contract research organisations (CRO) are companies that are commissioned to either develop and/or manufacture e.g. pharmaceuticals for other companies in the life sciences. *Other refers to e.g. engineering firms, logistics companies, inventory manufacturers and consultants with a life science focus. Figures may have changed since they were reported.



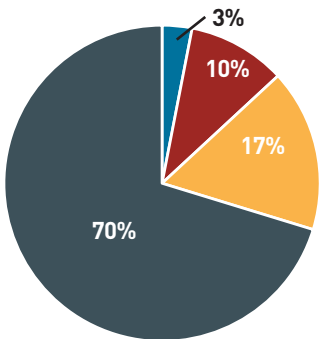
PHOTO: NEWS ØRESUND

MORE THAN HALF OF THE COMPANIES ARE SMALL – BUT ALMOST THREE OUT OF FOUR EMPLOYEES ARE AT LARGE COMPANIES

Number of companies in order of company size



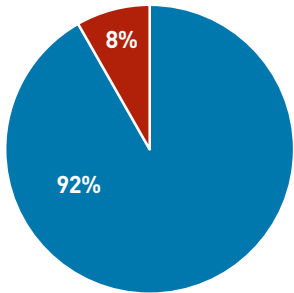
Number of employees in order of company size



Source: Statistics Sweden, Statistics Denmark, Bisnode, Central Business Register, and data from the companies.

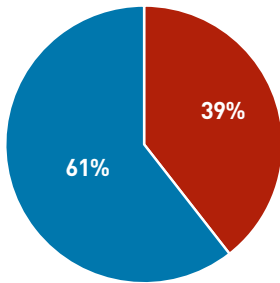
92% WORK IN TRADITIONAL LIFE SCIENCE

Number of employees in traditional life science versus new sectors* in Medicon Valley



39% ARE LINKED TO SCIENCE PARKS AND INCUBATORS

Share of companies that are or were at some point located in science parks in Medicon Valley



*'New sectors' refers to the subsectors ICT/healthtech, foodtech and other. 'Traditional life science' refers to the subsectors pharma, biotech, medtech, CRO and CMO. Source: Statistics Denmark, Bisnode, Central Business Register, and data from the companies.

38 COMPANIES WITH MORE THAN 250 EMPLOYEES REGIONALLY IN MEDICON VALLEY

Company	Municipality HQ	Subsector	Employees in Medicon Valley 2016/2017	Employees in Medicon Valley 2021/2022
Novo Nordisk A/S	Gladsaxe	Pharma	16 000	18 300
Novozymes A/S	Gladsaxe	Biotech	2 600	2 800
LEO Pharma A/S	Ballerup	Pharma	2 100	2 000
Demant A/S	Egedal	Medtech	1 500	1 800
Chr. Hansen A/S	Rudersdal	Biotech	1 500	1 800
H. Lundbeck A/S	Copenhagen	Pharma	1 600	1 700
Coloplast A/S	Fredensborg	Medtech	1 200	1 400
Radiometer Medical ApS	Copenhagen	Medtech	1 000	1 200
WS Audiology A/S	Allerød	Medtech	800	1 100
Fujifilm Diosynth Biotechnologies ApS	Hillerød	CDMO	800	1 000
GN Hearing	Ballerup	Medtech	550	900
NNE A/S	Lyngby-Taarbæk	Other	900	900
McNeil AB	Helsingborg	Pharma	800	850
ALK-Abelló A/S	Rudersdal	Pharma	750	800
William Cook Europe ApS	Køge	Medtech	800	800
Agilent Technologies Denmark ApS	Glostrup	Medtech	500	700
Xellia Pharmaceuticals ApS	Copenhagen	Pharma	500	700
AGC Biologics A/S	Gladsaxe	CDMO	200	700
AJ Vaccines A/S	Copenhagen	Pharma	600	600
Ferring Pharmaceuticals A/S	Tårnby	Pharma	550	600
Nomeco A/S	Copenhagen	Pharma	450	550
ConvaTec (Unomedical)	Gladsaxe	Medtech	300	550
Bavarian Nordic A/S	Gentofte	Pharma	250	500
Thermo Fisher Diagnostics ApS	Roskilde	Medtech	500	500
Ambu A/S	Ballerup	Medtech	200	450
Nolato AB (Medical Solutions)	Båstad	Medtech	350	450
3Shape A/S	Copenhagen	Healthtech	250	400
CP Kelco ApS	Køge	Foodtech	400	400
Genmab A/S	Copenhagen	Biotech	100	350
Ascendis Pharma A/S	Gentofte	Biotech	50	300
Sever Pharma Solutions (QPharma AB)	Malmö	CDMO	150	300
PolyPeptide Laboratories AB	Malmö	CDMO	200	300
TePe Munhygienprodukter AB	Malmö	Medtech	200	300
Roche Denmark	Copenhagen	Pharma	300	300
BK Medical ApS	Herlev	Medtech	150	300
Abacus Medicine A/S	Copenhagen	Pharma	100	250
HemoCue AB	Ängelholm	Medtech	250	250
Ferrosan Medical Devices A/S	Gladsaxe	Medtech	150	250

Beacon companies with more than 250 employees in Medicon Valley are employing increasing numbers of people, and the number of life science companies in that category is also growing. These companies are important for the economy of the Øresund Region, the growth of the sector, and for competence exchange between large companies and startups across the region.

38 BEACONS IN MEDICON VALLEY

38 beacon companies with over 250 employees in the region were identified in Medicon Valley.



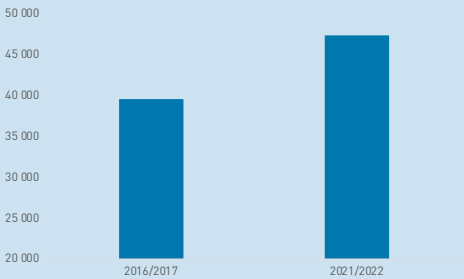
THE BEACON COMPANIES IN MEDICON VALLEY EMPLOY:

47 500

Together, the 38 beacon companies in Medicon Valley employ around 47 500 people regionally. Five years ago, the same companies employed around 39 500 in the region. That is an increase of ca 8 000 new jobs in the region since 2017, corresponding to approximately 20% employment growth. In total, more than 12 000 new jobs have been created in Medicon Valley over the past five years.

FIVE YEARS, 8 000 MORE EMPLOYEES

Employment development in the beacon companies



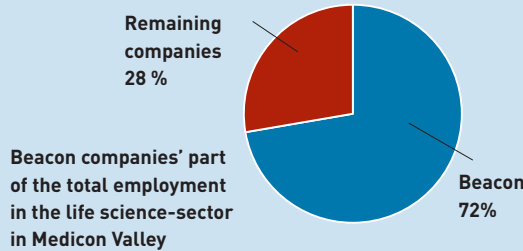
Source: Statistics Sweden, Statistics Denmark, Bisnode, Central Business Register, and data from the companies. The number of employees is rounded off. Please note that these figures may have changed since they were reported, and that some companies were only able to supply figures from 2018 and 2019. The definition of 'beacon' and thus a 'large' company is based on the EU's defining framework for micro-companies (0-9 employees), small companies (10-49 companies), medium-sized companies (50-249 employees) and large companies (> 250 employees).



NOVO NORDISK IS BIGGEST. The largest beacon company in eastern Denmark and all of Medicon Valley is the global diabetes concern Novo Nordisk, which employs around 18 200 people in Zealand and about 100 people in the Swedish offices in Malmö. Other beacon companies in eastern Denmark include Novozymes, LEO Pharma, Lundbeck, Radiometer Medical, Coloplast and the three hearing aid manufacturers Demant, WS Audiology, and GN Hearing.

72% of total employment

The 38 beacon companies identified are responsible for 72% of the total employment of around 65 500 employees in the life science-sector in Medicon Valley.

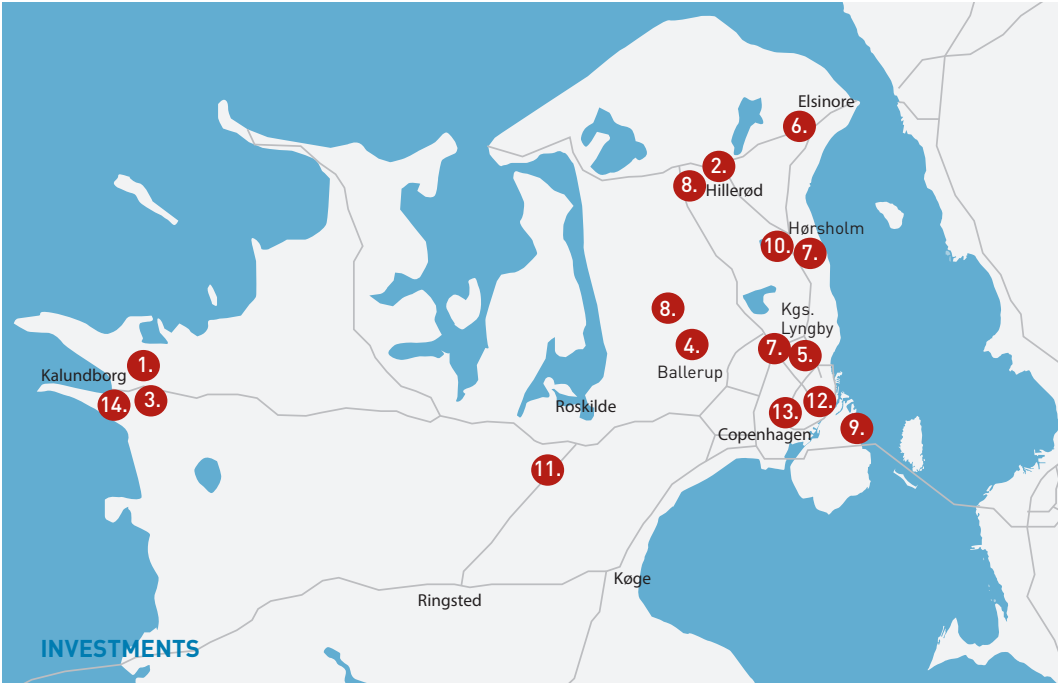


Beacon companies' part of the total employment in the life science-sector in Medicon Valley

In Medicon Valley, companies such as e.g. Zealand Pharma, Klifo, Dansac, Arjo, Atos Medical and Rechon Life Science are approaching the 'large company' category.

LIFE SCIENCE COMPANIES EXPAND FOR OVER 45BN DKK – THOUSANDS OF NEW JOBS EXPECTED

The life science sector in Medicon Valley has seen significant investment capacity, employment growth, and belief in the future in recent years. This is apparent in various ways, including that life science companies on the Danish side of Medicon Valley alone are investing more than DKK 45bn in expanding their production plants, research facilities, and/or offices and domiciles regionally. The pharmaceutical company Novo Nordisk and the contract manufacturer Fujifilm Diosynth Biotechnologies are carrying out the largest investments in their facilities. More than 4 000 new jobs alone i den danske del af Medicon Valley are expected to be generated through the investments. Grants from e.g. private foundations and government support also benefit shared infrastructure in the region such as new motorways and new research centres, and hospitals. On the Swedish side of Medicon Valley, Denmark and Sweden are both investing in e.g. European Spallation Source (ESS), while private companies are scaling up their facilities.



1 200 000

m2 is the size of Novo Nordisk’s existing plant in Kalundborg. It is the largest production facility in Medicon Valley, and it will be under expansion until 2027

36

bn DKK is Novo Nordisk’s investment in the plant in Kalundborg between 2000-2027

PHOTO: NOVO NORDISK

CURRENT AND UPCOMING INVESTMENTS IN EASTERN DENMARK + 45BN DKK IN NEW PLANTS, R&D AND OFFICES CREATE +4 000 NEW JOBS

NUM-BER ON MAP	COMPANY	TYPE OF INVESTMENT	CITY	SUM	NEW JOBS CREATED REGIONALLY
1.	Novo Nordisk	Four new plants and expansion of existing production facility – expected completion in 2023/2027.	Kalundborg	18bn DKK	420*
2.	Fujifilm Diosynth Biotechnologies	Plant expansion, 19 400 m2 – expected completion in 2023. In June 2022, the company received permission to expand the plant by 73 000 m2 and will invest an additional DKK 11bn in the facility.	Hillerød	17bn DKK	750
3.	Chr. Hansen	Taking over and revamping of a 175 000m2 plant – expected completion in 2023/2024.	Kalundborg	1.5bn DKK	150-200
4.	LEO Pharma	New plant, ca 6 000m2 – expected completion in 2023.	Ballerup	1.5bn DKK	-
5.	AGC Biologics	New plant, 19 000m2 – expected completion in 2023.	Søborg	1.2bn DKK	250-300
6.	Bavarian Nordic	Plant expansion to bring total production area to 4 700m2 – double what it was in 2018 – expected completion in 2022.	Kvistgård	1bn DKK	200
7.	DTU Science Park	New lab buildings with 18 000m2 and a new 27.000 m2 science park building – expected completion in 2024/2025.	Kgs. Lyngby and Hørsholm	1bn DKK	800
8.	Novo Nordisk	Plant expansions of 5000m2 – expected completion in 2022.	Hillerød and Måløv	1bn DKK	-
9.	Ferring Pharmaceuticals	New Danish headquarters and global R&D-centre, 37 500m2 – completion in 2022.	Kastrup	1bn DKK	150
10.	Chr. Hansen	Expansion of headquarters and R&D facilities, 15 000m2 – expected completion in 2022.	Hørsholm	412mn DKK	250
11.	ConvaTec	Plant expansion, 3 000m2 – expected completion in 2022.	Osted	200mn DKK**	-
12.	Symbion/COBIS	New 12 000 m2 office- and lab building – expected completion in 2023.	København	35-40mn DKK	600
13.	Genmab	New global headquarters, 12 500m2 – expected completion in 2023.	Valby	-	350
14.	Remilk	New plant, ca 72 000m2 site – expected completion in 2023/2024.	Kalundborg	-	100

+45bn DKK + 4000 jobs

Source: Internal research and information supplied by the companies via contact, press releases, etc. *Novo Nordisk expects a further 2 500 external employees to be engaged in the plant expansions, but these 2 500 external employees are not included in the count. **ConvaTec’s board decided in May 2021 to invest ca 30m USD in plant expansions in Osted, Denmark, and Reynosa, Mexico.

The world’s largest neutron facility is being built on the Swedish side of Medicon Valley

The multidisciplinary neutron facility European Spallation Source (ESS), whose data centre is in Copenhagen, is currently under construction in Lund. It is expected to be fully operational in 2027. The ESS facility will be the world’s largest and most advanced neutron source. Denmark and Sweden are the host

PHOTO: ROGER ERIKSSON/ESS

countries for the European research institutions, the total construction costs for which are around 2bn EUR, or approximately 15bn DKK. Around 3000 researchers are expected to work at the facility annually.

Examples of current investments in facilities in the Swedish part of Medicon Valley: PolyPeptide Laboratories (Malmö), Bioglan (Malmö), McNeil (Helsingborg) and BioGaia (Eslöv).

RECRUITMENT NEEDS FOR MEDICON VALLEY COMPANIES ARE PRIMARILY IN R&D AND SALES

Regardless of their subsector, most life science companies in Medicon Valley cite R&D as the most relevant expertise to recruit if they are able to augment their staff in the coming years. Expertise in sales is cited as the second-most important area, both in eastern Denmark and in Skåne. Commercial and regulatory expertise and IT and tech competences are also in demand in the sector. Competence needs are linked to the STEM subjects (Science, Technology, Engineering and Mathematics) on the whole.

COMPANIES PLAN TO RECRUIT MOSTLY IN R&D

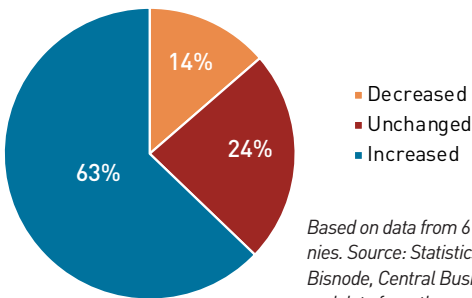
Area for recruitment	Number of companies
R&D	99
Sales	83
Marketing	51
Laboratory	49
Regulatory Affairs	45
Production	40
IT and Technology	38
Economy	29
Storage and logistics	27
Business Development	24*
Communication	21
Human Resources	20
Distribution	16
Law	12

Source: Questionnaire with ca. 50 respondents from life science companies in eastern Denmark and 126 respondents from life science companies in Skåne. Responses in multiple categories were possible.
*This response option was only available in the Danish questionnaire.



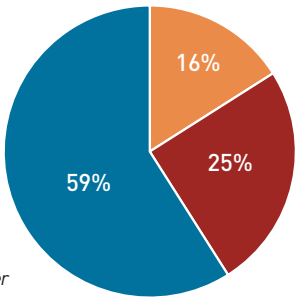
CHANGE IN THE COMPANIES' EMPLOYEE NUMBERS IN FIVE YEARS

Eastern Denmark, 2017-2022



Based on data from 616 companies. Source: Statistics Denmark, Bisnode, Central Business Register and data from the companies.

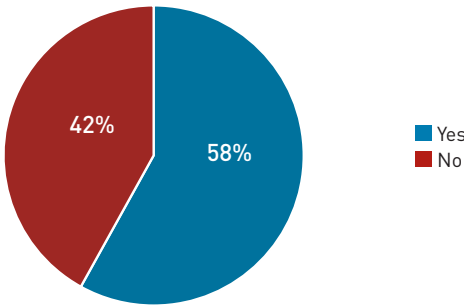
Skåne, 2015-2020



Based on data from 402 companies. Source: Bisnode, data from the companies

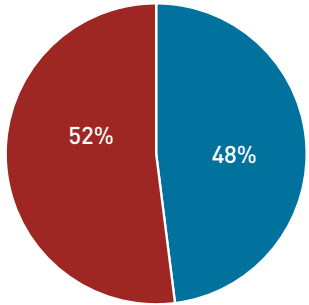
IT IS DIFFICULT TO RECRUIT SPECIFIC EXPERTISE?

Eastern Denmark



Based on survey responses from 62 companies in 2021-2022.

Skåne



Based on survey responses from 138 companies in 2020.

Slightly greater recruitment needs at life science companies on the Danish side of the Øresund

Around 58% of the ca 50 businesses in eastern Denmark interviewed reported that they have experienced difficulties recruiting specific expertise. Slightly fewer, 48%, of the businesses in Skåne interviewed had experienced the same.

Companies in Eastern Denmark report that expertise in regulatory affairs and quality assurance, as well as technicians, production specialists and engineers,

natural science researchers and people with IT- and digital expertise are difficult to recruit. In Skåne, the areas of expertise for which life science companies consider it difficult to recruit are predominantly related to the STEM programmes (Science, Technology, Engineering and Mathematics). Companies report that expertise in regulatory affairs and quality assurance, as well as in sales and marketing, also pose a recruitment challenge.

10 recommendations from the sector

1. More STEM master's graduates are vital
2. Strengthen vocational education on offer, especially for process operators
3. Educational programmes and courses in regulatory affairs and quality assurance are vital for sector
4. Strengthen automation- and digitalisation expertise
5. Create transdisciplinary programmes that combine clinical and technical disciplines (eastern Denmark) or sales, marketing and entrepreneurship with life science expertise (Skåne)
6. Give university graduates more practical experience and industry contact
7. Establish a learning- and development centre for students and the industry
8. Boost continuing education opportunities
9. Skåne: Strengthen pharmacy expertise
10. Eastern Denmark: Establish a master's programme for pharmaceutical engineering

DO TRAINING AND EDUCATION CORRESPOND WELL TO THE DEMAND FOR EXPERTISE?

YES ≈ 75%

NO ≈ 25%

76% of the 58 businesses in eastern Denmark interviewed reported that training and education correspond well to the demand for expertise. Slightly fewer, around 74%, of the 120 businesses in Skåne interviewed had experienced the same.

16 MUNICIPALITIES CENTRE OF LIFE SCIENCE SECTOR IN MEDICON VALLEY

More than 1 000 employees work in private life science companies in 16 municipalities in the Danish-Swedish Medicon Valley. These municipalities are particularly important for the life science sector in the region, as around 86% of the ca 65 500 people employed regionally work in a company located in one of these 16 municipalities. Gladsaxe Municipality, Copenhagen Municipality, and Ballerup Municipality are the three largest life science municipalities – not only in eastern Denmark, but in all of Medicon Valley. Malmö Municipality, Lund Municipality, and Helsingborg Municipality are the largest life science municipalities on the Swedish side of Medicon Valley.

EASTERN DENMARK



PHOTO: NOVO NORDISK

GLADSAXE

Number of companies 2021/2022: 31
Number of new companies since 2017: 4
Number of employees 2021/2022: 9 995
New jobs since 2017: 1 745 (21%)
Subsector with most employees: Pharma
Most important life science city in the municipality: Bagsværd, Søborg
Largest companies (number of employees in municipality): Novo Nordisk (7 300), Novozymes (1 100), AGC Biologics (674), Ferrosan Medical Devices (233), Zealand Pharma (131) og ConvaTec (100)



PHOTO: NEWS ØRESUND

COPENHAGEN

Number of companies 2021/2022: 272
Number of new companies since 2017: 134

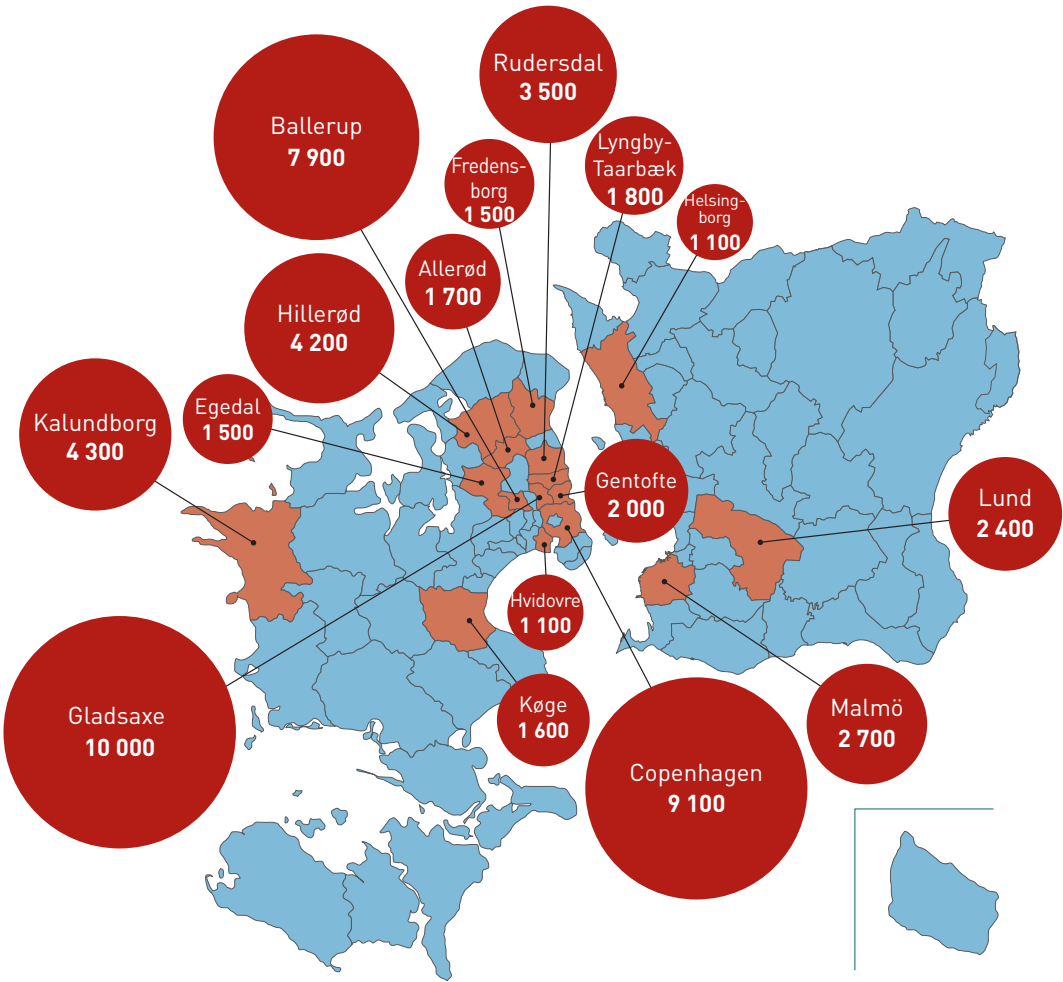
Number of employees 2021/2022: 9 126
New jobs since 2017: 2 155 (31%)
Subsector with most employees: Pharma
Most important life science city in the municipality: Copenhagen, Valby
Largest companies (number of employees in the municipality): Lundbeck (1 500), Radiometer Medical (1 300), Xellia Pharmaceuticals (700), AJ Vaccines (600), 3Shape (400), Nomeco (350) Genmab (300), Abacus Medicine (250)



PHOTO: NEWS ØRESUND

BALLERUP

Number of companies 2021/2022: 33
Number of new companies since 2017: 6
Number of employees 2021/2022: 7 854
New jobs since 2017: 1 560 (25%)
Subsector with most employees: Pharma
Most important life science city in the municipality: Ballerup, Måløv and Glostrup
Largest companies (number of employees in the municipality): Novo Nordisk (3 000), LEO Pharma (2 000), GN Hearing (900), Ambu (450)



SKÅNE



PHOTO: NEWS ØRESUND

MALMÖ

Number of companies 2015-2020: 116
Number of new companies 2015-2020: 19
Number of employees 2020: 2 700
New jobs 2015-2020: 900 (54%)
Subsector with most employees: CDMO

LUND

Number of companies 2015-2020: 225
Number of new companies 2015-2020: 64
Number of employees 2020: 2 400
New jobs 2015-2020: 400 (21%)
Subsector with most employees: Medtech

HELSINGBORG*

Number of companies 2015-2020: 36
Number of new companies 2015-2020: 2
Number of employees 2020: 1 100
New jobs 2015-2020: 100 (11%)
Subsector with most employees: Pharma
* The city of Helsingborg, not northwest Skåne on the whole

9 SCIENCE PARKS AND STARTUP ENVIRONMENTS IN MEDICON VALLEY

In Medicon Valley, there are nine science parks and startup environments entirely or partially dedicated to life science. In Skåne, the actors are Medeon, Medicon Village, Smile, Ideon and Krinova. In eastern Denmark, they are DTU Science Park, Cobis, Symbion and BioInnovation Institute. Altogether, there are 2 000 companies and 24 000 employees at these locations.

PHOTO: NEWS ØRESUND



1. DTU SCIENCE PARK

Founded: 2004

Number of companies: 300*

Number of employees at the locations: 4 300*

Location: Hørsholm and Lyngby

Focus: Deep tech, life science, biotech and med-tech comprise around 40% of the science park

PHOTO: NEWS ØRESUND



2. COBIS BY SYMBION

Founded: 2009

Number of companies inkl. BII's projects: 130

Number of employees at the location: 800

Location: Copenhagen

Focus: Life science, early & later-stage companies

PHOTO: NEWS ØRESUND



3. BIOINNOVATION INSTITUTE

Founded: 2018. BioInnovation Institute Foundation (BII) was established as a commercial foundation with a non-profit purpose in December 2020

Number of companies incubated: 70

Number of employees at the location: 150-200

Location: Copenhagen

Focus: Therapeutics, bioindustrials and healthtech

PHOTO: NEWS ØRESUND



4. SYMBION COMMUNITY

Founded: 1986

Number of companies: +650*

Number of employees at the locations: 3 000*

Location: Copenhagen (main facility in Østerbro, and five other locations, including e.g. the University of Copenhagen's Søndre Campus)

Focus: Life science, foodtech, medtech, hardware/makerspace and SaaS (Software as a Service)

5. KRINOVA INCUBATOR & SCIENCE PARK

Founded: 1999

Number of companies: 100*

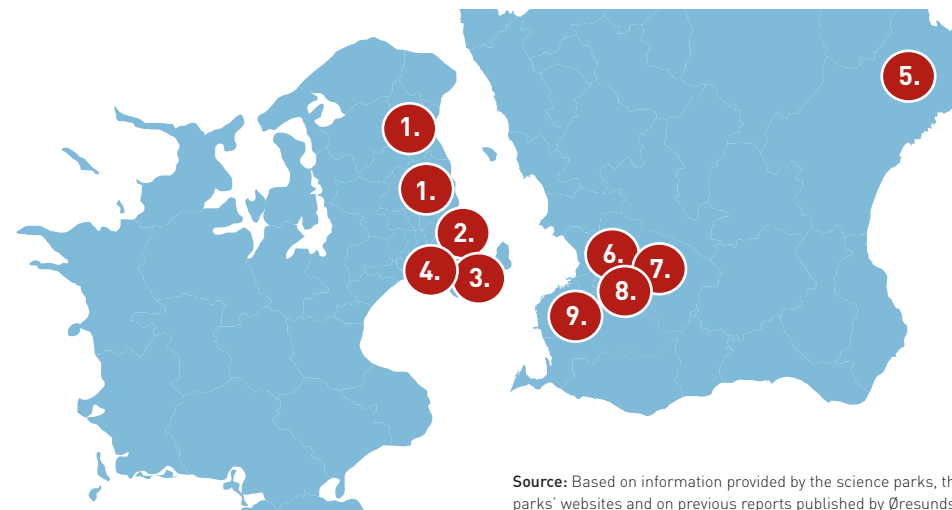
Number of employees at the locations:

350*

Location: Kristianstad

Focus: Food

PHOTO: NEWS ØRESUND



Source: Based on information provided by the science parks, the science parks' websites and on previous reports published by ØresundsInstitutet.

* The organisation is not exclusively dedicated to the life sciences.

PHOTO: NEWS ØRESUND



6. IDEON

Founded: 1983

Number of companies: 400*

Number of employees at the locations: 10 000*

Location: Lund

Focus: Healthtech/medtech and some biotech. 30% of the companies are active in the life sciences

PHOTO: NEWS ØRESUND



7. MEDICON VILLAGE

Founded: 2012

Number of companies: 180 *

Number of employees at the locations: 2 500 *

Location: Lund

Focus: Pharmaceuticals, medtech, and biotech
* from 1 January 2023

PHOTO: NEWS ØRESUND



8. SMILE

Founded: 2007

Number of companies: 30 *

Number of employees at the locations: 150 *

Location: Lund

Focus: Biotech, pharma, medtech, and e-health

* Included in Medicon Village figures

PHOTO: NEWS ØRESUND



9. MEDEON SCIENCE PARK & INCUBATOR

Founded: 2012

Number of companies: 180

Number of employees at the locations: 2 800

Location: Malmö

Focus: Pharma, medtech, biotech, and health care

DIABETES, CANCER, AND FERTILITY ARE AMONG MEDICON VALLEY'S RESEARCH STRENGTHS

The Øresund Region's Medicon Valley cluster is Scandinavia's largest life science cluster. The region's common research strengths are in diabetes, cancer, fertility and more, and globally leading companies and universities are active in those fields. Denmark and Sweden work across the Øresund to build highly advanced research facilities, and Danish and Sweden investment companies join together to fund new ideas. Innovation and new startups take shape at universities and science parks in Medicon Valley, and more than 900 border commuters cross the Øresund for their work, bringing together Danish and Swedish expertise.

One of Medicon Valley's shared Danish-Swedish strengths is that Zealand and Skåne both conduct globally leading research in diabetes, fertility and cancer. Research is carried out commercially via beacon companies such as Novo Nordisk, Ferring Pharmaceuticals and Genmab, as well as at universities, where the researchers further boost the region's scientific strong points. We received data for this analysis from hospitals and universities (The only

data from the University of Copenhagen concerns the Center for Basic Metabolic Research (CBMR) and Biotech Research & Innovation Centre (BRIC), and reservation is made for the possibility that some researchers work at hospitals as well as universities regarding:

- Approx. 1 700 cancer researchers
- Approx. 1 000 diabetes researchers
- Approx. 150 reproductive researchers

12

universities and university colleges offer educations in the life sciences in Medicon Valley – 4 are in Skåne and 8 in Zealand.



PHOTO: NEWS ØRESUND



PHOTO: NEWS ØRESUND

NEARLY 120 EDUCATIONS IN SKÅNE ARE LINKED TO THE LIFE SCIENCES

More than half of the approx. 8 500 students in the life sciences in Skåne in 2020 (full-time students in study programmes) were in a programme in the field of health, e.g. medicine, nursing, or dentistry.

Other programmes targeted the life science sector more directly, for instance educations for biomedical analysis, chemical civil engineering, bioengineering, medicine and engineering, as well as master's programmes in e.g. Biomedical Surface Science, molecular biology and pharmaceutical technology.

A total of 115 educational programmes in the life sciences were offered in 2020. These included programmes focused more directly on the life science sector or healthcare, as well as programmes with some applications or potential careers in the life science sector and programmes that feature the life sciences.

In addition to the programme educations, the universities offer hundreds of single courses in the life sciences that are not included in the above figure.



PHOTO: NEWS ØRESUND

25 000 STUDY LIFE SCIENCE-RELATED PROGRAMMES IN EASTERN DENMARK

In 2021, a total of 24 767 students (full-time students) in eastern Denmark were enrolled in programmes that will probably lead to a career in the life science- or health sector; 10 516 studied programmes that either involve some applications related to the life science sector and/or might lead to a career in the sector, and 2 361 people were in programmes in which life science is part of the study programme, although it is less probable that they will work in the life science sector.

Numerous new educational programmes have been established in recent years in response to requests from the life science sector, for example Bachelor and Master programmes in Medicine and Technology, offered jointly by DTU, the University of Copenhagen, and Rigshospitalet, and the two Bachelor of Engineering programmes in Biotechnology and Mechanical Engineering offered by the University College Absalon in Kalundborg.

Other programmes are underway, e.g., a Bachelor in Bioinformatics at the University of Copenhagen.

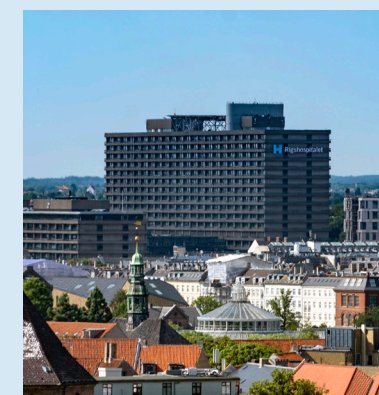


PHOTO: NEWS ØRESUND

RICH TRANS-ØRESUND LINKS IN THE LIFE SCIENCE SECTOR

With border commuters, capital raising, investments, and research collaborations, trans-Øresund contact in the life science sector is extensive. Multiple Swedish life science actors have been increasing their business activity in the Copenhagen area in recent years, and Danish life science companies continue to seek out the stock market in Sweden. Highly educated employees from Sweden thus benefit the life science sector in eastern Denmark, as many of the leading companies have Swedish employees.

900

More than 900 Danish-Swedish border commuters were identified in Medicon Valley in Øresundsinstitutet's survey between 2020-2021*

800 BORDER COMMUTERS FROM SWEDEN
At least 800 border commuters from Sweden were identified as working in life science companies in eastern Denmark; for example, approx. 200 commuters from Sweden work at Novo Nordisk on the Danish side of the Øresund.



PHOTO: NEWS ØRESUND

100 BORDER COMMUTERS FROM DENMARK
At least 100 border commuters from Denmark were identified as working in life science companies in Skåne. Most of the sector's commuters travel from Sweden to Denmark.

*The figures are based on the report *Life Science Across the Øresund*, published by Øresundsinstitutet in June 2021.

Examples of life science companies in Zealand with border commuters from Sweden	Subsector	Number of employees in Zealand	Number of border commuters from Sweden
Novo Nordisk A/S	Pharma	16 800	206
Ferring Pharmaceuticals A/S	Pharma	580	110
LEO Pharma A/S	Biotech	2 100	66
H. Lundbeck A/S	Pharma	1 700	40-45
Coloplast A/S	Medtech	1 300	31
Chr. Hansen A/S	Biotech	1 800	29
Demant A/S	Medtech	1 800	25
AGC Biologics A/S	CDMO	670	22
Genmab A/S	Biotech	210	20
GN Hearing A/S	Medtech	630	15
Xellia Pharmaceuticals A/S	Biotech	690	15
WS Audiology A/S	Medtech	1 000	13
Radiometer Medical A/S	Medtech	1 200	13
Zealand Pharma A/S	Biotech	230	13



PHOTO: POLYPEPTIDE

+20

At least 20 Danish CEOs/managing directors work in large, medium-sized and small life science companies in Skåne. The number of Danish directors has risen since 2017. One of them is Dane Jens Fricke, CEO of PolyPeptide Laboratories in Malmö.

14 DANISH COMPANIES HAVE LISTED IN SWEDEN SINCE 2014, 13 THEREOF ARE STILL LISTED

Company name	Subsector	Exchange/marketplace	HQ site	Listing date	Capital approx. raised at IPO
Saniona AB*	Biotech/pharma	Nasdaq	Glostrup	2014	17 mn SEK
Allarity Therapeutics A/S (formerly Oncology Venture A/S)*	Biotech/pharma	Nasdaq	Hørsholm	2015	20 mn SEK
Neuvolution (delisting)†	Biotech/pharma	Nasdaq		2015	250 mn SEK
RhoVac AB	Biotech/pharma	Spotlight Stock Market	Lund/Hørsholm	2016	20 mn SEK
Expres2ion Biotech Holding AB	Biotech/pharma	Nasdaq	Hørsholm	2016	18 mn SEK
Acarix AB	Medtech	Nasdaq	Malmö/Hellerup	2016	125 mn SEK
SynAct Pharma AB	Biotech/pharma	Spotlight Stock Market	Lund/Holte	2016	32 mn SEK
2curex AB	Biotech/pharma	Nasdaq	Copenhagen	2017	18 mn SEK
Initiator Pharma	Biotech/pharma	Spotlight Stock Market	Copenhagen	2017	20 mn SEK
Scandion Oncology A/S*	Biotech/pharma	Nasdaq	Copenhagen	2018	26 mn SEK
FluoGuide A/S*	Biotech/pharma	Nasdaq	Copenhagen	2019	22 mn SEK
Qlife Holding AB	Healthtech	Nasdaq	Helsingborg/Ballerup	2020	55 mn SEK
DanCann Pharma A/S	Biotech/pharma	Spotlight Stock Market	Ansager	2020	42 mn SEK
CS Medica A/S	Medtech	Spotlight Stock Market	Copenhagen	2021	30 mn SEK

695 mn SEK

Source: Nasdaq, Spotlight Stock Market, Nordic Growth Market and information from the companies. The figures in the above table for capital raised with an IPO are rounded off. Capital raised with later emissions is not included. Note that even if the companies are classified as Danish companies, some have partial headquarters in Skåne.†Neuvolution was sold to Amgen for 1.6bn SEK in 2019. *Saniona, FluoGuide, Scandion Oncology and Allarity Therapeutics were originally listed on Spotlight Stock Market but have moved to Nasdaq Stockholm.



PHOTO: NEWS ØRESUND

EXAMPLE OF SWEDISH FINANCIAL ACTORS WITH INVESTMENTS IN EASTERN DENMARK

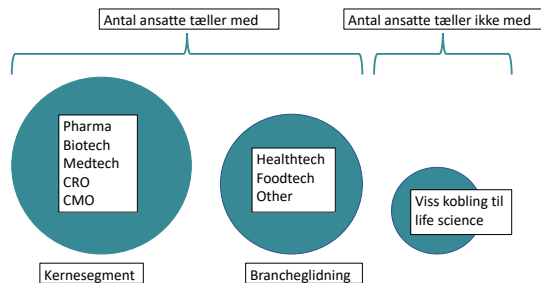
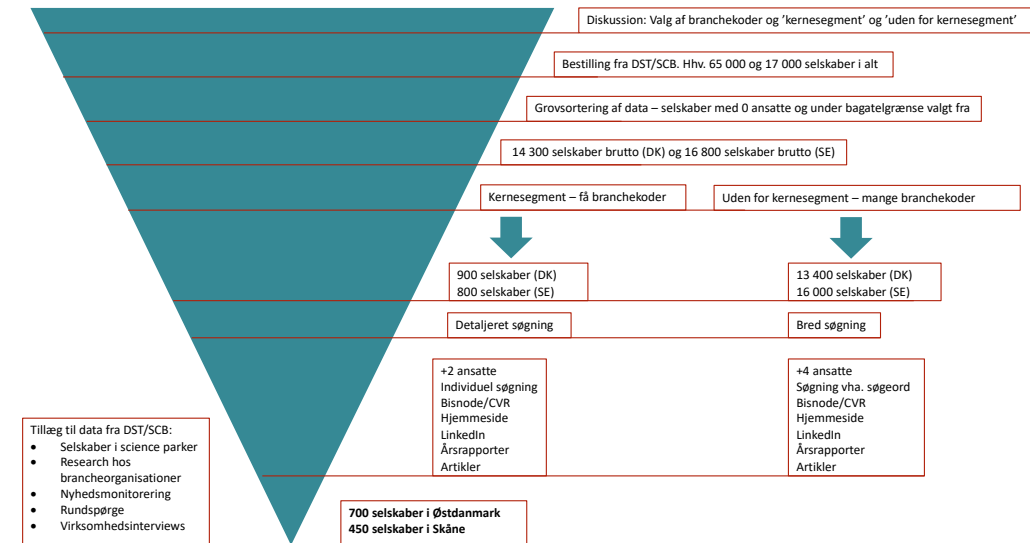
Investor	Company	Votes and capital
EQT	Ellab A/S, Hillerød	Majority shareholder
EQT	WS Audiology A/S, Lyngø	49% – second largest shareholder
Impilo	Scantox A/S, Lille Skensved	Majority shareholder
Impilo	Ferrosan Medical Devices A/S, Søborg	Majority shareholder
HealthCap	Hemab ApS, Copenhagen	Minority shareholder
HealthCap	Adcendo ApS, Copenhagen	Minority shareholder
Linc AB	FluoGuide A/S, Copenhagen	7,7% – third largest shareholder
Industrifonden	MinervaX A/S, Copenhagen	Minority shareholder
Nordic Capital*	LEO Pharma A/S, Ballerup	Minority shareholder

Sources: Companies' annual reports, press releases, reports in the press, information on company websites and information from the companies themselves. Please note that these figures may have changed since they were reported. *Nordic Capital operates globally, but its largest offices are in Stockholm.

METHOD

There is no established statistic definition that encompasses the entire life science sector. The sector comprises businesses that manufacture molecules, pills, apps, hospital beds and much more. The many scientific disciplines and areas of focus on e.g. disease extend into a multitude of subject areas, making it difficult to apprehend the sector as a whole. The reports have been prepared in order to depict the cluster in Medicon Valley more comprehensively, using the methodology described below and in each of the reports within the project. The principal foundation of the analysis is a broad extraction of data delivered by Statistics Denmark and Statistics Sweden; this was reviewed and supplemented with additional quantitative and qualitative information to render the most complete representation possible.

More information on the statistics and method used in the survey over Medicon Valley's life science companies is available in earlier reports from the project. Read more about them on the next page.



REPORTS



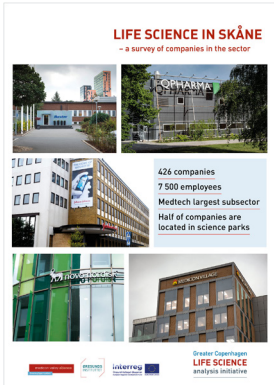
Life science in Medicon Valley
[This report](#)



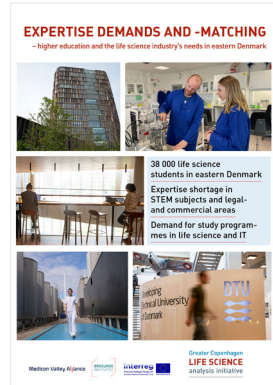
Life science in Eastern Denmark
[Read the report here](#)



Life science in Skåne
[Read the report here](#)



Life science across the Øresund
[Read the report here](#)



Expertise demands and -matching in Eastern Denmark
[Read the report here](#)



Expertise demands and -matching in Skåne
[Read the report here](#)



GREATER COPENHAGEN LIFE SCIENCE ANALYSIS INITIATIVE was an EU-project aimed at increasing knowledge about the region's life science cluster Medicon Valley. The focus was on the demand for labourers, future expertise needs, and more. The project received funding through the EU-programme Interreg Öresund-Kattegat-Skagerrak and ended on 30 June 2022. The project's lead partner was Medicon Valley Alliance, and Øresundsinstittet was partner.



PHOTO: NOVO NORDISK

ØRESUNDSINSTITUTTET

Øi is an independent Danish-Swedish centre for analytics and information that brings together more than 100 actors from the industry, the public sector and academic institutions with the aim of strengthening knowledge about societal developments on both sides of the Øresund Strait. As a member of ØresundsInstitutet, you become part of our strong Danish-Swedish network – and gain access to network meetings, facts, analyses and news about developments in the Greater Copenhagen region.
www.oresundsinstitutet.org

MEDICON VALLEY ALLIANCE

MVA is a Gold Label-certified, non-profit member organisation in the Danish-Swedish life science cluster Medicon Valley. Its 300 members include universities, hospitals, human life science businesses, regional governments and service providers that represent the Region's 'double triple-helix'. The activities in MVA focus on strengthening collaborations for a vibrant life science ecosystem in Medicon Valley through networking events and increased collaboration across borders and sectors.
www.mva.org

THE VISION

The vision is to be a well-known and respected member-driven contributor to the realisation and positioning of Medicon Valley as the most competitive and vital life science cluster in Northern Europe.

THE MISSION

MVA is committed to realising Medicon Valley's potential by facilitating networking, knowledge-sharing, and collaboration, analysing challenges and potentials, and mobilising support from key opinion leaders.

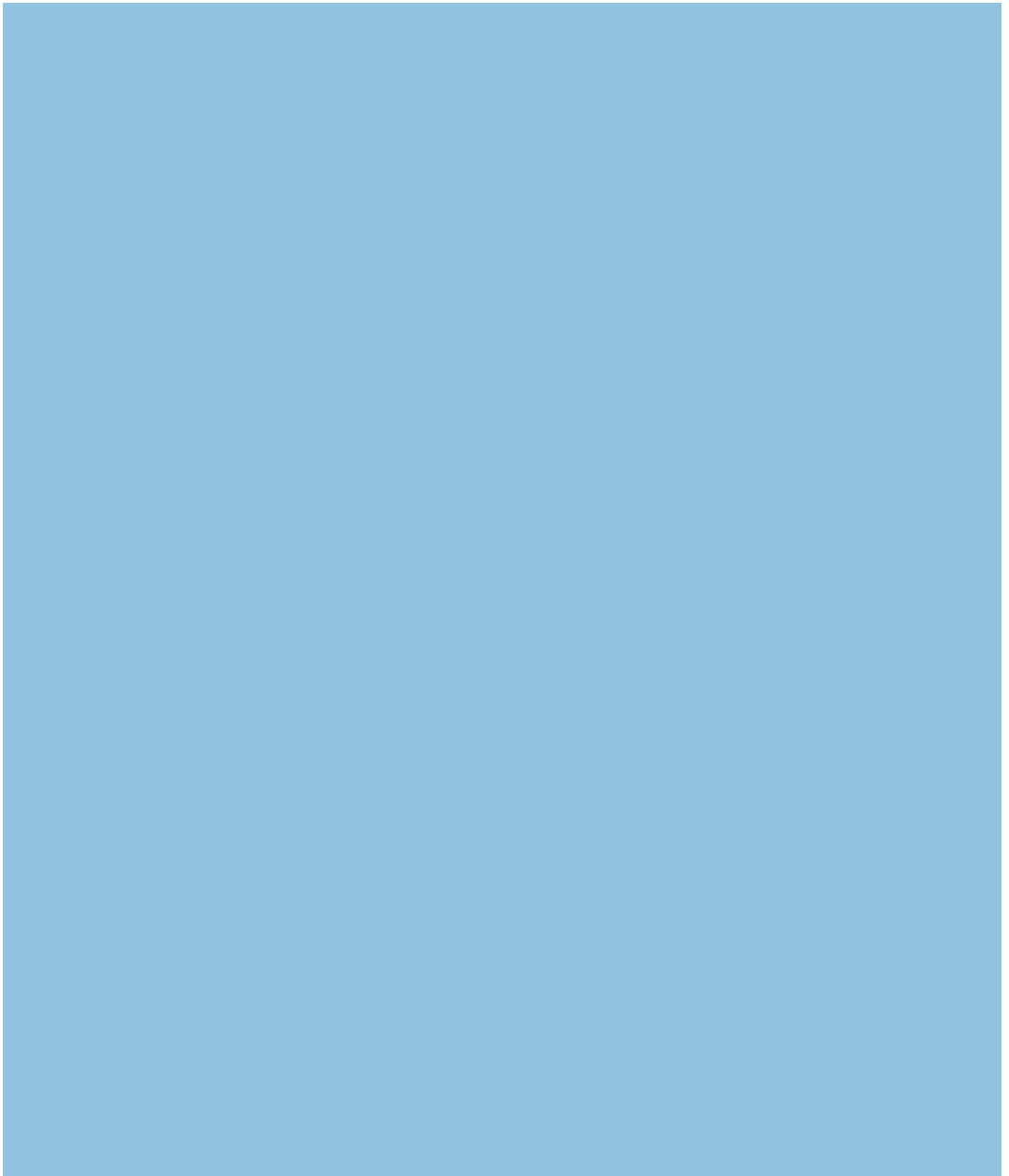
CALL TO ACTION

Read more about the Danish-Swedish life science cluster organisation Medicon Valley Alliance's events and activities on www.mva.org, where you can also find more information about how YOUR company can benefit from a membership.



Medicon Valley Alliance





Medicon Valley Alliance



Interreg
Øresund-Kattegat-Skagerrak
European Regional Development Fund



Greater Copenhagen
LIFE SCIENCE
analysis initiative