Appendices
Danish Diabetes Academy
Self-evaluation report 2018-2021



Table of contents

No	Title	Page
01	**Internal SWOT analysis of the Danish Diabetes Academy**	4
02	**External SWOT analysis of the Danish Diabetes Academy**	8
03	**Members of the Danish Diabetes Academy governing bodies**	32
	a. Board of Directors	33
	b. International Advisory Board	34
	c. National Advisory Forum	35
	d. Committee for Education	36
	e. Committee for Talent Development	37
04	**Curricula Vitae**	42
	a. Chair Allan Flyvbjerg	43
	b. Board member Lise Wogensen Bach	45
	c. Board member Kurt Højlund	47
	d. Managing Director Tore Christiansen	49
05	**Case story of the Danish Diabetes Academy Educational and Talent Development Activities by Sophia Metz**	51
06	**Terms of references for the Danish Diabetes Academy governing bodies**	53
	a. Board of Directors	54
	b. International Advisory Board	55
	d. Committee for Education	56
	e. Committee for Talent Development	57
07	**Overview of Danish Diabetes Academy governing bodies**	59
08	**Organisation and compositions of the Executive Management Team and the staff skill sets**	61
09	**Key collaborators of the Danish Diabetes Academy**	65
10	**Danish Diabetes Academy Educational and Talent Development Activities 2018-2021**	67
	a. Milestones of DDA Educational and Talent Development Activities 2018-2021	68
	b. Overview of DDA Educational and Talent Development Activities 2018-2021	69
	c. Participant outcome of DDA Educational and Talent Development Activities 2018-2021	80
11	**Case story of participant satisfaction and outcome of Danish Diabetes Academy Educational and Talent Development Activities by Malene R. Christiansen**	81

Table of contents

No	Title	Page
12	**Danish Diabetes Academy Networking and Collaboration Activities 2018-2021**	83
	a. Milestones of DDA Networking and Collaboration Activities 2018-2021	84
	B. Overview of DDA Networking and Collaboration Activities 2018-2021	85
	c. Participant outcome of DDA Networking and Collaboration Activities 2018-2021	90
	D. DDA Visiting Professors' outcome of their visiting professorship in terms of collaborations	92
13	**Case story of Danish Diabetes Academy Networking and Collaboration Activities 2018-2021 by Ingrid Willaing**	93
14	**Dialogue Report 2020 for the Danish Diabetes Academy**	96
15	**Danish Diabetes Academy Recruitment and Grant Activities 2018-2021**	119
	a. Milestones of DDA Recruitment and Grant Activities 2018-2021	120
	b. PhD scholarships	121
	c. Postdoc fellowships	129
	d. Visiting professorships	130
16	**Case story of Danish Diabetes Academy Recruitment and Grant Activities 2018-2021 by Peter Aldiss**	132
17	**Case story of Danish Diabetes Academy Recruitment and Grant Activities 2018-2021 by Lene Ring Madsen**	134
18	**Scientific Output of Danish Diabetes Academy**	136
19	**Case story of Danish Diabetes Academy Scientific Output by Annemarie Lundsgaard**	148
20	**Case story of Danish Diabetes Academy Scientific Output by Christoffer Rohde**	151
21	**Danish Diabetes Academy Outreach and Communication 2018-2021**	153
22	**Case story of Danish Diabetes Academy Outreach and Communication activities 2018-2021**	155
23	**Case story of Danish Diabetes Academy Outreach and Communication activities 2018-2021 by Jens Lund**	157
24	**Financial Overview**	159

Appendix 1

Internal SWOT analysis of the Danish Diabetes Academy

Internal SWOT Analysis of Danish Diabetes Academy

The Board of Directors, DDA bodies and Executive Management Team have performed an internal SWOT analysis of DDA organisation and DDA activities. This analysis is illustrated in *Figures A* and *B* and the key learnings are presented below. External consultants carried out an external SWOT analysis, which is presented in *Appendix 2*.

Key learnings

In summary, the SWOT analysis of the DDA organisation and activities revealed the following key learnings:

- DDA has a well-established and resilient organisation including an effective, agile, lean and competent Executive Management Team and eight years of management experience with running educational, networking and grant activities and ensuring high productivity, budget compliance and cost-effectiveness. However, the number of staff resources, in particular communications resources, are relatively low and impedes the team's ability to achieve the high ambitions of DDA and ensure continuous progress, innovation and outreach.

- DDA already includes early-career researchers and representatives from the life science industry in the governing bodies and for the organisation of the DDA activities. Yet, there is an unreleased potential to include even more early-career researchers, representatives from the life science industry, NGOs or individuals with diabetes in the governing bodies or for the organisation of the DDA activities. This would help DDA further exploit the opportunities for involving users and stakeholders and listening to the needs and demands of these.

- DDA provides highly-profiled and high-quality educational activities in collaboration with academia, university hospitals and the life science industry. Nonetheless, DDA could potentially include other scientific areas within diabetes or multidisciplinary research disciplines as topics for the educational activities and expand the online activities, harnessing the potentials of digitalisation.

- DDA has a well-established platform (international peer review process) for granting PhD scholarships, postdoc fellowships and visiting professorships, but there are few hard data collected to prove the societal impact of the existence of DDA in diabetes research for the past eight years.

- DDA has well-established collaborations and networks with researchers at national research institutions, but DDA could seize the opportunities for establishing broader, stronger and more strategic collaborations with internationally recognized research institutions worldwide.

Figure A. SWOT analysis of DDA organisation

Internal

Strengths

- Well-established and resilient organisation
- An agile, lean and competent Executive Management Team and eight years of management experience with running educational, networking and grant activities and ensuring high productivity, budget compliance and cost-effectiveness
- Members of governing bodies represent universities, university hospitals and other relevant sectors/disciplines across Denmark
- All members of governing bodies are engaged and committed and have broad professional scientific knowledge
- Members of the Committee for Talent Development are solely international renowned experts (independent review)
- The inclusion of early-career researchers as members of governing bodies and for the organisation of activities

Weaknesses

- Low number of representatives from life sciences industry in governing bodies
- Still a relatively low number of early-career researchers included in governing bodies (including Board of Directors)
- No (or very little) representation of NGOs or individuals with diabetes in governing bodies or for the organisation of activities
- Size of advisory bodies (relatively many members) and that these are permanent bodies (less agile)
- Low remuneration of members of Committee for Talent Development
- Relatively low number of employees in Executive Management Team, in particular shortage of communications resources (vulnerability and lack of time to lift the potential for development and outreach)

External

Opportunities

- Include early-career researchers more in the governance of DDA to ensure the bottom-up approach
- Include more representatives from the life sciences industry in the governance of DDA and for the organisation of the activities to enhance collaborations with that sector
- Include end-users (people with diabetes) in the organisation of DDA activities to ensure relevance of research and activities

Threats

- DDA is solely depending on funding from the Novo Nordisk Foundation
- Researchers will not engage in (voluntarily) and support DDA as members of DDA governing bodies or for the organisation of activities

Figure B. SWOT analysis of DDA activities

Internal

Strengths

- National and international (mainly in Europe) recognition and support to DDA
- Well-established collaborations and networks with researchers at national research institutions
- Highly profiled and high-quality educational activities
- Established platform for networking among early-career (and senior) researchers (primarily) in Denmark, including an alumni network
- Well-established platform (international peer review process) for granting PhD scholarships, postdoctoral fellowships and visiting professorships.
- High variety in topics and research disciplines of applications for DDA grants
- Attraction of top international researchers to Denmark (DDA visiting professorships and speakers at DDA activities)
- Established collaboration with the Danish Diabetes Association.
- DDA funding to early-career researchers strengthens the entire food chain in Danish diabetes research.
- Exposure and visibility on social media

Weaknesses

- The collaboration in relation to educational, networking and grant activities with the life science industry has not met its potential for bridging academia, hospitals and life sciences industry.
- There are few hard data collected to prove the societal impact of the existence of DDA in diabetes research for the past eight years.
- Dependence of scientific leaders for the organisation of the scientific programmes of DDA activities. All work is done 'pro-bono'.

External

Opportunities

- Expand DDA to include other scientific areas within diabetes and multidisciplinary research disciplines with the purpose of ensuring knowledge sharing.
- Expand the collaboration with the Steno Diabetes Centers in Denmark.
- Establish collaborations with other adjacent Danish academies.
- Establish broader, stronger and more strategic collaborations with internationally recognized research institutions worldwide.
- Further establish networking between research fields and research disciplines.
- Increase public awareness and visibility
- Establish a connection between people with diabetes and early-career researchers
- Facilitate to mobility of DDA-funded researchers/applicants (cross-sectoral, inter-institutional and international).
- Pave the path for and support early-career researchers' with regard to enhancing their career opportunities and career development
- Expand the DDA online training portfolio

Threats

- Some types of diabetes are preventable and the volume of researchers engaged in the field decreases, i.e. no request for diabetes researchers by industry, academia, hospitals.
- The COVID-19 pandemic will continue and DDA will have a hard time continuously creating meaningful online networking and educational activities in the remaining funding period.
- Loss of interest from researchers due to the fact that DDA will allocate no grants in the next two years.

Appendix 2

External SWOT analysis of the Danish Diabetes Academy

External SWOT analysis of the Danish Diabetes Academy (DDA)

In addition to the internal SWOT analysis performed by DDA (*Appendix 1*), external consultants (Mobilize Strategy Consulting A/S) also carried out an external SWOT analysis to uncover the strategic potential of DDA.

To that end, Mobilize analysed two benchmark cases selected in collaboration between DDA and Mobilize, and conducted 10 personal interviews and two focus group interviews including a total of 10 participants. The participants for the interviews were suggested by DDA and included main stakeholders (users) of DDA, i.e. former and current DDA-funded researchers (PhD students, postdoc fellows and visiting professors), and secondary stakeholders (collaborators) from universities, university hospitals and the life science industry in Denmark and abroad, i.e. national and international speakers and organisers of DDA activities, national principal investigators of DDA-funded researchers and members of the DDA governing bodies. Questionnaires for the interviews were developed in collaboration between DDA and Mobilize, and Mobilize performed the interviews in March 2021. Finally, the analysis work, including the findings and conclusions of the qualitative analyses, were developed and presented in a final report by Mobilize.

The final report, containing results and conclusions of the external strategic evaluation performed by Mobilize, is included in this appendix.

Danish Diabetes Academy

External input to Self-evaluation 2021

Still a significant unleashed potential within the Danish diabetes sector

Purpose and structure of the report

The primary purpose of this report is to uncover the strategic potential of the Danish Diabetes Academy (DDA). To fulfil this purpose, the report aims to describe and analyse the various input that has been gathered throughout the DDA self-evaluation process, including selected benchmark cases, qualitative individual interviews and focus groups, quantitative questionnaires, and desktop research. These inputs are analysed with the objective of eliciting the future strategic potential of the DDA.

Fundamentally, the DDA may choose between two main roads/options to pursue, when it comes to the future potential of the organisation (see also figure 1). The two roads are labelled *further incremental potential* and *transformative strategic potential*. With this report it is our aim to help the DDA by recommending which of the two main roads is the best fit for the DDA in the current situation and thereby support DDA in making an informed decision about the future endeavours of the academy.

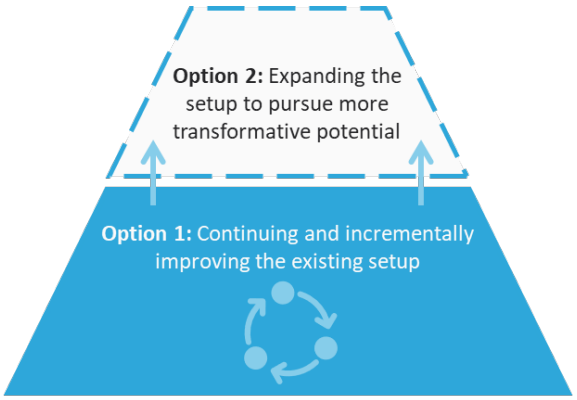


Figure 1: Illustration of the two options to pursue

This will take onset in analysis of the current strategic status of the DDA. Secondly, selected international benchmark cases will be briefly presented and analysed to highlight key learnings for the DDA going forward. Thirdly, some of the most important strategic dilemmas will be presented as a foundation for the following analysis of the qualitative empirical data that have been collected through two different methodological approaches (individual and focus group interviews). Lastly, we will summarise the most important results and recommendations and conclude on the main road that best unleashes the future strategic potential of the DDA.

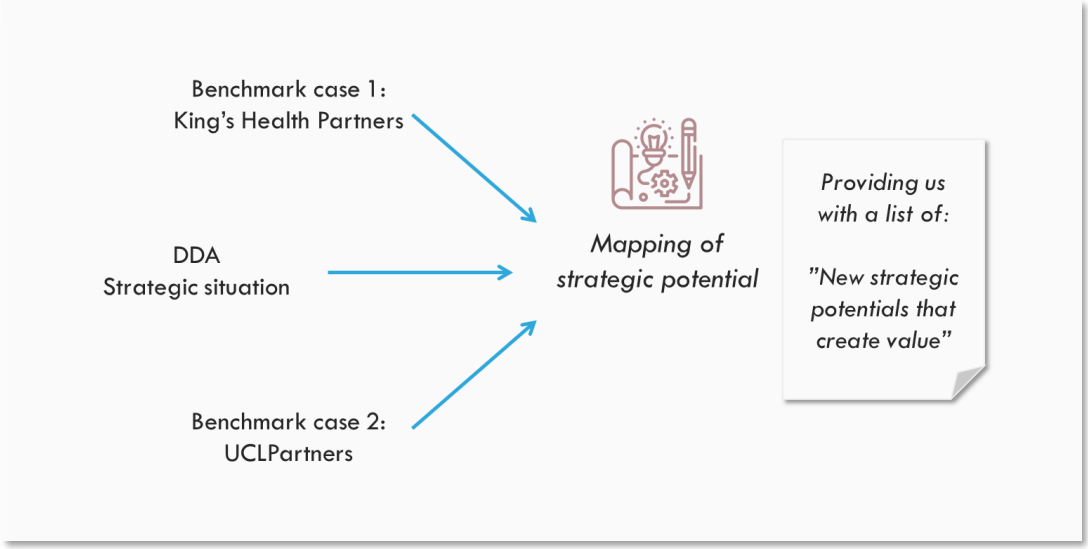


Figure 2: Illustration of the analytical process from the strategic situation and selected benchmark cases

1. Strategic status of DDA today

Unifying academia, hospitals, and life-science

The DDA has succeeded in creating a strong national network within the diabetes sector, unifying academia, hospitals, and life-science industries around educational activities for young researchers within the field. As an organisation, the DDA has a clear national mandate and purpose focusing on developing the knowledge and skills of researchers at an early point in their career.

To support these activities, the DDA has developed an effective, agile, lean, and overall competent Executive Management Team that is open and ready to develop the organisation even further and expand the network to a more strategically oriented level. And with the great success up until today the academy seems prepared to go the next strategic level. The academy has built a very positive reputation among both stakeholders and users of the various courses and network activities that the DDA has initiated as well as national and international recognition with senior and junior researchers at national research institutions.

Such a strategic expansion, however, requires certain competences and resources that the DDA does not necessarily possess at the moment. In addition, to support the potential expansion of the network activities and meet the new requirements, it is important to proactively expand and/or develop the Executive Management Team accordingly.

Bringing the organisation to the next level will also entail more long-term influence on and development of the diabetes system – but the DDA does not up front have a clear mandate when it comes to creating long-term system impact, in case this is prioritised as part of the next strategic phase of the academy. Further, it can be argued that the DDA has primarily been a supply-oriented actor up until this day, instead of having more systematic activities that focus on the requirements and needs of the sector.

While there can be little to no doubt about the high ambitions and value creation of the DDA when it comes to the future of Danish diabetes research, there are few hard data available to accentuate the impact that the DDA has had during the first eight years in operation – e.g., on increased

employability among students, high impact publications, established collaborations across organisations and sectors, and more internationally oriented research collaborations.

2. Benchmark cases

For the purpose of the evaluation, we find it relevant to include and compare the situation of the DDA with selected international benchmark cases. The benchmark cases are comparable network organisations that have gone through many of the same developments that the DDA is currently facing, albeit being at a later growth stage than the DDA. In this context, two British cases have been chosen in terms of King's Health Partners and UCL Partners – both as part of the Academic Health Science Network (AHSN) and Academic Health Science Centre (AHSC) structure of the London-based healthcare system. These cases provide the opportunity of looking into alternative development paths for the DDA going forward.

At this point in the report, we have outlined the strategic situation for the DDA. By supplementing the situational analysis with the selected benchmark cases, we are better able to map the future strategic potential of the DDA.

Benchmark case 1: King's Health Partners

King's Health Partners (KHP) is an Academic Health Science Centre where *"world-class research, education and clinical practice are brought together for the benefit of patients"*. KHP's tripartite mission and goals are concretely implemented in the Clinical Academic Groups (CAG) which bring experts in their field – clinicians as well as researchers – together across the organisational division and structure within and between the university and the three hospitals involved. All CAGs are different but share the same purpose of collaboration across boundaries to improve the treatment of patients. They also all have a dual leadership of a clinical and an academic leader. The CAGs do not have independent budgetary responsibility, but they make their own educational-, research- and clinical strategy.

The Education Academy oversees the education and training activities of the partner organisations to ensure consistent standards of excellence for all students and staff, including to ensure that all staff and students can access world class courses to boost their career and potential. The Education Academy raises the profile of education and training across the partnership and ensures effective co-ordination between the Clinical Academic Groups and the partner organisations. *"The Education Academy draws together expertise across King's Health Partners to develop and deliver innovative education and training for our students, our workforce and beyond."* (read more about benchmark case 1 in appendix A).

The KHP benchmark case is interesting as it is a great example of a rather lean network organisation that has had a great impact on the collaboration between research, education, and clinical practice across sectors and partner organizations in the Southern part of London. There is much to learn from this case going into the next phase of the DDA. The following are some concrete potential learning points from the case (see more in appendix A).

- Expanding the collaboration with the Steno Diabetes Centres in Denmark by acting more as a strategic network "broker" that facilitates cohesion between the centres, industry, universities, hospitals, and primary care facilities.
- Including more diabetes-related areas in the DDA portfolio including (but not limited to) obesity, nutrition, and diabetic complications. Further, the DDA could choose to include multiple research disciplines in its programs.

3

- Overseeing and making education and training activities available and accessible could be the primary vehicle for the DDA, starting with a Danish national focus, but over time expanding through a Nordic Learning Hub to include the other Nordic countries as well.
- Establishing a broader and stronger strategic collaboration internationally by developing international research education and training with a particular focus on impacting the mindset of the future generation, who are still at an early stage in the career.

Benchmark case 2: UCLPartners

In England, every Academic Health Science Centre (AHSC) works closely and integrated together with an Academic Health Science Network (AHSN). UCLPartners (UCLP) is both an AHSC and an AHSN. The AHSN-part of UCLP is connected to three partnerships. The core is the connection to the AHSC and its partners. Next is the connection to the 40 regional organisations. The third connection is to the national AHSN-Network. You could also say that the AHSN is connecting the AHSC to broader setup locally and nationally.

As an AHSN their ability to operate locally is very dependent of the trust the member organisations have in them. The AHSN understands the needs of the health systems and are well placed to broker innovative solutions, while collaborating across England to take what works best and quickly spread it nationally. The UCLP describes their AHSN role the following way: *"We are collaborators – we identify successful innovations in our local and regional communities and support the spread of these across our national Network at pace and scale."*

All AHSNs support the regional 'import and export' of healthcare innovation through the "Innovation Exchange". The Innovation Exchange is an AHSN coordinated approach to identify, select, and support the adoption of innovations that improve the economy and patients' lives**.** The Innovation Exchange identifies innovations for "the Accelerated Access Collaborative" and for local adoption. The Accelerated Access Collaborative is a national partnership of organisations including NHS England, Department of Health and Social Care, Department for Business Energy, and Industrial Strategy, NICE, NHS Improvement, and the AHSNs (read more about benchmark case 2 in appendix A).

The UCLP benchmark case is interesting as the partnership represents a large network of organisations that work together and coordinate to facilitate the spread and adoption of innovations that support the healthcare sector and thereby the general population of the region. Selected concrete learning points for the DDA from the benchmark case:

- Developing into a more full-blown network structure that connects the Steno Diabetes Centres with the hospitals, and the academic institutions – both within the different regions and nationally. In the long run, the DDA can create and initiate user-involvement activities with the potential for strengthening the national network collaboration even further.
- Focusing more on creating relations to the industry and not only focusing on research education and training, but also how to spread research-based innovations across the different partner organisations. The DDA could help industry partners in understanding the rather complicated public healthcare and health research system.
- Enhancing the role and capacity of the DDA to understand the demand for research education and increasingly engage in user involvement. The DDA needs to be more in dialogue with end users, citizens, and the wider society – a role that will possibly also require new competences in the organisation.

4

- Transforming into a more “broker-oriented” organisation that helps the system and its different partner organisations focusing on the most important common priorities regarding research education and training and research leadership development.
- In addition, being a “broker organisation” that facilitates more flexible, quick, and bottom-up collaborations between the different organisations in the Danish/Nordic diabetes system.

3. Strategic potential

Based on the inspiration and concrete takeaways from the selected benchmark cases and the strategic situation, we are now able to define more clearly the strategic potential for the DDA. In this context, the potentials focus on different ways for the academy to expand its current scope of operation.

More concretely, the adjacent textbox contains a list of potential new ways of creating value for the DDA (see Box 1). These selected potentials have been examined closer by being presented to and discussed with the individual interview participants as “hypotheses/proposals” for the future of the DDA (see also chapter 5).

Box 1 – New strategic potentials

1. **Expanding the professional scope** to include other diabetes-related areas (such as obesity, cardiovascular disease, psychosocial disorders)
2. **Expanding the activity scope** by increasingly acting as a “broker” between the other actors in the system, engaging more in user involvement, and facilitating the sharing of knowledge and innovation across the sectors.
3. **Expanding the educational scope** to become a central learning hub that can work across national borders by utilizing a digital platform – e.g., starting with the Nordic region.
4. **Expanding the actor scope** by having a much clearer and more explicit role in connecting the industry with public research-, education-, and healthcare organisations.

4. Strategic dilemmas

Such a development, or fulfilment of future strategic potential, also produces a range of natural strategic dilemmas for the DDA. Strategic dilemmas are defined as legitimate concerns that point in different directions and that must be discussed and balanced according to the situation (and future ambition) of the organisation. Based on the understanding of DDA's current situation and the strategic potential from the benchmark cases, the most important dilemmas identified for the DDA at this stage are depicted in the following figure 3:

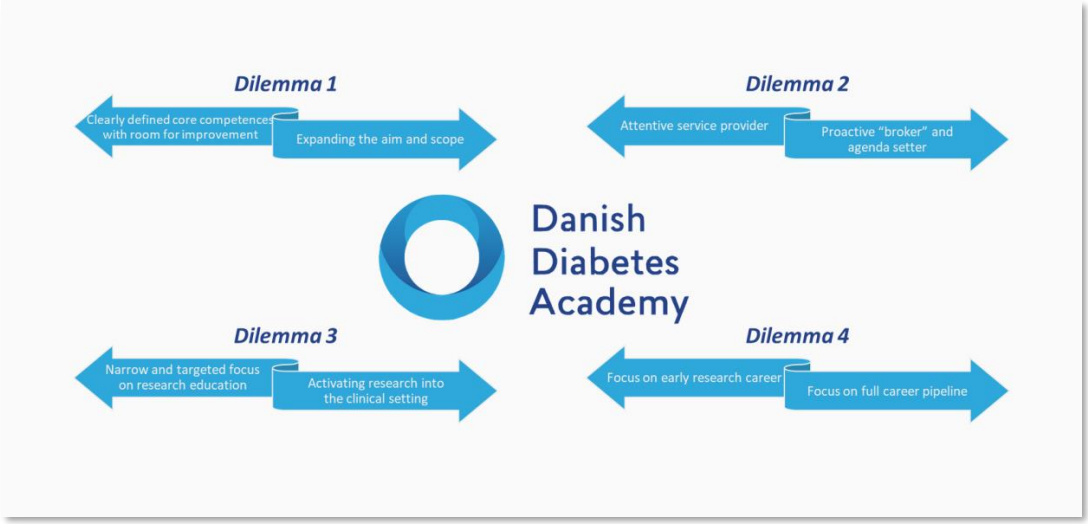


Figure 3: DDA strategic dilemmas

1. *Clearly defined core competences with room for improvement vs. expanding the aim and scope*

This first dilemma speaks directly to the identified "strategic potentials" (see Box 1), as these are obviously not arguing for only continuous expansion of the chosen aim and scope of the current organisation. The new strategic potentials suggest new routes to go and new competences to build. *Is this a good idea?*

Simultaneously, these strategic potentials do not mean that DDA should give up what they already do. Instead, it is important to find the right balance between clearly defining and maintaining what the DDA is already capable and successful at, while expanding the aim and scope of operations to continue developing as an educational platform and network organisation.

For the first grant periods the primary purpose of the DDA has been to establish a platform and become among the best-in-class within educating and supporting young diabetes researchers. With inspiration from the benchmark cases, the maturity of the DDA has arguably reached a level that allows for widening the scope to some degree.

2. *Attentive service provider vs. proactive "broker" and agenda setter*

There is no doubt the DDA has built a successful organisation, when it comes to supporting young researchers in the development of their career and ideas for concrete projects, symposiums etc. The

DDA supplies a broad palette of diabetes-related activities and courses (both hard and soft skills) and have generally done a tremendous job at listening closely to the needs of both the users and stakeholders of the organisation.

However, there is an inherent dilemma between the current "service provider" role and general *attentiveness* of the DDA, pitted against the potential for the DDA to work as a network organisation that *proactively* contributes to setting the agenda and acts as a "broker" between the different actors of the network. In this case, DDA would be much more active in building agendas together with the other actors in the network (the Steno Diabetes Centres, the hospitals, and academic institutions).

3. *Narrow and targeted focus on research education vs. activating research into the clinical setting*

Today, DDA has clear focus on research education. DDA has a clear mandate and strong competences here. The focus is on the researcher's research competences. Should DDA also help building the competences, which the researchers need to use for activating the research in the clinical setting? The educational focus of today is rather narrow, and therefore DDA can concentrate the resources primarily on the development of the individual researcher and her/his research topic and concrete project. But there is also great potential value (both individual and societal) in focusing more explicitly on the support of translational research and public involvement and in further seeking to strengthen the "chain" between basic research and clinical research and development. However, this may be with the risk of weakening the "natural" narrow focus, moving into new and broader areas that are not that easy to define and therefore not that easy to find a clear focus in.

4. *Focus on early research career vs. focus on full career pipeline*

While the DDA has primarily put its focus on the career development and support of young researchers at the ph.d. and postdoc levels, the term "young" contains more potential nuances. The DDA is faced with an important dilemma between maintaining its current focus on, what we have defined as, the early research career of young researchers (representing the journey from ph.d. to postdoc), and on the other hand broadening the scope to emphasise the full career pipeline. The latter would require more earlier interventions and activities that, e.g., instead appeal to current Master students with a dream of starting a ph.d. within the diabetes field. At the other end of the "career pipeline", the DDA can also more actively support former postdocs – including but not necessarily limited to DDA alumni – who wish to continue a career within research but find it difficult to realise the dream.

All of the dilemmas above are opposite legitimate concerns that together represent a multitude of alternative pathways for the future development of the DDA. While it has not been the purpose in this section to prescribe a suitable balance for the selected dilemmas, they will make up an analytical framework for the qualitative input that has been gathered during the evaluation, and which will be described and analysed in the following sections.

5. Interview results

What do the users and the stakeholders think about these new strategic potentials (see box 1)? The purpose of this section is to report the feedback from both users and stakeholders on the current situation, the strategic potentials, the dilemmas above, and important learning points for the future.

Feedback on the current setup

Therefore, for the purpose of the evaluation, a total of 10 individual interviews and two focus groups have been completed with (previous) users of the courses and network activities as well as key stakeholders with relevant knowledge of both the daily operations and purpose of the DDA. The individual interviews have primarily focused on *feedback*, while the focus groups have provided more general *input*. In the following, we will highlight some of the most important points and conclusions from this qualitative part of the evaluation.

Part of the backbone of Danish diabetes research

Throughout the interview process there was left no doubt about the significant difference and impact that the DDA has contributed with, when it comes to Danish diabetes research – not least by supporting, developing, and enabling young researchers at the ph.d. and postdoc levels and thereby contributing to the flourishing diabetes research environment at a national level. There was a clear consensus in one of the focus groups that "*the DDA has become part of the backbone of Danish diabetes research"* (focus group 1).

As regards the courses and activities supplied by the DDA, both users and stakeholders vividly described their enthusiasm and positive personal experiences with short to no delay in their responses. In direct continuation, the executive management and administration of the DDA receive high praise for their level of professionalism and general support both in relation to their own activities as well as activities that are initiated by the young researchers themselves. In the same focus group, the support team is described as *"flexible, supportive, and engaged"* (focus group 1) – a positive statement that resonated consistently throughout the process.

Obsessed with having an impact

Whereas most of the interviewees and focus group participants emphasised the definite added value of the DDA's existence, there was also a general recognition that it can be (very) difficult to document much of the value that the DDA is contributing with (e.g., through networking, developing young researchers, and supporting interdisciplinarity). *"It is a long-term investment."* (Interview, Jens 31:00). In this context, we (Mobilize, ed.) find an important difference between being able to *document* and *indicate* the value that is created through the activities and services provided. Through the feedback from the users and stakeholders – and further taking into consideration our own interactions with the people of the organisation – it is our clear assessment that DDA has a culture that makes it fair to say that DDA is *obsessed with having an impact*. They really focus on making a difference for their users – and the users can feel it.

Further, several of the interviewees emphasised the importance of following close and acting proactively on the developments within the field of diabetes research – with one example being the use of technology in research and the wider field of data science. While on the one hand being a place for teaching young researchers about the basics of diabetes research, the DDA is also encouraged to create a forum and a platform for looking into the future together and trying to envisage what comes next. To be a sandbox for experimentation and maturing of new and innovative ideas (interview, Ulla 02:20) – speaking to the more transformative

A platform for looking into the future together

development of the DDA going forward. During the interviews, a lot of creative ideas came up. Some of them are listed in box 2.

Over the years, the DDA has also built a positive reputation beyond national borders thanks to the organisation's outreach abilities and the high levels of quality, professionalism, and support of young researchers. Across the conversations with stakeholders and users, they stress the opportunity to further embrace the international perspective. First, the collaboration with and attraction of senior international researchers to DDA activities constitutes a "win-win", as international researchers find great joy in contributing to the development of younger colleagues in the informal settings that the DDA facilitates. Furthermore, the possibility of sending even more students abroad on exchange stays can be scaled even further in the future, as it provides a great opportunity for the individual young researcher, but also adds to the international network platform of the DDA.

Box 2 – Ideas for building on the existing model

- Increasingly include *data science* in the research education curriculum
- Focus more on applied research instead of purely metabolism oriented
- Include younger Master students more actively in (new) activities
- Continue to build and expand international relations and collaborations
- Utilize the advanced Danish IT infrastructure to develop/modernize own systems and initiatives.

As mentioned in the beginning of this section, there can be no doubt of the significant value that the DDA contributes with in terms of supporting, developing, and enabling young researchers at the ph.d. and postdoc level. During both the interviews and focus groups, however, the importance of supporting young researchers throughout the "career pipeline" became apparent. Two main discussion points were:

1. Putting more attention and resources into the support of even younger researchers, who are still at the graduate level, e.g., by establishing concrete activities/courses for aspiring diabetes researchers who are currently finishing their Master programme.
2. Supporting researchers who have finished their postdoc and are currently in transition to the next step but find it difficult to continue a career within diabetes research.

Lastly, speaking once again to the great success of the network organisation, the DDA has managed not only to create a successful network, but also to create a culture around the academy and its activities – a culture that goes beyond the young researchers currently attending the programme, but also includes the wider network of international presenters and alumni.



Expanding the professional scope

While many different perspectives were represented as regards the professional focus, the mainstream opinion was unambiguous: The role and impact of the DDA will be improved by further strengthening the link to the clinical research environments. This should of course not be considered an "either-or" discussion between a focus on basic and clinical research, as there are many perspectives and nuances in play. Rather, this is an important dilemma in the further development of the DDA, and in the future it is necessary to find a suitable balance, for example by *"focusing on translational research and promoting the move from basic to clinical research to reach the end users."* (Interview, Peter 40:40).

With respect to the professional focus, the interviewees also consider it relevant to discuss the range of topics within and related to diabetes research that should be included in the DDA portfolio. Although the DDA has done a tremendous job at facilitating collaboration within certain research activities that are less popular or face tough conditions, there is still a significant amount of unleashed potential in widening the professional scope, e.g., with an increased focus on obesity, nutrition, diabetic complications, cardiovascular diseases, and/or psychosocial disorders.



Expanding the activity scope

One concrete hypothesis that was presented and discussed during the individual interviews was about the DDA acting as a "broker" that understands and brings the user needs into play within the existing network of diabetes research (see also Box 1). The interviewees saw great potential in the DDA assuming such a more proactive user-involving role, arguing for more transformative development, given their existing position in the system. More specifically, it is possible for the DDA to bring together different parts of/actors in the system to discuss common societal issues that are identified through increased user involvement and can only be solved by working together across sectors and disciplines. While there are already good examples of this format having a positive impact, the network would arguably benefit significantly if the DDA assumed a more conscious, target-oriented, and systematic role in bringing different actors together around such issues. DDA could be a platform for the diabetes network actors discussing the future demands for diabetes research of tomorrow.



Expanding the educational scope

In the context of Covid-19, and when talking about the international potential, many interviewees also highlighted the potentials of further utilising a digital presence to facilitate network activities. However, as regards a digital expansion, great emphasis was also put on the importance of not *changing a winning strategy*. Instead, the digitalisation and future digital supply of activities should be completed in sync with the existing activities that are already very successful (e.g., the Summer School). Another hypothesis presented the idea of expanding the platform to a Nordic level by creating a *Nordic digital hub* for diabetes research education (see also Box 1). While it was generally viewed as a positive idea/next step for the DDA, some interviewees questioned whether a more international (digital) expansion – beyond the Nordic borders – would make more sense and better meet the potentials for scaling such a model.



Expanding the actor scope

When it comes to the actor scope and the future role of the DDA facing the diabetes industry, several interviewees (especially stakeholders in the focus group – see appendix B) emphasised the potential benefits from building a closer connection to the industry. Both in terms of more traditional collaborations as well as new co-creation models that build on the ecosystem which the DDA has played a big part in forming. Such an expansion should of course be directed at facilitating contact between the industry and the research, education, and healthcare organisations – thereby further aligning or balancing the continuum of basic and clinical research.

Recommendations

Based on the learnings from the benchmark cases and the input and feedback from the interviews, we are now prepared to offer some recommendations for the further strategic development of the DDA.

With respect to the points made by the interviewees regarding the professional scope and preparing for the future, while there certainly seems to be a trend of approving and including a wider scope of research topics within the portfolio, many of the stakeholders expect the DDA to be more proactive and independently challenge and create new directions within the diabetes research system. These developments are also illustrated in the following figures 4 (and 5), which represent both the current and proposed future balance between two key dilemmas (see also section 4 about the most important dilemmas) in a two-dimensional coordinate system.

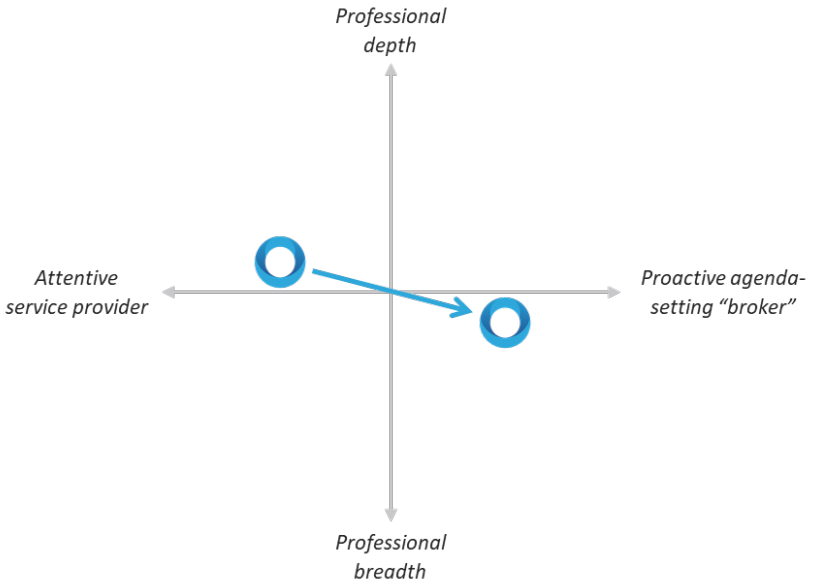


Figure 4: Potential developments for the DDA – strategic dilemmas 1 and 2

The illustration in figure 4 represents the notion that the DDA can benefit significantly from progressing on the path towards including more professional diabetes-related areas to the portfolio (cf. the minor shift towards "breadth"). However, whereas this inclusion and professional expansion until today has primarily been the result of incremental and more attentive adaptation, there is a great unleashed potential for the DDA in becoming a more proactive network "broker" that contributes to setting the agenda within the field of diabetes research.

During the interviews, another central dilemma was recognised when it comes to the balance of the DDA's professional focus between basic and clinical research. However, as mentioned above, the role and impact of the DDA can be improved by continuing to strengthen the link to the clinical research environments (see also figure 5).

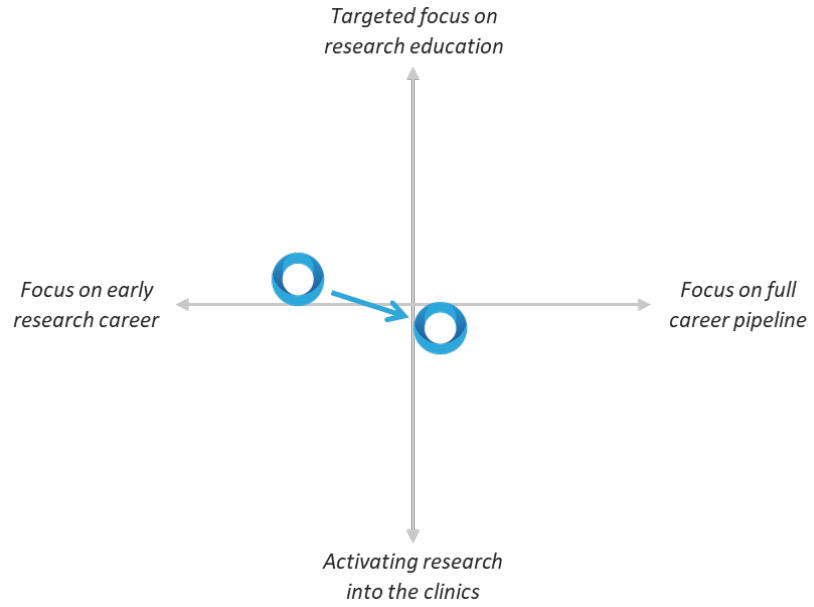


Figure 5: Potential developments for the DDA – strategic dilemmas 3 and 4

Figure 5 represents the necessary shift in the balance between the two final strategic dilemmas that were presented earlier in this report. A strengthening of the link to the clinics, represented by the vertical shift, e.g., by increasing focus on translational research. Meanwhile, a horizontal shift towards a wider focus on the "full career pipeline" of young diabetes researchers. In spite of the young age of the organisation, the DDA has accumulated significant and valuable knowledge and experience when it comes to the development of young researchers – knowledge and experience that can be put to good use by focusing more on younger candidates (pre-ph.d. level) and supporting postdoc alumni in the next steps of their research career.

6. Conclusion

What conclusions can then be drawn from the input that has been collected throughout the evaluation process, from the strategic situation, the benchmark cases and the focus group and individual interviews? Which main road – incremental or transformative – do we recommend the DDA to pursue, when it comes to the future potential?

Even though there is undoubtedly much value and many possibilities in continuing incremental development of the DDA's current model*, there is significant potential in pursuing a more transformative change path*. When asking the majority of the users and stakeholders, their suggestions support this overall conclusion and point towards a more transformative strategic potential as being best fit for the purpose of the DDA – a further transformative potential that the DDA should seek to unleash within the diabetes sector in the near future. Such a conclusion entails that the DDA should not simply seek to do more of the same, although better. The DDA must work to develop further and enter the next phase of the network organisation without throwing the baby out with the bathwater.

The primary purpose of this report has been to uncover the strategic potential of the DDA and propose a battery of opportunities as a result hereof. However, competent strategy work further

calls for the qualified prioritisation between the many proposed initiatives. For the next strategic phase of the DDA we propose a focus on the following uncovered initiatives:

- Further strengthening the link to the clinical research environments and focusing more on translational research.
- Acting more as a network "broker" that is constantly in close contact with and involves users and stakeholders in identifying central needs and demands – and bring these societal issues into play within the existing network of diabetes research organisations.
- Reaping and utilising the learning from the Covid-19 crisis, when it comes to digitalisation and the possibilities of building a digital and more international platform – e.g. starting with the creation of a "Nordic digital hub" for diabetes research education.
- Escalating the academy's focus on building partnerships with other organisations across the network – both nationally and internationally.

There is no doubt that the DDA today already is obsessed with having an impact. Likewise, there is no doubt that the DDA currently *has* achieved significant impact in the diabetes sector through a profoundly demand-driven approach – and the academy should continue in these endeavours. But if the DDA truly wishes to pursue its more transformative strategic potential and expand the scope of the current setup, the proposed initiatives could represent a number of ambitious, albeit achievable, first steps in that direction and enable the DDA to *strive for an even bigger impact on another level*. This development may require further resources, but we are confident these will be resources very well spent, when looking at the current as well as the future potential impact of the DDA.

Appendix

Appendix A – International benchmark cases

Appendix A

Benchmark case I – King's Health Partners

Partnership
King's Health Partners (KHP) is an Academic Health Science Centre where *"world-class research, education and clinical practice are brought together for the benefit of patients".* The journey of KHP started in 2006, and as the executive management says: *"We are still on a journey – and always will be"* in the pursuit of the KHP *"tri-partite mission: clinical practice – research – education."*

The British government took in 2007 the initiative to establish *Academic Health Science Centres (AHSC)* to break down barriers and increase co-operation between research, education and clinical practice to improve patient treatment and care. The objective of an AHSC is to establish partnerships between hospitals and universities to ensure that research results are translated and implemented as fast as possible into the treatment of patients and conversely to ensure that that research takes onset in the actual health challenges - translation goes both ways. Five AHSCs were accredited in the first round in 2009. One of them was KHP, who also successfully passed the regular re-accreditations in 2014 and 2019.

KHP is a partnership comprising of the university *King's College London* and three NHS Foundations Trusts: *Guy's and St Thomas's Hospital, King's College Hospital and South London and Maudsley Hospital.* KHP has a joint Executive Team reporting to a Board comprising of senior representatives from the partner organisations. Simultaneously, the four partner organisations have maintained their respective governance and structure.

The four partner organisations altogether have 40.000 staff, 30.000 students and serve a patient population of 8 million in south London and southeast England. KHP reach out and interact in an *Academic Health Science Network* including primary care and the local boroughs.

Strategic broker
KHP is a small organisation – only consisting of a few leaders and a small secretariat. But because of its central position – bringing the partnership together – it has a huge strategic influence. The strategies developed by KHP have influence for all the partnership organisations and their collaboration.

KHP launched in 2020 a new five-year plan 2020 – 2025: *"Delivering better health for all through high impact innovation."* This is built upon four key themes focusing on:

- Delivering high impact innovation in novel technologies, therapeutics and diagnostics
  - To drive improvements in patient outcomes
  - Facilitated by the emerging life sciences cluster connecting universities and healthcare to accelerate translation from research to patient benefit
- Transforming quality improvement and outcomes across the system
  - Using the evaluative capability of the *South London Applied Research Collaboration* and *Health Innovation Network*
- Improving urban population health in south east London
  - Supporting prevention and wellbeing promotion
  - Including the Vital 5 – five key issues that impact most widely on health – smoking tobacco, high blood pressure, obesity, drinking too much alcohol, and common mental health conditions
- Training and developing the healthcare workforce for the future
  - Recognising the need for new roles, improved skills and values, and supporting diversity
  - All facilitated by the *Education Academy's* uniquely broad portfolio of health education

Through the years KHP grow a lot of network contacts across the partnership. Contacts that KHP can utilize in its strategic work. It can act as broker that brings the right people together. This way KHP can really have a strategic impact on the system level even though it is a small organisation.

Clinical Academic Groups
KHP's tripartite mission and goals are concretely implemented in the *Clinical Academic Groups (CAG)* which bring experts in their field - clinicians as well as researchers – together across the organisational division and structure within and between the university and the three hospitals. Everybody in the partnership is member of a CAG, and simultaneously employment- and budget wise anchored in her/his unit in the university or the particular hospital. This has been instrumental for developing the culture to really drive the co-operation.

All CAGs are different, but share the same purpose of collaboration across boundaries to improve the treatment of patients. They also all have a dual leadership of a clinical and an academic leader. The CAGs do not have independent budgetary responsibility, but they make their own educational-, research- and clinical strategy.

One of the in total 22 CAGs at KHP is the *Diabetes, Endocrinology, Nutrition, Obesity, Vision and Related Services (DENOVARS) Clinical Academic Group (CAG).* This CAG is reportedly the largest centre for metabolic disease in Europe. It is working collaboratively to deliver a world-class clinical, research and education offer that directly improves quality and access to diabetes, obesity and endocrinology care. It brings together a range of services including newly diagnosed Type 1 and 2 diabetes, diabetic eye complication screening, liaison psychiatry, pre-pregnancy care, a full range of podiatric services and treatments, supportive orthotic services, educational programmes for diabetes management, islet transplantation, insulin pump therapy and lipid management. It contributes significantly to the KHP *Mind & Body* program to ensure diagnosing and treating the significant co-morbidity between mental and physical illness. They are currently *"also learning more and more each day about the risks COVID-19 poses to people with diabetes".*

This CAG serves approximately two million patients across southeast England, making it the largest provider of these services in the UK. The CAG is focusing on the management of long-term conditions, particularly community and primary care integration, together with involving patients and carers more in service design. Its goal is to improve health and wellbeing of people living with diabetes and obesity. One way they do this is through the variety of online training opportunities that the Education Academy provides to support their staff and students and ensure they can continue to deliver the best possible patient care.

Education Academy
The *Education Academy* oversees the education and training activities of the partner organisations to ensure consistent standards of excellence for all students and staff, including to ensure that all staff and students can access world class courses to boost their career and potential.

The Education Academy raises the profile of education and training across the partnership and ensures effective co-ordination between the Clinical Academic Groups and the partner organisations. "*The Education Academy draws together expertise across King's Health Partners to develop and deliver innovative education and training for our students, our workforce and beyond."*

The academy has a portfolio of learning approaches that include the best, proven technological developments to meet the diverse needs of learners. It is responsible for the accreditation, quality assurance and dissemination of innovative learning methods and technologies.

The online *Learning Hub* provides a free access for staff and students to browse and attend e-learning courses and webinars. Currently, more than 80 courses for all levels from student to CEO are provided. An actual example is that it provides a range of online e-learning opportunities for staff being relocated to intensive care units and COVID-wards in response to the numerous hospital admissions due the pandemic. A few recent examples from the available diabetes training include: Diabetes and COVID-19, Depression in Diabetes, Inpatient Care for People with Diabetes. This example also shows that the academy and the learning hub are important vehicles in delivering new research and research-based knowledge across the system then needed and it can be done fast through digital means.

An ongoing major focus of the Education Academy is to further develop international education and training. The first trainees were recruited in 2019 to the Postgraduate Certificate in Advanced Medical Training, which has a 30-credit face-to-face module in Children's Health, Haematology, Women's Health or Neuroscience. Further modules are being made available. There are also two 15-credit online modules, one in Research Methodology and one in Clinical Leadership developed with the *King's College London Business School*. The latter is also available as a standalone module. The Postgraduate Certificate can be taken by the Partners' Trust Fellows or by national and international trainees. In addition, it is offered as part of KHP's developing Global Health Fellowship scheme in conjunction with a clinical placement in one of the Partner Trusts.

The Learning Hub is now available locally and globally. All KHP staff and students will still be able to access the large variety of e-learning resources free, and these will also be freely available to KHP Networks. National and international users will be able to access these state-of-the-art e-learning resources, either free or via a fee.

Additionally, the external face advertises the Partners' educational and training activities such as postgraduate courses, conferences and continual personal and professional development activities. A KHP Education and Training database, an online searchable database of healthcare related education and training opportunities across the Partnership, has been created to ensure all Faculty are aware of available resources.

Another ongoing focus of the Education Academy is to increase research capacity at all levels. This has included supporting medical, dental and veterinary students to successfully apply for INSPIRE funding for more than GBP 100.000 from the Academy of Medical Sciences and the Faculty of Life Sciences and Medicine, the Dental Institute and the Royal Veterinary Medical College. Using programme support and coordination by the Education Academy, this will deliver closer working between medical, dental and veterinary students on a series of research related activities including a research showcase event, a conference, journal clubs, elevator pitch, internships, summer research studentships, placements within industry, and research opportunities database.

The Education Academy leads the Academic Foundation Programme, which is one of the most popular in London and the South East. It also provides a programme of support to facilitate *King's College London* students applying for the national Academic Foundation programme, and the Integrated Academic Training programme includes a Postgraduate Certificate in Applied Research Methods.

The Education Academy continues to deliver the KHP/University of California San Francisco course in Designing Clinical Research; through eight years 168 trainees have completed the course, and 25 KHP Faculty have been trained to deliver the course.

Relevant inspiration and opportunities for Danish Diabetes Academy
There are several elements in the KHP setup and approach, which could be an inspiration and learning for the Danish Diabetes Academy (DDA) in order to leverage from the opportunities for increased outreach and impact, and further unleash DDA's strategic potential.

Inspired by and learning from the *Partnership and Strategic broker*, the collaboration with the Steno Diabetes Centres in Denmark could be expanded with DDA acting as a broker in between the centres, and further also connecting the dots with respect to industry, universities, hospitals and primary care. DDA could act as a strategic network broker that connects the young researchers across the system and help them exchange and share new research.

Inspired by and learning from the *DENOVARS CAG,* the scope of DDA could be expanded to include other scientific areas related to diabetes, including obesity, nutrition and diabetic complications. Further inspired by the CAGs contribution to the KHP *Mind & Body* program, DDA could be further expanded to include multiple research disciplines.

Inspired by and learning from the *Education Academy*, overseeing and making education and training activities available and accessible could be the primary vehicle for DDA to be at the central core to ensure consistent standards of excellence in diabetes research and care. In the first step across Denmark, but with the prospect through a Nordic *Learning Hub* also to expand impact to the other Nordic countries. DDA should focus on research training in its own activities but as a network broker and trough its digital platform DDA could also have a role in making the newest research available across the system.

Further inspired by and learning from the *Education Academy,* DDA could establish a broader and stronger strategic collaboration internationally by developing international research education and training. This could be combined with the inspiration and learning from the *Education Academy's* ongoing focus to increase research capacity at all levels. A particular focus could be put on younger researchers, and DDA would have a unique opportunity to impact the mindset of the future generation at an early stage in their career.

Benchmark case II – *UCL*Partners – the network part

Partnerships
In England, every Academic Health Science Center (AHSC) works closely and integrated together with an Academic Health Science Network (AHSN). Every regional part of England has a AHSN – 15 in total – and they are all connected in "The AHSNNetwork" – an organisation that spread health innovations across the different regions (see more here: https://www.ahsnnetwork.com/).

UCLPartners (UCLP) is both an AHSC and an AHSN. In this part of England, the two organizations are combined in one. UCLP is located in North East and Central London, South & West Hertfordshire, South Bedfordshire, and South West Essex. They serve a population of over six million people through more than 40 organisations across the NHS, higher education, and local authorities (see list here: https://uclpartners.com/about-us/our-partners/). Their member organisations work together and further collaborate with patient groups, commissioners, primary care, community care, the third sector, government, and industry to co-create healthcare solutions.

The partners in UCLP AHSC are:
- Barts Health NHS Trust
- Great Ormond Street Hospital for Children NHS Foundation Trust
- London School of Hygiene & Tropical Medicine
- Moorfields Eye Hospital NHS Foundation Trust
- Queen Mary University of London
- Royal Free London NHS Foundation Trust
- UCL
- University College London Hospitals NHS Foundation Trust

So, the AHSN-part of UCLP is connected to three partnerships. The core is the connection to the AHSC and its partners. Next is the connection to the 40 regional organisations. The third connection is to the national AHSNNetwork. You could also say that the AHSN is connecting the AHSC to a broader setup locally and nationally.

Role of AHSN
As an AHSN, their ability to operate locally is very dependent on the trust the member organisations have in them. The AHSN understands the needs of the health systems and is well placed to broker innovative solutions, while collaborating across England to take what works best and quickly spread it nationally.

The UCLP describes their AHSN role the following way:
- *We are catalysts for innovation, helping facilitate change across whole health and social care economies – to improve health, drive down the cost of care, and stimulate economic growth.*

- *We connect regional networks of NHS and academic organisations, local authorities, the third sector, industry, and citizens – responding to the diverse needs of our patients and populations through partnership and collaboration.*

- *We create the right environment for relevant industries and innovators to work more effectively with the health and social care ecosystem.*

- *We are collaborators – we identify successful innovations in our local and regional communities and support the spread of these across our national Network at pace and scale.*

The Innovation Exchange
All 15 AHSNs support the regional 'import and export' of healthcare innovation through the "Innovation Exchange". The Innovation Exchange is an AHSN coordinated approach to identify, select, and support the adoption of innovations that improve the economy and patients' lives.

The Innovation Exchange identifies innovations for "the Accelerated Access Collaborative" and for local adoption. The Accelerated Access Collaborative is a national partnership of organisations including NHS England, Department of Health and Social Care, Department for Business, Energy and Industrial Strategy, NICE, NHS Improvement, and the AHSNs.

The Innovation Exchange has four structured elements:

Needs-definition: They support the different partners in identifying proven solutions to existing challenges.

Innovator support and signposting: Innovator support is provided by all AHSNs. They focus on developing and testing the value-proposition and subsequently sign-post and/or support the next stages of development.

Real world validation: Real world validation is informed by regional and local needs and seeks to build confidence that the intervention delivers the intended benefits. This builds on the evidence already gathered of smaller or more controlled testing.

Spread and adoption of supported innovations: Having validated the benefits, AHSNs can support scaling up through their expertise and cross-sector connections. Through their networking they can identify common challenges and quickly bring people and organisations together to spread proven innovation.

Funded by the government's Office for Life Sciences, the Innovative Exchange builds on AHSNs' unique expertise and cross-sector connections, enabling them to identify common challenges and quickly bring people and organisations together to develop, test and spread proven innovations.

National programmes and priorities
As part of the national AHSNNetwork, the AHSN part of UCLP also participates in national programmes and priorities. In 2020 it was decided that the following themes should be in focus in all AHSNs:

- Early Intervention Eating Disorders
- Improving Diagnosis of ADHD
- Lipid management and FH

As an example, a number of AHSNs are supporting mental health teams across England to speed up diagnosis and treatment of eating disorders in young people aged 16 to 25. One approach they want to spread is FREED (First episode Rapid Early intervention for Eating Disorders), a model developed by South London and Maudsley NHS Foundation Trust and King's College London. This is an evidence-based, specialist care package for 16 to 25-year-olds with a first episode eating disorder of less than three years' duration. Broadly based on the early intervention model for psychosis, it overcomes barriers to early treatment and recovery and provides highly coordinated early care, with a central focus on reducing the duration of an untreated eating disorder. It consists of a service model and a care package.

The AHSNs across England – including UCLP – will focus on scaling up existing models – like FREED – that they know work. Important here are the national priorities. Across England they choose what areas and innovations to focus on from year to year. They are not trying to

spread all programmes and innovations at once – they prioritize and the AHSNs have a big role in this prioritization.

Bottom-up collaborations across the AHSNs
The Innovation Exchange programme and the national priorities are the more top-down driven collaborations between the AHSNs. More bottom-up driven collaborations also exist. A recent example is the three London AHSNs working together to embed virtual consultations across the capital. The AHSNs support the hospitals in the region to quickly embed virtual consultations to safeguard patients and staff during the pandemic.

The already established network structure make it possible to collaborate faster and more easily than the independent hospitals and thrusts could before.

Stakeholder impact report
I 2019 UCLP assessed the impact of the AHSN. An independent consultant interviewed a lot of stakeholders and made a report based on the information. UCLP got the following feedback:

UCLPartners has three areas stakeholders commonly note to be key assets in interview discussions. Firstly, the quality improvement programmes UCLPartners offer have been memorable to stakeholders for their high standard and notable impact on stakeholder innovations. Secondly, stakeholders repeatedly comment on UCLPartners' excellent engagement with them and the supportive culture that the AHSN has fostered. Thirdly, UCLPartners is described as an effective mediator between industry and the NHS. Stakeholders provide examples where they attribute their success in implementing new innovations into the healthcare system to UCLPartners. However, there are a couple of points for UCLPartners to consider going forwards. It has been suggested by some stakeholders that there can be a focus on low impact, short-term projects rather than having a more long-term focus. Additionally, there are opportunities to communicate more clearly to those aware of UCLPartners around how the AHSN can best fit in with and support their organisation and/or innovations.

It is interesting to see how the stakeholders advocate for more long-term focus, not getting to engaged in day-to-day low impact, short-term projects.

Relevant inspiration and opportunities for Danish Diabetes Academy
There are several elements in the UCLP and AHSN setup and approach, which could be an inspiration and learning for the Danish Diabetes Academy (DDA) in order to leverage from the opportunities for increased outreach and impact, and further unleash DDA's strategic potential.

Inspired by and learning from the *Partnerships*, the core of the AHSN is a structure that creates network on different levels – organizationally, locally, and nationally. Likewise, DDA could develop into a more full-blown network structure that connects the Steno Diabetes centers, the hospitals, and the academic institutions – both in the different regions and nationally. Following this line, DDA could also see itself as a network structure connecting the Danish healthcare and research organizations with a more national setup – e.g., the Nordic region. DDA should still focus on research training for and network collaboration between young scientists, but in the long run DDA activities create a potential for strengthening the network collaboration even further. DDA could focus more on unleashing this potential.

Inspired by and learning from the *role of AHSN*, the AHSN has a clear role and mandate when it comes to creating collaborations between the public organizations and industry. In that role, the AHSN also focuses on innovation – not just making innovation possible, but also to spread and scale innovation across the whole system. DDA could follow the same road by focusing more on creating relations to industry and not just focus on research training and education, but also how you spread research-based innovations by young researchers across the different

partner organizations. DDA could also help industry partners in understanding the rather complicated public healthcare and health research system. In that way, DDA can help the young researchers collaborate even further.

Inspired by and learning from the *innovation exchange*, UCLP and other networks have a role in which they help the system define the user needs. In that way, they are helping the rather innovation "push-oriented" AHSCs to also take into consideration the demand side – what do the citizens and the system need? DDA could also enhance its role and capacity to understand the demand for research education. In this context, DDA needs to be more in dialogue with the different users. A role that will require new competences in DDA.

Inspired by and learning from the *national programmes*, the AHSNNetwork – the national organization – together with all the 15 local AHSCs annually decides on common priorities. The idea is to have a common focus on what should be prioritized together. DDA could also be a "broker organization" that helps the system and its different partner organizations focus on the most important common priorities regarding research leadership development and research training.

Inspired by and learning from the *bottom-up collaborations*, UCLP has created a network structure that makes it easy to create new relations and collaborations when needed. In a crisis situation like the Covid-19 pandemic, they do not have to create entirely new collaboration structures – UCLP can quickly facilitate and mobilize new relations between the different partner organizations when they are needed. In that way, it makes partner collaborations much more flexible and bottom-up by nature. DDA could also be seen as a "broker organization" that facilitates these more flexible, quick, and bottom-up collaborations between the different organizations in the Danish/Nordic system.

Appendix 3

Members of the Danish Diabetes Academy governing bodies

a. Board of Directors
b. International Advisory Board
c. National Advisory Forum
d. Committee for Education
e. Committee for Talent Development

A. Board of Directors

Members of the Board of Directors of the Danish Diabetes Academy (DDA)

as per 31 March 2021

Name	Title	Affiliation
Lise Wogensen Bach	Vice-Dean of Talent Development	Aarhus University, Faculty of Health Sciences
Allan Flyvbjerg	CEO	Steno Diabetes Center Copenhagen
Kurt Højlund	Head of Research	Steno Diabetes Center Odense

Chair: Allan Flyvbjerg, Steno Diabetes Center Copenhagen

B. International Advisory Board

Members of the International Advisory Board of the Danish Diabetes Academy (DDA)

as per 31 March 2021

Name	Title	Affiliation
Patricia L. Brubaker	Professor	University of Toronto, Canada
Tim Dornan	Professor	Queen's University Belfast, Northern Ireland
Lena Eliasson	Professor	Lund University Diabetes Centre, Sweden
Richard Holt	Professor	University of Southampton, United Kingdom
Anna Krook	Professor	Karolinska Institute, Sweden
Claudia Langenberg	Programme Leader	Cambridge University, United Kingdom
Marc Prentki	Professor	University of Montreal, Canada
Chris Rhodes	Vice President	AstraZeneca
Rebecca Simmons	Chief Operating Officer	Riverlane, United Kingdom
Antonio Vidal-Puig	Professor	University of Cambridge, United Kingdom

Chair: Rebecca Simmons, Riverlane, United Kingdom

C. National Advisory Forum

Members of the National Advisory Forum of the Danish Diabetes Academy (DDA)

As per 31 March 2021

Name	Title	Affiliation
Christina Brock	Associate Professor	Aalborg University Hospital, Department of Clinical Medicine
Stine Byberg	Postdoc, PhD, MSc	Steno Diabetes Center Copenhagen
Tine Dalsgaard Clausen	Chief physician, Associate Professor, PhD	Nordsjællands Hospital, Hillerød
Seyed Ghiasi (until 19 July 2021)	PhD, MSc	University of Copenhagen, Department of Biomedical Sciences
Jakob Grauslund	Professor, Head of Research	Odense University Hospital, Department of Ophthalmology
Shivani Joshi (until 19 July 2021)	PhD, Postdoc	Aarhus University, Department of Clinical Medicine/Department of Paediatrics
Páll Karlsson	Assistant Professor	Aarhus University, Danish Pain Research Center
Jette Kolding Kristensen	Professor	Aalborg University Hospital, Department of Clinical Medicine
Frans Pouwer	Professor	University of Southern Denmark, Department of Psychology
Signe Schmidt	MD, PhD	Steno Diabetes Center Copenhagen

Chair: **Jette Kolding Kristensen**, Aalborg University Hospital

D. Committee for Education

Members of the Committee for Education of the Danish Diabetes Academy (DDA)

as per 31 March 2021

Name	Title	Affiliation
Mette Bjerre	Associate Professor	Aarhus University, Department of Clinical Medicine
Louise T. Dalgaard	Professor	Roskilde University, Department of Natural Science and Environment
Nils Færgeman	Professor	University of Southern Denmark, Department of Biochemistry and Molecular Biology
Sys Zoffmann Glud	Director	BioMedical Design, Novo Nordisk Foundation Fellowship Programme
Ramneek Gupta	Professor	Novo Nordisk Research Centre Oxford
Ole Hejlesen	Professor	Aalborg University, Department of Health Science and Technology
Mads Hornum	Associate Research Professor, Chief Physician	Copenhagen University Hospital Rigshospitalet, Department of Nephrology
Jacob Jelsing	Co-founder, vice-chairman of board	Gubra
Dorte Møller Jensen	Professor	Odense University Hospital, Steno Diabetes Center Odense
Jesper Johannesen	Associate Clinical Research Professor	Herlev and Gentofte Hospital
Peter Kurtzhals	Chief Scientific Advisor	Novo Nordisk A/S
Gretchen Repasky	Vice Education Director	Elevate Scientific Academy (Sweden)
Esben Søndergaard	PhD, MD	Aarhus University, Department of Clinical Medicine
Ingrid Willaing	Head of Diabetes Management Research	Steno Diabetes Center Copenhagen
Jørgen Wojtaszewski	Professor	University of Copenhagen, Department of Nutrition, Exercise and Sports

Chair: Nils Færgeman, Professor, University of Southern Denmark

E. Committee for Talent Development

Members of the Committee for Talent Development of the Danish Diabetes Academy *as per 31 March 202*

Name	Title	Affiliation
Loranne Agius	Professor	University of Newcastle, United Kingdom
Amy Ahern	Senior Investigator Scientist	University of Cambridge, United Kingdom
Hadi Al-Hasani	Professor	German Diabetes Center, Germany
Myriam Aouadi	Professor	Karolinska University, Sweden
Clare Bambra	Professor	Newcastle University, United Kingdom
Darlene Berryman	Professor, Executive Director of the Diabetes Institute	Ohio University, United States
Carina Chan	Professor	La Trobe University, Australia
Lluis Fajas Coll	Professor	University of Lausanne, Switzerland
Ralph Brinks	Dr.	German Diabetes Center, Germany
Patricia L. Brubaker	Professor	University of Toronto, Canada
Molly Byrne	Professor	Galway University, Ireland
Imelda Coyne	Professor	Trinity College Dublin, Ireland
Dana Dabelea	Professor	Colorado School of Public Health, United States
Gernot Desoye	Professor	University of Graz, Department of Obstetrics and Gynecology, Austria
Fidelma Dunne	Professor, MD, PhD	School of Medicine, Clinical Science Institute, NUI Galway, Ireland
Baran Ersoy	Assistant Professor of Medicine	Weill Cornell Medicine Division of Gastroenterology and Hepatology, United States
Adam Farmer	Professor	Keele University, United Kingdom
Mark A.Febbraio	Professor	Monash Institute of Pharmaceutical Sciences, Monash University, Australia
Jorge Ferrer	Professor	Imperial Biomedical Research Centre London, United Kingdom
Graham Finlayson	Professor	University of Leeds, United Kingdom

Name	Title	Affiliation
Francis Finucane	Professor	Galway University Hospital, Ireland
Andre Franke	Professor	Christian-Albrecths-University of Kiel, Germany
Jed Friedman	Professor, Director	Harold Hamm Diabetes Center, University of Oklahoma Health Sciences Center, United States
James Granneman	Professor	Center for Integrative Metabolic and Endocrine Research, Detroit, United States
Samy Hadjadi	Professor	Nantes University, France
Soffia Gudbjörnsdottir	Professor	Gothenburg University, Sweden
Hermann Haller	Professor	Hannover Medical School, Germany
Ola Hansson	Professor	Lund University, Sweden
Anand Hardikar	Associate Professor	University of Sydney, Australia
Gunnar Hartvigsen	Professor	The Artic University of Norway, Norway
Hiddo Lambers Heerspink	Professor	University of Groningen, Netherlands
Norbert Hermanns	Professor	Forschungsinstitut Diabetes-Akademie Bad Mergentheim, Germany
Stephan Herzig	Professor	TUM School of Medicine, Germany
Matthew Hirshcey	Assistant Professor	Duke University, Departments of Medicine (Division of Endocrinology, Metabolism and Nutrition) and Pharmacology & Cancer Biology, United States
Richard Holt	Professor	Medicine at University of Southampton, United Kingdom
Chew Boon How	Professor	University Putra Malaysia, Malaysia
Jørgen Jensen	Professor in sports biology	Norwegian School of Sport Sciences, Oslo, Norway
Mugdha Joglekar	PhD, JDRF APF	University of Sydney, Australia
Fredrik Karpe	Professor	Oxford University, United Kingdom
Ryo Kawasaki	Professor	University of Melbourne, Australia
George King	MD	Joslin Diabetes Center, United States
Anna Krook	Professor	Karolinska University, Sweden
Paul R. Langlais	Ass.Professor, PhD	University of Arizona, United States
David Leslie	Professor	The Blizard Institute, London, United Kingdom

Name	Title	Affiliation
James Lo	Assistant Professor	Weill Cornell Medicine, United States
Jelle Matthijnssens	Principal Investigator	KU Leuven, Belgium
Rory McCrimmon	Dean	University of Dundee, Scotland, United Kingdom
David McIntyre	Professor	University of Queensland, Australia
Ari Meerson	Assistant Professor	MIGAL Galilee Research Institute, Israel
Timothy H. Moran	Professor	John Hopkins University, Department of Psychiatry and Behavioral Sciences, United States
Helen Murphy	Professor	University of Cambridge, United Kingdom
Venkat Narayan	Professor	Emory University, United States
Christopher Nolan	Professor	Canberra Hospital, Endocrinology Unit, Australia
Luke Norton	Assistant Professor	University of Texas, Health Sciences Center at San Antonio, United States
Timothy Osborne	Professor	Johns Hopkins University, USA
Susan E. Ozanne	Professor	University of Cambridge, United Kingdom
Tunde Peto	Professor	University College London, United Kingdom
John Petrie	Professor	University of Glasgow, United Kingdom
Rodica Pop-Busui	Professor	Michigan University, United States
Marc Prentki	Professor	McGill University Canada and Montreal Diabetes Reserach Center, Department of Medicine, Canada
Bodil Rasmussen	Professor	Deakin University Melbourne, Australia
Romano Regazzi	Professor	University of Lausanne, Switzerland
Bart Roep	Professor	City of Hope, the Netherlands
Casper Schalkwijk	Professor	Maastricht University, the Netherlands
Miranda Schram	Professor	Maastricht University, the Netherlands
Dinesh Selvarajah	Senior Lecturer, Consultant Physician	Sheffield Teaching Hospitals Foundation Trust, United Kingdom
Edmund Seto	Professor	University of Washington, United States
Torild Skrivarhaug	Group leader PhD	Oslo University Hospital, Norway

Name	Title	Affiliation
Anthony Smith	Professor	University of Queensland, Australia
Frank Snoek	Professor	VU University Medical Center, Amsterdam, the Netherlands
Coen Stehouwer	Professor	Maastricht University, the Netherlands
Gregory R. Steinberg	Professor	McMaster University, Canada
Lars Christian Stene	Researcher	Diabetes Research Center, Norwegian Institute of Public Haematology, Norway
Jacqueline Stephens	Professor	Pennington Biomedical Research Center, United States
Markus Stoffel	Professor	ETZ Zürich, Switzerland
Scott Summers	Professor	University of Utah, United States
Lori Sussel	Professor	Barbara Davis Center, United States
Solomon Tesfaye	Professor	University of Sheffield, United Kingdom
Jeff Tessem	Assistant Professor, PhD	Brigham Young University, United States
Helen Thomas	Professor	St. Vincent's Institute, Melbourne, Victoria, Australia
Bernard Thorens	Professor	University of Lausanne, Switzerland
Paula Trief	Professor	SUNY Upstate Medical University, United States
Vincenzo Trischitta	Professor	University of Rome, Italy
Jaakko Tuomilehto	Professor	Dasman Diabetes Institute
Joop van den Bergh	Professor	Maastricht University, the Netherlands
Antonio Vidal-Puig	Professor	University of Cambridge, United Kingdom
Michael Weedon	Assistant Professor	University of Exeter, United Kingdom
Cora Weigert	professor	University of Tuebingen, Germany
Sarah Wild	Professor	Edinburgh University, United Kingdom
David Charles Wright	Professor	University of Guelph, Canada
Hannele Yki-Järvinen	Professor	University of Helsinki, Finland
Victor Zammit	Professor	University of Warwick, United Kingdom
Antonio Zorzano	Professor	University of Barcelona, Spain

Chairs and vice-chairmen

Postdoctoral fellowships and visiting professorships

Chair: **Scott Summers**, University of Utah, United States

Vice-chair: **Venkat Narayan**, Emory University, United States

PhD scholarships

Chair: **Timothy Osborne**, Johns Hopkins University, United States

Vice-chair: **Darlene Berryman**, Ohio University, United States

Appendix 4

Curricula Vitae

a. Chair Allan Flyvbjerg
b. Board member Lise Wogensen Bach
c. Board member Kurt Højlund
d. Managing Director Tore Christiansen

A. Chair Allan Flyvbjerg



Brief CV - **ALLAN FLYVBJERG**

Day of birth: April 28th, 1959
Address: Steno Diabetes Center Copenhagen (SDCC), The Capital Region of Denmark, Niels Steensens Vej 2, DK-2820 Gentofte, Denmark
Tel. +45 5177 9548 and e-mail allan.flyvbjerg@regionh.dk

A. Education, degrees and positions

1986:	Graduated as **Medical Doctor (MD)** from Aarhus University (AU), Aarhus, Denmark.
1986-88	Employed as Clinical Endocrinologist at Medical Department of Endocrinology, Aarhus University Hospital, Aarhus, Denmark.
1993:	**Doctor of Science (D.Sc.(Dr. Med.))** from AU, Aarhus, Denmark.
1999	Specialist in Endocrinology and Internal Medicine.
2001	Chief Physician and Clinical Endocrinologist/Diabetologist at Department M and Medical Research Lab., Aarhus University Hospital, Aarhus, Denmark.
2005-09:	**Professor in Experimental Medicine**, AU, Aarhus, Denmark
2009-10	**Professor in Clinical Endocrinology (Chair)**, AU, Aarhus, Denmark.
2010-16	**Dean** at Faculty of Health, AU, Aarhus, Denmark.
2016-	**CEO** at Steno Diabetes Center Copenhagen (SDCC), The Capital Region of Denmark, Copenhagen, Denmark
2016-	**Professor in Clinical Endocrinology**, University of Copenhagen, Copenhagen, Denmark
2019-	Graduated from the Copenhagen Business School (CBS) with **the CBS Executive Board of Director Education**, Copenhagen, Denmark

B. Scientific contributions

Publications:

620 printed/in press (**495** of these articles are peer reviewed and **125** review articles).
H-index (Scopus): **79**, citations **~26,500**
H-index (Web of Science): **72**, citations **~22,000**

Supervisor for:

A total of more than 20 PhD-students. A total of more than 10 Medical Students.

C. Significant administrative qualifications

1999-2009	**Leader** of The Medical Research Laboratories, Clinical Institute, AU
2000-2011	**President** of the Danish Diabetes Association (app. 90.000 members and an annual budget of app. 50 mio. DKK)
2001-2002:	**President** of the Scandinavian Diabetes Association (SSSD).
2005-2011	**Vice-institute leader** at Clinical Institute, Aarhus University Hospital (app. 1,600

	employed doctors, nurses, post docs, PhDs; an annual budget of more than 500 mio. DKK)
2008-2016	**Member** of the Steering Committee for the New University Hospital (DNU) in Aarhus (total budget of 8.90 billion DKK)
2010-2015	**Director** of the Nanomedicine Center LUNA (total budget of 30 mio. DKK)
2011-2016	**Dean** at Faculty of Health, Aarhus University, Aarhus, Denmark; an annual budget of 2 billion DKK
2016-2017	Member of the **Growth team for life-science,** established by the Danish Government
2016-	**CEO** at Steno Diabetes Center Copenhagen (SDCC), The Capital Region of Denmark, Copenhagen, Denmark; an annual budget of 400 mio. DKK.
2018-2022	**Chairman, Board of Directors** for the Danish Diabetes Academy.
2020-	**Member, Board of Directors**, in the Bagger Sørensen Foundation.

D. Major personal awards:

2019:	**Honorary Member of the Danish Diabetes Association**
2017:	**The Bagger-Sørensen Award 2017** – awarded by the Bagger-Sørensen Foundation, Vejle, Denmark
2011:	**The Erhoff Prize 2011** - awarded by the Thor Erhoff Family Foundation
2011:	**Knighted** by **the Queen of Denmark**
2011:	**The Novo Nordisk Foundation Lecture Prize 2011** - awarded by SSSD, Reykjavik, Iceland
2010:	**The Ruth Østerby Prize 2010 -** awarded by the European Diabetic Nephropathy Study Group (EDNSG) at the Annual Meeting in Poitiers, France
2010:	**Her Majesty Queen Ingrid Celebration Lecture 2010** – awarded by the Regional Hospital of Southern Denmark, Sønderborg, Denmark
2009:	**Aarhus University Research Communication Prize 2009**, Aarhus, Denmark
2009:	**The Dorothy Hodgkin Prize 2009** - awarded by Diabetes-UK in Glasgow. UK.
2007:	**The Knud Lundbæk Prize 2007–** awarded by the Scandinavian Society for the Study of Diabetes (SSSD) at the 42th Annual Meeting in Denmark
2006:	**The Hagedorn Prize 2006** – awarded by the Danish Society of Internal Medicine (DSIM) in Copenhagen, Denmark
2004:	**The ESCI Award for Excellence in Clinical Science 2004** – awarded at the 38th European Society for Clinical Investigation (ESCI) Meeting in Utrecht, Holland
2001:	**The Castelli Pedroli Prize** - **16th Camillo Golgi Lecture 2001** at the 37th European Association for the Study of Diabetes (EASD) Meeting in Glasgow, UK
2001:	**The Dandy Foundation Award 2001** - for outstanding diabetes research
1998:	**The Niels Schwartz Sørensen Award 1998** - for outstanding diabetes research
1995:	**The Bernhard Rasmussen and Meta Rasmussens Memorial Award**, Odense, Denmark

Further info:
https://research.regionh.dk/en/persons/allan-flyvbjerg(f1a1a424-d423-4e1d-af30-851c0b5a7254).html

B. Board member Lise Wogensen Bach



Curriculum Vitae – Lise Wogensen Bach
Vice-dean, Health, Aarhus University
Born: 12 12 58
Family matters: Married, 3 adult children
Address: 23 Kystvejen, 3rd floor, DK-8000 Aarhus C
Phone: +45 25 48 85 22
E-mail: LWB@au.dk
https://pure.au.dk/portal/da/lwb@au.dk

Education/Academic Degrees:
1986 MD, The Faculty of Health Science, University of Copenhagen
1995 DMSci, Doctoral Thesis in the field of Diabetes, The Faculty of Health Science, University of Copenhagen

Professional Experience/Positions:
04/1986-19/1986 Resident, Steno Diabetes Center, Gentofte, Denmark
10/1986-03/1991 Post-doctoral Research Fellow, Steno Diabetes Center/Hagedorn Research Laboratory, Gentofte, Denmark
04/1991-12/1993 Post-doctoral Research Fellow, Department of Neuropharmacology, The Scripps Research Institute, La Jolla, CA, USA (Nora Sarvetnick, Ph.D.)
04/1994-10/2010 Associate Scientist and Associate Professor, Research Laboratory of Biochemical Pathology, Institute of Experimental Research, Aarhus University Hospital, Denmark
07/2008- 07/2010 Head of Postgraduate Program in Endocrinology (training of PhD-students)
11/2010 - 10/2015 Professor MSO Molecular Matrix Biology, Institute of Clinical Medicine
03/2011 - 03/2016 Vice-dean, talent and Head of Graduate School of Health Sciences, Aarhus University, Denmark
04/2016 - 12/2019 Vice-dean, talent and external relations, Health Aarhus University, Denmark
01/2020 - Vice-dean, education, Health, Aarhus University, Denmark

Leadership Courses:
- Harvard IEM 2015, Leadership in higher education (14 days, 2015)
- One day seminar at Harvard Graduate School of Education (2014).
  Topics: 1) The power of reframing. 2) Immunity to Change

Profile as vice-dean for education: My focus is in study programs within health science and pregraduate extracurricular programs including honours programs within research and innovation. My goal is to initiate actions that support the key tasks of Aarhus University concerning education: Research based degree programs at the highest international quality, development of research talents and integration of research into the degree programs, and graduates for the labor market of the future. I have furthermore special emphasis on social and professional integration, digitalization and internationalization. Concerning the latter, I work with student exchange, lecturer exchange, mobility windows for student exchange and summer university. I work cross disciplines, sectors and borders promoting interdisciplinary learning and teaching activities and internationalization.

Scientific profile: My research focus is extracellular matrix biology and inflammation. I have established several gene-modified animal models for diseases in man, with special emphasis on chronic kidney disease and diabetic angiopathy. I have supervised 8 Ph.D.-students as main supervisor and 4 Ph.D.-students as co-supervisor. I have supervised several master students, research year students and Erasmus exchange students (total 20). I have authored 71 scientific publication; 16 as first author, 13 as last author.

Reviewer Functions: *Ph.D. theses:*16*, Master theses:* 6, *Research year theses:* 10*, Other:* 8
Journals: Diabetologia, Biochimica et Biophysica Acta, Nephrology, dialysis and transplantation, Hormone and Metabolic Research, Kidney International, Laboratory Investigation, American Journal of Physiology

Local Committees (Aarhus University): Since 2002 I have been a member of several faculty specific and interfaculty committees with responsibility for PhD training including head of Postgraduate Program in Endocrinology (research training), recruitment of PhD-students and awarding PhD scholarships. Furthermore, I have participated in development of “Junior Researcher Development Program”, policy for gender balance in science and policy for responsible conduct of research. From 2020, I attend committees with focus on education and study programs.

National Committees (selected):
- Board of the Danish Endocrine Society (2006-2010)
- The Danish Committees for Scientific Dishonesty (2010-2017)
- The National group for Research Integrity, formulation of “The Danish Code of Conduct” (2013-2014)
- Danish Diabetes Academy Research Committee (funding for Ph.D.-students, post.docs and guest professors within the academy) (2012-2017)
- Universities Denmark: committee for Research Education (2014-2019)
- The Committee for the Protection of Scientific Work (UBVA) (UBVA) (2015-2018)
- Board of the Danish Diabetes Academy (2018-)

International Committees:

- Nordic Medical Research Council (NOS-M): Possible harmonisation of the medical PhD education 10th October 2012, Copenhagen (formulation of recommendations)
- Member of committee performing an international audit for the investigation of scientific dishonesty in an EU-supported project (2013) (contact: Isabelle de Froidmont-Gortz, Project Officer, European Commission, DG Research & Innovation, E)
- Member of the steering committee for Norwegian National Graduate Schools, The Norwegian Research Council (funding and evaluation of Research Schools) (2013-2017)
- The National Commission for the Investigation of Research Misconduct, Norway 2017-2019
- Chair International Review Panel; Evaluation of The Graduate School of Health and Medical Sciences, Copenhagen University, Denmark (2019)
- The Research Council of Norway: Chair of Nordic review panel; Midterm evaluation of 11 research schools (2020)

Organizer of conferences and workshops (selected):

- High Level Dialogue: Excellence in European Doctoral Training, September 20th - 21st, 2012, Aarhus University, Denmark.
- "Research Integrity and Responsible Conduct of Research – New Challenges in a Turbulent World". 17 April 2013, Health, Aarhus University
- Excellence in European Doctoral Education: Innovation and Enhancement, Conference. Jointly hosted by the University of Edinburgh and Aarhus University, 28th and 29th November 2013, Edinburgh, Scotland
- Match-Making seminar between Peking University Health Science Center and Health, Aarhus University. 8th September 2014, Aarhus University, Denmark.
- Danish-Finnish (Helsinki Doctoral School in Health Sciences) Seminar on Ph.D.-training 17th-18th November 2014, Health, Aarhus University, Denmark.
- Focus Group for postdoc researchers, EUA-CDE, 12-13 November 2015, University of Aarhus, Denmark
- Danish-Finnish (Helsinki Doctoral School in Health Sciences) Workshop on Ph.D.-training, 21th -22nd January 2016, Health, Aarhus University, Denmark. Participants: Graduate school management. Topics: 1) Formal agreement on collaboration herein cotutelles, joint ph.d.-programs and student exchange, 2) eSurvey for Supervisors 3) Joint courses, 4) joint funding possibilities 5) Nordic Network in doctoral education
- DEA 22 November 2016, Aarhus Universitet. Title: International recruitment - Between a dynamic workforce and retaining excellent researchers

Visit at other institutions:

- Leiden University Medical Center, 2012
- Bejing University, Tsinghua University, CAS/UCAS og SinoDanishCenter and Fudan University (Shanghai) 2012
- China Resources Pharmaceutical Group, Beijing, and Peking University Health Science Center, China State Institute of Pharmaceutical Industry, Shanghai and Fudan University, 2013
- Boston area, 2014, Boston Children Hospital, Harvard Medical School, Institute for Healthcare Improvement, Evans Center, Boston University, Beth Israel Deaconess Medical Center & Brigham and Womens Hospital, Harvard School of Public Health,
- Helsinki Doctoral School in Health Sciences, Helsinki University, Helsinki, 2014. Knowledge exchange within PhD-training: a) general program structure, b) admission, c) training, d) progress evaluation, and e) thesis
- Helsinki Doctoral School in Health Sciences, Helsinki University, Helsinki, Topics: joint training, competitive funding, supervison.
- EU, Bruxelles (CDEU, European Brain Council, Horizon 2020 Health, EU Joint program), 2016
- Medical University Graz, Austria, 2016. Topics: student exchange, staff exchange, joint PhD.-program.
- University of Sao Paulo (Ribeirao Preto (FCFRP-USP) and Sao Paulo (USP)) and Innovation Centre Denmark Sao Paulo, 2017. Topics: student exchange, joint PhD.-program, match-making.

Invited talks (selected):

- 6th 'ORPHEUS' annual conference 2011, Izmir, Turkey, PhD Quality Indicators for Biomedicine and Health Sciences; Moderator in workshop.
- High Level Dialogue: Excellence in European Doctoral Training, Aarhus University, Denmark 2012. Title: Internationalisation and mobility.
- Excellence in European Doctoral Education: Innovation and Enhancement Conference, 2013, Edinburgh, Scotland. Title: Interdisciplinarity and Doctoral Programs.
- STAGES Workshop 2014, AU. Title: "Structural transformation to achieve gender equality in science".
- The Association of Spanish Researchers in Denmark, Breaking down borders in research, 2016. Title: Internationalisation strategies at Aarhus University.
- Royal Netherlands Academy of Arts and Sciences and the Association of Universities in the Netherlands, 23th March, 2016. Amsterdam, The Netherlands. Title: 1) RCR education and RI initiatives in Aarhus and 2) National code of conduct, Denmark.
- 10th FENS Forum of Neuroscience, July 2-6, Copenhagen, Denmark. Title: Fabrication and Falsification, from pure misconduct into the grey zone.

C. Board member Kurt Højlund

Curriculum vitae



Full name, date and place of birth
Kurt Højlund, April 22, 1967, Holstebro, Denmark

Current positions and places of work:
Head of Research, Clinical Professor in Endocrinology, Consultant, Steno Diabetes Center Odense, Odense University Hospital and Department of Clinical Research, University of Southern Denmark (SDU), DK-5000 Odense, Denmark
Adjunct Professor, Department of Nutrition, Exercise and Sports, Copenhagen University from 2014-2024.

Academic education:
Jun 1995: Diploma in Medical Research, Odense University.
Jan 1996: Masters Degree in Health Sciences, Medicine, Odense University. Average Mark 10.4 (13 scale).
Nov 2003: Degree of PhD in Health Sciences, Medical Endocrinology, SDU.
Jan 2011: Completed "Research Management Course" at Copenhagen Business School.
May 2014: Doctoral degree (DMSc) at the Faculty of Health Sciences, SDU

Clinical education and specialist authorization:
1996-2003: House Officer, Svendborg Sygehus, Funen County, Dept. of Endocrinology, Odense University Hospital and Dept. of Internal Medicine, Odense University Hospital
2003-2005: Senior House Officer, Depts. of Internal Medicine/Endocrinology, Odense University Hospital
2005-2009: Senior Registrar/post.doc (50/50%). Dept. of Endocrinology, Odense University Hospital
2009-2014: Consultant/associate professor (50/50%), Dept. of Endocrinology, Odense University Hospital
2014-2018: Consultant/professor (50/50%), Dept. of Endocrinology, Odense University Hospital
2018- Consultant/professor (50/50%), Steno Diabetes Center Odense, Odense University Hospital
Nov 2008: Specialist in Medical Endocrinology.

Administrative work including research leadership:
2005-2007: Vicepresident for the Danish Society for Young Endocrinologists (FYEN)
2005-2008: Webmaster in the Danish Society for Young Endocrinologists (FYEN)
2008-2012: Member of the Board and Secretary for the Danish Endocrine Society (DES)
2009: Chief-organizer of the Annual Meeting of the Danish Endocrine Society (DES)
2008-2019: Member of the Board for the Society for the Study of Diabetes in Scandinavian (SSSD)
2011- Member of the Steering Committee for the FFARMED
2011- 2016: Sapere Aude DFF-Research Leader, Institute of Clinical Research, SDU
2012+2017: Chief-organizer of the 47th and 52nd annual meetings in SSSD
2012-2018: Chairman of the Consultative Council in the Danish Diabetes Academy
2012- Member of the Board of the Danish Diabetes Academy
2013- Member of the Regional Council of Endocrinology (Specialerådet) in Region Syddanmark
2014- Member of the Scientific Evaluation Committee for Lægeforeningens Forskningsfond
2016- Member of the working group for the National Guidelines for treatment of type 2 diabetes by the Danish Endocrine Society (DES) and The Danish College of General Practitioners (DSAM)
2016- Member of the working group for NBV (National Behandlings Vejledninger) of type 2 diabetes, Danish Endocrine Society (DES).
2018- Member of the Scientific Evaluation Committee for OUH PhD Stipends
2018- Chair of the Scientific Evaluation Committee for SDCO PhD Stipends
2020- Member of the Scientific Evaluation Committee for Diabetesforeningens Forskningsråd

Referee work: For > 50 different journals in the areas of diabetes, endocrinology, metabolism and proteomics. Referee for Diabetes UK Grant Review 2006; the Wellcome Trust Grant Review 2006; the Agence Nationale de la Recherche (French National Agency) 2008, 2011, 2012; the Villum Foundation 2011; the ERC Consolidator Grant 2014; The Netherlands Organisation for Health Research and Development 2014, 2016; the European Foundation for the Study of Diabetes 2015. Member of the evaluation committee for Ph.D mobility stipends at Copenhagen University 2010;

Offical opponent of 29 PhD theses and 1 doctoral dissertation

Scientific Awards: Sehested-Hansen Foundation Honor Bursary 2003; Bagger-Sørensen Foundation Honor Bursary 2003; Helmar Lausten's Memorial Bursary 2004; Young Investigators Award of SSSD 2007; Niels Schwartz-Sørensens Honory Prize 2010. Sawmill owner Jeppe Juhl and wife Ovita Juhl Memorial Bursary 2016.

Major external funding as main applicant (>1.000.000 DKr)
2005 Danish Medical Research Council: 1.001.915 DKK
2009 Danish Medical Research Council: 1.791.474 DKK
2009 Novo Nordic Excellence Grant: 5.000.000 DKK.
2011 Sapere Aude, DFF Starting Grant: 8.571.866 DKK
2013 SDU 2020: 2.221.000 DKK
2015 Novo Nordisk Foundation: 3.000.000 DKK
2016 Sawmill owner Jeppe Juhl and wife Ovita Juhl Memorial Bursary: 1.000.000 DKK
2020 The Ministry of Higher Education and Science: 1.500.000 DKK

Chair: Annual Meetings of DES (2005, 2006, 2009, 2011,2014) and SSSD (2007, 2008, 2012, 2015, 2017).
Courses arranged by Danish PhD School of Molecular Metabolism/ Diabetes Academy (2005, 2007-2020)
EASD/ADA-symposion "Mitochondrial Biology in Human Diabetes and Metabolic Diseases (EASD 2012)
"Skeletal muscle Proteome" session at 14th Human Proteome Organization World Congress (HUPO 2015)

Supervisor for 25 Ph.D. students and 7 Postdocs:
Completed: Vibe Skov 2007, Martin Hey-Mogensen 2009, Birgitte F. Vind 2010, Xiaolu Zhao and Louise Frederiksen 2011, Lene Sønder 2012, Steffen Bak and Andreas J.T.Pedersen 2014, Mette Wod, Zuzana Vlachocva and Tore B. Stage 2015, Rikke Kruse, Line V. Magnussen, Sofia B. Mikkelsen 2016. Magda Altionok, Mette Lundgren Nielsen 2017. Rugivan Sabaratnam, Han-Chow Koh 2018. Karina V. Sørensen 2019. Post.docs: Stine J. Petersson 2014, Jonas M Kristensen 2015, Michaela Tencerova 2019.
Current: Maria Blicher, Tine B. Nielsen, Eva Kampmann-Gram, Jens-Jacob Lauterlein, Maria H. Petersen, Kristoffer J. Kolnes, Pauline M. Møller. Post.docs:, Rikke Kruse, Rugivan Sabaratnam, Navid Sahebekhtiari, Rikke Hjortebjerg.

Teaching within past 5 years: 1997-2020: Course in Human Pathophysiology, SDU. 1999-2019: Pregraduate courses in endocrinology (K6+K14), Odense University Hospital. 2002-2020: Ph.d.-courses at the Danish PhD School of Molecular Metabolism, SDU, now the Danish Diabetes Academy. 2012-2014: Courses at the Institute of Sports Science and Clinical Biomechanics, SDU. 2013: Ph.D. course at Department of Nutrition, Exercise and Sports, KU.

Publications:
Total number of peer review publications: 163 (22 as first author, 31 as last author). Citations=8917, H-index=49 (Web of Science).

10 most important publications:

1. Højlund K, Hansen T, Lajer M, Henriksen JE, Levin K, Lindholm J, Pedersen O, Beck-Nielsen H. A novel syndrome of autosomal dominant hyperinsulinemic hypoglycemia linked to a mutation in the human insulin receptor gene. **Diabetes**. 2004; 53: 1592-1598.
2. Mogensen M, Sahlin K, Fernstrøm M, Glintborg D, Vind B, Beck-Nielsen, Højlund K. Mitochondrial respiratorion is decreased in skeletal muscle of patients with type 2 diabetes. **Diabetes** 2007: 56; 1592-1599.
3. Skov V, Glintborg D, Knudsen S, Jensen T, Kruse TA, Tan Q, Brusgaard K, Beck-Nielsen H, Højlund K. Reduced expression of nuclear-encoded genes involved in mitochondrial oxidative metabolism in skeletal muscle of insulin-resistant women with polycystic ovary syndrome. **Diabetes.** 2007 Sep;56(9):2349-55.
4. Højlund K, Glintborg D, Andersen NR, Birk JB, Treebak JT, Frøsig C, Beck-Nielsen H, Wojtaszewski JP. Impaired insulin-stimulated phosphorylation of Akt and AS160 in skeletal muscle of women with polycystic ovary syndrome is reversed by pioglitazone treatment. **Diabetes** 2008; 57: 357-366.
5. Vind BF, Pehmøller C, Treebak JT, Birk JB, Hey-Mogensen M, Beck-Nielsen H, Zierath JR, Wojtaszewski JFP, Højlund K. Impaired insulin-induced site-specific phosphorylation of TBC1D4 in skeletal muscle in type 2 diabetes is rescued by endurance exercise training. **Diabetologia** 2011; 54(1):157-67.
6. Boström P, Wu J, Jedrychowski MP, Korde A, Ye L, Lo JC, Rasbach KA, Boström EA, Choi JH, Long JZ, Kajimura S, Zingaretti MC, Vind BF, Tu H, Cinti S, Højlund K, Gygi SP, Spiegelman BM. A PGC1-α-dependent myokine that drives brown-fat-like development of white fat and thermogenesis. **Nature.** 2012; 481(7382):463-8.
7. Vind BF, Birk JB, Vienberg SG, Andersen B, Beck-Nielsen H, Wojtaszewski JF, Højlund K. Hyperglycaemia normalises insulin action on glucose metabolism but not the impaired activation of AKT and glycogen synthase in the skeletal muscle of patients with type 2 diabetes. **Diabetologia.** 2012; 55(5):1435-45.
8. Kruse R, Vind BF, Petersson SJ, Kristensen JM, Højlund K. Markers of autophagy are adapted to hyperglycaemia in skeletal muscle in type 2 diabetes. **Diabetologia** 2015 Sep;58(9):2087-95.
9. Kruse R, Vienberg SG, Vind BF, Andersen B, Højlund K. Effects of insulin and exercise training on FGF21, its receptors and target genes in obesity and type 2 diabetes. **Diabetologia.** 2017 Oct;60(10):2042-2051.
10. Sabaratnam R, Pedersen AJ, Eskildsen TV, Kristensen JM, Wojtaszewski JFP, Højlund K. Exercise Induction of Key Transcriptional Regulators of Metabolic Adaptation in Muscle Is Preserved in Type 2 Diabetes. **J Clin Endocrinol Metab.** 2019 Oct 1;104(10):4909-4920.

D. Managing Director Tore Christiansen



Curriculum Vitae

Managing Director, Danish Diabetes Academy
Tore Christiansen
Stenrosevej 69, 8330 Beder
+45 2964 6764
Tore.christiansen@rsyd.dk
https://www.linkedin.com/in/tore-christiansen-a023a2/
https://twitter.com/TBergishagen

Education/Academic Degrees:

1999 Physical Therapist, VIA University College, Holstebro
2004 Master of Health Science, Aarhus University
2009 PhD, Faculty of Health, Aarhus University

Professional Experience/Positions:

02/2013 Managing Director Danish Diabetes Academy

01/2010 – 01/2013 January, Medical Liaison, Eli Lilly and Company

05/2009 May – 01/2010, Center Administrator, Lundbeck Foundation Center for Knee and Hip arthroplasty, Aarhus University Hospital

2005-2009 Research Assistant, Aarhus University Hospital

2004-2005 Teacher at School for Physiotherapy, Via University College Aalborg

1991-2001 Physical Therapist Give Hospital and Kalundborg Hospital

Positions of trust

Board of Director Member of Danish society for adipose research

Publication list

Glud, M**., Christiansen, T**., Larsen, L.H., Richelsen, B., Bruun, J.M. Changes in Circulating BDNF in relation to Sex, Diet, and Exercise: A 12-Week Randomized Controlled Study in Overweight and Obese Participants, Journal of Obesity, 2019, 2019, 4537274

Fjeldborg, K., Pedersen, S.B., Møller, H.J.,**Christiansen, T,.** Bennetzen, M., Richelsen, B. Human adipose tissue macrophages are enhanced but changed to an anti-inflammatory profile in obesity, Journal of Immunology Research, 2014,

Fjeldborg, K., **Christiansen, T**., Bennetzen, M., ...Pedersen, S.B., Richelsen, B. The macrophage-specific serum marker, soluble CD163, is increased in obesity and reduced after dietary-induced weight loss, Obesity, 2013, 21(12), pp. 2437–2443

Christiansen, T., Bruun, J.M., Paulsen, S.K., Ølholm, J., Overgaard, K., Pedersen, S.B., Richelsen, B. Acute exercise increases circulating inflammatory markers in overweight and obese compared with lean subjects. European Journal of Applied Physiology 2013

Cullberg, K.B., **Christiansen, T**., Paulsen, S.K., ...Pedersen, S.B., Richelsen, B. Effect of weight loss and exercise on angiogenic factors in the circulation and in adipose tissue in obese subjects., Obesity, 2013, 21(3), pp. 454–460

Wamberg L, **Christiansen T**, Paulsen SK, Fisker S, Rask P, Rejnmark L, Richelsen B, Pedersen SB. Expression of vitamin D-metabolizing enzymes in human adipose tissue-the effect of obesity and diet-induced weight loss. International Journal of Obesity, 2013, 37(5), pp. 651–657

Christiansen T, Paulsen SK, Bruun JM, Pedersen SB, Richelsen B. Exercise-training versus diet-induced weight-loss on metabolic risk factors and inflammatory markers in obese subjects. A 12-week randomized intervention-study. American Journal of Physiology - Endocrinology and Metabolism, 2010, 298(4)

Christiansen T, Paulsen SK, Bruun JM, Ploug T, Pedersen SB, Richelsen B. Diet-induced weight loss and exercise alone and in combination enhance the expression of adiponectin receptors in adipose tissue and skeletal muscle, but only diet-induced weight loss enhanced circulating adiponectin. J Clin Endocrinol Metab 2010; 95(2):911-919.

Christiansen T, Paulsen SK, Bruun JM, Overgaard K, Ringgaard S, Pedersen SB et al. Comparable reduction of the visceral adipose tissue depot after a diet-induced weight loss with or without aerobic exercise in obese subjects: a 12-week randomized intervention study. Eur J Endocrinol 2009; 160(5):759-767.

Madsen EL, Bruun JM, Skogstrand K, Hougaard DM, **Christiansen T**, Richelsen B. Long-term weight loss decreases the nontraditional cardiovascular risk factors interleukin-18 and matrix metalloproteinase-9 in obese subjects. Metabolism 2009; 58(7):946-953.

Positano V, **Christiansen T**, Santarelli MF, Ringgaard S, Landini L, Gastaldelli A. Accurate segmentation of subcutaneous and intermuscular adipose tissue from MR images of the thigh. J Magn Reson Imaging 2009; 29(3):677-684.

Christiansen T, Bruun JM, Madsen EL, Richelsen B. Weight loss maintenance in severely obese adults after an intensive lifestyle intervention: 2- to 4-year follow-up. Ugeskr Læger 2007;169(33):2642-2645.Secondary publicaiton

Christiansen T, Bruun JM, Madsen EL, Richelsen B. Weight loss maintenance in severely obese adults after an intensive lifestyle intervention: 2- to 4-year follow-up. Obesity (Silver Spring) 2007; 15(2):413-420.

Christiansen T, Richelsen B, Bruun JM. Monocyte chemoattractant protein-1 is produced in isolated adipocytes, associated with adiposity and reduced after weight loss in morbid obese subjects. Int J Obes Relat Metab Disord 2005; 29(1):146-150.

Appendix 5

Case story of the Danish Diabetes Academy Educational and Talent Development Activities by Sophia Metz

Behind the scenes of the DDA Summer School

I attended the DDA summer school the first time in 2019 as a first-year PhD student. It was an impressing event with engaging lectures, interesting people and great networking. Therefore, I did not have to think twice when the DDA looked for a PhD student to join the summer school organizing team. Being on "the other side of the fence" has been an amazing experience and outstanding opportunity of various reasons:

Without doubt, I can say that I have learned a lot about the "behind the scenes" processes of such an event: Brainstorming the sessions, topics to discuss, speakers to invite and how to combine all of it into a four-day long event with great content and networking opportunities. I absolutely admire the passion that the organizing team invests every year into making the summer school a great experience for the students.

Especially, this past year has been a challenge for all of us, but the Summer School 2020 is still one of my highlights in a year full of uncertainty – both, by being an organizer and a participant.

Altogether, it was a great chance to sneak-peek into the preparation efforts of the DDA Summer School and it was, and still is, a pleasure to work together with group leaders from all over Denmark and the wonderful and motivated team from the DDA to create yet another exciting Summer School in 2021. I am looking forward to some exciting and inspiring days next summer!



Sophia Metz, MSc, PhD student, University of Copenhagen, Novo Nordisk Foundation Center for Basic Metabolic Research

Appendix 6

Terms of references for the Danish Diabetes Academy governing bodies

a. Board of Directors
b. International Advisory Board
c. National Advisory Forum
d. Committee for Education
e. Committee for Talent Development

A. Board of Directors

Terms of Reference for BoD

Members

The members of the BoD are three (3) internationally renowned experts in education, research, innovation and talent development within diabetes.

In order to ensure a national representation across Denmark, universities/university hospitals and relevant sectors and disciplines the BoD is composed of:

Allan Flyvbjerg, CEO at Steno Diabetes Center Copenhagen (SDCC), Capital Region of Denmark and Clinical Professor in Endocrinology at University of Copenhagen (Chair).

Lise Wogensen Bach, Professor MSO and Vice-Dean of Talent Development at Aarhus University.

Kurt Højlund, Chief Physician at Odense University Hospital and Clinical Professor in Endocrinology at Southern Danish University.

Appointment

The BoD is appointed for a period of five years.

Members cannot be re-elected. If a BoD member resigns before the end of his or her term, a new member will be appointed in accordance with the above-mentioned principles.

Tasks

The principal tasks of BoD are to:

- Set the overall strategy of the DDA
- Appoint members of the various bodies of the DDA
- Determine the framework and the specific activities undertaken within the DDA
- Be responsible for public communications regarding the DDA's corporate interests, grant policies and strategies
- Perform an annually self-evaluation and further evaluate the cooperation between the BoD and the Executive Management Team
- Hire a Managing Director of the DDA

Meetings

The BoD will meet four times a year for regular BoD meetings.
Meet on a regular basis with the various bodies of the DDA and the managing director.

Meet once a year with the senior management team of OUH.

In the event of a disagreement within the BoD, a decision is made based on simple majority.

Salary

The BoD receives no remuneration, but members' travel expenses are reimbursed.

2019-02-22

B. International Advisory Board

Terms of Reference of the International Advisory Board

Members

The International Advisory Board consists of ten renowned international experts within diabetes research, education and talent development. The committee will include younger senior experts and have a genderbalanced profile.

Relevant departments at the faculties of science and health sciences at the Universities, departments of endocrinology at the University Hospitals and the Danish Endocrine Society will be asked to nominate qualified members for the International Advisory Board. In addition, PhD students and postdocs funded by DDA and all members of DDA will be given the opportunity to nominate qualified members for the International Advisory Board.

Appointment

Based on these nominations, members and the Chair are appointed by the DDA BoD for a period of 2½ years. Members may be re-appointed once.

Tasks

The aim of the International Advisory Board is to discuss and challenge the overall strategy of the DDA, including the strategy for talent development and education.

Thus, the principal tasks of the International Advisory Board are to:

- Provide feedback and recommendations on activities in the DDA and provide inputs to the overall strategy of the DDA, including past, present and future DDA activities.
- Compile, jointly with the DDA BoD, an annual report outlining strengths, weaknesses, opportunities and threats (SWOT) to the DDA in relation to the three main focus areas: Education and talent development; networking activities; and, recruitment of talented researchers. The report will be prepared by the Secretariat of the Academy and will be approved by the DDA BoD and the International Advisory Board.

Meetings

The International Advisory Board meets with all members of the DDA BoD yearly at the American Diabetes Association (ADA) and/or European Association for the Study of Diabetes (EASD) Annual Meetings, where material and comments on the annual self-report are presented and discussed.

Salary

Members of the International Advisory Board will receive no remuneration, but the DDA will cover travel and accommodation costs in connection with the meetings of the Committee.

25-09-2018

C. National Advisory Forum

Terms of Reference of the National Advisory Forum

Members
The National Advisory Forum consists of ten renowned national experts within diabetes research, education and talent development. The committee will include younger experts and have a gender-balanced profile.

Relevant departments at the faculties of science and health sciences at the Universities, departments of endocrinology at the University Hospitals and the Danish Endocrine Society will be asked to nominate qualified members for the National Advisory Forum. In addition, PhD students and postdocs funded by DDA and all members of DDA will be asked to nominate qualified members for the National Advisory Forum.

Appointment
Based on these nominations, the members and Chair are appointed by the DDA BoD for a period of 2½ years. Members may be re-appointed once.

Tasks
The aim of the National Advisory Forum is to be a formal body for members to provide feedback and recommendations on the activities of the DDA and to make inputs to the overall strategy of the DDA, including past, present and future DDA activities.

Thus, the primary tasks of the National Advisory Forum are to:

- enhance communication and consultation between the DDA BoD, the committees, and the executive team to ensure continuous improvements in all aspects of the DDA
- give the Board feedback and recommendations on past, present and future activities within:
    - Educational activities: Format and topics of PhD courses, seminars and symposia and suggestions for 'hot topics'.
    - Networking activities: assist the BoD with suggestions to establish effective networking between members of the DDA.
    - Recruitment activities: Assist the DDA BoD with suggestions on how to recruit the best talents and how to improve mobility across disciplines, borders and sectors.

Meetings
The National Advisory Forum will hold two meetings per year and will meet with all members of the DDA BoD once yearly.

Salary
Members of the National Advisory Forum will receive no remuneration, but the DDA will cover travel and accommodation costs in connection with the meetings of the Committee.

21-09-2018

D. Committee for Education

Terms of Reference of the Committee for Education

Members

The Committee for Education consists of ten national experts of the highest international calibre within relevant diabetes areas and within education. The committee is composed of experts in basic, translational and clinical research, experts in educational and interdisciplinary principles and younger researchers. A gender-balanced profile will be maintained.

Faculties of science and health sciences at the Universities, University Hospitals, Medical Societies and relevant Life Science Industry will be asked to nominate qualified members for the Committee of Education. In addition, PhD students and postdocs funded by the DDA and all members of DDA will be given the opportunity to nominate qualified members for the Committee for Education.

Appointment

Based on these nominations, the members and chairman of the Committee for Education are appointed by the DDA BoD for a period of 2½ years. Members may be re-appointed once.

Tasks

The DDA educational training, talent development and networking activities are based on theoretical and practical courses, seminars, symposia, Summer schools, winter schools and annual meetings. The Committee for Education is responsible for organising these events.

Thus, the principal tasks of the Committee of the Education are to:

- coordinate and plan activities offered by the Academy and to manage the following functions related to the PhD graduate programme 'PhD graduate programme of Diabetes and Metabolism'
- establish an academic, scientific curriculum of educational and networking activities
- manage PhD courses and seminars (preparation of course programmes, course evaluations)
- manage course budgets (to be approved by the DDA BoD)
- explore co-financing opportunities
- collaborate with the PhD graduate schools of the university faculties in order to ensure approval of academic courses for the desired number of ECTS points and prevent overlap between DDA events and the compulsory courses of the university.

Further, the Committee for Education must each year prepare and send to the DDA BoD for approval in September:

- A report on the forthcoming year's activities including the aim, purpose, target participants and budget for PhD courses, seminars, symposia and other events.
- An annual report with an evaluation of all activities undertaken in the foregoing year, including participants' evaluation of these activities.
- A statement on the implementation of the latest learning principles.

Meetings

All DDA BoD members will meet with all members of the Committee for Education twice yearly in order to evaluate the function of the body and receive suggestions for potential changes to the work of the committee.

27-09-2018

E. Committee for Talent Development

Terms of reference of the Committee for Talent Development

Members

The Committee for Talent Development consists of a number of international, renowned scientific experts of the highest international caliber within relevant diabetes areas and within talent development. The committee is composed of a gender-balanced representation of experts in basic, translational and clinical research and experts in interdisciplinary research. Scientific experts working in Denmark cannot be nominated for the committee.

Faculties of science and health sciences at the Universities, University Hospitals, Medical Societies and relevant Life Science Industry will be asked to nominate qualified members for the Committee for Talent Development. In addition, PhD students and postdocs funded by DDA and all members of DDA will be given the opportunity to nominate qualified members for the Committee for Talent Development.

Potential changes to the function of the body are decided on by all members of the DDA BoD.

Appointment

Based on these nominations, the members and the chairman of the Committee for Talent Development are appointed by the DDA BoD for a period of 2½ years. Members may be re-appointed once.

Tasks

The aim of the Committee for Talent Development is to perform a professional peer review evaluation of PhD, postdoc and visiting professorship applications and to provide a motivated recommendation to the BoD on applications to be funded by DDA.

Thus, the primary task of the Committee for Talent development is twice a year to perform a professional peer review of all incoming applications received for:

- PhD scholarships
- Postdoc fellowships
- Visiting professorships

The Committee will base its evaluation on the applicant's quality, potential, viability and merits and on the quality of the proposed research project.

The Chairs of the Committee are responsible for submitting a motivated recommendation, including quantitative scores, to the DDA BoD on applications for DDA funding.

Meetings

The Committee will carry out peer reviews of all incoming applications twice a year. The Chairs of the Committee are responsible for scheduling conference calls to discuss qualified applications.

The Chairs of the Committee meets with all members of the DDA BoD yearly, in order to evaluate the function of the body and receive suggestions for potential changes in the work of the committee.

The Management Assistant of the DDA is responsible for coordinating workflow between the Committee, the

23-08-2018

Appendix 7

Overview of Danish Diabetes Academy governing bodies

Overview of governing bodies of the Danish Diabetes Academy (DDA)

The table below (*Table A*) gives an overview of the DDA governing bodies with regard to time of establishment, number of members, election period, number of meetings and their primary roles.

The members are listed in *Appendix 6*.

Table A. Overview of DDA governing bodies

	Time of establishment	Members (no)	Election period (years)	Meetings per year (no)	Roles
Board of Directors (BoD)	January 2018	3	5	4	Leadership
International Advisory Board	November 2018	10	2 ½ + 2 ½[c]	2[d]	Advisory
National Advisory Forum	January 2019	10	2 ½ + 2 ½[c]	2[d]	Advisory
Committee for Education	June 2018	15[a]	2 ½ + 2 ½[c]	2[d]	Executive (and advisory)
Committee for Talent Development	August 2018	93[b]	2 ½ + 2 ½[c]	2[e]	Executive (and advisory)

[a] The Committee for Education was expanded in 2019 to include one more representative of the life sciences industry to enhance collaborations with the life sciences industry.

[b] The Committee for Talent Development was expanded twice (in 2019 and 2020) to support the Executive Management Team's efforts to match the submitted applications with appropriate reviewers and thus secure a scientifically rigorous, in-depth and high-quality peer-review assessment of all applications by three individual reviewers.

[c] The members of the bodies were initially appointed for a period of 2 ½ years, and all members (except for two) were re-appointed for a second (and final) 2 ½-year term in 2021.

[d] Each body (except for the Committee for Talent Development, see below[5]) meets two times per year either face-to-face (preferably) or online. The Committee for Education and the National Advisory Forum also meets in a joint meeting once per year. Members of the Committee for Education meet ad hoc in sub-committees to organise the DDA educational and talent development activities. The BoD and Executive Management Team engage continuously with the chairs of the bodies to discuss the strategic approach and receive feedback and recommendations for the DDA activities. In addition to the meetings, the International Advisory Board prepares an annual written report evaluating the DDA activities and strategy and providing recommendations for improvements.

[e] The Committee for Talent Development does not meet, as the members submit their reviews through an online web-based system. However, the two chairs of the committee meet with the BoD twice per year to discuss and evaluate the DDA grant applications and the grant review process.

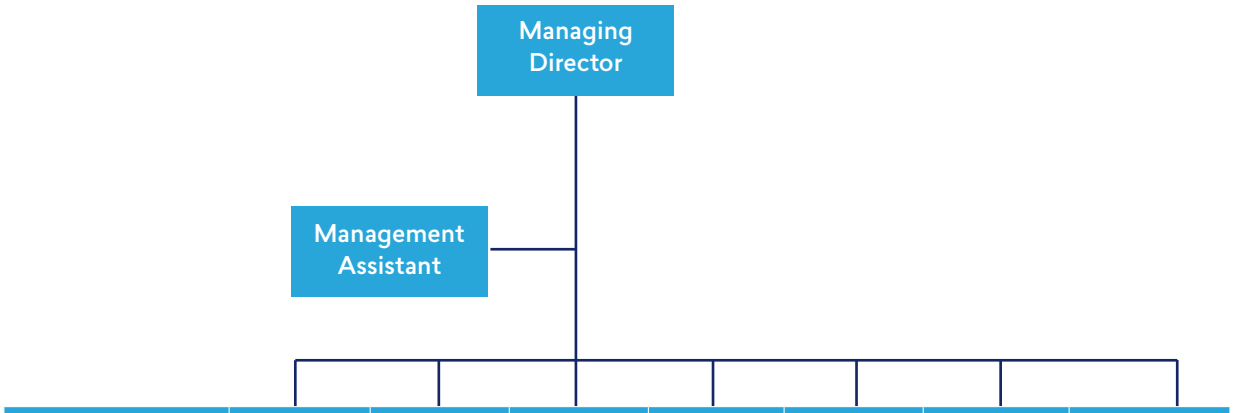
Appendix 8

Organisation and compositions of the Executive Management Team and the staff skill sets

Organisation and composition of the Executive Management Team over time and the staff skill sets

The organogram below *(Figure A)* shows the organisation and composition of the Executive Management Team.

Figure A. DDA Executive Management Team



	Education Manager	Education and Network Coordi-nator	Office Assistant	Commu-nications Officer	Project Manager	Student Assistant (web)	Student Assistant (communi-cations)
Educational activities and talent development	■	■	■	■	■	■	■
Networking and collaboration activities		■	■	■	■	■	■
Scholarships, fellowships, and visiting professorships				■	■	■	■

The table below *(Table A)* shows the composition of the Executive Management Team and the staff skill sets over time (2018-2021).

Table A. The composition of the DDA Executive Management Team and its staff skill sets (2018-2021)

Job title	Name	Appointment	Skills
Managing Director	**Tore Christiansen**	01.02.2018-31.12.2022	MSc in Health Science, PhD, physical therapist, experience as teacher and research assistant, research centre administrator and medical liaison (diabetes) in pharmaceutical company, and Managing Director of DDA during the first grant period (01.02.2013-31.12.2017)
Management Assistant	**Tine Hylle**	01.05.2018-31.12.2022	BA in Corporate Communications (English/French), experience as administrative secretary to hospital department management and research management (Odense University Hospital), PA to the chairman of the DDA Board of Directors during the first grant period (01.09.2012-31.12.2017), stays abroad
Education Manager	**Jette Husum**	01.08.2018-31.12.2022 (sick leave: 07.10.2019-31.08.2020)	MA in Classical Archeology, MA in Adult learning and Qualifications, experience as training manager and e-learning and learning specialist from various private companies
Education and Networking Coordinator	**Pernille Bruun Nielsen**	01.12.2018-31.12.2022 (maternity leave: 22.06.2020-06.06.2021)	MA in International Business Communications, experience as claims coordinator and project manager/ coordinator from private company and municipality, stay abroad
	Hanne Ørnstedt Hansen (sick-leave and maternity cover)	01.02.2020-30.04.2021	MA in Business, Language and Culture, experience as a marketing coordinator/ assistant and communications officer in various private companies
Office Assistant	**Mette Roed**	01.06.2018-31.12.2022	Bilingual secretary (English/French), experience as administrative secretary, executive assistant and management assistant from various private companies

Job title	Name	Appointment	Skills
Project Manager	**Nina Jensen**	01.06.2019-31.05.2021	PhD in Medicine, MSc in Molecular Medicine, experience as postdoctoral researcher and grants and research coordinator, stay abroad
Communications Officer (part-time)	To be employed	01.06.2021-31.12.2022	
	Pernille Fløjstrup Andersen	01.01.2020-30.04.2021	Journalist, experience as head of communications, communications officer, journalist from various private companies and journals and newspapers
	Jannie Iwankow Søgaard	01.08.2018-31.10.2019	Journalist, experience as freelance journalist for various journals and newspapers, Danish Medical Journal, Independent Research Fund Denmark, University of Copenhagen, and others
Student Assistant (web) (10 hours per week)	**Maria Friis**	01.02.2021-31.01.2022 (20 hours per week 01.03.2021-31.08.2021)	BA in Information Studies, IT and Interaction Design, experience as web designer from private company and university, stay abroad
	Amel Skobalj	20.08.2018-31.12.2020	Web integrator, BA in psychology, experience as web integrator and web designer from various private companies
Student Assistant (communications) (10 hours per week)	To be employed	01.09.2021-31.12.2022	
	Nanna Bach Andersen	01.09.2020-28.02.2021	Journalist, MA in journalism, experience as journalist, social media assistant, photographer from journals/newspapers, stay abroad
	Sigrid Mark Jørgensen	01.09.2019-31.08.2020	BA (Hons) in Business Management, experience as brand ambassador and social media assistant, stay abroad

Appendix 9

Key collaborators of the Danish Diabetes Academy (DDA)

Key collaborators of the Danish Diabetes Academy (DDA)

During 2018-2021, DDA collaborated with a number of researchers and research institutions from academia, hospitals and the life science industry in Denmark and abroad in connection with the education, networking and recruitment activities.

Table A below presents the key national and international collaborators that DDA collaborated with during 2018-2021. DDA collaborated with many more than those indicated on the lists below, in particular also researchers who are members of the DDA governing bodies and former and current DDA-funded PhD students, postdocs and visiting professors. The below lists only contain collaborators that DDA collaborated with more than once in connection with DDA activities.

Table A. Key national and international collaborators of DDA

Close national collaborators *(researchers and representatives from the below-mentioned institutions)*	**Close international collaborators** *(researchers and representatives from the below-mentioned institutions)*
Steno Diabetes Center Aarhus	Cambridge Metabolic Network, United Kingdom
Steno Diabetes Center Copenhagen	Banting & Best Diabetes Center, Canada
Steno Diabetes Center Odense	Joslin Diabetes Center, USA
Aarhus University Hospital	German Center for Diabetes Research, Germany
Aalborg University Hospital	University of Kiel, Germany
Copenhagen University Hospital	Medical University of Graz, Austria
Odense University Hospital	Geneva University Hospitals, Switzerland
Roskilde University, Department of Science and Environment	University of Queensland, Australia
Aarhus University, Faculty of Health Sciences	King's College London, United Kingdom
Copenhagen University, Faculty of Health and Medical Sciences	University of Leeds, United Kingdom
Copenhagen University, Faculty of Science	Lund University, Sweden
Aalborg University, Department of Health Science and Technology	University of Utah, USA
University of Southern Denmark, Faculty of Science	John Hopkins University School of Medicine, USA
University of Southern Denmark, Faculty of Health Sciences	Astra Zeneca, Sweden/United Kingdom
PhD Research Training Network (PhD schools at the Danish universities)	Dedoc, Germany
Gubra	
Novo Nordisk A/S	
The Danish Diabetes Association	

Appendix 10

Danish Diabetes Academy Educational and Talent Development Activities 2018-2021

a. Milestones of DDA Educational and Talent Development Activities 2018-2021

b. Overview of DDA Educational and Talent Development Activities 2018-2021

c. Participant outcome of DDA Educational and Talent Development Activities 2018-2021

A. Timeline illustrating milestones of the educational and talent development activities 2018-2021

2018

3-6 September
PhD Summer School on Diabetes & Metabolism

26-27 October
5th BBDC-Joslin-UCPH Conference

3-4 & 18-19 March
First methods course held by a DDA-funded postdoc fellow: Reproducible Quantitative Methods: Data Analysis Workflow Using R

9-10 December
Children, Adolescents & Emerging Adults with Type 1 Diabetest

2019

14 May
Diabetes - Do It Yourself Movement

3-8 November
DDA Winter School for Postdocs

14 May
First webinar by a DDA-funded PhD student: Cost of Treating Skin Problems in Patients Who Use Insulin Pumps and/or Glucose Sensors

15 September
Resetting the clock to mitigate cardiometabolic diseases by timing of food, exercise and sleep

2020

26 May
First Visiting Professor workshop: Glucose-Insulin Axis in 1st Trimester of Pregnancy and Feto-placental Growth

3-4 September
Cambridge Metabolic Network-DDA PhD & Postdoc Course on Metabolic Aspects of the Brain Muscle Axis

4 November
First webinar on a Career in life science industry organised in collaboration with the life science industry

2021

17 February
First life science industry webinar: Preclinical drug discovery in NASH: Narrowing the translational gap

9 March
First webinar on a series of webinars on diabetes & cancer organised by former and current DDA-funded postdocs

B. Overview of DDA Educational and Talent Development Activities 2018-2021

Tables A-D gives an overview of all PhD courses, postdoc courses and symposia/seminars initiated, organised or supported financially and logistically by the Danish Diabetes Academy in 2018-2021. Collaborators from abroad are indicated in **blue.**

Table A. DDA Educational and Talent Development Activities 2018

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
3-6 September	Summer School on Diabetes & Metabolism	PhD Course	Onsite	Committee for Education (DK)	58
26-27 October	5th BBDC-Joslin-UCPH Conference	Symposium	Onsite	Banting & Best Diabetes Center (CA), Joslin Diabetes Center (US), University of Copenhagen (DK)	117
26-29 November	Basal Metabolism and Molecular Mechanism	PhD Course	Onsite	Committee for Education (DK)	56

B. Overview of DDA Educational and Talent Development Activities 2018-2021

Tables A-D gives an overview of all PhD courses, postdoc courses and symposia/seminars initiated, organised or supported financially and logistically by the Danish Diabetes Academy in 2018-2021. Collaborators from abroad are indicated in **blue.**

Table B. DDA Educational and Talent Development Activities 2019

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
3-4 & 18-19 March	Reproducible Quantitative Methods: Data Analysis Workflow Using R	PhD course & Postdoc course	Onsite	Steno Diabetes Center Aarhus (DK)	23
13-14 March	Presenting Powerfully	PhD course & Postdoc course	Onsite	Partners in Training (PinT), UK	15
1, 2 & 21 May	Research Leadership Course	Postdoc course	Onsite	Mobilize Strategy Consulting (DK)	20
6-8 May	Non-condin RNA's in metabolic disease	Symposium	Onsite	Roskilde University (DK), Copenhagen University Hospital (DK), University of Southern Denmark (DK)	77
14 May	Diabetes - Do It Yourself Movement	Symposium	Onsite	Steno Diabetes Center Copenhagen (DK)	88
14-15 August	Co-morbidities in Diabetes	Symposium	Onsite	Copenhagen University Hospital (DK)	81

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
26-29 August	Summer School on Diabetes & Metabolism	PhD Course	Onsite	Committee for Education	46
11-12 September	Presenting Powerfully (II)	Postdoc course	Onsite	Partners in Training (PinT), UK	15
29 September-2 October	The role of the microbiome in complex meatbolig & inflammatory diseases	PhD Course	Onsite	University of Copenhagen (DK), University of Kiel (DE)	58
1-2 and 10 October	Personal Performance Course for DDA-funded researchers modul 1	PhD course & Postdoc course	Onsite	Ministry of Music (DK)	10
3-8 November	DDA Winter School	Postdoc course	Onsite	Postdoc Organisation Committee	54
25-28 November	Basal Metabolism and Molecular Mechanism	PhD Course	Onsite	Committee for Education	43
9-10 December	Children, Adolescents & Emerging Adults with Type 1 Diabetes	Symposium	Onsite	Steno Diabetes Center Copenhagen, Herlev & Gentofte Hospital (DK)	77

B. Overview of DDA Educational and Talent Development Activities 2018-2021

Tables A-D gives an overview of all PhD courses, postdoc courses and symposia/seminars initiated, organised or supported financially and logistically by the Danish Diabetes Academy in 2018-2021. Collaborators from abroad are indicated in **blue.**

Table C. DDA Educational and Talent Development Activities 2020

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
13 January	Personal Performance Course for DDA-Funded Researchers - Module 1	PhD course & Postdoc course	Onsite	Ministry of Music (DK)	11
14-15 January	Personal Performance Course for DDA-Funded Researchers - Module 2l	PhD course & Postdoc course	Onsite	Ministry of Music (DK)	12
4-5 February	Presenting Powerfully	PhD course & Postdoc course	Onsite	Partners in Training (PinT), UK	16
20-21 April & 3 June	Project Management in Research for Postdocs	PhD course & Postdoc course	Hybrid - onsite and onlinee	Mobilize Strategy Consulting (DK)	20
28 April	What happens when you research results cannot be reproduced	Webinar	Online	Aarhus University Hospital (DK), Aarhus University (DK)	29
14 May	Cost of Treating Skin Problems in Patients Who Use Insulin Pumps and/ or Glucose Sensors	Webinar	Online	Novo Nordisk (DK)	26
20 May	Will Future New Technology Solve Retinopathy Screening Challenges?	Symposium	Online	Aalborg University Hospital (DK)	31

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
26 May	Glucose-Insulin Axis in First Trimester of Pregnancy and Feto-placental Growth	Webinar	Online	Medical University of Graz (AU)	28
2 June	The unidentified hormonal defense against weight gain	Webinar	Online	University of Copenhagen (DK)	62
12 June	Oxyntomodulin and Glicentin May Predict the Effect of Bariatric Surgery on Food Preferences and Weight Loss	Webinar	Online	University of Copenhagen (DK)	8
22-24 June	PhD & Postdoc Course in Reproducible Research in R: An introductory course on modern data analyses and workflows (Beginner level)	PhD course & Postdoc course	Onsite	Steno Diabetes Center Aarhus (DK)	23
26 June	High Prevalence of Gestational Diabetes Mellitus in Rural Tanzania	Webinar	Online	University of Copenhagen (DK) Copenhagen University Hospital (DK)	15
24-27 August	Summer School on Diabetes & Metabolism	PhD course	Online	Committee for Education (DK)	52

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
3-4 September	CMN-DDA PhD & Postdoc Course on Metabolic Aspects of the Brain Muscle Axis	PhD course & Postdoc course	Online	Cambridge Metabolic Network (UK), Steno Diabetes Center Aarhus (UK), Norwegian School of Sport Sciences (N)	37
8-9 September	PhD & Postdoc Course: Intermediate course on reproducible research in R - Expanding your data analysis toolkit	PhD course & Postdoc course	Onsite	Steno Diabetes Center Aarhus (DK)	20
15 September	Resetting the clock to mitigate cardiometabolic diseases by timing of food, exercise and sleep	Symposium	Onsite	Geneva University Hospitals, CH Maastricht University, (NL) Steno Diabetes Center Copenhagen (DK)	77
6-7 October	Meeting the Reproducibility Challenges in Research - Importance of Quality Assessment in the Laboratory	PhD course & Postdoc course	Onsite	Aarhus University Hospital (DK), Aarhus University (DK)	17
20 October	How to present your research to the public	PhD course & Postdoc course	Hybrid - onsite and online	Elevate Scientific Academy (S)	8
26-28 October	Basal Metabolism & Molecular Mechanisms in Diabetes	PhD Course	Online	Committee for Education (DK)	39

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
30 October	The dialog between target tissues and the immune system in type 1 diabetes and other autoimmune diseases	Webinar	Online	ULB Center for Diabetes Research, Medical Faculty, Université Libre de Bruxelles (BE)	24
2 November	3D imaging of pancreas – preclinical and clinical applicability (Gubra)	Webinar	Online	Gubra (DK)	33
4 November	Career in life science industry	PhD course & Postdoc course	Online	Zealand Pharma (DK)	48
5 November	Career in life science industry	PhD course & Postdoc course	Online	Novo Nordisk A/S (DK)	61
6 November	Career in life science industry	PhD course & Postdoc course	Online	Nordic Bioscience (DK)	41
9 November	Career in life science industry	PhD course & Postdoc course	Online	Follicum (S)	23
11 November	Career in life science industry	PhD course & Postdoc course	Online	RSP systems (DK)	23
12 November	Career in life science industry	PhD course & Postdoc course	Online	Sanofi Aventis (DK)	53
18 November	Preclinical models and methods in diabetic kidney disease	Webinar	Online	Gubra (DK)	18
20 November	Adapting GDM diagnosis to the COVID-19 pandemic	Webinar	Online	The University of Queensland (AU)	28
30 November	Online poster presentation workshop	PhD course & Postdoc course	Online	Elevate Scientific Academy (S)	12

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
2 December	Is it time to question euglycaemic hyper-insulinaemic clamps for muscle insulin sensitivity?	Webinar	Online	Victoria University (AU)	55
10 December	Sex, Drugs and Exercise: Studies Investigating the Metabolic Side Effects of Antipsychotic Drugs	Webinar	Online	University of Guelph (CA)	35
18 December	Exploring islet cell sub-types in health and type 2 diabetes	Webinar	Online	University of Alberta and the Alberta Diabetes Institute (CA)	48

B. Overview of DDA Educational and Talent Development Activities 2018-2021

Tables A-D gives an overview of all PhD courses, postdoc courses and symposia/seminars initiated, organised or supported financially and logistically by the Danish Diabetes Academy in 2018-2021. Collaborators from abroad are indicated in **blue.**

Table D. DDA Educational and Talent Development Activities 2021

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
13 January	Sex Differences in Metabolic and Cardiovascular Disease	Webinar	Online	Vanderbilt University Medical Center (US)	51
15 January	Cell-to-cell communication via Extracellular vesicles - challenges and opportunities in diabetes research	Webinar	Online	The University of Queensland (AU)	66
17 February	Preclinical drug discovery in NASH: Narrowing the translational gap	Webinar	Online	Gubra (DK)	20
23 February	Does diabetes effect voluntary movement? A study of the effect of diabetes on the pathway for voluntary movement	Webinar	Online	Aarhus University Hospital (DK)	5
24 February	Improved time-in-range is associated with albuminuria reduction in persons with type 1 diabetes	Webinar	Online	Steno Diabetes Center Copenhagen (DK)	13
9 March	Epidemiology and genetics of Diabetes and cancer	Webinar	Online	University of Manchester (UK)	50

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
11 March	"The COPLab study"	Webinar	Online	Copenhagen University Hospital (DK)	24
11 March	The anti-inflammatory effects of exercise: focus on diabetes and cancer	Webinar	Online	Copenhagen University Hospital (DK)	57
15 March	Schizophrenia and Metabolism: A Collision of Brain and Body?	Webinar	Online	Centre for Addiction and Mental Health (CA)	68
15 March	The link between breast cancer and diabetes	Webinar	Online	Aarhus University Hospital (DK)	47
16 March	Cancer (treatment) and Diabetes	Webinar	Online	Mount Sinai Hospital (US)	29
16 March	Childhood Obesity and cancer	Webinar	Online	Frederiksberg Hospital (DK)	30
18 March	Metabolic Health, Insulin, and Breast Cancer: Why Oncologists Should Care About Insulin	Webinar	Online	UC San Diego School of Medicine (US)	32
23 March	Muscling in on insulin resistance in cancer	Webinar	Online	University of Copenhagen (DK)	38

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
24 March	Metabolic and epigenetic changes after adjuvant chemotherapy in patients with early breast cancer	Webinar	Online	University of Copenhagen (DK)	31
25 March	Deciphering the role of adipose tissue in breast cancer: a putative role of PAPP-A and IGF-2	Webinar	Online	Odense University Hospital (DK)	31

C. Participant outcome of DDA Educational and Talent Development Activities 2018-2021

Tables A-B show the participant outcome of the DDA educational and talent development activities 2018-2021, including competences gained or developed *(Table A)* and participants' use of the competences gained or developed (*Table B*).

Table A. Participants competences gained or developed through participating in the DDA educational and talent development activities 2012-2021

DDA-funded researchers (former and current) were asked the following question in a written survey: 'To what extent have you gained or further developed the following competencies through participating in DDA activities?'

	To a very large extent/ to a large extent (%)	To some extent (%)	To a lesser (%)	To no extent at all (%)	Not sure (%)
Scientific skills (e.g. data analysis and interpretation, experimental design, knowledge of current research in the field)	53.0	34.0	6.4	4.3	2.1
Transferable skills (e.g. presentation skills, communication, leadership, project and time management etc.)	59.0	31.0	6.1	2.0	2.0
Career-development skills (of e.g. improved networking competencies, knowledge of career paths)	50.0	40.0	8.0	0.0	2.0

Table B. Participants' use of the competences gained or developed through participating in the DDA activities

DDA-funded researchers (former and current) were asked the following question in a written survey: 'To what extent have you used or do you expect to use competencies you gained or further developed through participating in DDA activities?'

To a very large extent/ to a large extent (%)	To some extent (%)	To a lesser extent (%)	To no extent at all (%)	Not sure (%)
69.0	22.0	7.3	0.0	1.8

Appendix 11

Case story of participant satisfaction and outcome of Danish Diabetes Academy Educational and Talent Development Activities by Malene R. Christiansen

What I gained from participating in the DDA Summer School

As a participant at the DDA Summer School for PhD students in 2020, I have only positive memories of the four days spend in the beautiful landscape of Funen. The academic content of the summer school was unique and I learned a lot of new aspects on diabetes, different from the aspects I am usually exposed to and working with in my own research. Despite most physical international borders were closed due to the corona situation, theDDA succeeded in engaging multiple international speakers via online streaming. This yielded the feeling of an international conference even though the circumstances did not allow for physical presence.

Personally, my boundaries got challenged by the mandatory 1-minute poster pitch that all PhD students had to present in front of a big crowd, and I improved my competences by telling others about my research from the poster sessions.

Besides a great scientific programme, one of the best things about the summer school was the networking in great surroundings. Meeting PhD students from other institutions was highly valuable to me. Not only did I learn a lot about other exciting PhD projects from oral presentations, but I also expanded my network and found potential collaboration partners for future projects. I am outermost satisfied with this excellent event organised by the DDA, and I left four intense days with a feeling of excitement, new inspiration and reawakened motivation.



Malene Revsbech Christiansen, MSc, PhD student, University of Copenhagen, Novo Nordisk Foundation Center for Basic Metabolic Research

Appendix 12

Danish Diabetes Academy Networking and Collaboration Activities 2018-2021

a. Milestones of DDA Networking and Collaboration Activities 2018-2021

b. Overview of DDA Networking and Collaboration Activities 2018-2021

c. Participant outcome of DDA Networking and Collaboration Activities 2018-2021

d. DDA Visiting Professors' outcome of their visiting professorship in terms of collaboration

A. Timeline illustrating milestones of the networking and collaboration activities 2018-2021

2018

25 October
DDA Training Day

12 November
DDA Annual Day

2019

26 August
National Junior Faculty of Sweden-DDA webinar: Team science & Research Assessment

26-27 February
Start-up meeting with DDA-funded researchers

12-13 December
Workshop on Diabetes Distress Intervention

2020

4-5 April
Workshop on Effects of Circadian Clock & Timing of Eating on Diabete, Obesity and Metabolism

29 April
Alumni Network: Be so good they will hire you – job searching strategies for PhDs

16 December
Workshop on Do-It-Yourself Diabetes Technology – Opportunity or Threat for Diabetes Research?

B. Overview of DDA Networking and Collaboration Activities 2018-2021

Tables A-C gives an overview of all networking and collaboration activities initiated, organised or supported financially and logistically by the Danish Diabetes Academy in 2018-2021. Collaborators from abroad are indicated in **blue.**

Table A. DDA Networking and Collaboration Activities 2018

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
24 June	Networking dinner, American Diabetes Association 78th Scientific Sessions, Orlando, United States	Networking	Onsite	Executive Management Team	16
1-5 October	Booth exhibition, 54th Annual Meeting of the European Association for the Study of Diabetes, Berlin, Germany	Networking	Onsite	German Center for Diabetes Research (DE)	over 500 attended the booth
3 October	Networking Event in connection with the 54th Annual Meeting of the European Association for the Study of Diabetes, Berlin, Germany	Networking	Onsite	German Center for Diabetes Research (DE)	80
25 October	DDA Training Day	Workshop	Onsite	Joslin Diabetes Center (US), Banting and Best Diabetes Center (CA), University of Copenhagen (DK)	31
12 November	DDA Annual Day	Networking	Onsite	DDA Committee for Education	142
11 December	2nd Danish Muscle Metabolism Network Workshop	Workshop	Onsite	Steno Diabetes Center Aarhus (DK), Steno Diabetes Center Odense (DK), University of Copenhagen (DK)	45

B. Overview of DDA Networking and Collaboration Activities 2018-2021

Tables A-C gives an overview of all networking and collaboration activities initiated, organised or supported financially and logistically by the Danish Diabetes Academy in 2018-2021. Collaborators from abroad are indicated in **blue.**

Table B. DDA Networking and Collaboration Activities 2019

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
3-4 January	Diabetic Wound Healing Workshop	Workshop	Onsite	Roskilde University (DK)	20
26-27 February	DDA Start-up meeting with DDA-funded researchers	Networking	Onsite	Executive Management Team	21
28-29 March	Workshop on Family involvement & psychosocial support in the care of pre-teens with type 1 diabetes	Workshop	Onsite	Steno Diabetes Center Copenhagen (DK)	13
4-5 April	Workshop on Effects of Circadian Clock & Timing of Eating on Diabete, Obesity and Metabolism	Workshop	Onsite	Steno Diabetes Center Copenhagen (DK), Lausanne University Hospital (CH)	37
8-10 May	Workshop for North European Young Diabetologists (Annual Meeting)	Workshop	Onsite	Hvidovre Hospital (DK)	25
21 May	Workshop on Screening and diagnosis of gestational diabetes mellitus in Denmark	Workshop	Onsite	Copenhagen University Hospital (DK), Odense University Hospital (DK), Oslo University (N), University of Quennsland (AU)	24
8 June	Networking dinner, American Diabetes Association 79th Scientific Sessions, San Francisco, United States	Networking	Onsite	Executive Management Team	35
19-23 September	Booth exhibition and blogger event, 55th Annual Meeting of the European Association for the Study of Diabetes, Barcelona, Spain	Networking	Onsite	Executive Management Team	over 500 attended the booth
21 September	Networking Event in connection with the 55th Annual Meeting of the European Association for the Study of Diabetes, Barcelona, Spain	Networking	Onsite	German Center for Diabetes Research (DE)	80

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
23 October	DDA Training Day for PhD students and postdocs	Workshop	Onsite	Joslin Diabetes Center (US), Banting and Best Diabetes Center (CA), University of Copenhagen (DK)	30
12 November	DDA Annual Day	Networking	Onsite	DDA Committee for Education	115
12 December	Workshop on Causes and consequences of insulin resistance in pregnancy	Workshop	Onsite	Aarhus University Hospital (DK), Steno Diabetes Center Aarhus (DK)	30
12-13 December	Workshop on Diabetes Distress Intervention	Workshop	Onsite	Steno Diabetes Center Copenhagen (DK), Dedoc Labs (DE)	27

B. Overview of DDA Networking and Collaboration Activities 2018-2021

Tables A-C gives an overview of all networking and collaboration activities initiated, organised or supported financially and logistically by the Danish Diabetes Academy in 2018-2021. Collaborators from abroad are indicated in **blue.**

Table C. DDA Networking and Collaboration Activities 2020

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
4-5 February	DDA Start-up meeting with DDA funded researchers	Networking	Onsite	Executive Management Team	25
5-6 February	Workshop on Psychosocial Support Needs & Appropriate Support Initiatives in People Diagnosed with Type 1 Diabetes in Adulthood	Workshop	Onsite	Steno Diabetes Center Copenhagen (DK), King's College London (UK)	12
27-28 February	How to Improve Assessment of Nerve Fibre Damage in Diabetes? – An Interdisciplinary, Hands-on, Collaborative Workshop	Workshop	Onsite	Aarhus University Hospital (DK), Aalborg University (DK)	32
29 April	Alumni Network: Be so good they will hire you – job searching strategies for PhDs	Alumni	Online	Passage2Pro (SE)	17
12 may	Alumni Network: How to make a great elevator pitch using storytelling techniques	Alumni	Online	Passage2Pro (SE)	19
27 May	Aumni Network: Finding jobs in the hidden job market	Alumni	Online	Passage2Pro (SE)	18
26 August	National Junior Faculty of Sweden-DDA webinar: Team science & Research Assessment	Workshop	Online	Lund University (SE)	33
9 September	National Junior Faculty of Sweden-DDA webinar: Hyper-Competition for Resources	Workshop	Online	Lund University (SE)	31
22 September	Workshop on The Human Placenta in Diabetes and Obesity (Diabesity)	Workshop	Onsite/ online	University of Copenhagen (DK), Medical University of Graz (A)	19

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
23 September	National Junior Faculty of Sweden-DDA webinar: Positive Influence of Failure	Workshop	Online	Lund University (SE)	28
1 October	Alumni Network: Tools to further develop your career	Alumni	Onsite	Executive Management Team	8
7 October	National Junior Faculty of Sweden-DDA webinar: Open Science & Open Access	Workshop	Online	Lund University (SE)	25
21 October	National Junior Faculty of Sweden-DDA webinar: Public Trust & Perception of Science	Workshop	Online	Lund University (SE)	29
10 November	Alumni Network: How to pitch your science to the public	Alumni	Online	Aurora Dynamics AB (SE)	8
7 December	Networking Meeting for DDA-funded Researchers	Networking	Onsite	DDA Committee for Education	34
16 December	Workshop on Do-It-Yourself Diabetes Technology – Opportunity or Threat for Diabetes Research?	Workshop	Online	Steno Diabetes Center Copenhagen (DK), Dedoc Labs (DE)	37

Table D. DDA Networking and Collaboration Activities 2021

Date	Activity	Type	Format	Collaborators/ researchers affiliated to institutions	Number of participants (not including speakers)
25-26 February	Alumni Network: Understanding and developing my leadership skills	Alumni	Online	Executive Management Team	16

C. Participant outcome of DDA Networking and Collaboration Activities 2018-2021

Tables A-C show the participant outcome of the DDA networking and collaboration activities 2018-2021, including participant outcome in terms of expansion of network (*Table A*), outcome in terms of new collaborators (*Table B*), and outcome in terms of enhanced contact to or awareness of researchers across sectors and borders (*Table C*).

Table A. Participants' outcome of DDA networking and collaboration activities 2012-2021 in terms of expansion of their network

DDA-funded researchers (former and current) were asked the following question in a written survey: 'To what extent did you expand your network at the DDA activities?'

To a very large extent/ to a large extent (%)	To some extent (%)	To a lesser extent (%)	To no extent at all (%)	Not sure (%)
60.0	20.0	18.0	0.0	2.0

Table B. Participants' outcome of DDA networking and collaboration activities 2012-2021 in terms of finding new collaborators

DDA-funded researchers (former and current) were asked the following question in a written survey: 'Did you find new collaborators through DDA activities?(by collaborator we mean as a minimum someone who gave you input or guidance in your project, or someone you gave input or guidance to. It could also be any of: co-authored papers, shared data, co-developed experimental design, collaborated on funding applications etc.?)'

Yes (%)	No (%)	Not sure (%)
50.0	45.0	6.0

C. Participant outcome of DDA Networking and Collaboration Activities 2018-2021

Table C. Participants' outcome of the DDA networking and collaboration activities 2012-2021 in terms of enhanced contact to or awareness of researchers across sectors and borders

DDA-funded researchers (former and current) were asked the following question in a written survey: 'To what extent did you experience enhanced contact to or awareness of researchers from: universities in Denmark, hospitals in Denmark, private companies in Denmark, universities abroad, private companies abroad?'

	To a very large extent/ to a large extent (%)	To some extent (%)	To a lesser extent (%)	To no extent at all (%)	Not sure (%)
Universities in Denmark	63.0%	29.0%	3.8%	1.9%	1.9%
Hospitals in Denmark	41.0%	33.0%	17.6%	5.9%	2.0%
Private companies in Denmark	20.0%	32.0%	26.0%	20.0%	2.0%
Universities abroad	20.0%	30.0%	26.0%	22.0%	2.0%
Hospitals abroad	10.0%	12.0%	28.0%	44.0%	6.0%
Private companies abroad	2.0%	10.0%	22.4%	59.2%	6.1%

D. DDA Visiting Professors' outcome of their visiting professorship in terms of collaboration

Tables A-B show the DDA visiting professors' outcome of their DDA visiting professorship in terms of finding new collaborators (*Table A*) and in terms of inviting junior researchers or other collaborators in Denmark on a research stay at their institution (*Table B*).

Table A. Visiting Professors' (2012-2021) outcome of their DDA visiting professorship in terms of finding new collaborators

DDA-funded visiting professors (former and current) were asked the following question in a written survey: 'Did you find new collaborators in Denmark as a result of your visiting professorship?(by collaborator we mean as a minimum someone who gave you input or guidance in your project or someone you gave input or guidance to. It could also be: co-authored papers, shared data, co-developed experimental design, collaborated on funding applications etc.)'

Yes (%)	No (%)	Not sure (%)
91.67%	8.33%	0

Table B. Visiting Professors' (2012-2021) outcome of their DDA visiting professorship in terms of inviting junior researchers or other collaborators in Denmark on a research stay at their institution

DDA-funded visiting professors (former and current) were asked the following question in a written survey: 'Have you had or will you have junior researchers from your host or other collaborators in Denmark on a research stay at your institution?)'

Yes (%)	Yes, I plan to (%)	No (%)	Not sure (%)
58.33%	25.0%	8.33%	8.33

Appendix 13

Case story of Danish Diabetes Academy Networking and Collaboration Activities 2018-2021 by Ingrid Willaing

Strong network and collaboration behind 32-page Danish-language chapter on treatment of diabetes distress

A December workshop in 2019 attended by leading American and a British diabetes psychology researchers have resulted in a Danish-language chapter on diabetes distress.

Diabetes distress can lead to serious quality of life issues for people living with diabetes. Diabetes demands day-to-day attention, and it impacts a person's habits and emotional life. The existence of diabetes distress has been clearly demonstrated by solid research, but research based tools and methods to address diabetes distress are still in their infancy.

In recent years, though, there has been some progress in the development of support and treatment for diabetes distress. In December 2019, the Danish Diabetes Academy held a workshop entitled 'Diabetes Distress Interventions' and the 21 participants had the opportunity to work from the most up-to-date research-based knowledge and experience. Professor Ingrid Willaing, of the Steno Diabetes Center Copenhagen has for 10 years been in touch with, and collaborating with, University of California, San Francisco (UCSF)-based psychologist Professor Larry Fisher.

'Larry Fisher is one of the most experienced researchers in diabetes psychology, which has been his field since the 1970s. He is the originator of some of the most-used screening tools in this area, he is at the forefront with research into support for diabetes distress and being able to hold this workshop in collaboration with him and draw on his vast knowledge of the development and implementation of diabetes distress interventions was a fantastic opportunity', says Professor Ingrid Willaing.

Strong motivation to continue the work

In addition to Professor Fisher, other experts acted as facilitators at the workshop: psychologist Danielle Hessler Jones PhD of the University of California, San Francisco (UCSF) and, from the UK, Professor Jackie Sturt of King's College London, a Visiting Professor at the DDA since December 2019. There was discussion of how to prevent diabetes distress and how it is possible to support management of diabetes distress. There is no formally recognized and systematic approach to support and treatment of diabetes distress in Danish clinical practice, and in other countries, this is the case, too.

After the workshop, there was a lot of enthusiasm and motivation for more development and further collaboration. The participants joined a network, and the first meeting dates were marked in the 2020 calendar. Then the world was hit by the Coronavirus.

'The aim of the workshop was to translate our knowledge into methods that we could use. The exchange of ideas and the development were meant to continue in the network. When we were suddenly unable to meet, we decided to nurture the use of relevant, practically applicable literature about the field. At the workshop, we discovered that there was a need for some literature in Danish, adapted to Danish culture and the Danish context', says Ingrid Willaing, who once again made use of her extensive network and gained the opportunity to translate an exciting practical guide from Australia.

'In the Australian textbook ***Diabetes and emotional health: A practical guide for health professionals supporting adults with type 1 or type 2 diabetes,*** *there was a chapter that we could translate into Danish about support of people with diabetes distress which could be adapted to Danish culture and healthcare context. We contacted the authors, and a protracted negotiation ensued. By about the summer of 2020, an agreement was in place, and by early 2021 the translation of the chapter was complete', says Ingrid Willaing.*

Difficult conversations about emotions: Chapter will guide healthcare staff

The clinical approach to diabetes distress is multi-faceted. It involves people and emotions and communicating about diabetes distress can be difficult both for the person experiencing it and for healthcare providers. The translated chapter, entitled Diabetes distress: A practical guide for health professionals, contains a step-by-step guide including specific questions that healthcare staff can make use of. There are sections on the symptoms of diabetes distress and on the considerations that need to beconsidered in order to offer the right treatment and support to the individual person with diabetes. It is a chapter worth saving on your hard disc – as many people have already discovered.

'We've had incredibly good feedback. It's been very positive. There are physicians, diabetes educators, nurses and other health care providers who have found the chapter very relevant and directly applicable. This translation has been a positive experience that we will build on, as there clearly is a great need for research based methods and tools in this area', says Ingrid Willaing.



Professor Ingrid Willaing, Head of Research, Steno Diabetes Center Copenhagen

Facts:

Read the chapter: Diabetes distress: A practical guide for health professionals (sdcc.dk, in Danish)

Diabetes distress is the term denoting the negative emotional stresses and worries caused by living with and managing diabetes in everyday life.

Danish questionnaire studies have shown that around one in four people with type 1 diabetes and one in four with type 2 diabetes suffer from diabetes distress. The latest (unpublished) Danish survey indicate an even higher incidence of diabetes distress.

The Danish book chapter has been translated by researchers from SDCC, Diabetes Management Research, and the work has been funded by SDCC Health Promotion Research, SDCC Education and the SDCS, Steno Diabetes Center Zealand.

Appendix 14

Dialogue Report 2020 for the Danish Diabetes Academy

Danish Diabetes Academy Dialogue report for 2020 Internal grants

Gert Vilhelm Balling
Senior Impact Partner
Impact

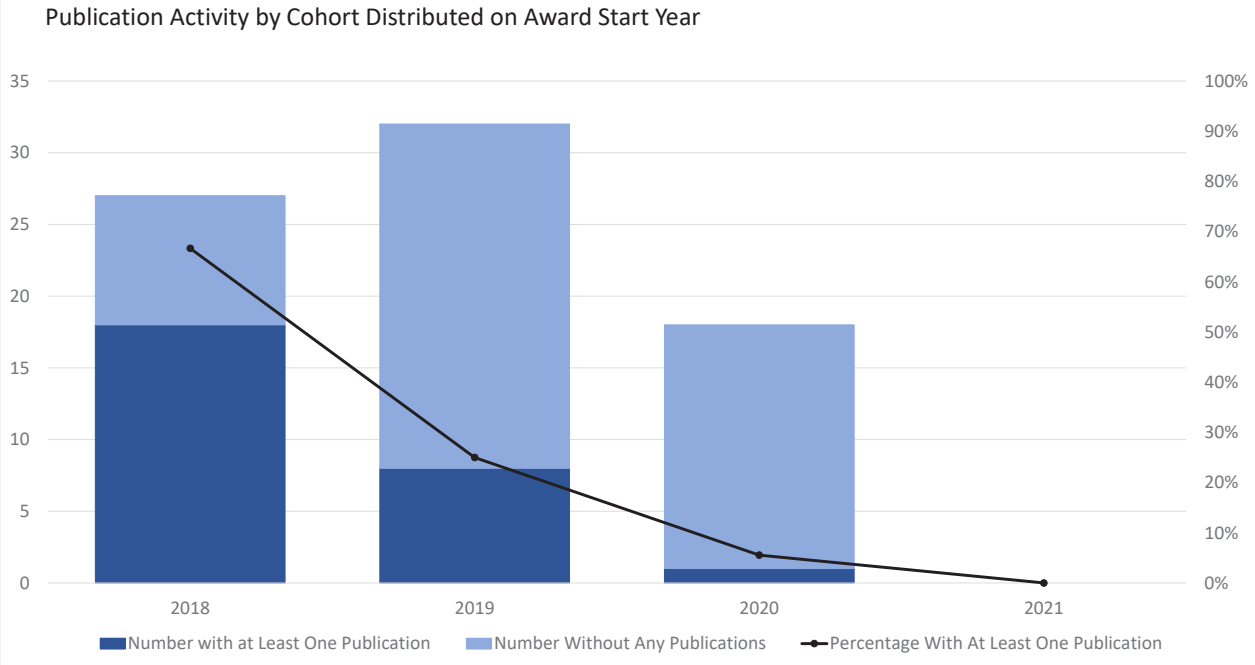
novo nordisk **fonden**

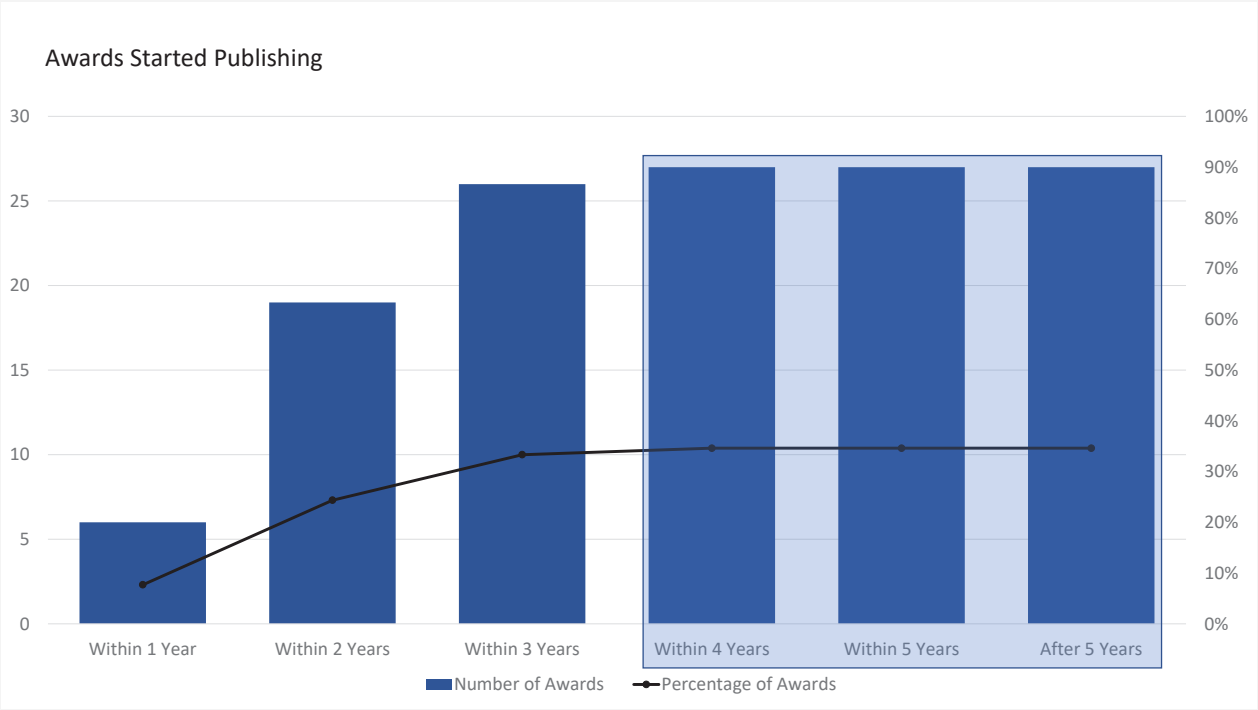
Awards

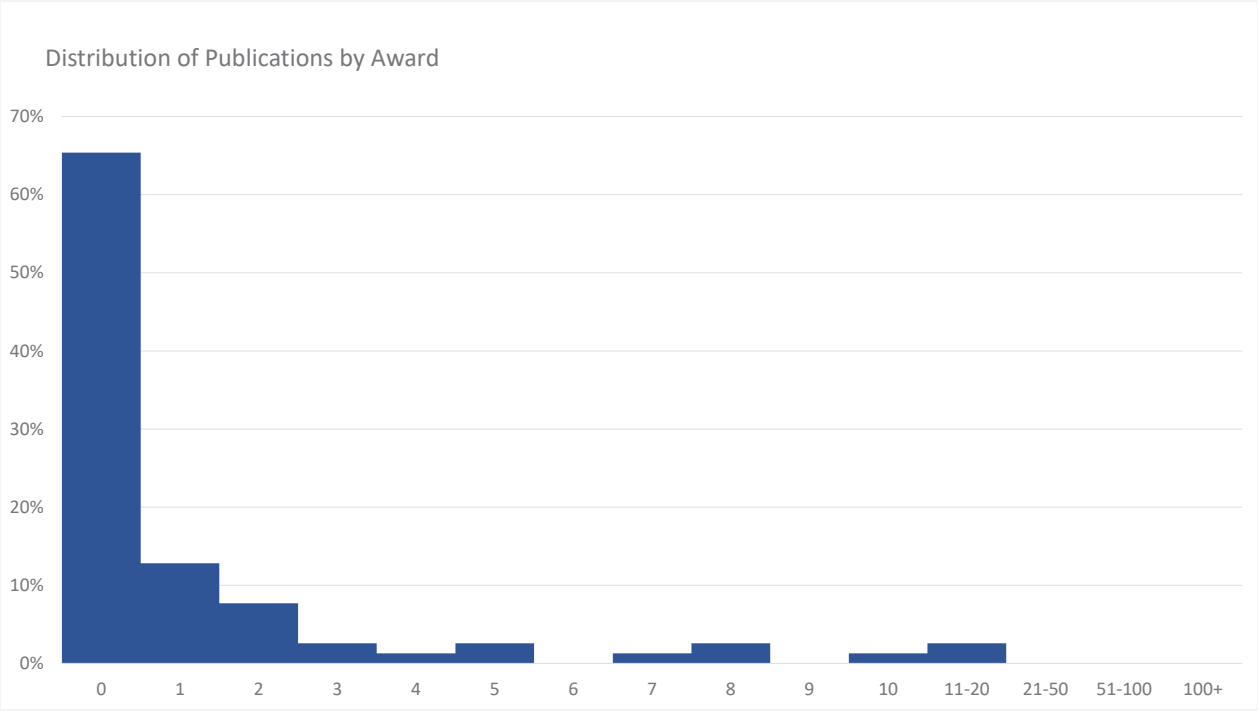
78	Number of Awards

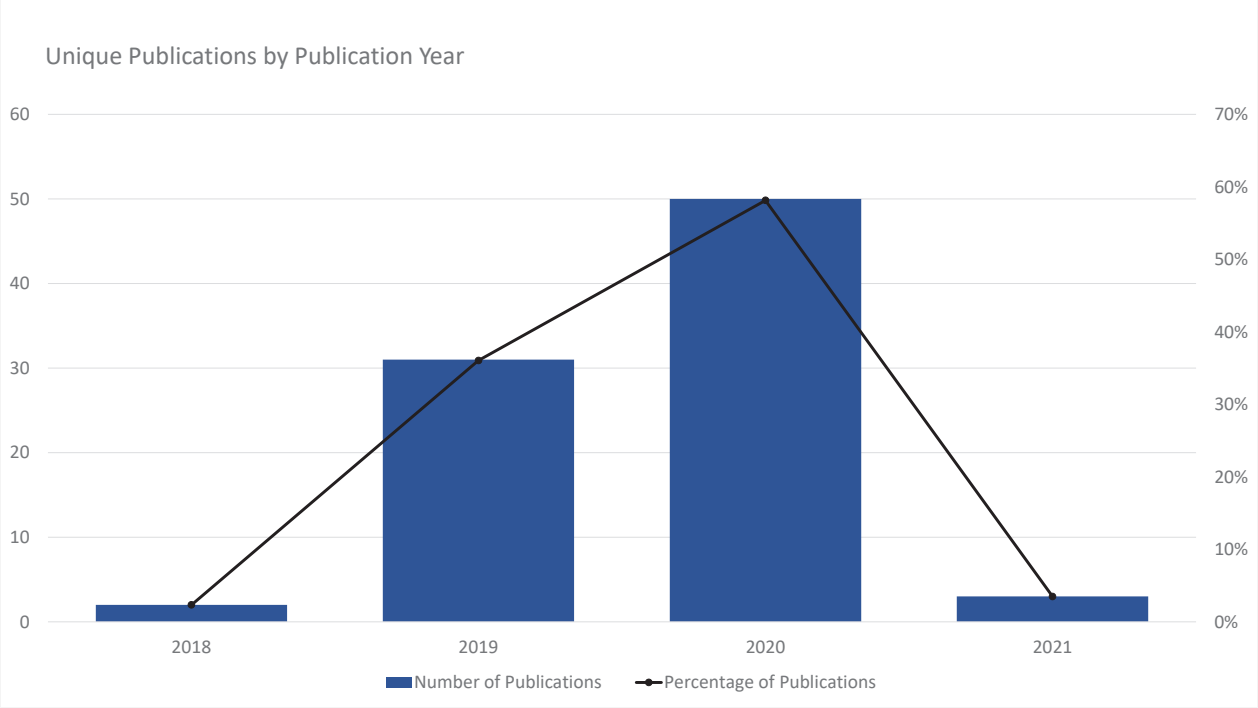
Publications

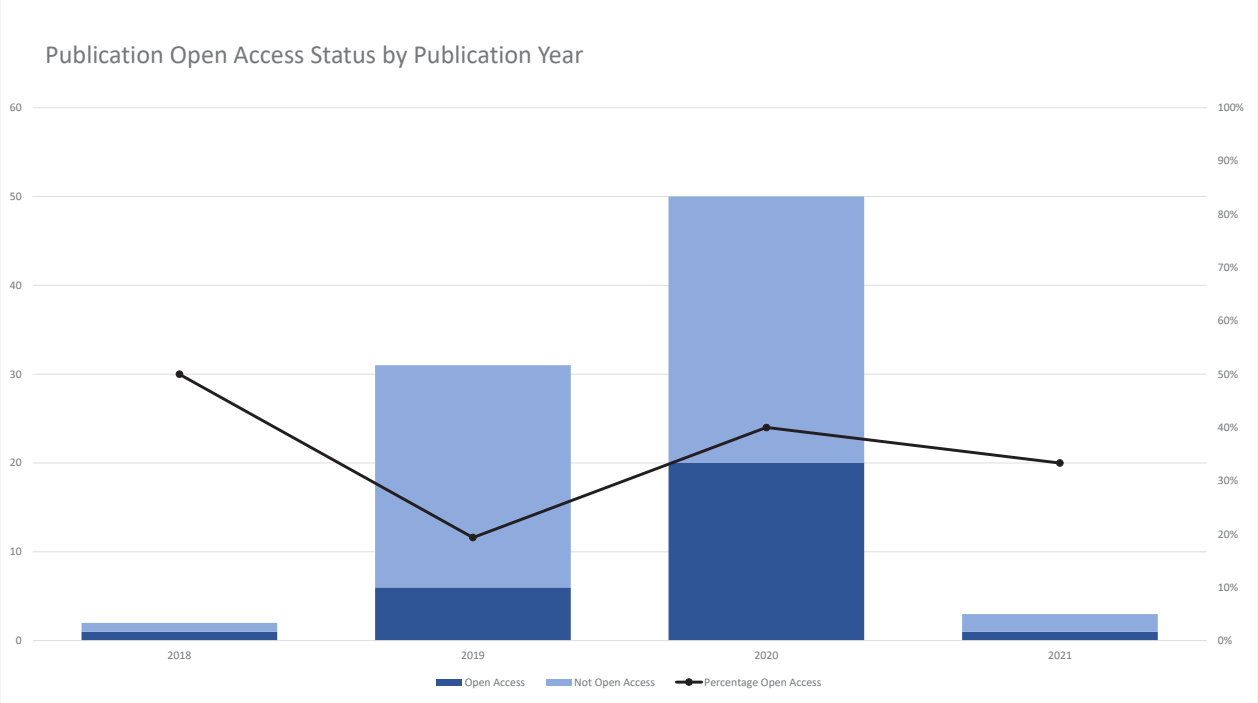
78	Number of Awards
27	Number Reporting at Least One Publication
35%	Percentage Reporting at Least One Publication
86	Number of Unique Publications
3.19	Mean Number of Publications for Awards Reporting at Least One Publication
1.10	Mean Number for the Group




Awards Started Publishing
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Within 1 Year
Within 2 Years
Within 3 Years
Within 4 Years
Within 5 Years
After 5 Years
Number of Awards
Percentage of Awards


Distribution of Publications by Award
70%
60%
50%
40%
30%
20%
10%
0%
0
1
2
3
4
5
6
7
8
9
10
11-20
21-50
51-100
100+


Unique Publications by Publication Year
60
50
40
30
20
10
0
70%
60%
50%
40%
30%
20%
10%
0%
2018
2019
2020
2021
Number of Publications
Percentage of Publications

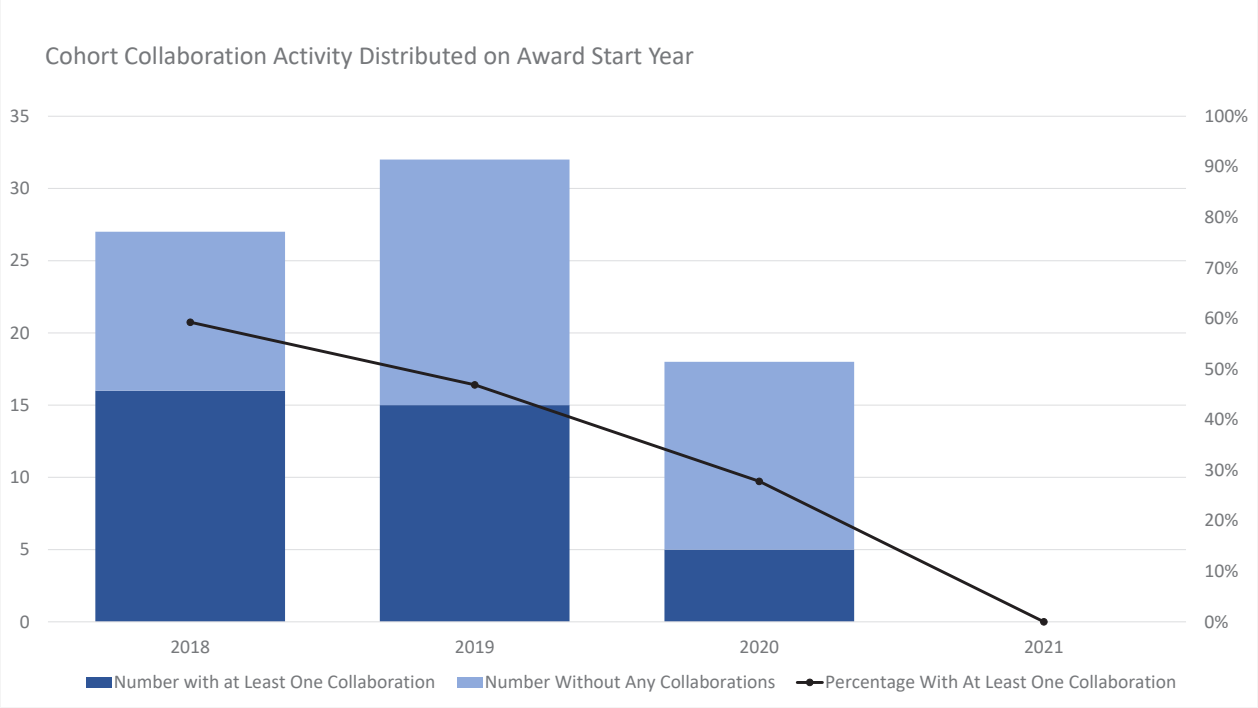

Publication Open Access Status by Publication Year
60
50
40
30
20
10
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2018
2019
2020
2021
Open Access
Not Open Access
Percentage Open Access

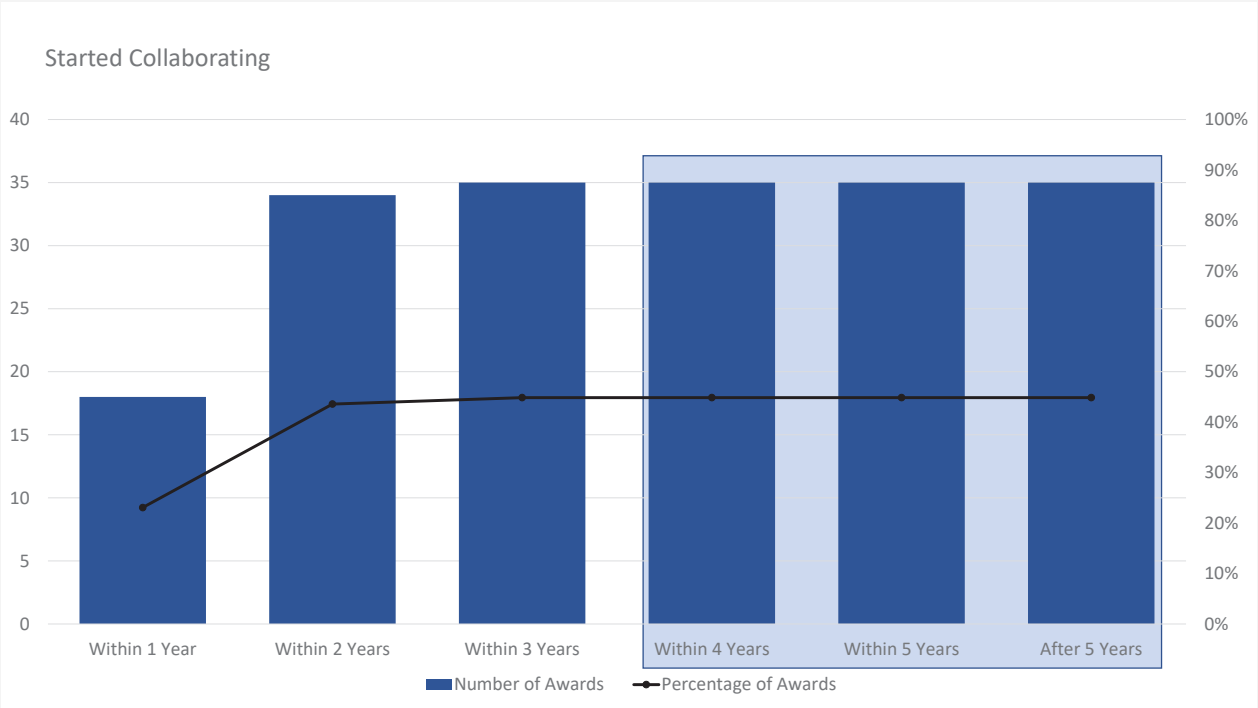
Number of Publications by Type

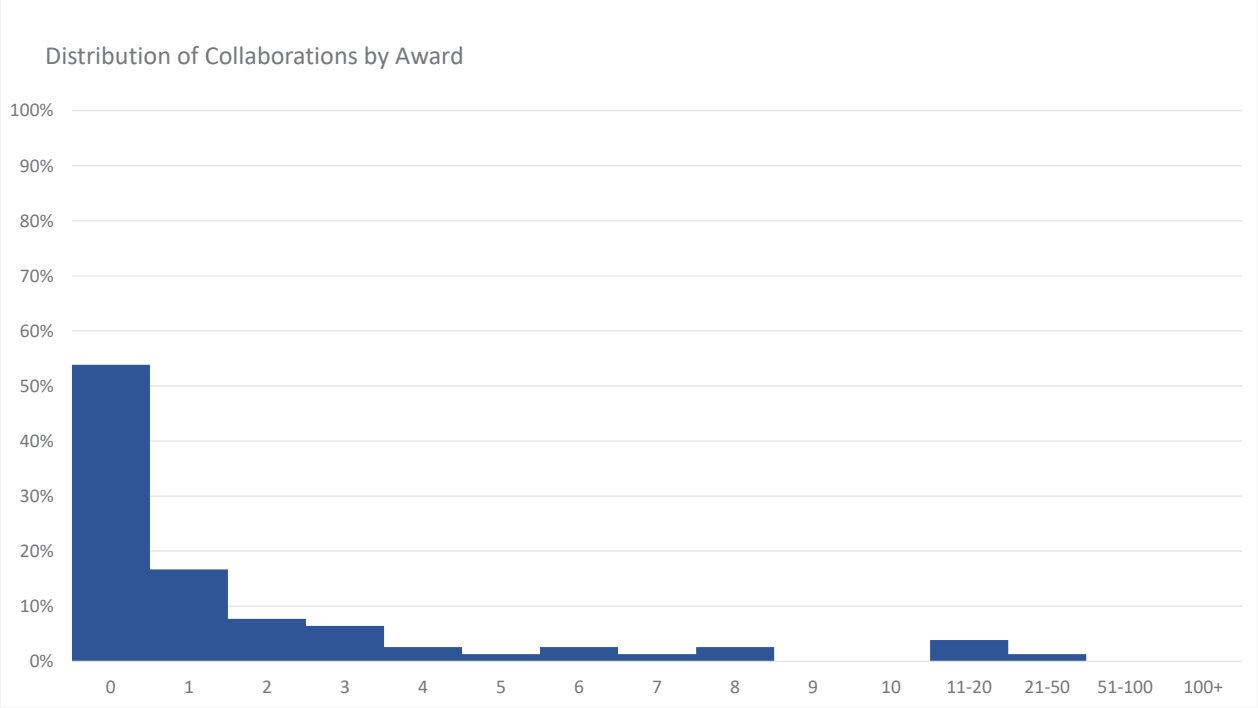


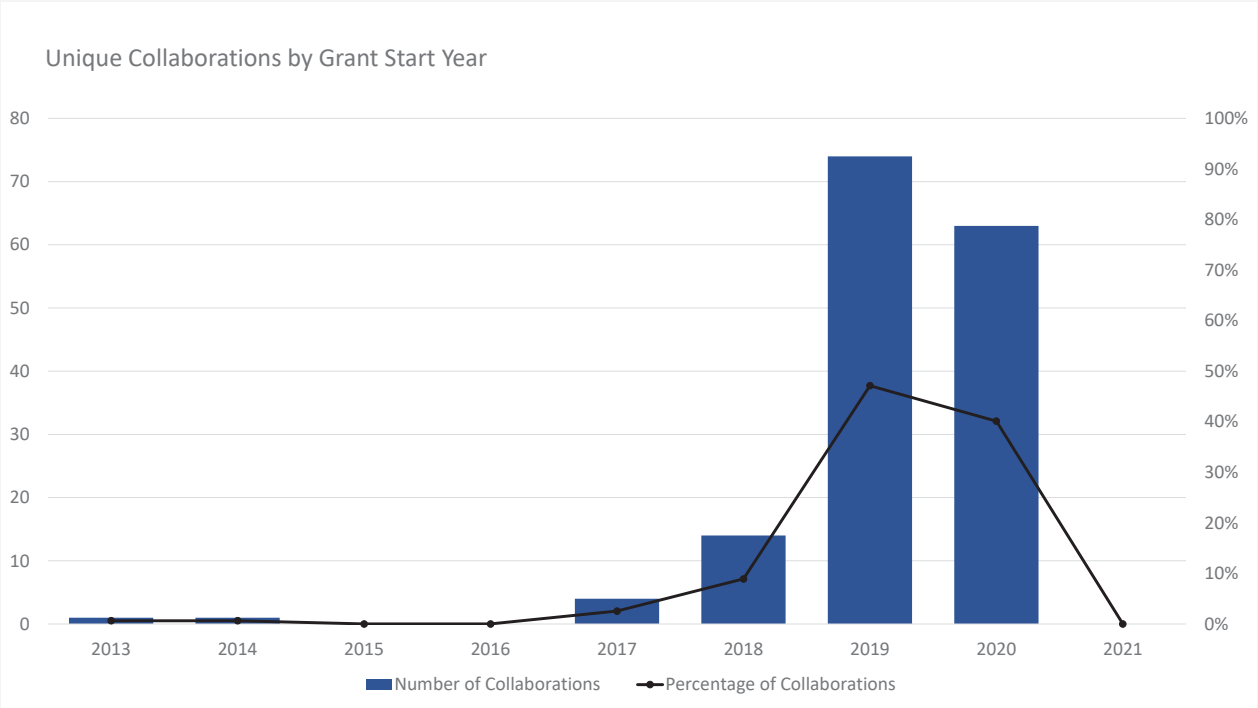
Collaborations

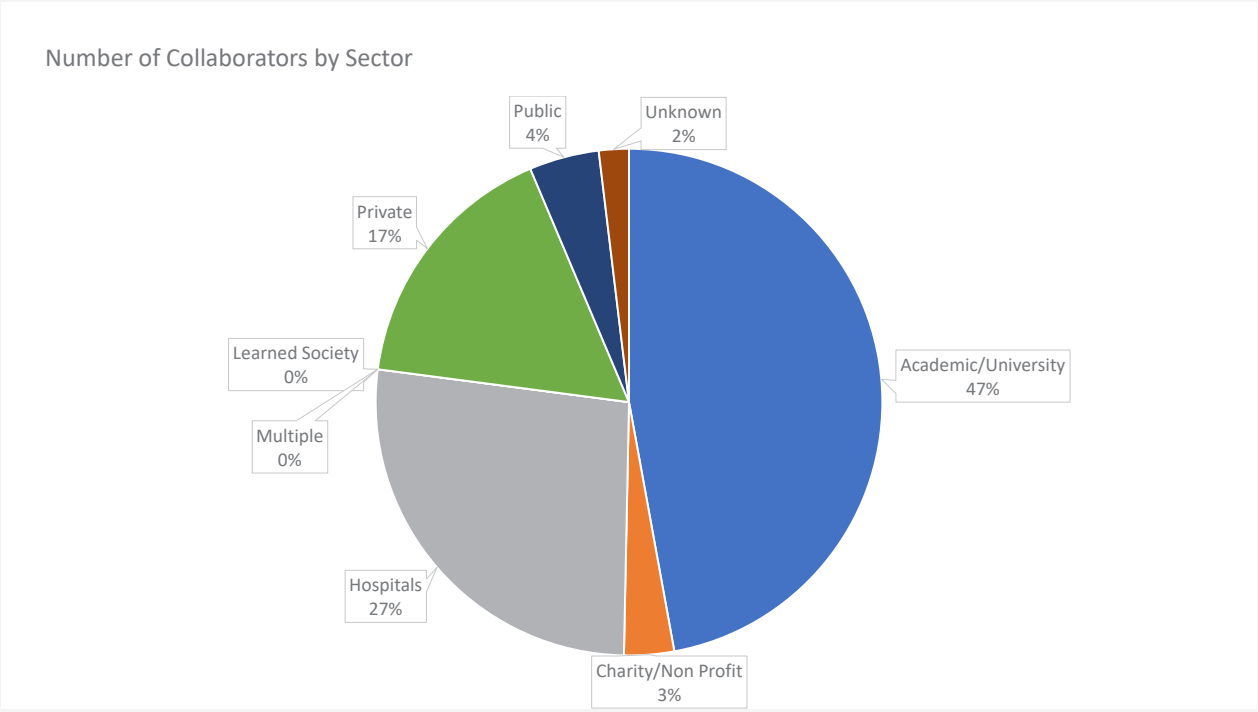
78	Number of Awards
36	Number Reporting at Least One Collaboration
46%	Percentage Reporting at Least One Collaboration
157	Number of Collaborations
4.36	Mean Number of Collaborations for Awards Reporting at Least One Collaboration
2.01	Mean Number for the Group


Cohort Collaboration Activity Distributed on Award Start Year
35
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2018
2019
2020
2021
Number with at Least One Collaboration
Number Without Any Collaborations
Percentage With At Least One Collaboration


Started Collaborating
40
35
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Within 1 Year
Within 2 Years
Within 3 Years
Within 4 Years
Within 5 Years
After 5 Years
Number of Awards
Percentage of Awards


Distribution of Collaborations by Award
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0
1
2
3
4
5
6
7
8
9
10
11-20
21-50
51-100
100+


Unique Collaborations by Grant Start Year
80
70
60
50
40
30
20
10
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2013
2014
2015
2016
2017
2018
2019
2020
2021
Number of Collaborations
Percentage of Collaborations

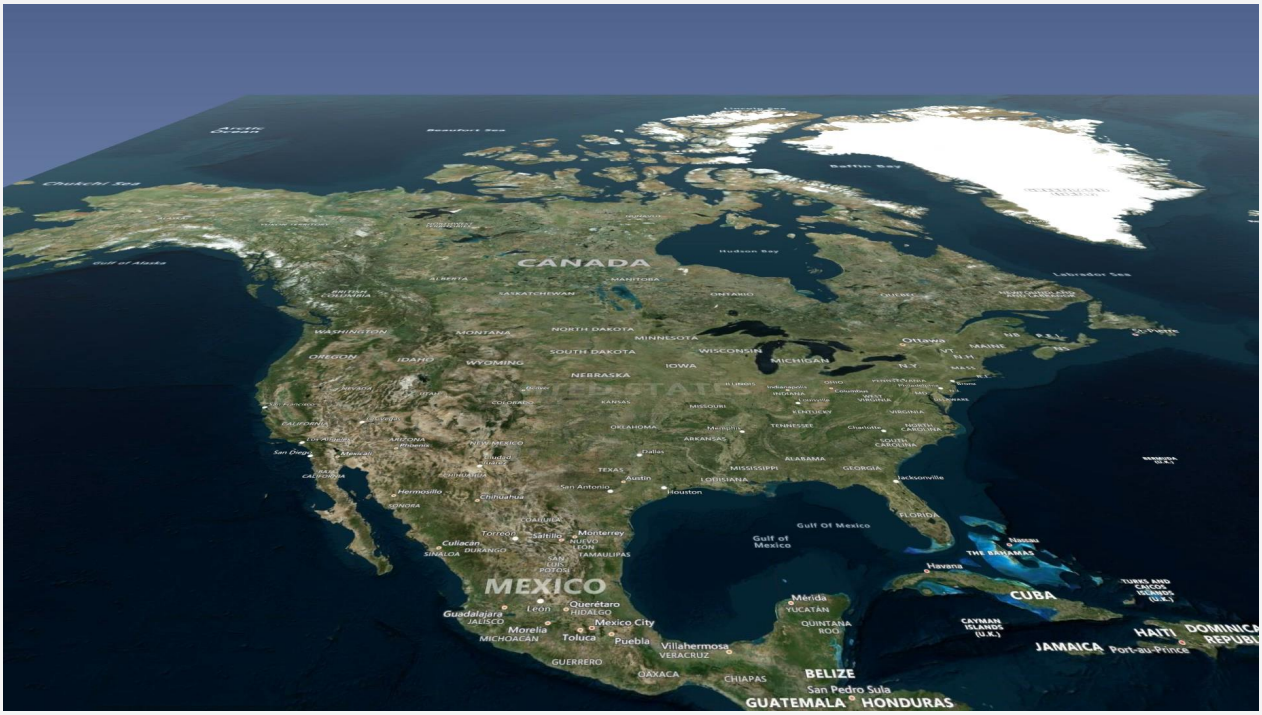


Top 10 Collaborators

Rank	Parent Org	Child Org	Sector	Country	Number of Collaborations	Percentage
1	Steno Diabetes Center Copenhagen		Hospitals	Denmark	10	6.4%
2	University of Copenhagen		Academic/University	Denmark	7	4.5%
3	Roskilde University		Academic/University	Denmark	6	3.8%
4	University of Southern Denmark		Academic/University	Denmark	5	3.2%
5	Zealand Pharma		Private	Denmark	4	2.5%
5	Novo Nordisk		Private	Denmark	4	2.5%
5	Technical University of Denmark		Academic/University	Denmark	4	2.5%
5	Aarhus University		Academic/University	Denmark	4	2.5%
9	Steno Diabetes Center Aarhus		Hospitals	Denmark	3	1.9%
9	Aalborg University		Academic/University	Denmark	3	1.9%

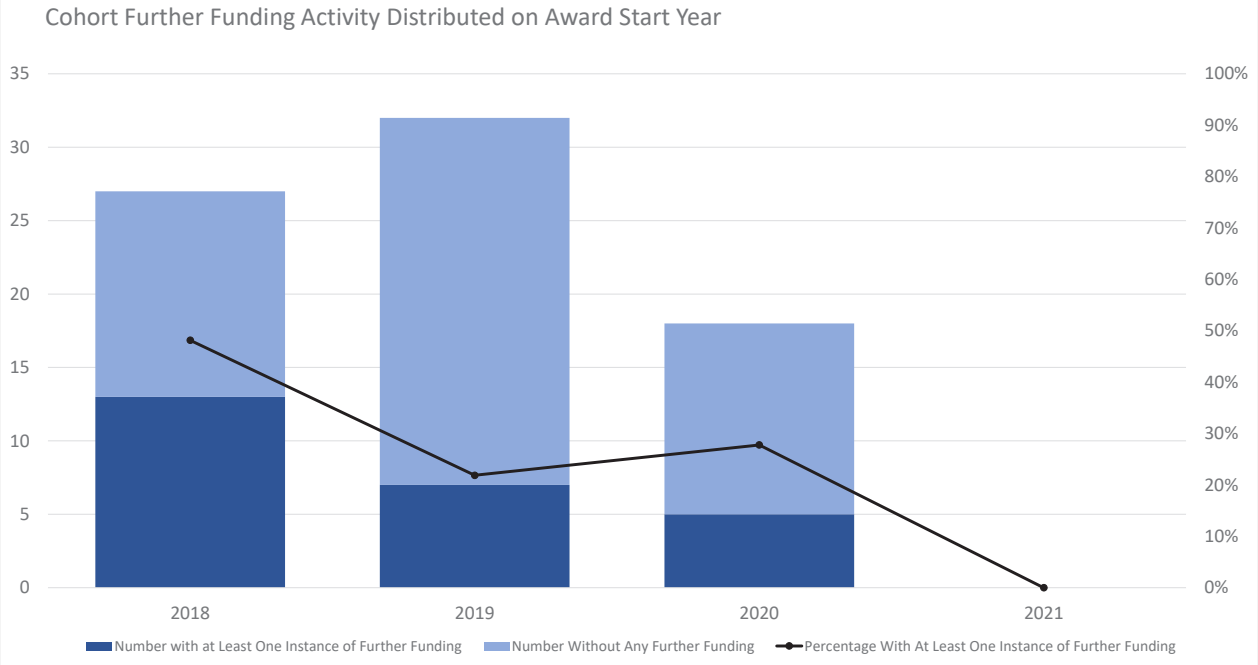
Top 10 Collaborators (Parent)

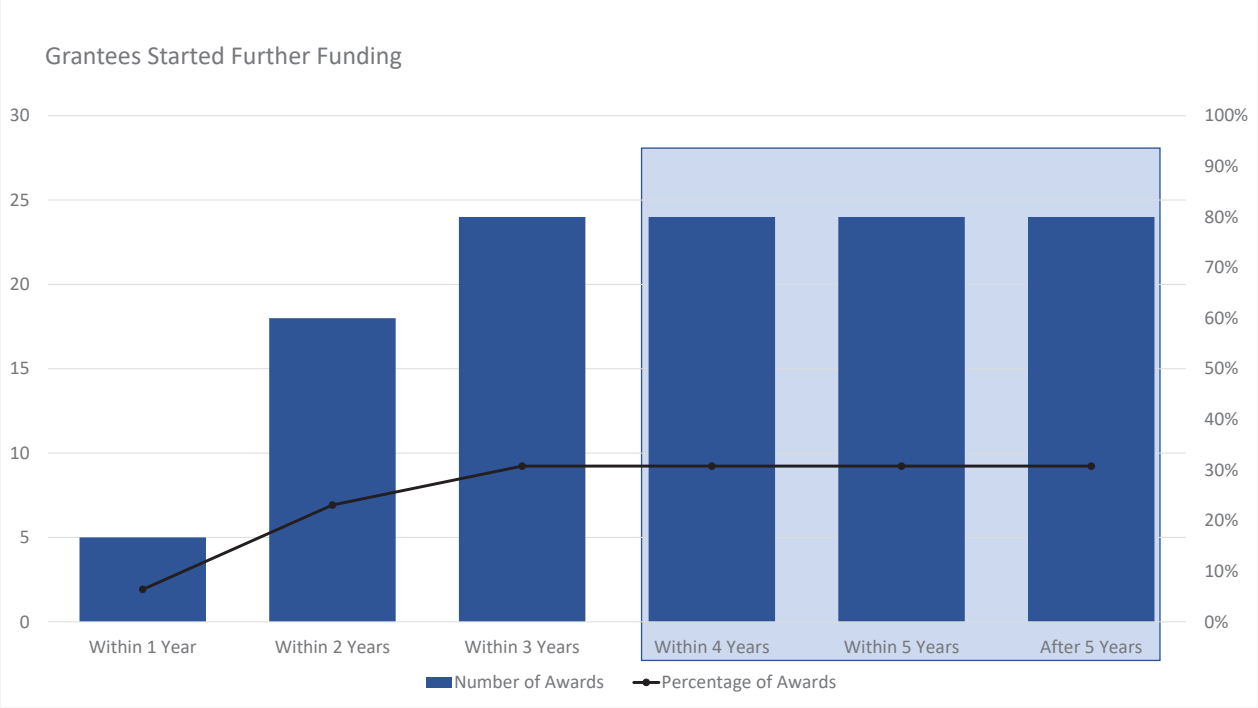
Rank	Parent Org	Parent Sector	Parent Country	Number of Collaborations	Percentage
1	Steno Diabetes Center Copenhagen	Hospitals	Denmark	11	7.0%
2	University of Copenhagen	Academic/University	Denmark	10	6.4%
3	Aarhus University	Academic/University	Denmark	6	3.8%
3	Roskilde University	Academic/University	Denmark	6	3.8%
3	Rigshospitalet	Hospitals	Denmark	6	3.8%
6	Novo Nordisk	Private	Denmark	5	3.2%
6	University of Southern Denmark	Academic/University	Denmark	5	3.2%
8	Technical University of Denmark	Academic/University	Denmark	4	2.5%
8	Zealand Pharma	Private	Denmark	4	2.5%
10	Steno Diabetes Center Aarhus	Hospitals	Denmark	3	1.9%
10	Hvidovre Hospital	Hospitals	Denmark	3	1.9%
10	AstraZeneca	Private	United Kingdom	3	1.9%
10	Aalborg University	Academic/University	Denmark	3	1.9%

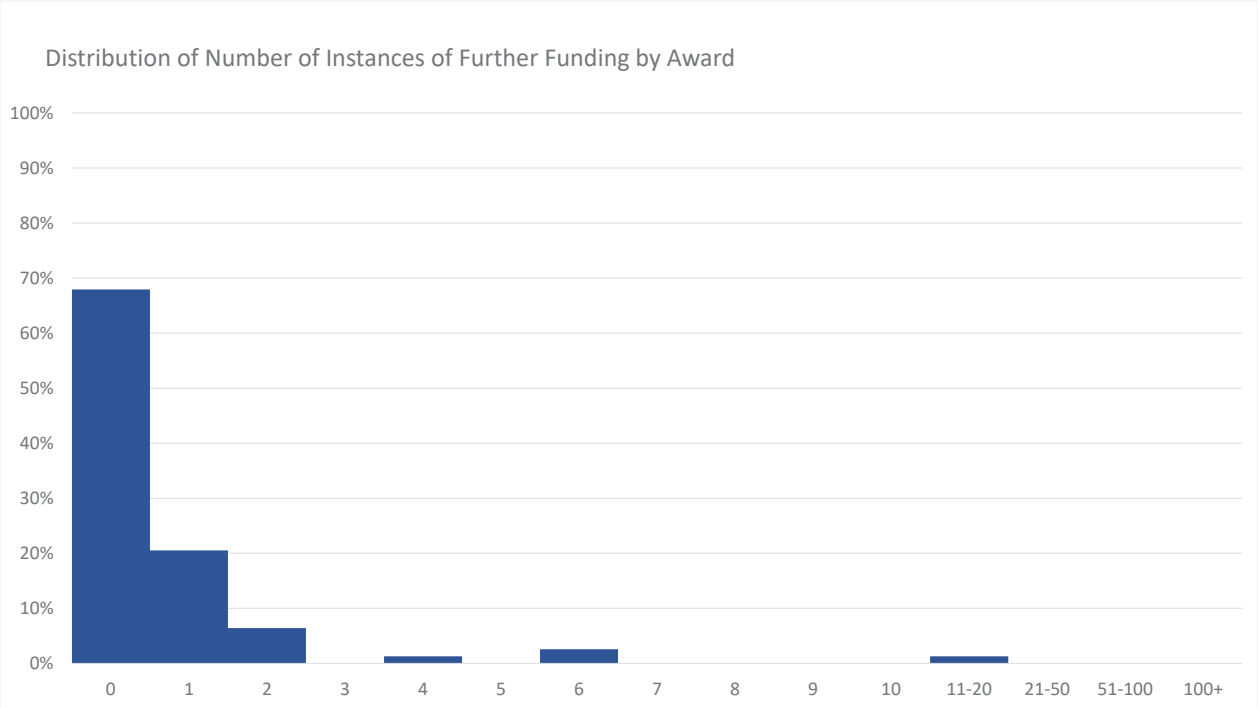


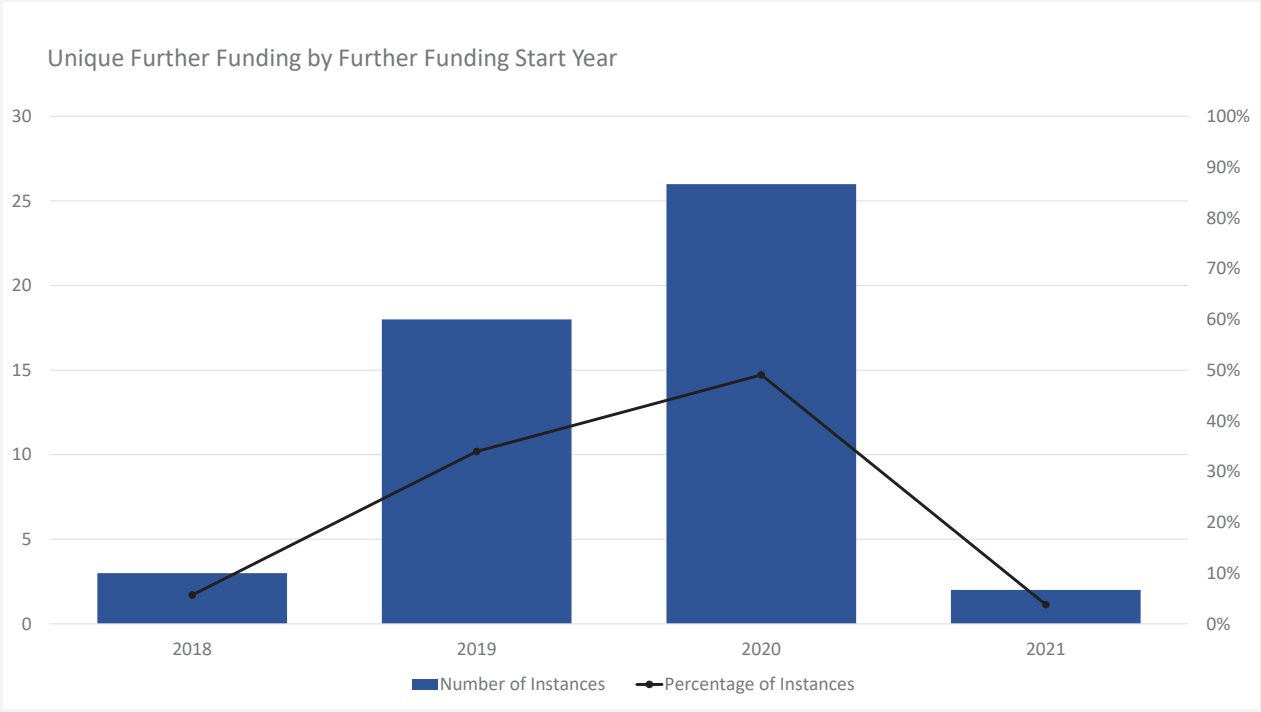
Further Funding

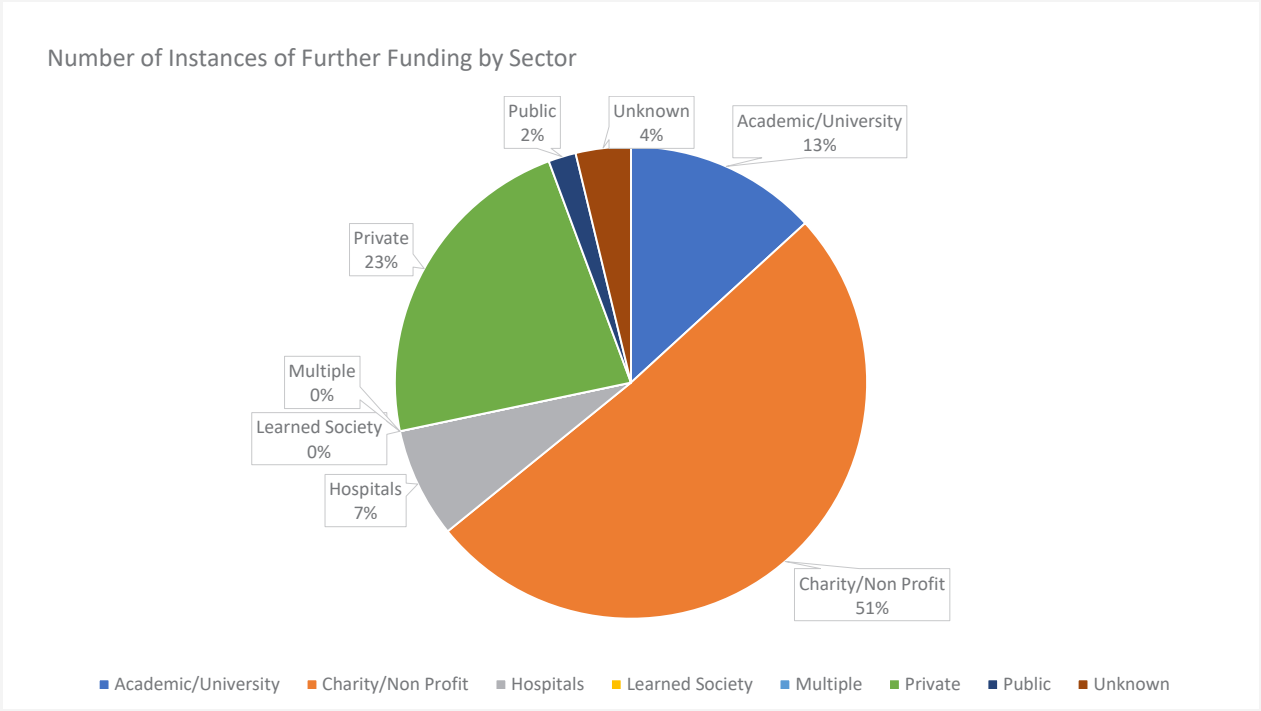
78	Number of Awards
25	Number Reporting at Least One Instance of Further Funding
32%	Percentage Reporting at Least One Instance of Further Funding
53	Number of Instances of Further Funding
2.12	Mean Number of Instances for Awards Reporting at Least One Instances of Further Funding
0.68	Mean Number for the Group
DKK 19,426,323	Effective Further Funding (Currently Committed)



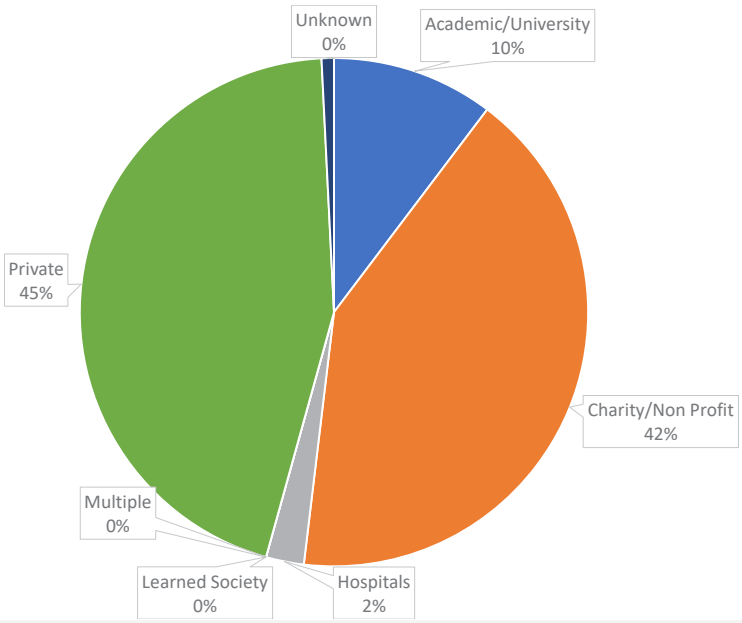

Grantees Started Further Funding
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Within 1 Year
Within 2 Years
Within 3 Years
Within 4 Years
Within 5 Years
After 5 Years
Number of Awards
Percentage of Awards


Distribution of Number of Instances of Further Funding by Award
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0
1
2
3
4
5
6
7
8
9
10
11-20
21-50
51-100
100+


Unique Further Funding by Further Funding Start Year
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2018
2019
2020
2021
Number of Instances
Percentage of Instances


Number of Instances of Further Funding by Sector
Public 2%
Unknown 4%
Academic/University 13%
Private 23%
Multiple 0%
Learned Society 0%
Hospitals 7%
Charity/Non Profit 51%
Academic/University
Charity/Non Profit
Hospitals
Learned Society
Multiple
Private
Public
Unknown

Effective Value of Further Funding by Sector (Currently Committed)



Top 10 Further Funders by Value

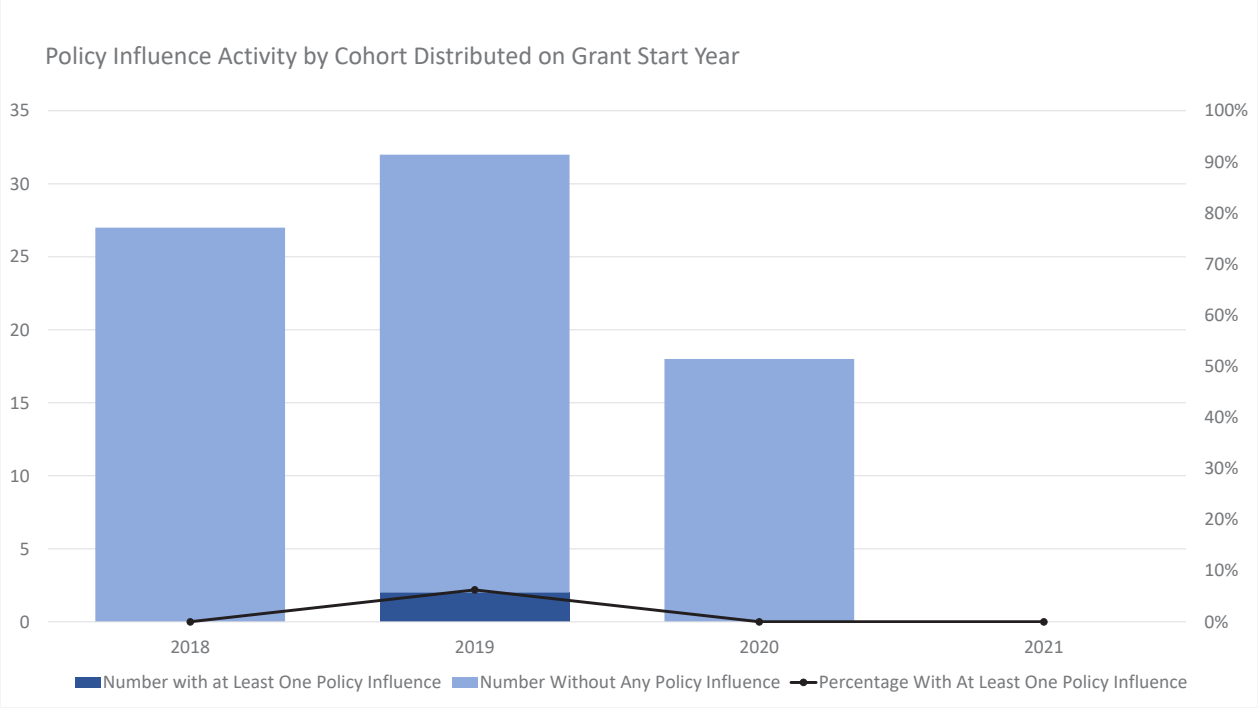
Rank	Parent Org	Sector	Country	Number of Instances	DKK Total Effective Value	Percentage Value
1	Novo Nordisk Foundation	Charity/Non Profit	Denmark	2	DKK 4,867,865	25.1%
2	MedImmune	Private	United States	1	DKK 4,419,476	22.7%
3	Novo Nordisk	Private	Denmark	1	DKK 2,485,000	12.8%
4	Danish Diabetes Association	Charity/Non Profit	Denmark	5	DKK 1,460,000	7.5%
5	Augustinus Foundation	Private	Denmark	3	DKK 1,100,000	5.7%
5	University of Southern Denmark	Academic/University	Denmark	2	DKK 1,100,000	5.7%
7				1	DKK 744,048	3.8%
8	Aarhus University	Academic/University	Denmark	2	DKK 608,500	3.1%
9	Jascha Fonden	Charity/Non Profit	Denmark	1	DKK 300,000	1.5%
10	Aage Bangs Fond	Charity/Non Profit	Denmark	3	DKK 251,699	1.3%

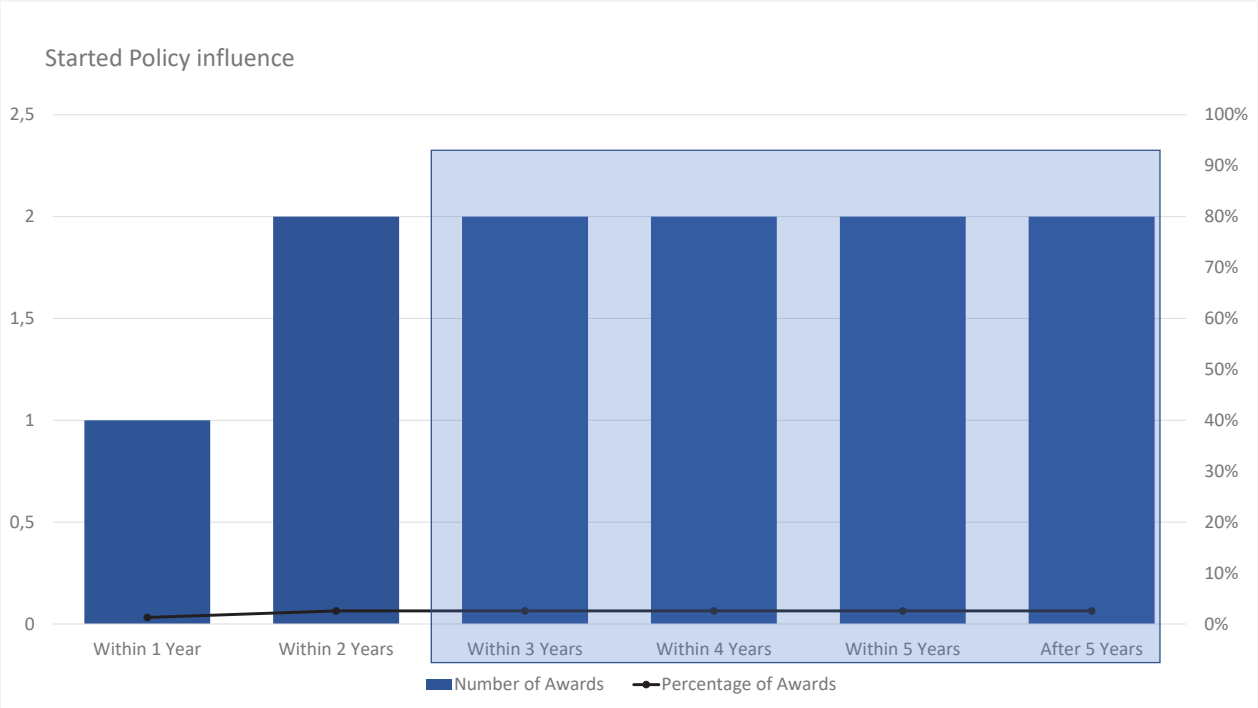
Further Funders by Country

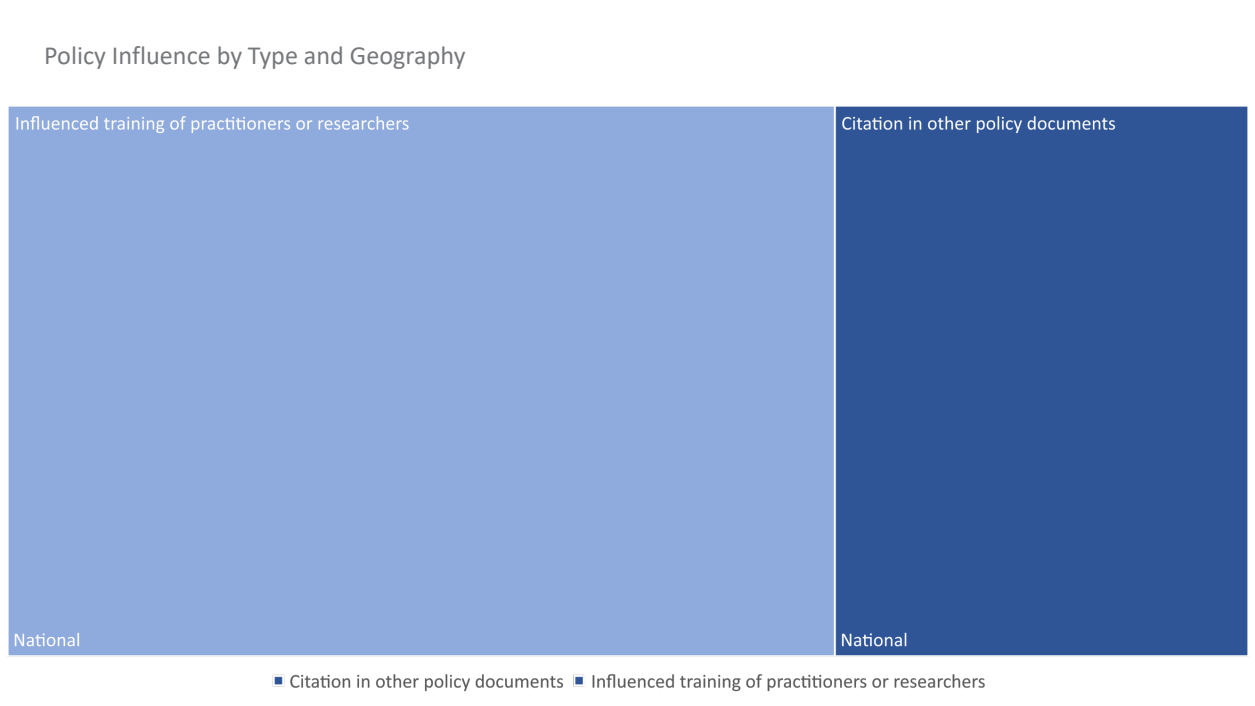
Rank	name	Number of Instances of Further Funding	Value of Further Funding	Percentage Value
1	Denmark	44	DKK 13,773,214	74.5%
2	United States	2	DKK 4,450,687	24.1%
3	Global	1	DKK 219,312	1.2%
4	Germany	4	DKK 39,063	0.2%

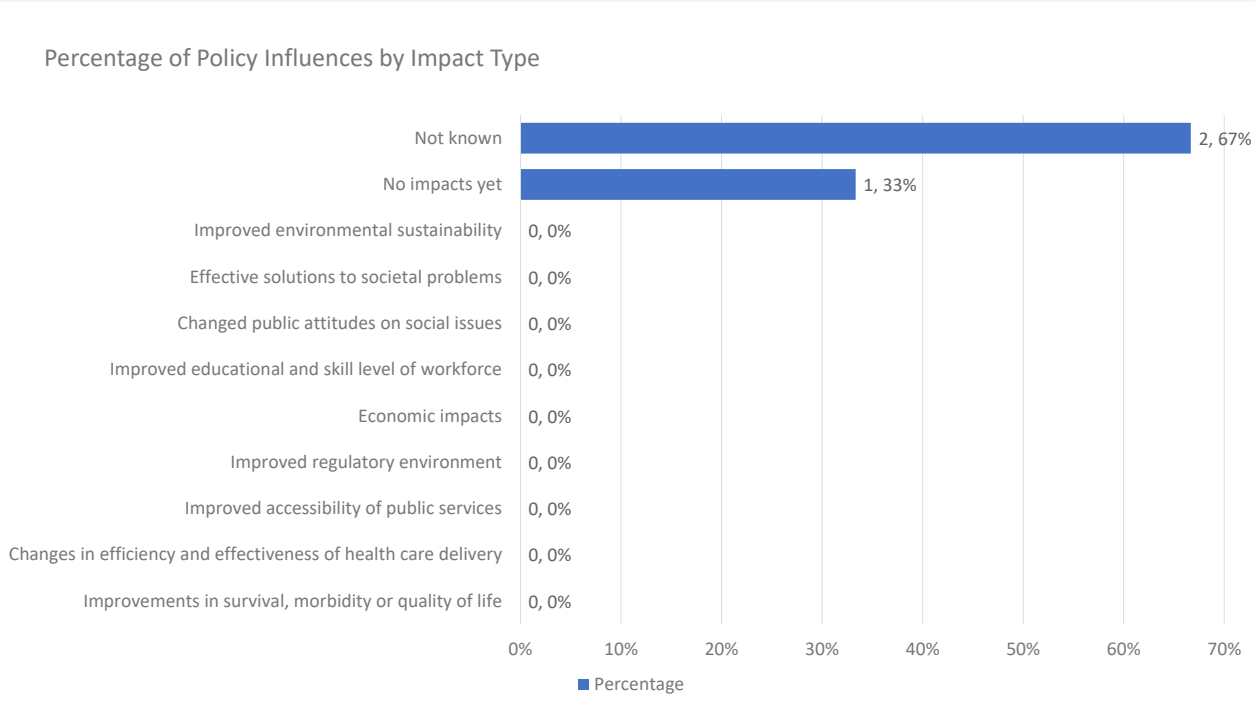
Policy Influence

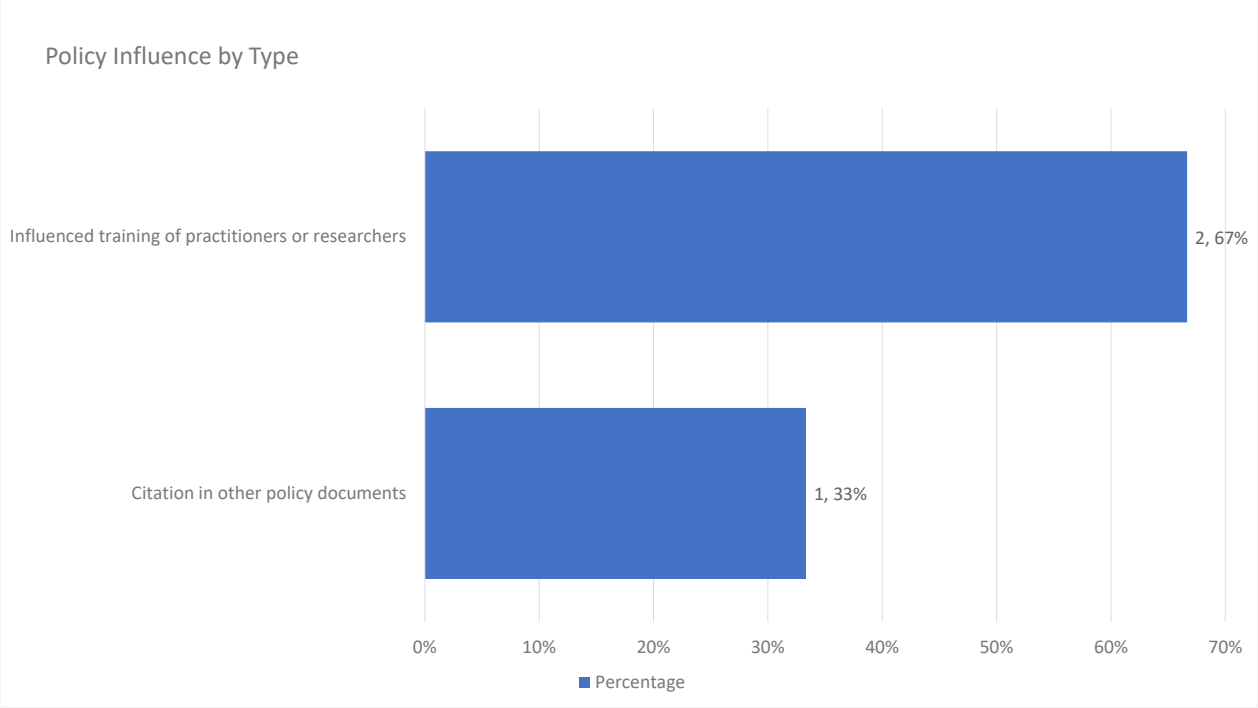
78	Number of Awards
2	Number Reporting at Least One Policy Influence
3%	Percentage Reporting at Least One Policy Influence
3	Number of Unique Policy Influences
1.50	Mean Number of Policy Influences for Awards Reporting at Least One Policy Influence
0.04	Mean Number for the Group

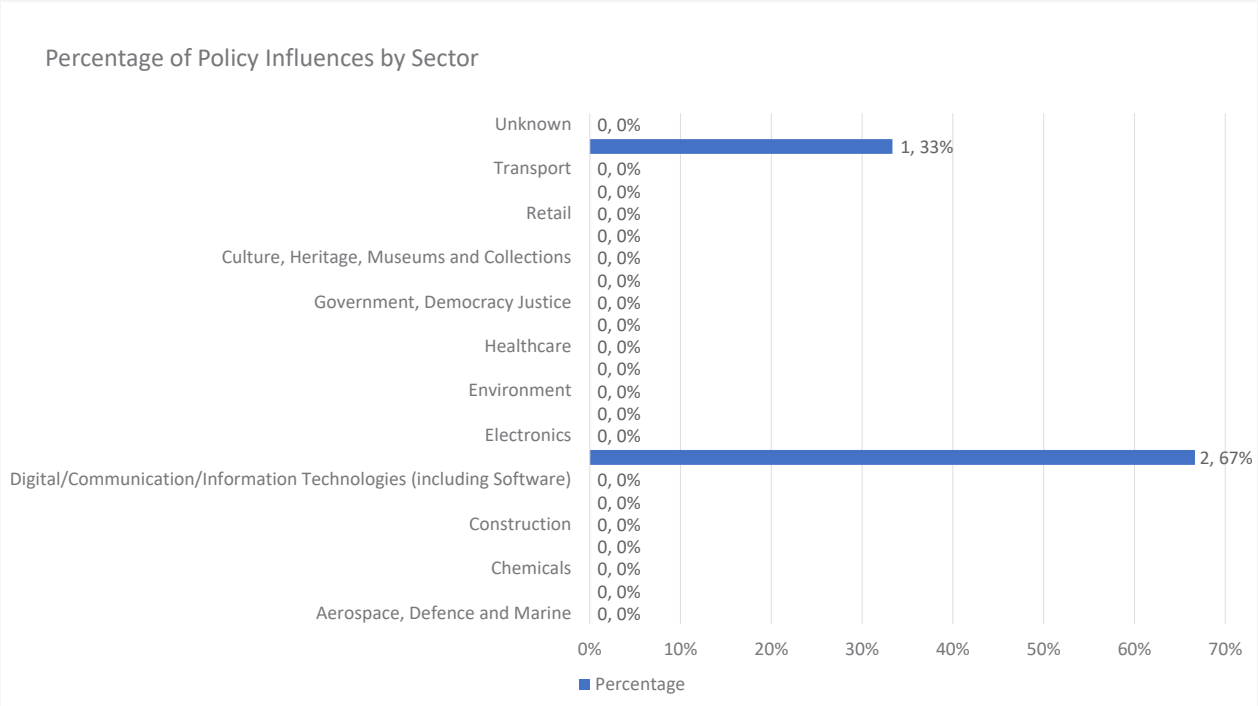

Policy Influence Activity by Cohort Distributed on Grant Start Year
35
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2018
2019
2020
2021
Number with at Least One Policy Influence
Number Without Any Policy Influence
Percentage With At Least One Policy Influence


Started Policy influence
2,5
2
1,5
1
0,5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Within 1 Year
Within 2 Years
Within 3 Years
Within 4 Years
Within 5 Years
After 5 Years
Number of Awards
Percentage of Awards


Policy Influence by Type and Geography
Influenced training of practitioners or researchers
National
Citation in other policy documents
National
Citation in other policy documents
Influenced training of practitioners or researchers

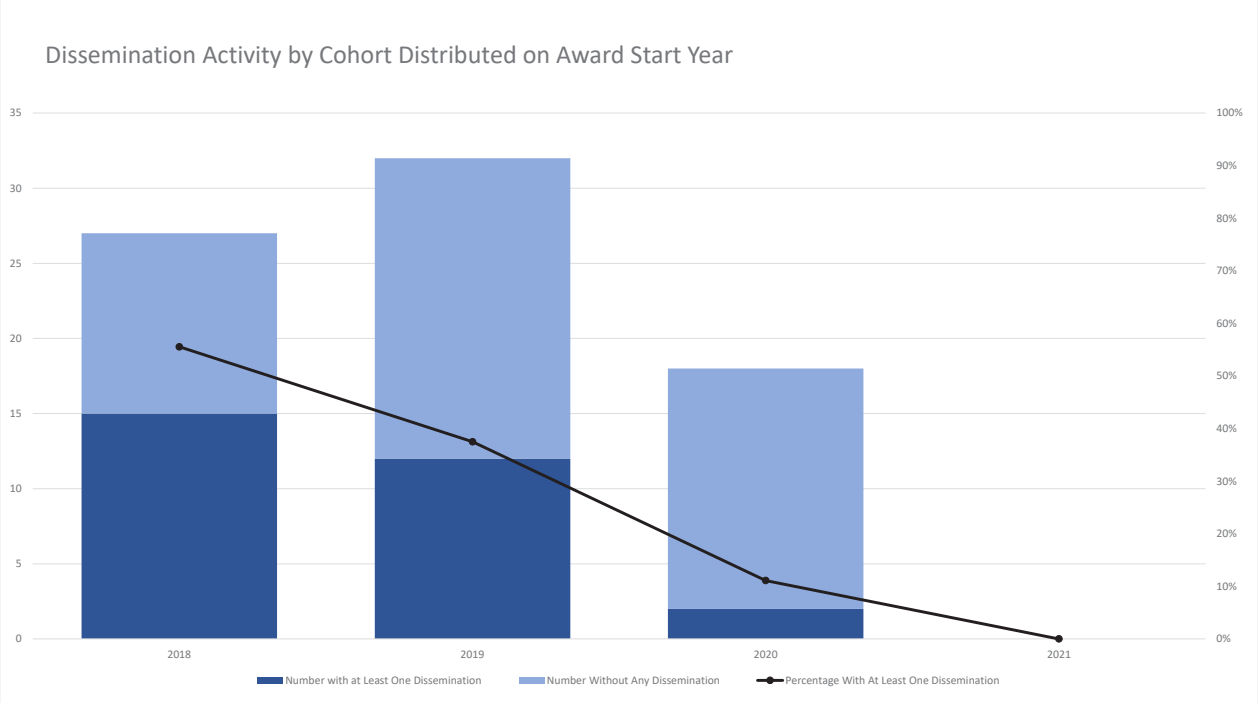

Percentage of Policy Influences by Impact Type
Not known
2, 67%
No impacts yet
1, 33%
Improved environmental sustainability
0, 0%
Effective solutions to societal problems
0, 0%
Changed public attitudes on social issues
0, 0%
Improved educational and skill level of workforce
0, 0%
Economic impacts
0, 0%
Improved regulatory environment
0, 0%
Improved accessibility of public services
0, 0%
Changes in efficiency and effectiveness of health care delivery
0, 0%
Improvements in survival, morbidity or quality of life
0, 0%
0%
10%
20%
30%
40%
50%
60%
70%
Percentage

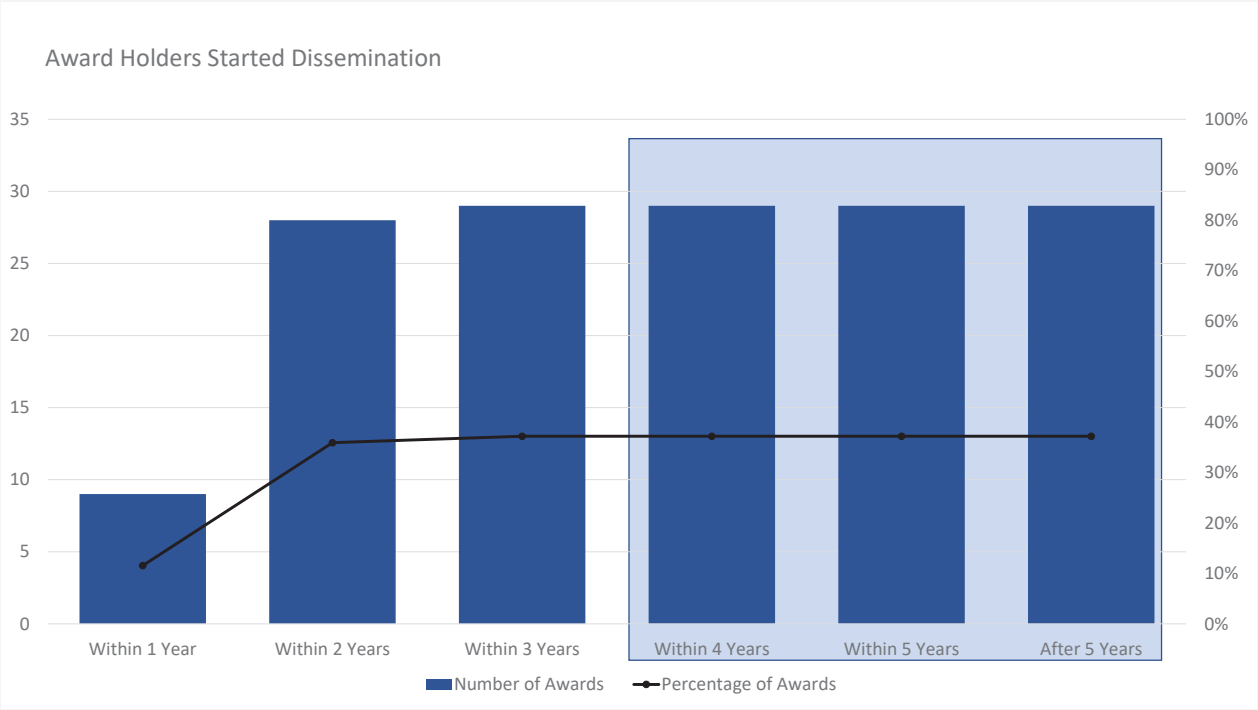

Policy Influence by Type
Influenced training of practitioners or researchers
2, 67%
Citation in other policy documents
1, 33%
0%
10%
20%
30%
40%
50%
60%
70%
Percentage

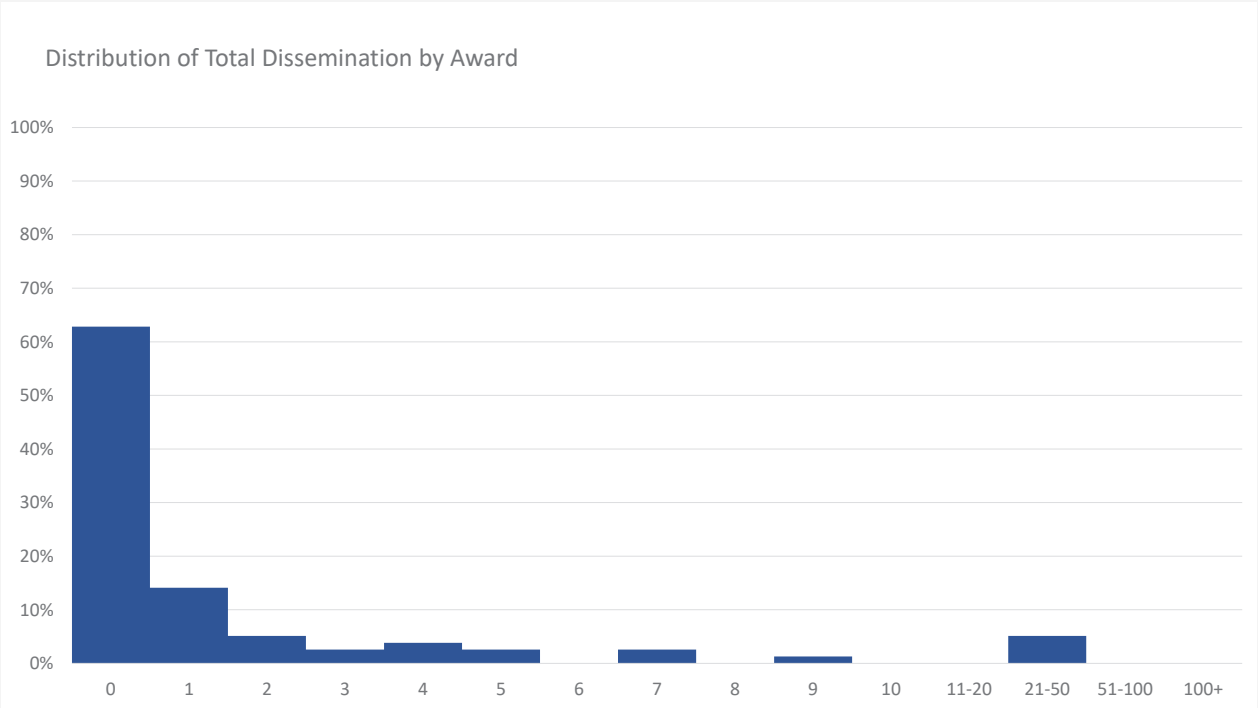

Percentage of Policy Influences by Sector
Unknown
0, 0%
1, 33%
Transport
0, 0%
0, 0%
Retail
0, 0%
0, 0%
Culture, Heritage, Museums and Collections
0, 0%
0, 0%
Government, Democracy Justice
0, 0%
0, 0%
Healthcare
0, 0%
0, 0%
Environment
0, 0%
0, 0%
Electronics
0, 0%
2, 67%
Digital/Communication/Information Technologies (including Software)
0, 0%
0, 0%
Construction
0, 0%
0, 0%
Chemicals
0, 0%
0, 0%
Aerospace, Defence and Marine
0, 0%
0%
10%
20%
30%
40%
50%
60%
70%
Percentage

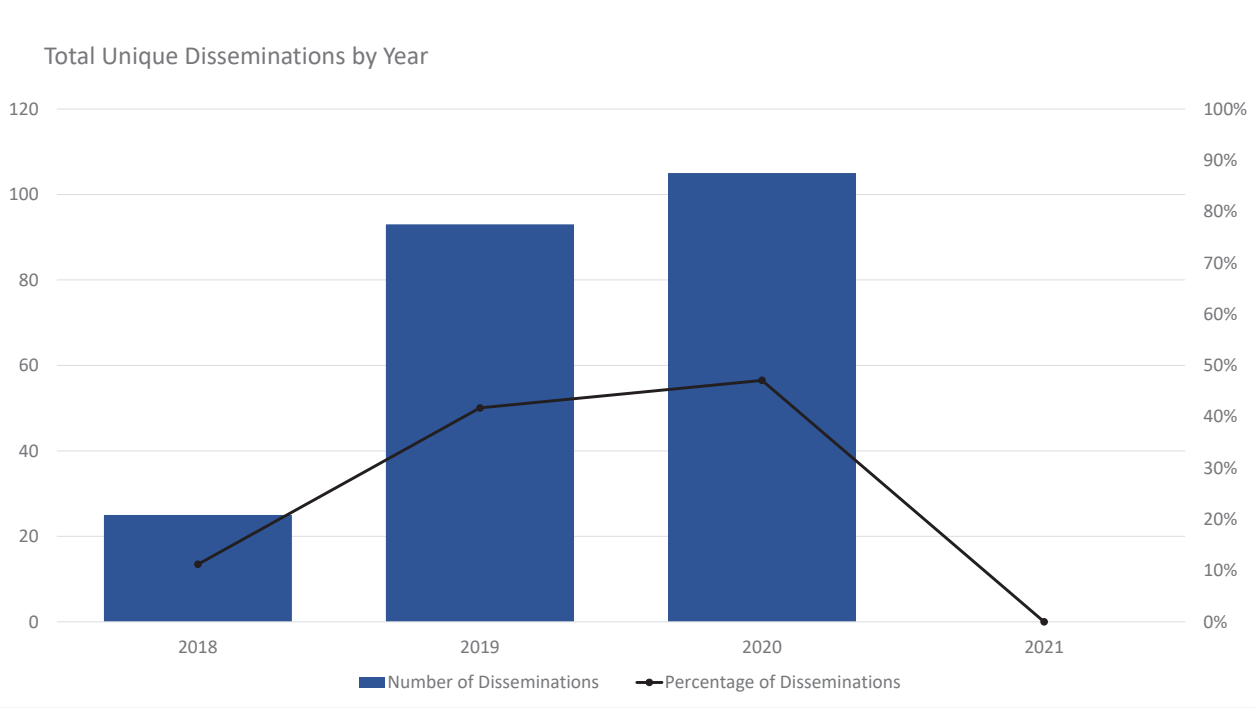
Dissemination Activities

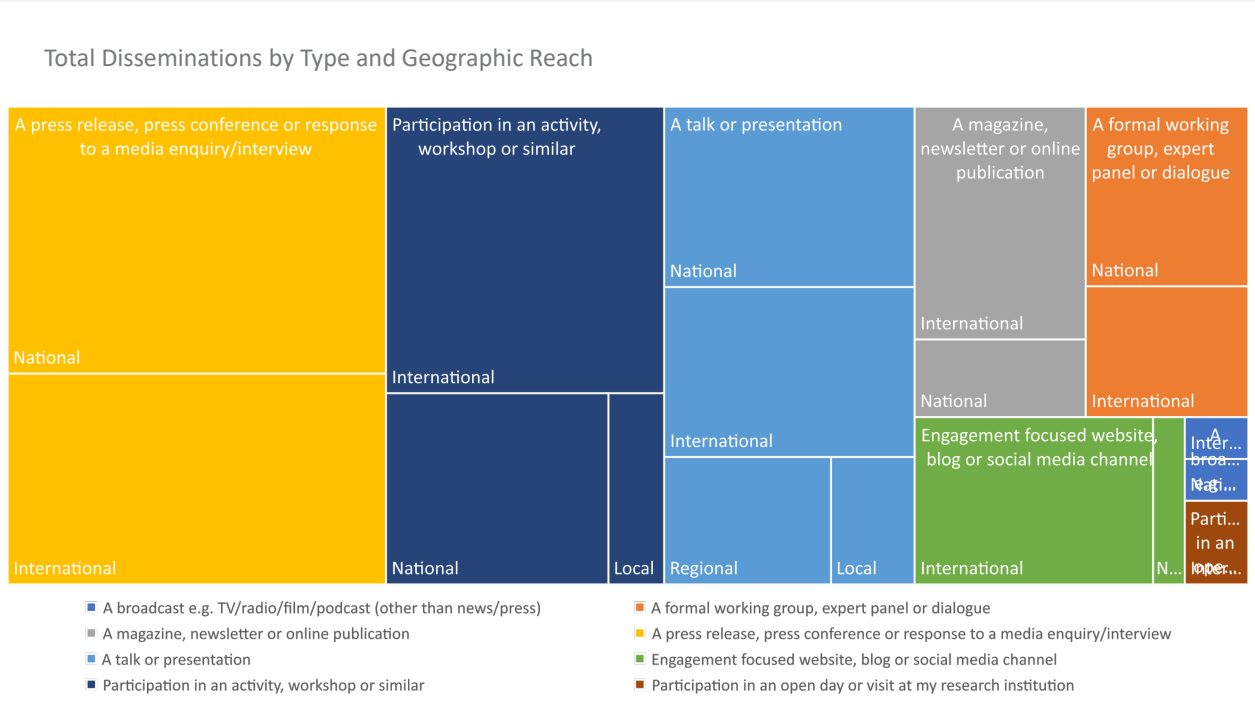
78	Number of Awards
29	Number Reporting at Least One Dissemination
37%	Percentage Reporting at Least One Dissemination
220	Number of Unique Disseminations
7.59	Mean Number of Disseminations for Awards Reporting at Least One Dissemination
2.82	Mean Number for the Group
223	Number of Unique Total Disseminations
7.69	Mean Number of Total Disseminations for Awards Reporting at Least One Dissemination
2.86	Mean Total Number for the Group

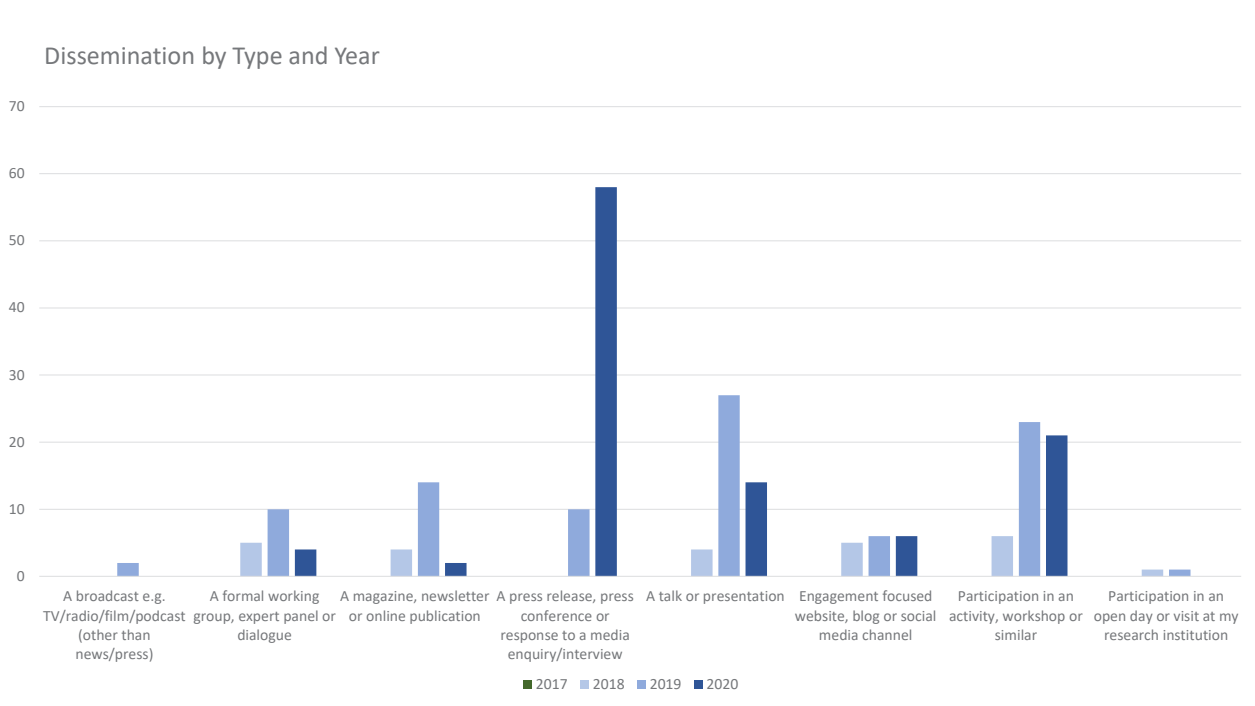


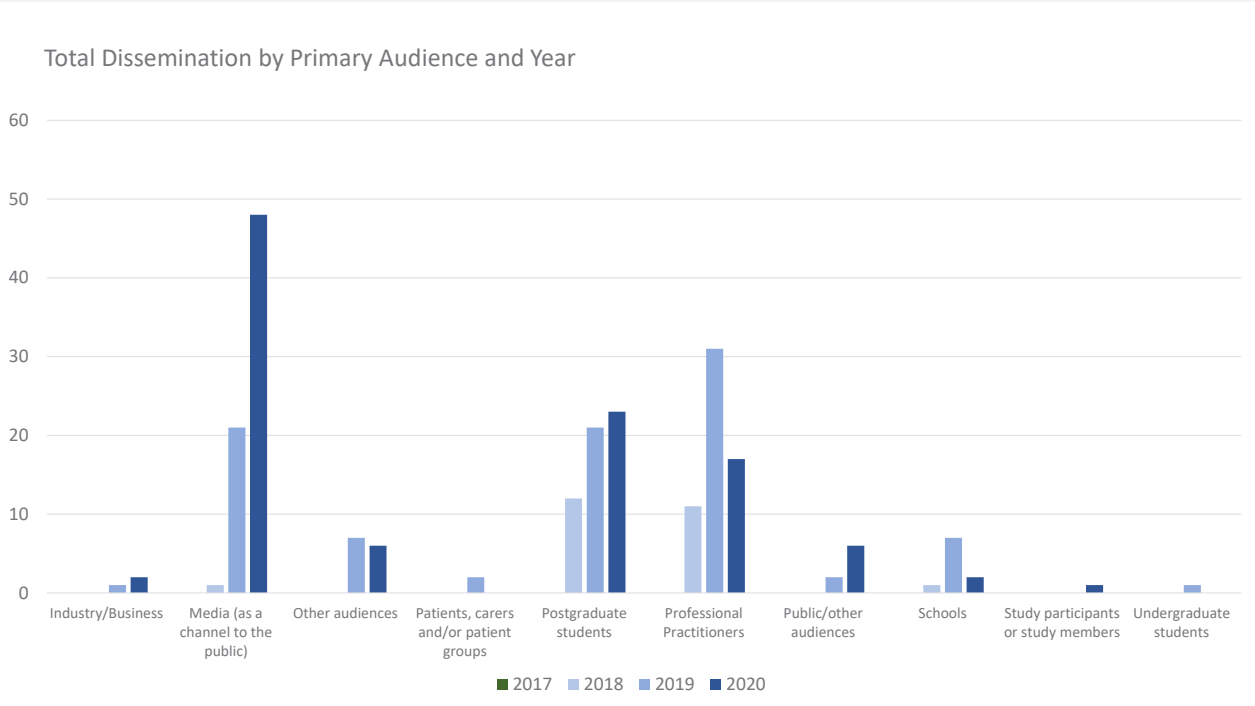

Award Holders Started Dissemination
35
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Within 1 Year
Within 2 Years
Within 3 Years
Within 4 Years
Within 5 Years
After 5 Years
Number of Awards
Percentage of Awards


Distribution of Total Dissemination by Award
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0
1
2
3
4
5
6
7
8
9
10
11-20
21-50
51-100
100+


Total Unique Disseminations by Year
120
100
80
60
40
20
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2018
2019
2020
2021
Number of Disseminations
Percentage of Disseminations


Total Disseminations by Type and Geographic Reach
A press release, press conference or response to a media enquiry/interview
National
International
Participation in an activity, workshop or similar
International
National
Local
A talk or presentation
National
International
Regional
Local
A magazine, newsletter or online publication
International
National
A formal working group, expert panel or dialogue
National
International
Engagement focused website, blog or social media channel
International
A broadcast e.g. TV/radio/film/podcast (other than news/press)
A magazine, newsletter or online publication
A talk or presentation
Participation in an activity, workshop or similar
A formal working group, expert panel or dialogue
A press release, press conference or response to a media enquiry/interview
Engagement focused website, blog or social media channel
Participation in an open day or visit at my research institution


Dissemination by Type and Year
70
60
50
40
30
20
10
0
A broadcast e.g. TV/radio/film/podcast (other than news/press)
A formal working group, expert panel or dialogue
A magazine, newsletter or online publication
A press release, press conference or response to a media enquiry/interview
A talk or presentation
Engagement focused website, blog or social media channel
Participation in an activity, workshop or similar
Participation in an open day or visit at my research institution
2017
2018
2019
2020


Total Dissemination by Primary Audience and Year
60
50
40
30
20
10
0
Industry/Business
Media (as a channel to the public)
Other audiences
Patients, carers and/or patient groups
Postgraduate students
Professional Practitioners
Public/other audiences
Schools
Study participants or study members
Undergraduate students
2017
2018
2019
2020

Additional Outputs Reported

8	Research Materials
2	Medical Products, Interventions, Clinical Trials
16	Personal Recognition
5	Use of Shared Facilities
3	Other Outputs
1	Next Destination (Western Sydney University)
8	Research Databases and Models
1	IP

Appendix 15

Danish Diabetes Academy Recruitment and Grant Activities 2018-2021

a. Milestones of DDA Recruitment and Grant Activities 2018-2021
b. PhD scholarships
c. Postdoc fellowships
d. Visiting professorships

A. Milestones of recruitment and grant activities 2018-2021

2018

August
Establishment of the DDA Committee for Talent Development: 60 members

December
Allocation of:
- 12 2/3-financed PhD scholarships
- 9 postdoc fellowships
- 4 visiting professorships

2019

June
First call for PhD scholarships, postdoc fellowships and visiting professorships, in open and free competition

October
Allocation of 2 postdoc fellowships with co-funding from AstraZeneca

August
Expansion of the DDA Committee for Talent Development: 80 members

Allocation of:
- 1 postdoc fellowships with co-funding from AstraZeneca
- 4 1/3-financed PhD scholarships with co-funding from life science industry
- 1 1/3-financed postdoc fellowships with co-funding from life science in

June
Allocation of:
- 6 2/3-financed PhD scholarships
- 5 postdoc fellowships
- 1 visiting professorship

2020

December
Allocation of:
- 7 2/3-financed PhD scholarships
- 6 postdoc fellowships
- 3 visiting professorships

February
Expansion of the DDA Committee for Talent Development: 93 members
Allocation of 1 1/3-financed PhD scholarships with co-funding from life science industry

December
Allocation of:
- 6 2/3-financed PhD scholarships
- 4 postdoc fellowships
- 4 visiting professorships

June
Allocation of:
- 7 2/3-financed PhD scholarships
- 6 postdoc fellowships
- 4 visiting professorships

B. PhD scholarships

Table A. Overview of DDA PhD scholarships 2018-2020 (2/3-financed)

Grant year	Grant type	Name	Academic title	Gender	Nation-ality	Project title	Affiliation (university and faculty of enrolment)
2018	2/3 financed	Anna Korsgaard Berg	MD	Female	Danish	Prevention and Treatment of Dermatological Complications Associated with Continuous Subcutaneous Insulin Infusion and/or Continuous Glucose Monitoring in Pediatric Patients with Type 1 Diabetes	University of Copenhagen Faculty of Health and Medical Sciences
2018	2/3 financed	Maria Hornstrup Christensen	MSc	Female	Danish	Gestational Diabetes Mellitus and Future Health	University of Southern Denmark Faculty of Health Sciences
2018	2/3 financed	Mads Thue Fejerskov Damgaard	MSc	Male	Danish	Targeting SIRT1 signaling pathways in skeletal muscle to promote metabolic health	University of Copenhagen Faculty of Health and Medical Sciences
2018	2/3 financed	Anna Skab Hassing	MSc	Female	Danish	Defining the link between hepatic NAD+ salvage capacity and liver fibrosis	University of Copenhagen Faculty of Health and Medical Sciences
2018	2/3 financed	Hermina Jakupovic	MSc	Female	Finnish	Uncovering genetic and prenatal factors that modify the impact of weight gain and obesity on diabetic and cardiovascular risk	University of Copenhagen Faculty of Health and Medical Sciences
2018	2/3 financed	Marianne Vie Ingersgaard Jørgensen	MSc	Female	Danish	Illness Identity and Social Relations in Adolescents and Emerging Adults with Type 1 Diabetes	University of Southern Denmark Faculty of Health and Medical Sciences
2018	2/3 financed	Mette Ludwig	MSc	Female	Danish	Deciphering type 2 diabetes remission using single cell transcriptomics, epigenetics and human genetics	University of Copenhagen Faculty of Health and Medical Sciences
2018	2/3 financed	Jens Lund	MSc	Male	Danish	Deciphering the Role of Lactate in Brown Fat – Brain Cross-Talk	University of Copenhagen Faculty of Health and Medical Sciences

Grant year	Grant type	Name	Academic title	Gender	Nationality	Project title	Affiliation (university and faculty of enrolment)
2018	2/3 financed	Mark Preben Lyngbaek	MSc	Male	Danish	Single-cell analysis of muscle progenitors and beta-cell function in people with type 2 diabetes following a life style intervention	University of Copenhagen Faculty of Health and Medical Sciences
2018	2/3 financed	Anne Lundager Madsen	MSc	Female	Danish	Unravelling mechanisms related to glucose stimulated beta cell function – A systematic genetic examination of measures of oral glucose stimulated insulin secretion	University of Copenhagen Faculty of Health and Medical Sciences
2018	2/3 financed	Anupa Rijal	MSc	Female	Nepalese	Management of hypertension, type II diabetes, and cardiovascular disease in low- and middle-income countries	University of Southern Denmark Faculty of Health Sciences
2019	2/3 financed	Johan Onslev	MD	Male	Danish	Identification of molecular mechanisms underlying muscle glucose utilization during exercise and enhanced insulin sensitivity	University of Copenhagen Faculty of Science and Engineering
2019	2/3 financed	Xiaoli Hu	MSc	Female	Chinese	Mechanisms behind neuropathic pain in Type 1 diabetes: a translational research project	Aarhus University Faculty of Health Sciences
2019	2/3 financed	Indumathi Kumarathas	MD	Female	Danish	Cardiac and hepatic metabolic flexibility in fatty liver disease: Impact of NAFL and NASH in type 2 diabetes and of GLP-1 recept	Aarhus University Faculty of Health Sciences
2019	2/3 financed	Sarah Bisgaard Olesen	MSc	Female	Danish	Discovery and Study of Hot-Spots for Proteome Advanced Glycation	Aarhus University Faculty of Health Sciences
2019	2/3 financed	Trine Vestergaard Dam	MSc	Female	Danish	A genomics approach to study the non-parenchymal cell population of the liver	University of Southern Denmark Faculty of Science
2019	2/3 financed	Anders Askeland	MSc	Male	Norwegian	Extracellular Vesicles in Non-Alcoholic Fatty Liver Disease: A Novel Approach for Disease Diagnosis and Monitoring.	Aalborg University Faculty of Health Sciences
2019	2/3 financed	Malene Revsbech Christiansen	MSc	Female	Danish	Genetic regulation of leptin levels during weight loss – implications for weight management and metabolic health	University of Copenhagen Faculty of Health and Medical Sciences
2019	2/3 financed	Christopher Rohde	MD	Male	Danish	The impact of treatment with antidepressants on the course of type 2 diabetes	Aarhus University Faculty of Health Sciences

Grant year	Grant type	Name	Academic title	Gender	Nationality	Project title	Affiliation (university and faculty of enrolment)
2019	2/3 financed	Cathrine Munk Scheuer	MD	Female	Danish	Screening for gestational diabetes: Is implementation of new criteria justified in a Danish population?	University of Copenhagen Faculty of Health and Medical Sciences
2020	2/3 financed	Ellen Gammel mark	BSc	Female	Danish	Adipose Tissue Plasticity and Cellular Crosstalk at Single-Cell Resolution during Regression of Obesity	University of Southern Denmark Faculty of Science
2020	2/3 financed	Daniel Hansen	MSc	Male	Danish	Spatiotemporal Deconstruction of Microvascular Decay in NASH	University of Southern Denmark Faculty of Science
2020	2/3 financed	Laura Linnea Määttä	MD	Female	Finnish	A Novel Biomarker to Assess Presence and Progression of Diabetic Neuropathy	Aarhus University Faculty of Health Sciences
2019	2/3 financed	Amalie London	MD	Female	Danish	Targeting liver fat accumulation by dietary interventions	University of Copenhagen Faculty of Health and Medical Sciences
2019	2/3 financed	Kevin Patrick Marks	MD	Male	United States of America	Identifying problems upstream: An psychosocial innovative prospective study to build a model to predict future glycemic control	Aarhus University Faculty of Health Sciences
2019	2/3 financed	Christine Rode Andreasen	MD	Female	Danish	Glucose fluctuations and cardiovascular disease in diabetes	University of Copenhagen Faculty of Health and Medical Sciences
2019	2/3 financed	Inga Sileikaite	MSc	Female	Lithuania	The role of RNA oxidation in islet dysfunction in type 2 diabetes	University of Copenhagen Faculty of Health and Medical Sciences
2020	2/3 financed	Hüsün Sheyma Kizilkaya	MSc	Female	Danish	Impact of naturally occuring GIP receptor (GIPR) variants for GIPR function and interplay with the GLP-1R	University of Copenhagen Faculty of Health and Medical Sciences
2020	2/3 financed	Camilla Cederbye Karlsson	MSc	Female	Danish	Elucidating the genetic background of variation in human food and taste preference	University of Copenhagen Faculty of Health and Medical Sciences
2020	2/3 financed	Astrid Møller Baattrup	MSc	Female	Danish	Identification of Gene Regulatory Mechanisms Controlling Human Intestinal GLP-1 Expression	University of Copenhagen Faculty of Health and Medical Sciences

Grant year	Grant type	Name	Academic title	Gender	Nationality	Project title	Affiliation (university and faculty of enrolment)
2020	2/3 financed	Malte Palm Suppli	MD	Male	Danish	The impact of non-alcoholic fatty liver disease on hepatic glucagon sensitivity and amino acid turnover	University of Copenhagen Faculty of Health and Medical Sciences
2020	2/3 financed	Mona Sadek Ali	MSc	Female	Danish	Determining the impact of breast cancer on skeletal muscle molecular regulation and insulin sensitivity	University of Copenhagen Faculty of Science
2020	2/3 financed	Caroline Bruun Abild	MSc	Female	Danish	Disturbed eating behavior among children and adolescents with type 1 diabetes - an observational and explorative study of prevalence, psychosocial and clinical characteristics	Aarhus University Facuylty of Health Sciences
2020	2/3 financed	Kristine Stoltenberg Addington	MSc	Female	Danish	Younger adults living with diabetes complications: A mixed-methods study investigating the burden of complications and developing a co-created support intervention	University of Copenhagen Faculty of Health and Medical Sciences
2020	2/3 financed	Jonathan Mathias Baier	MD	Male	Danish	Effect of colchicine on cardiovascular target organ damage in patients with type 2 diabetes	Aarhus University Faculty of Health Sciences
2020	2/3 financed	Stephanie Holm	MSc	Female	Danish	The Impact of Medium Chain Fatty Acids in the Regulation of the Appetite Modulating Hormone, Liver Expressed Antimicrobial Peptide 2 (LEAP2)	University of Copenhagen Faculty of Health and Medical Sciences
2020	2/3 financed	Carolina Coimbra de Brito Lobato	MD	Female	Portugese	HypoBar: Unravelling post-bariatric hypoglycaemia towards improving healthcare and inspiring new glucose lowering therapies	University of Copenhagen Faculty of Health and Medical Sciences

B. PhD scholarships

Table B. Overview of DDA industrial PhD scholarships (co-funding with life science industry) 2018-2020

Grant year	Grant type	Name	Academic title	Gender	Nationality	Project title	Affiliation (university and faculty of enrolment)	Company
2019	1/3 financed (industrial)	Flora Alexopoulou	MSc	Female	Greece	Array-assisted Peptide Drug Discovery for Obesity and Cancer Cachexia	University of Copenhagen Faculty of Health and Medical Sciences	Gubra
2019	1/3 financed (industrial)	Sarina Gadgaard	MSc	Female	Danish	Treating diabetes induced osteoporosis using a new GIP/GLP-2 dual agonist.	University of Copenhagen Faculty of Health and Medical Sciences	Bainan Biotech
2019	1/3 financed (industrial)	Christine Bodelund Christiansen	MSc	Female	Danish	Aronia As A Part of The Type 2 Diabetes Treatment Regimen	Aarhus University Faculty of Health Sciences	Elkærholm
2019	1/3 financed (industrial)	Sofia Wareham Mathiassen	MSc	Female	Danish	Assessment, mapping, and benchmark of antimicrobial technologies for future injection device application	University of Copenhagen Faculty of Health and Medical Sciences	Novo Nordisk
2020	1/3 financed (industrial)	Mathias Bonde Møllerhøj	MSc	Male	Danish	Identification and validation of fibrosis targets in non-alcoholic steatohepatitis	University of Copenhagen Faculty of Health and Medical Sciences	Gubra

C. Postdoc fellowships

Table A. Overview of DDA postdoc fellowships 2018-2020 (fully financed two- and three-year)

Grant year	Type of grant (number of grant years)	Name	Academic title	Gender	Nationality	Project title	Affiliation (institution of employment)
2018	3	Line S. Bisgaard	MSc, PhD	Female	Denmark	Unraveling the role of apoM in diabetic nephropathy – Implication of glycocalyx formation and S1P signaling on kidney fibrosis	Rigshospitalet
2018	2	Kaja Plucinska	MSc, PhD	Female	Polish	Thermo-adipokines: Novel Brown Fat Enriched Secreted Factors as Potent Regulators of Metabolic Homeostasis	University of Copenhagen
2018	2	German D. Carrasquilla	MD, MSc, PhD	Male	Colombian	Genetic regulation of weight gain and risk of diabetes and cardiovascular disease	University of Copenhagen
2018	2	Andreas Mæchel Fritzen	PhD	Male	Denmark	Understanding the mechanisms underpinning metabolic flexibility	University of Copenhagen
2018	3	Line Hjort	MSc., PhD, Human Biology	Female	Denmark	The impact of diabetes and obesity in pregnancy on offspring DNA and later health	Rigshospitalet
2018	3	Naja Zenius Jespersen	MD, PhD	Female	Denmark	Effect of repeated cold exposure on human brown adipose tissue function – can obesity induced whitening of brown fat be reversed to counteract type II diabetes	Rigshospitalet
2018	3	Annemarie Lundsgaard	PhD, Msc Human Physiology	Female	Denmark	The role of the apolipoprotein apoA-IV in metabolic health	University of Copenhagen
2018	3	Pernille Falberg Rønn	Post doc, PhD, MSc	Female	Denmark	Mapping and predicting distinct patterns of glycaemic control across a life course in patients with type 1 diabetes (MapForLife1)	Steno Diabetes Center Copenhagen
2018	3	Anja Elaine Sørensen	PhD, MSc	Female	Denmark	MicroRNAs as predictors of gestational diabetes mellitus	Roskilde University
2019	2	Rasmus Kjøbsted	MSc, PhD	Male	Denmark	TBC1D4 in muscle insulin sensitization	University of Copenhagen

Grant year	Type of grant (number of grant years)	Name	Academic title	Gender	Nationality	Project title	Affiliation (institution of employment)
2019	2	Ajenthen Ranjan	MD, PhD	Male	Denmark	Low-dose glucagon added to insulin therapy in type 1 diabetes	Steno Diabetes Center Copenhagen
2019	3	Linn Gillberg	MSc, PhD	Female	Sweden	Metabolic and epigenetic changes after adjuvant chemotherapy in patients with early breast cancer	University of Copenhagen
2019	3	Carlos Henriquez	PhD	Male	Chile	Resolving the contribution of subcellular ROS sources to muscle insulin resistance	University of Copenhagen
2019	3	Luke William Johnston	Postdoctoral researcher	Male	Canada	The metabolic consequences of adverse early life conditions and subsequent risk for adult type 2 diabetes	Steno Diabetes Center Aarhus
2019	2	Louise Lang Lehrskov	MD, PhD	Female	Denmark	"COLONIC RESECTION AS DIABETOGENIC RISK FACTOR A Translational Research Study Exploring the Pathophysiological Effects of Colon Resection on Glucose homeostasis, Gastrointestinal Hormones, Microbiota, Visceral Fat Accumulation and Low-grade Inflammation in patients with colon cancer"	Rigshospitalet
2019	2	Morten Dall	MSc, PhD	Male	Denmark	Impaired hepatic NAD+ metabolism as a novel driver of liver fibrosis	University of Copenhagen
2019	2	Sara Lind Jepsen	PhD	Female	Denmark	Can somatostatin antagonism be developed for type 2 diabetes therapy	University of Copenhagen
2019	2	Lewin Small	PhD	Male	Australia	Investigating Seasonal Rhythms in Energy Metabolism	University of Copenhagen
2019	3	Lasse Bach Steffensen	PhD	Male	Denmark	Uncovering Adipocyte-Driven Risk of Atherosclerosis by Development and Application of a Novel In Vivo Phenotyping	Odense University Hospital
2019	3	Eva Winning Lehmann	MD, PhD	Female	Denmark	Understanding treatment of adolescent obesity and the underlying organ dysfunctions (UNFOLD)	University of Copenhagen

Grant year	Type of grant (number of grant years)	Name	Academic title	Gender	Nationality	Project title	Affiliation (institution of employment)
2020	2	Julie Abildgaard	MD, PhD	Female	Denmark	Effects of Exercise versus Estrogen on Visceral Fat Mass after Prophylactic Bilateral Oophorectomy – A Randomized Controlled Trial	Rigshospitalet
2020	2	Lene Ring Madsen	MD, PhD	Female	Denmark	Pregnancy following bariatric surgery - consequences for offspring and mothers	Steno Diabetes Center Aarhus
2020	2	Antonio Augusto Bastos Peluso	MSc, PhD	Male	BR	Identification of Metabolic and Lifespan Biomarkers Regulated by Dietary Intervention Mimetics Across Species	University of Copenhagen
2020	2	Jonas Salling Quist	MSc, PhD	Male	Denmark	Time-restricted eating and food reward in type 2 diabetes	Steno Diabetes Center Copenhagen
2020	3	Peter Aldiss	BSc, PhD	Male	Great Britain	Dissecting a novel hepatic endocrine circuit that regulates pleasure-seeking and appetite via the central nervous system	University of Copenhagen
2020	3	Rasmus Wibæk Christensen	MSc, PhD	Male	Denmark	A 20-year cardiometabolic outcome follow-up of the Inter99 cohort – The role of birth weight and prematurity	Steno Diabetes Center Copenhagen
2020	2	Tinne Laurberg	MD, PhD	Female	Denmark	The impact of diabetes on colorectal cancer	Steno Diabetes Center Aarhus
2020	3	Hande Topel Batarlar	MSc, PhD	Female	Turkey	The Role of Proto-Adipokine AOC3 During Adipose Tissue Dysfunction in Metabolic Diseases	University of Southern Denmark
2020	3	Jonas Borup Roland	MSc, PhD	Male	Denmark	GLUT4 storage vesicle biogenesis as a universal determinant of muscle insulin sensitivity?	University of Copenhagen
2020	3	Hannah Zakariassen	MSc (Health), PhD	Female	Great Britain	Mechanisms underlying appetite suppressing and weight lowering effects of combination treatment with neurotensin and GLP-1 agonists in mice	University of Copenhagen

C. Postdoc fellowships

Table B. Overview of DDA industrial postdoc fellowships 2018-2020 (co-funding with industry)

Grant year	Type of grant (number of grant years)	Name	Academic title	Gender	Nationality	Project title	Affiliation (institution of employment)	Company
2018	3	Mette Korre Andersen	MSc, PhD	Female	Denmark	Progression of Prediabetes to Type 2 Diabetes (T2D) and/or Diabetes Complications	University of Copenhagen	AstraZeneca
2018	3	Anna Elisabet Jonsson	MSc, PhD	Female	Denmark	LOXIN variants and sLox-1 measures as Biomarkers for CVD risk	University of Copenhagen	AstraZeneca
2019	3	Taewook Kang	MSc, PhD	Male	Taiwan	Identification and Validation of Non-Invasive Biomarkers for Non-Alcoholic SteatoHepatitis (NASH)	University of Southern Denmark	AstraZeneca
2019	3	Charlotte Bayer Christensen	MSc, PhD	Female	Denmark	Investigating a potential future treatment strategy for diabetes-induced osteoporosis	University of Copenhagen	Bainan Biotech

D. Visiting professorships

Table A. Overview of DDA visiting professorships 2018-2020

Grant year	Name	Academic title	Affiliation (university and country of employment)	Project title	Host institution in Denmark
2018	John Michael Stafford	MD, PhD. Associate Professor of Medicine, Endocrinology and Metabolism	Vanderbilt University, United States	Improving Fatty Acid Flux to Restore HDL's Protective Function with Obesity and Diabetes	Department of Endocrinology and Internal Medicine
2018	Graham Finlayson	Chair in Psychobiology	University of Leeds, United Kingdom	Investigation of the role of food reward and other behavioral aspects of appetite within the field of (pre-)diabetes research	Steno Diabetes Center Copenhagen
2018	Anandwardhan Awadhoot Hardikar	Associate Professor and JDRF Australia T1D Clinical Research Fellow	University of Sydney, Australia	The ASPiRE Study: Assessing and Simulating (Pre-)miRNA Expression for Diabetes Prediction and Prevention	Department of Science and Environment, Roskilde University
2018	Glenn McConell	Professor	Victoria University, Australia	Investigation of the regulation of insulin sensitivity after exercise in people with type 2 diabetes	University of Copenhagen, Department of Nutrition, Exercise and Sport
2019	Decio L. Eizirik	MD, PhD, Professor, Center Director	Université Libre de Bruxelles, Belgium	Targeting key hubs for beta cell preservation in type 1 diabetes	Steno Diabetes Center Copenhagen
2019	Jackie Sturt	Professor	King's College, United Kingdom	Strengthening wellbeing in diabetes through intimate partner relationships using perspectives from social and behavioural sciences	Steno Diabetes Center Copenhagen
2019	David McIntyre	Professor	Mater Health and University of Queensland, Australia	Improving care for gestational diabetes mellitus in Denmark – new strategies for diagnosis, management and post pregnancy care to improve the health of mothers and babies.	Aarhus University
2019	Gernot Desoye	Professor	Medical University of Graz, Austria	Maternal Metabolism and Feto-placental Outcomes Throughout Pregnancy	Rigshospitalet

Grant year	Name	Academic title	Affiliation (university and country of employment)	Project title	Host institution in Denmark
2020	Khalida Ismail	Professor	King's College, United Kingdom	Type 1 Diabetes and Disordered Eating	Steno Diabetes Center Copenhagen
2020	Patrick MacDonald	Professor	University of Alberta, Canada	Exploring islet cell sub-types in health and type 2 diabetes	University of Southern Denmark, Department of Biochemistry and Cell Biology
2020	Carlos Salomon	Assistant Professor	University of Queensland, Australia	Extracellular vesicles in obesity and diabetes - Circulating liquid biopsies for biomarker discovery and real-time monitoring of metabolic changes in a Danish population	Aalborg University, Department of Clinical Biochemistry
2020	David Charles Wright	Professor	University of Guelph, Canada	Targeting Skeletal Muscle AMPK to Offset the Acute Hyperglycemic Effects of Antipsychotic Drugs	University of Copenhagen, Department of Nutrition, Exercise and Sports
2020	Adrian Baumann	Professor	University of Sydney, Australia	Enhancing methods for scale-up in diabetes prevention	Steno Diabetes Center Copenhagen
2020	Glyn Elwyn	Professor	Dartmouth College/University, United States	Developing coproduction in Denmark: focusing on diabetes and SDM	Steno Diabetes Center Copenhagen
2020	Margaret Hahn	Associate Professor	Centre of Addiction and Mental Health, Canada	Establishing real-world interdisciplinary care and research approaches for cardiometabolic care in schizophrenia spectrum disorders	University of Copenhagen, Mental Health Centre Glostrup
2020	Jonathan CK Wells	Professor	UCL Great Ormond Streat Institute of Child Health, United Kingdom	Developing an evolutionary approach to Type 2 and Gestational Diabetes	Steno Diabetes Center Copenhagen

Appendix 16

Case story of Danish Diabetes Academy Recruitment and Grant Activities 20182-2021 by Peter Aldiss

The DDA offers much more than funding

It is safe to say that 2020 was a mixed bag for most of us. The year started with me finishing up a fairly unsuccessful first post-doc and moving to start an in-vivo physiology post at the University of Edinburgh in March. But, just three weeks later, I was sent home on furlough till May for the foreseeable future. As time passed, and the extent of the pandemic was realised, May soon became October, and the prospect of 7 months at home with no work was hard to comprehend. One week later I was finally awarded my PhD (post-corrections) but, with limited celebrations, this proved incredibly underwhelming. However, successful fellowship awards from both Ludwig Maximillian University and the DDA during these first few months proved to be the light amongst the dark. After over 3 years and ~15 unsuccessful fellowship applications, I could not believe my luck. Moving abroad during a pandemic is probably not something I would recommend, particularly in hindsight. But working in Copenhagen had been a dream for years and, even with conditions as they were, was an offer I could not turn down.

Having spent a couple of years trying to make the switch from 'physiologist' to the field of neurobiology, I am eternally grateful to Professor Matt Gillum, Center for Basic Metabolic Research, and the DDA for taking a leap of faith where many others didn't. As many of us do, I aspire to start my own research group further down the line and saw a switch to neurobiology as being central to my future plans. Now, thanks to the DDA, I can finally realise this by gaining experience in human genetics, the euroendocrine regulation of appetite and addiction and, using new, exciting rodent models and lab techniques understand the role of FGF21 in regulating sucrose and alcohol intake. But the DDA has offered much more than just 'funding', they have offered a platform, or springboard to future success. Being awarded the Lundbeck Experiment grant to identify G-protein coupled receptors upstream of the obesity gene ADCY3 at the end of last year was as much a shock to me as anyone else. With no neurobiology experience at the time, there is no doubt in my mind that the presence of DDA funding in the area will have contributed significantly to this. There can be no way of knowing what the future holds, for myself, or for the DDA as they look to a potential DDA 3.0. I have an exciting few years ahead doing truly translational science, in a wonderful department with a fantastic group, which is more than most can say in the current circumstances. And, I hope that the DDA will be around for years to come so they can continue offering people like myself the opportunities they have given me and others like me.



Peter Aldiss, BSc, PhD, University of Copenhagen, Novo Nordisk Foundation Center for Basic Metabolic Research

Appendix 17

Case story of Danish Diabetes Academy Recruitment and Grant Activities 2018-2021 by Lene Ring Madsen

Do variations in insulin sensitivity and insulin secretion in pregnancy predict differences in obstetric and neonatal outcomes?

A new study by researchers from Denmark, Australia, Hong Kong and the USA feeds in to an important debate on how to target our resources where the need is greatest without neglecting pregnant women at risk of complications from gestational diabetes.

The overall conclusion is that, if we combine continuous data on insulin secretion and insulin sensitivity with easily available details such as BMI, age, ethnicity, smoking and weight gain during pregnancy, that is the most accurate way of predicting complications, says postdoc Lene Ring Madsen MD, PhD, the first author of the study, which has just been published in Diabetologia.

Gestational diabetes can be due to either reduced insulin secretion or reduced insulin sensitivity in the mother, and studies in recent years have shown a greater risk of complications if diabetes is caused by reduced insulin sensitivity rather than reduced insulin secretion. These studies have led toconsideration being given to dividing pregnant women with gestational diabetes into high complication risk and low complication risk categories to enable the pathway and treatment to be tailored to the individual woman.

'Our work shows that we are not there yet. We need to know more before we can group pregnant women in such a categorical way', says Lene Ring Madsen.

The study, which is based on data from 6,337 women and their babies, argues that reduced insulin sensitivity and reduced insulin secretion in pregnancy should be regarded to a greater extent as a continuum.

The study is based on data from Australia, the USA and Hong Kong, and the idea for it emerged during a PhD research visit to Brisbane in Queensland, Australia hosted by Danish Diabetes Academy visiting professor David McIntyre.

Facts:
Gestational diabetes is observed in approximately 3% of pregnant Danish women, but has an incidence of up to 20% in other parts of the world.

Gestational diabetes raises the risk to both mother and baby of complications during pregnancy such as oversized babies, increased risk of caesarean section, pre-eclampsia and premature birth.



Lene Ring Madsen PhD, staff specialist, postdoc Hospital Unit West & Steno Diabetes Center Aarhus, Aarhus University Hospital

Appendix 18

Scientific Output of Danish Diabetes Academy

Scientific Output of Danish Diabetes Academy

Table A. List of publications by DDA-funded researchers 2018-2020

Title	Authors	Year	Journal	Impact factor	Publication type	Citations	Field-Weighted Citation Impact	Institutions	Country/ Region
Intrauterine programming of obesity and type 2 diabetes	Fernandez-Twinn, D.S.| **Hjort, L.**| Novakovic, B.| Ozanne, S.E.| Saffery, R.	2019	Diabetologia	6.99	Review	40	4.96	Cambridge University Hospitals NHS Foundation Trust| Murdoch Children's Research Institute| Royal Children's Hospital| University of Copenhagen| University of Cambridge| Wellcome Trust	United Kingdom| Australia| Denmark
Obesity, unfavourable lifestyle and genetic risk of type 2 diabetes: a case-cohort study	Schnurr, T.M.| **Jakupović, H.**| Carrasquilla, G.D.| Ängquist, L.| Grarup, N.| Sørensen, T.I.A.| Tjønneland, A.| Overvad, K.| Pedersen, O.| Hansen, T.| Kilpeläinen, T.O.	2020	Diabetologia	6.99	Article	17	7.38	University of Copenhagen| Novo Nordisk A/S| Aalborg University| Aarhus University| Danish Cancer Society	Denmark
The Emerging Roles of Nicotinamide Adenine Dinucleotide Phosphate Oxidase 2 in Skeletal Muscle Redox Signaling and Metabolism	**Henríquez-Olguín, C.**| Boronat, S.| Cabello-Verrugio, C.| Jaimovich, E.| Hidalgo, E.| Jensen, T.E.	2019	Antioxidants and Redox Signaling	7.04	Review	15	1.2	Universidad de Santiago de Chile| University of Copenhagen| Universidad Andrés Bello| Pompeu Fabra University| Universidad de Chile	Chile| Spain| Denmark
Non-coding RNA in pancreas and β-cell development	**Wong, W.K.M.| Sørensen, A.E.| Joglekar, M.V.| Hardikar, A.A.| Dalgaard, L.T.**	2018	Non-coding RNA		Review	15	0.73	University of Sydney| Roskilde University	Australia| Denmark
TBC1D4 is necessary for enhancing muscle insulin sensitivity in response to AICAR and contraction	**Kjøbsted, R.**| Chadt, A.| Jørgensen, N.O.| Kido, K.| Larsen, J.K.| De Wendt, C.| Al-Hasani, H.| Wojtaszewski, J.F.P.	2019	Diabetes	7.72	Article	13	2.84	University of Copenhagen| German Diabetes Center Düsseldorf| German Center for Diabetes Research| Heinrich Heine University Düsseldorf	Germany| Denmark
Molecular Mechanisms in Skeletal Muscle Underlying Insulin Resistance in Women Who Are Lean with Polycystic Ovary Syndrome	Hansen, S.L.| Svendsen, P.F.| Jeppesen, J.F.| Hoeg, L.D.| Andersen, N.R.| Kristensen, J.M.| Nilas, L.| **Lundsgaard, A.-M.**| Wojtaszewski, Jø.F.P.| Madsbad, S.| Kiens, B.	2019	Journal of Clinical Endocrinology and Metabolism	5.399	Article	12	2.61	University of Copenhagen	Denmark

Title	Authors	Year	Journal	Impact factor	Publication type	Citations	Field-Weighted Citation Impact	Institutions	Country/ Region
Diabetes in pregnancy and epigenetic mechanisms—how the first 9 months from conception might affect the child's epigenome and later risk of disease	**Hjort, L.**| Novakovic, B.| Grunnet, L.G.| Maple-Brown, L.| Damm, P.| Desoye, G.| Saffery, R.	2019	The Lancet Diabetes and Endocrinology	25.34	Review	11	1.25	Medical University of Graz| Murdoch Children's Research Institute| University of Copenhagen| Charles Darwin University| University of Melbourne| Royal Darwin Hospital	Austria| Australia| Denmark
Insulin-induced membrane permeability to glucose in human muscles at rest and following exercise	**McConell, G.K.**| Sjøberg, K.A.| Ceutz, F.| Gliemann, L.| Nyberg, M.| Hellsten, Y.| Frøsig, C.| Kiens, B.| Wojtaszewski, J.F.P.| Richter, E.A.	2020	Journal of Physiology	4.04	Article	9	4.5	Victoria University| University of Copenhagen	Australia| Denmark
Housing temperature influences exercise training adaptations in mice	Raun, S.H.| **Henriquez-Olguín, C.**| Karavaeva, I.| Ali, M.| Møller, L.L.V.| Kot, W.| Castro-Mejía, J.L.| Nielsen, D.S.| Gerhart-Hines, Z.| Richter, E.A.| Sylow, L.	2020	Nature Communications	12.12	Article	9	3.59	University of Copenhagen| Novo Nordisk A/S	Denmark
Contraction-regulated mTORC1 and protein synthesis: Influence of AMPK and glycogen	**Knudsen, J.R.**| Li, Z.| Persson, K.W.| Li, J.| **Henriquez-Olguin, C.**| Jensen, T.E.	2020	Journal of Physiology	4.04	Article	9	4.5	University of Copenhagen	Denmark
The importance of fatty acids as nutrients during post-exercise recovery	**Lundsgaard, A.-M.| Fritzen, A.M.|** Kiens, B.	2020	Nutrients	4.54	Review	9	2.35	University of Copenhagen	Denmark
Glucometabolic consequences of acute and prolonged inhibition of fatty acid oxidation	**Lundsgaard, A.-M.| Fritzen, A.M.**| Nicolaisen, T.S.| Carl, C.S.| Sjøberg, K.A.| Raun, S.H.| Klein, A.B.| Sanchez-Quant, E.| Langer, J.| Ørskov, C.| Clemmensen, C.| Tschöp, M.H.| Richter, E.A.| Kiens, B.| Kleinert, M.	2020	Journal of Lipid Research	4.56	Article	9	4.38	Helmholtz Zentrum München - German Research Center for Environmental Health| University of Copenhagen| Technical University of Munich| German Center for Diabetes Research| Novo Nordisk A/S	Germany| Denmark
Compartmentalized muscle redox signals controlling exercise metabolism – Current state, future challenges	**Henriquez-Olguin, C.**| Meneses-Valdes, R.| Jensen, T.E.	2020	Redox Biology	9.986	Review	8	2.11	University of Copenhagen	Chile| Denmark

Title	Authors	Year	Journal	Impact factor	Publication type	Citations	Field-Weighted Citation Impact	Institutions	Country/ Region
Dietary Fuels in Athletic Performance	**Fritzen, A.M.**| **Lundsgaard, A.-M.**| Kiens, B.	2019	Annual review of nutrition	8.78	Review	8	0.93	University of Copenhagen	Denmark
Testing for gestational diabetes during the COVID-19 pandemic. An evaluation of proposed protocols for the United Kingdom, Canada and Australia	**McIntyre, H.D.**| Gibbons, K.S.| Ma, R.C.W.| Tam, W.H.| Sacks, D.A.| Lowe, J.| **Madsen, L.R.**| Catalano, P.M.	2020	Diabetes Research and Clinical Practice	3.26	Article	7	3.28	Novo Nordisk A/S| University of Queensland| Aarhus University| Chinese University of Hong Kong| Shanghai Jiao Tong University| Tufts University| University of Newcastle	China| Hong Kong| United States| Australia| Denmark
Human Paneth cell α-defensin-5 treatment reverses dyslipidemia and improves glucoregulatory capacity in diet-induced obese mice	Larsen, I.S.| **Fritzen, A.M.**| Carl, C.S.| Agerholm, M.| Damgaard, M.T.F.| Holm, J.B.| Marette, A.| Nordkild, P.| Kiens, B.| Kristiansen, K.| Wehkamp, J.| Jensen, B.A.H.	2019	American Journal of Physiology - Endocrinology and Metabolism	3.78	Article	7	1.35	University of Copenhagen| University of Tübingen| Novo Nordisk A/S| Université Laval	China| Germany| Denmark| Canada
Proteomic Analysis of Restored Insulin Production and Trafficking in Obese Diabetic Mouse Pancreatic Islets following Euglycemia	**Kang, T.**| Boland, B.B.| Alarcon, C.| Grimsby, J.S.| Rhodes, C.J.| Larsen, M.R.	2019	Journal of Proteome Research	4.07	Article	7	1.05	University of Southern Denmark| The University of Chicago| MedImmune	United States| Denmark
Mitochondrial function in liver cells is resistant to perturbations in NAD+ salvage capacity	**Dall, M.**| Trammell, S.A.J.| Asping, M.| Hassing, A.S.| Agerholm, M.| Vienberg, S.G.| Gillum, M.P.| Larsen, S.| Treebak, J.T.	2019	Journal of Biological Chemistry	4.23	Article	6	0.98	Medical University of Białystok| University of Copenhagen| Novo Nordisk A/S| Université Laval	Poland| Denmark| Canada
Abdominal adiposity and cardiometabolic risk factors in children and adolescents: A Mendelian randomization analysis	Viitasalo, A.| Schnurr, T.M.| Pitkänen, N.| Hollensted, M.| Nielsen, T.R.H.| Pahkala, K.| Atalay, M.| Lind, M.V.| Heikkinen, S.| Frithioff-Bøjsøe, C.| Fonvig, C.E.| Grarup, N.| Kähönen, M.| **Carrasquilla, G.D.**| Larnkjaer, A.| Pedersen, O.| Michaelsen, K.F.| Lakka, T.A.| Holm, J.-C.| Lehtimäki, T.| Raitakari, O.| Hansen, T.| Kilpeläinen, T.O.	2019	American Journal of Clinical Nutrition	6.6	Article	6	1.34	University of Turku| University of Eastern Finland| University of Copenhagen| University of Southern Denmark| Novo Nordisk A/S| Fimlab Laboratories| Tampere University	Finland| Denmark

Title	Authors	Year	Journal	Impact factor	Publication type	Citations	Field-Weighted Citation Impact	Institutions	Country/ Region
It's well and truly time to stop stating that AMPK regulates glucose uptake and fat oxidation during exercise	**McConell, G.K.**	2020	American Journal of Physiology - Endocrinology and Metabolism	3.78	Review	6	1.61	Victoria University	Australia
Inducible deletion of skeletal muscle AMPKα reveals that AMPK is required for nucleotide balance but dispensable for muscle glucose uptake and fat oxidation during exercise	Hingst, J.R.| **Kjøbsted, R.**| Birk, J.B.| Jørgensen, N.O.| Larsen, M.R.| Kido, K.| Larsen, J.K.| Kjeldsen, S.A.S.| Fentz, J.| Frøsig, C.| Holm, S.| **Fritzen, A.M.**| Dohlmann, T.L.| Larsen, S.| Foretz, M.| Viollet, B.| Schjerling, P.| Overby, P.| Halling, J.F.| Pilegaard, H.| Hellsten, Y.| Wojtaszewski, J.F.P.	2020	Molecular Metabolism	6.448	Article	6	2.64	Medical University of Białystok| University of Copenhagen| CNRS| Université de Paris| Institut national de la santé et de la recherche médicale	Poland| Denmark| France
The long noncoding RNA MALAT1 predicts human islet isolation quality	Wong, W.K.M.| Jiang, G.| **Sørensen, A.E.**| Chew, Y.V.| Lee-Maynard, C.| Liuwantara, D.| Williams, L.| O'Connell, P.J.| Dalgaard, L.T.| Ma, R.C.| Hawthorne, W.J.| Joglekar, M.V.| **Hardikar, A.A.**	2019	JCI Insight	6.014	Article	5	1.73	University of Sydney| Chinese University of Hong Kong| Westmead Millennium Institute for Medical Research| Roskilde University	Hong Kong| Australia| Denmark
Increased leptin, decreased adiponectin and FGF21 concentrations in adolescent offspring of women with gestational diabetes	Kampmann, F.B.| Thuesen, A.C.B.| **Hjort, L.**| Bjerregaard, A.A.| Chavarro, J.E.| Frystyk, J.| Bjerre, M.| Tetens, I.| Olsen, S.F.| Vaag, A.A.| Damm, P.| Grunnet, L.G.	2019	European Journal of Endocrinology	5.24	Article	5	1.06	Statens Serum Institut| Harvard University| University of Copenhagen| Technical University of Denmark| Novo Nordisk A/S| Aarhus University	United States| Denmark| Sweden
Skeletal muscle AMPK is not activated during 2 h of moderate intensity exercise at - 65% VO2peak in endurance trained men	**McConell, G.K.**| Wadley, G.D.| Le plastrier, K.| Linden, K.C.	2020	Journal of Physiology	4.04	Article	5	2.5	Victoria University| Western Sydney University| University of Melbourne| Deakin University| Charles Sturt University	Australia
Growth Factor-Dependent and -Independent Activation of mTORC2	**Knudsen, J.R.**| **Fritzen, A.M.**| James, D.E.| Jensen, T.E.| Kleinert, M.| Richter, E.A.	2020	Trends in Endocrinology and Metabolism	8.48	Review	5	1.52	Helmholtz Zentrum München - German Research Center for Environmental Health| University of Sydney| University of Copenhagen| German Center for Diabetes Research	Germany| Australia| Denmark

Title	Authors	Year	Journal	Impact factor	Publication type	Citations	Field-Weighted Citation Impact	Institutions	Country/ Region
Hyperandrogenism and Metabolic Syndrome Are Associated With Changes in Serum-Derived microRNAs in Women With Polycystic Ovary Syndrome	**Sørensen, A.E.**| Udesen, P.B.| Maciag, G.| Geiger, J.| Saliani, N.| Januszewski, A.S.| Jiang, G.| Ma, R.C.| **Hardikar, A.A.**| Wissing, M.L.M.| Englund, A.L.M.| Dalgaard, L.T.	2019	Frontiers in Medicine	3	Article	5	1.73	University of Sydney| University of Southern Denmark| Chinese University of Hong Kong| Sjællands Universitetshospital| Roskilde University	Hong Kong| Australia| Denmark
Maternal glycemic index and glycemic load in pregnancy and offspring metabolic health in childhood and adolescence—a cohort study of 68,471 mother–offspring dyads from the Danish National Birth Cohort	Maslova, E.| Hansen, S.| Grunnet, L.G.| Strøm, M.| Bjerregaard, A.A.| **Hjort, L.**| Kampmann, F.B.| Madsen, C.M.| Thuesen, A.C.B.| Bech, B.H.| Halldorsson, T.I.| Vaag, A.A.| Zhang, C.| Olsen, S.F.	2019	European Journal of Clinical Nutrition	3.04	Article	4	0.89	University of the Faroe Islands| Statens Serum Institut| National Institutes of Health| Harvard University| University of Copenhagen| AstraZeneca| Imperial College London| Technical University of Denmark| University of Iceland| Aarhus University| Landspitali University Hospital	United Kingdom| United States| Iceland| Denmark| Sweden| Faroe Islands
Cancer causes metabolic perturbations associated with reduced insulin-stimulated glucose uptake in peripheral tissues and impaired muscle microvascular perfusion	Han, X.| Raun, S.H.| Carlsson, M.| Sjøberg, K.A.| **Henriquez-Olguín, C.**| Ali, M.| **Lundsgaard, A.-M.**| **Fritzen, A.M.**| Møller, L.L.V.| Li, Z.| Li, J.| Jensen, T.E.| Kiens, B.| Sylow, L.	2020	Metabolism: Clinical and Experimental	6.36	Article	4	2.16	University of Copenhagen	Denmark
Prior exercise in humans redistributes intramuscular GLUT4 and enhances insulin-stimulated sarcolemmal and endosomal GLUT4 translocation	**Knudsen, J.R.**| Steenberg, D.E.| Hingst, J.R.| Hodgson, L.R.| **Henriquez-Olguin, C.**| Li, Z.| Kiens, B.| Richter, E.A.| Wojtaszewski, J.F.P.| Verkade, P.| Jensen, T.E.	2020	Molecular Metabolism	6.448	Article	4	1.76	University of Bristol| University of Copenhagen| Swiss Federal Institute of Technology Lausanne	United Kingdom| Switzerland| Denmark
Tuning fatty acid oxidation in skeletal muscle with dietary fat and exercise	**Fritzen, A.M.**| **Lundsgaard, A.-M.**| Kiens, B.	2020	Nature Reviews Endocrinology	14.56	Review	3	0.91	University of Copenhagen	Denmark

Title	Authors	Year	Journal	Impact factor	Publication type	Citations	Field-Weighted Citation Impact	Institutions	Country/ Region
Characterization of signaling pathways associated with pancreatic β-cell adaptive flexibility in compensation of obesity-linked diabetes in DB/DB mice	**Kang, T.**| Boland, B.B.| Jensen, P.| Alarcon, C.| Nawrocki, A.| Grimsby, J.S.| Rhodes, C.J.| Larsen, M.R.	2020	Molecular and Cellular Proteomics	4.83	Article	3	1.36	University of Southern Denmark| AstraZeneca| Northwestern University| The University of Chicago	United States| Denmark
Insulin-stimulated glucose uptake partly relies on p21-activated kinase (PAK)2, but not PAK1, in mouse skeletal muscle	Møller, L.L.V.| Jaurji, M.| **Kjøbsted, R.**| Joseph, G.A.| Madsen, A.B.| **Knudsen, J.R.**| **Lundsgaard, A.-M.**| Andersen, N.R.| Schjerling, P.| Jensen, T.E.| Krauss, R.S.| Richter, E.A.| Sylow, L.	2020	Journal of Physiology	4,04	Article	3	1.5	University of Copenhagen| Swiss Federal Institute of Technology Lausanne| Icahn School of Medicine at Mount Sinai	United States| Switzerland| Denmark
Levels of circulating insulin cell-free DNA in women with polycystic ovary syndrome - a longitudinal cohort study	Udesen, P.B.| **Sørensen, A.E.**| Joglekar, M.V.| **Hardikar, A.A.**| Wissing, M.L.M.| Englund, A.-L.M.| Dalgaard, L.T.	2019	Reproductive Biology and Endocrinology	8.48	Article	3	0.79	University of Sydney| Sjællands Universitetshospital	Australia| Denmark
Afadin is a scaffold protein repressing insulin action via HDAC6 in adipose tissue	Lundh, M.| Petersen, P.S.S.| Isidor, M.S.| Kazoka-Sørensen, D.N.M.| **Plucińska, K.**| Shamsi, F.| Ørskov, C.| Tozzi, M.| Brown, E.L.| Andersen, E.| Ma, T.| Müller, U.| Barrès, R.| Kristiansen, V.B.| Gerhart-Hines, Z.| Tseng, Y.-H.| Emanuelli, B.	2019	EMBO Reports	6.99	Article	3	0.49	Scripps Research Institute| Harvard University| University of Copenhagen| Novo Nordisk A/S	United States| Denmark
Improved time in range over 1 year is associated with reduced albuminuria in individuals with sensor-augmented insulin pump–treated type 1 diabetes	**Ranjan, A.G.**| Rosenlund, S.V.| Hansen, T.W.| Rossing, P.| Andersen, S.| Nørgaard, K.	2020	Diabetes Care	13.02	Article	3	1.57	University of Copenhagen| Novo Nordisk A/S	Denmark

Title	Authors	Year	Journal	Impact factor	Publication type	Citations	Field-Weighted Citation Impact	Institutions	Country/ Region
High prevalence of gestational diabetes mellitus in rural tanzania—diagnosis mainly based on fasting blood glucose from oral glucose tolerance test	Grunnet, L.G.| **Hjort, L.**| Minja, D.T.| Msemo, O.A.| Møller, S.L.| Prasad, R.B.| Groop, L.| Lusingu, J.| Nielsen, B.B.| Schmiegelow, C.| Bygbjerg, I.C.| Christensen, D.L.	2020	International Journal of Environmental Research and Public Health	2.76	Article	2	1.09	University of Copenhagen| Lund University| Aarhus University| University of Helsinki| National Institute for Medical Research Tanga	Finland| Denmark| Tanzania| Sweden
Protocol for a single-centre, parallel-group, randomised, controlled, superiority trial on the effects of time-restricted eating on body weight, behaviour and metabolism in individuals at high risk of type 2 diabetes: The REStricted Eating Time (RESET) study	**Quist, J.S.**| Jensen, M.M.| Clemmensen, K.K.B.| Pedersen, H.| Bjerre, N.| Størling, J.| Blond, M.B.| Albrechtsen, N.J.W.| Holst, J.J.| Torekov, S.S.| Vistisen, D.| Jørgensen, M.E.| Panda, S.| Brock, C.| **Finlayson, G.**| Færch, K.	2020	BMJ Open	2.49	Article	2	0.72	University of Copenhagen| University of Southern Denmark| Novo Nordisk A/S| Aalborg University| University of Leeds| Salk Institute for Biological Studies	United Kingdom| United States| Denmark
Exposure to Gestational Diabetes Is a Stronger Predictor of Dysmetabolic Traits in Children Than Size at Birth	Kampmann, F.B.| Thuesen, A.C.B.| **Hjort, L.**| Olsen, S.F.| Pires, S.M.| Tetens, I.| Grunnet, L.G.	2019	Journal of Clinical Endocrinology and Metabolism	5.399	Article	2	0.43	Statens Serum Institut| University of Copenhagen| Technical University of Denmark	Denmark
Fatty acid type–specific regulation of SIRT1 does not affect insulin sensitivity in human skeletal muscle	**Fritzen, A.M.| Lundsgaard, A.-M.**| Jeppesen, J.F.| Sjøberg, K.A.| Høeg, L.D.| Deleuran, H.H.| Wojtaszewski, J.F.P.| Richter, E.A.| Kiens, B.	2019	FASEB Journal	4.966	Article	2	0.33	University of Copenhagen	Denmark
The ULK1/2 and AMPK inhibitor SBI-0206965 blocks AICAR and insulin-stimulated glucose transport	**Knudsen, J.R.**| Madsen, A.B.| Persson, K.W.| **Henríquez-Olguín, C.**| Li, Z.| Jensen, T.E.	2020	International Journal of Molecular Sciences	4.556	Article	2	0.99	University of Copenhagen| Swiss Federal Institute of Technology Lausanne	Switzerland| Denmark

Title	Authors	Year	Journal	Impact factor	Publication type	Citations	Field-Weighted Citation Impact	Institutions	Country/ Region
Mechanisms underlying absent training-induced improvement in insulin action in lean, hyperandrogenic women with polycystic ovary syndrome	Hansen, S.L.| Bojsen-Møller, K.N.| **Lundsgaard, A.-M.**| Hendrich, F.L.| Nilas, L.| Sjøberg, K.A.| Hingst, J.R.| Serup, A.K.| **Olguín, C.H.**| Carl, C.S.| Wernblad, L.F.| Henneberg, M.| Lustrup, K.M.| Hansen, C.| Jensen, T.E.| Madsbad, S.| Wojtaszewski, J.F.P.| Richter, E.A.| Kiens, B.	2020	Diabetes	7.72	Article	1	0.43	University of Copenhagen	Denmark
Calsyntenin 3β Is Dynamically Regulated by Temperature in Murine Brown Adipose and Marks Human Multilocular Fat	**Plucińska, K.**| **Jespersen, N.Z.**| Brown, E.L.| Petersen, P.S.| Rupar, K.| Nielsen, S.| Scheele, C.| Emanuelli, B.	2020	Frontiers in Endocrinology	3.644	Article	1	0.54	University of Copenhagen| Novo Nordisk A/S	Denmark
Cost of Treating Skin Problems in Patients with Diabetes Who Use Insulin Pumps and/or Glucose Sensors	**Berg, A.K.**| Thorsen, S.U.| Thyssen, J.P.| Zachariae, C.| Keiding, H.| Svensson, J.	2020	Diabetes Technology and Therapeutics	5.07	Article	1	0.59	University of Copenhagen	Denmark
ApoA-1 improves glucose tolerance by increasing glucose uptake into heart and skeletal muscle independently of AMPKα2	**Fritzen, A.M.**| Domingo-Espín, J.| **Lundsgaard, A.-M.**| Kleinert, M.| Israelsen, I.| Carl, C.S.| Nicolaisen, T.S.| **Kjøbsted, R.**| Jeppesen, J.F.| Wojtaszewski, J.F.P.| Lagerstedt, J.O.| Kiens, B.	2020	Molecular Metabolism	6.448	Article	1	0.44	Helmholtz Zentrum München - German Research Center for Environmental Health| University of Copenhagen| Lund University| Novo Nordisk A/S	United States| Germany| Denmark| Sweden
Preference for Subcutaneously Administered Low-Dose Glucagon Versus Orally Administered Glucose for Treatment of Mild Hypoglycemia: A Prospective Survey Study	Tetzschner, R.| **Ranjan, A.G.**| Schmidt, S.| Nørgaard, K.	2019	Diabetes Therapy	2.95	Article	1	0.22	University of Copenhagen| Novo Nordisk A/S	Denmark
Epigenome- and Transcriptome-wide Changes in Muscle Stem Cells from Low Birth Weight Men	Broholm, C.| Ribel-Madsen, R.| **Hjort, L.**| Olsson, A.H.| Ahlers, J.M.D.| Hansen, N.S.| Schrölkamp, M.| **Gillberg, L.**| Perfilyev, A.| Volkov, P.| Ling, C.| Jørgensen, S.W.| Mortensen, B.| Hingst, J.| Wojtaszewski, J.| Scheele, C.| Brøns, C.| Pedersen, B.K.| Vaag, A.	2020	Endocrine Research	1.52	Article	1	0.54	University of Copenhagen| Lund University| AstraZeneca| Novo Nordisk A/S	Denmark| Sweden

Title	Authors	Year	Journal	Impact factor	Publication type	Citations	Field-Weighted Citation Impact	Institutions	Country/ Region
Contraction influences Per2 gene expression in skeletal muscle through a calcium-dependent pathway	**Small, L.**| Altıntaş, A.| Laker, R.C.| Ehrlich, A.| Pattamaprapanont, P.| Villarroel, J.| Pillon, N.J.| Zierath, J.R.| Barrès, R.	2020	Journal of Physiology	4.04	Article	1	0.5	University of Copenhagen| Karolinska Institutet| Novo Nordisk A/S	Denmark| Sweden
Pharmacological targeting of α3β4 nicotinic receptors improves peripheral insulin sensitivity in mice with diet-induced obesity	Jall, S.| De Angelis, M.| **Lundsgaard, A.-M.| Fritzen, A.M.**| Nicolaisen, T.S.| Klein, A.B.| Novikoff, A.| Sachs, S.| Richter, E.A.| Kiens, B.| Schramm, K.-W.| Tschöp, M.H.| Stemmer, K.| Clemmensen, C.| Müller, T.D.| Kleinert, M.	2020	Diabetologia	6.99	Article	1	0.43	Helmholtz Zentrum München - German Research Center for Environmental Health| University of Copenhagen| Technical University of Munich| German Center for Diabetes Research| University of Tübingen| Novo Nordisk A/S| University of Konstanz	Germany| Denmark
Thyroid hormone receptor α in skeletal muscle is essential for T3-mediated increase in energy expenditure	Nicolaisen, T.S.| Klein, A.B.| Dmytriyeva, O.| Lund, J.| Ingerslev, L.R.| Fritzen, A.M.| Carl, C.S.| **Lundsgaard, A.-M.**| Frost, M.| Ma, T.| Schjerling, P.| Gerhart-Hines, Z.| Flamant, F.| Gauthier, K.| Larsen, S.| Richter, E.A.| Kiens, B.| Clemmensen, C.	2020	FASEB Journal	4.966	Article	1	0.5	University of Copenhagen| CNRS| École normale supérieure de Lyon| Novo Nordisk A/S| INRAE| Université de Lyon| Universite Claude Bernard Lyon 1	Denmark| France
Small Amounts of Dietary Medium-Chain Fatty Acids Protect Against Insulin Resistance During Caloric Excess in Humans	**Lundsgaard, A.-M.| Fritzen, A.M.**| Sjøberg, K.A.| Kleinert, M.| Richter, E.A.| Kiens, B.	2021	Diabetes	7.22	Article	1	4.36	Helmholtz Zentrum München - German Research Center for Environmental Health| University of Copenhagen	Germany| Denmark
Effect of familial diabetes status and age at diagnosis on type 2 diabetes risk: a nation-wide register-based study from Denmark	Silverman-Retana, O.| Hulman, A.| Nielsen, J.| Ekstrøm, C.T.| Carstensen, B.| Simmons, R.K.| Bjerg, L.| **Johnston, L.W.**| Witte, D.R.	2020	Diabetologia	6.99	Article	0	0	University of Copenhagen| Emory University| Novo Nordisk A/S| Aarhus University	United States| Denmark

Title	Authors	Year	Journal	Impact factor	Publication type	Citations	Field-Weighted Citation Impact	Institutions	Country/ Region
Genome-Wide Association Analysis of Pancreatic Beta-Cell Glucose Sensitivity	Deshmukh, H.A.| **Madsen, A.L.**| Viñuela, A.| Have, C.T.| Grarup, N.| Tura, A.| Mahajan, A.| Heggie, A.J.| Koivula, R.W.| De Masi, F.| Tsirigos, K.K.| Linneberg, A.| Drivsholm, T.| Pedersen, O.| Sørensen, T.I.A.| Astrup, A.| Gjesing, A.A.P.| Pavo, I.| Wood, A.R.| Ruetten, H.| Jones, A.G.| Koopman, A.D.M.| Cederberg, H.| Rutters, F.| Ridderstrale, M.| Laakso, M.| Mccarthy, M.I.| Frayling, T.M.| Ferrannini, E.| Franks, P.W.| Pearson, E.R.| Mari, A.| Hansen, T.| Walker, M.	2021	Journal of Clinical Endocrinology and Metabolism	5.399	Article	0	0	Harvard University| Newcastle University| Technical University of Denmark| Novo Nordisk A/S| University of Exeter| University of Oxford| University of Helsinki| Aventis Pharma Germany GmbH| Vrije Universiteit Amsterdam| University of Dundee| University of Eastern Finland| University of Copenhagen| Lund University| National Research Council of Italy| Umeå University| University of Geneva	Austria| United Kingdom| Finland| United States| Germany| Switzerland| Italy| Denmark| Netherlands| Sweden
Metformin decreases mir-122, mir-223 and mir-29a in women with polycystic ovary syndrome	Udesen, P.B.| Glintborg, D.| **Sørensen, A.E.**| Svendsen, R.| Nielsen, N.L.S.| Wissing, M.L.M.| Andersen, M.S.| Englund, A.L.M.| Dalgaard, L.T.	2020	Endocrine Connections	2.59	Article	0	0	University of Copenhagen| University of Southern Denmark| Sjællands Universitetshospital| Roskilde University	Denmark
Do variations in insulin sensitivity and insulin secretion in pregnancy predict differences in obstetric and neonatal outcomes?	**Madsen, L.R.**| Gibbons, K.S.| Ma, R.C.W.| Tam, W.H.| Catalano, P.M.| Sacks, D.A.| Lowe, J.| **McIntyre, H.D.**	2021	Diabetologia	6.99	Article	0	0	Kaiser Permanente| University of Southern Denmark| Novo Nordisk A/S| University of Queensland| Aarhus University| Chinese University of Hong Kong| Shanghai Jiao Tong University| Tufts University| University of Newcastle	China| Hong Kong| United States| Australia| Denmark
Glucose Sensor Accuracy after Subcutaneous Glucagon Injections near to Sensor Site	Laugesen, C.| Schmidt, S.| Tetzschner, R.| Nørgaard, K.| **Ranjan, A.G.**	2020	Diabetes Technology and Therapeutics	5.07	Article	0	0	University of Copenhagen| Novo Nordisk A/S	Denmark
Glucagon for hypoglycaemia treatment in type 1 diabetes	**Ranjan, A.G.**| Schmidt, S. | Nørgaard, K.	2020	Diabetes/ Metabolism Research and Reviews	3.31	Article	0	0	Novo Nordisk A/S	Denmark
Dietary Fat and the Genetic Risk of Type 2 Diabetes	**Carrasquilla, G.D. | Jakupović, H.** | Kilpeläinen, T.O.	2019	Current Diabetes Reports	3.68	Review	0	0	University of Copenhagen| Novo Nordisk A/S	Denmark

Title	Authors	Year	Journal	Impact factor	Publication type	Citations	Field-Weighted Citation Impact	Institutions	Country/ Region
The impact of hospital-diagnosed depression or use of antidepressants on treatment initiation, adherence and HbA1c/ LDL target achievement in newly diagnosed type 2 diabetes	**Rohde, C.**| Knudsen, J.S.| Schmitz, N.| Østergaard, S.D.| Thomsen, R.W.	2021	Diabetologia	6.99	Article	0	0	Aarhus University| McGill University	Denmark| Canada
Effect of adjunctive glucose-lowering drugs on body weight in people with type 1 diabetes: A systematic review and network meta-analysis protocol	Laugesen, C.| **Ranjan, A.G.**| Schmidt, S.| Rasmussen, L.N.| Nørgaard, O.| Christensen, R.| Nørgaard, K.	2020	BMJ Open	2.49	Review	0	0	University of Copenhagen| University of Southern Denmark| Novo Nordisk A/S	Denmark
Mechanistic Actions of microRNAs in Diabetic Wound Healing	Petkovic, M.| **Sørensen, A.E.**| Leal, E.C.| Carvalho, E.| Dalgaard, L.T.	2020	Cells	4.89	Review	0	0	University of Coimbra| Roskilde University| University of Arkansas for Medical Sciences	United States| Portugal| Denmark
Incident psychopharmacological treatment and psychiatric hospital contact in individuals with newly developed type 2 diabetes - A register-based cohort study	**Rohde, C.**| Schmitz, N.| Thomsen, R.W.| Østergaard, Sø.D.	2020	Acta Neuropsychiatrica	1.96	Article	0	0	Aarhus University| McGill University	Denmark| Canada

Table B. Summary of list of DDA-funded publications 2018-2020

DDA early career researchers first authorship	Publications co-authored by DDA visiting professors	Peer-reviewed original articles	Reviews
29 (49%)	8 (13.5%)	47 (79.6)	12 (19.4%)

Appendix 19

Case story of Danish Diabetes Academy Scientific Output by Annemarie Lundsgaard

Small amounts of medium-chain fatty acids protect against insulin resistance during high-fat overfeeding

Medium-chain fatty acids are naturally occurring fatty acids, consisting of 6-12 carbon atoms. Medium-chain fatty acids make up around 10% of the fat content of milk and are also found in significant quantities in coconut, coconut oil and palm kernel oil. The conclusion of this study is that a small amount of medium-chain fatty acids in the diet is highly potent in preserving the effect of insulin on the removal of glucose from the bloodstream during high fat intake and energy surplus. The article was published in ***Diabetes*** in January 2021.

Medium-chain fatty acids distinguish by being absorbed directly from the gut to the portal vein. This is in contrast to long-chain fatty acids, which occur more frequently in the diet and which, because of their hydrophobic properties, are packed into chylomicrons in the intestinal cells and transported via the lymph to the circulation. The absorption path of medium-chain fatty acids thus goes straight to the liver, and animal studies show that these fatty acids undergo a high degree of combustion.

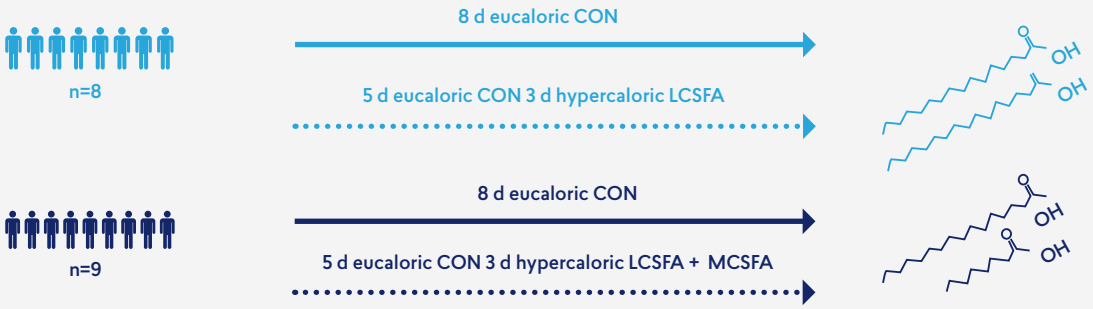
Medium-chain fatty acids have been shown in mice and rats to have positive effects on glucose homeostasis during overfeeding with fat. In this study, we therefore wanted to investigate whether medium-chain fatty acids in the diet could have a positive effect on insulin resistance in humans when a hypercaloric, fat-rich diet is consumed.

Two groups of matched young men took part in the trial. Each group consumed, in randomized order, a three-day control diet during which energy balance was maintained, and a three-day hypercaloric fat-rich diet with a 75% energy surplus. The fat-rich diet contained approximately 82E% fat, equivalent to a daily intake of 450 grams of fat.

The main difference between the two fat-rich dietary interventions was the substitution of saturated long-chain fatty acids with ~ 30 grams of saturated medium-chain fatty acids.

The ~ 30 grams of medium-chain fatty acids stemmed from foods such as coconut, coconut oil, palm kernel oil and dairy products.

The participants in each trial group attended an experimental day on the day after the control diet and again after the hypercaloric fat-rich diet. Insulin sensitivity was measured on the experimental days.



"The data in this study suggest that medium-chain fatty acids have great potential in the regulation of both glucose and fat metabolism and are notable for their availability in common foodstuffs"

After the hypercaloric fat-rich diet with primarily saturated long-chain fatty acids, whole body insulin sensitivity and peripheral insulin-stimulated glucose disposal were reduced by 21% and 26% respectively. Interestingly, insulin sensitivity was unaffected after the hypercaloric fat-rich diet containing ~30 grams of medium-chain fatty acids, despite an average daily energy intake of 21 MJ. With concurrent intake of medium-chain fatty acids, increased fat combustion and increased storage of glucose as glycogen in the muscles were observed.

The study concludes that a small amount of medium-chain fatty acids in the diet is highly potent in preserving the effect of insulin on the removal of glucose from the bloodstream during high fat intake and energy surplus. As a result of these interesting findings, we are now investigating other effects of medium-chain fatty acids in the body, including regulation of energy metabolism, fat combustion and liver-derived molecules. The data in this study suggest that medium-chain fatty acids have great potential in the regulation of both glucose and fat metabolism and are notable for their availability in common foodstuffs.



Anne-Marie Lundsgaard, PhD, Postdoc, Section of Molecular Physiology, Department of Nutrition, Exercise and Sports, University of Copenhagen

Appendix 20

Case story of Danish Diabetes Academy Scientific Output by Christoffer Rohde

DDA Grant Recipient: Antidepressants benefit newly diagnosed diabetes patients

Many people who get type 2 diabetes will benefit from taking antidepressant medication, as it appears to reduce the symptoms of diabetes. That is a provisional result of research carried out by medical doctor and PhD student Christopher Rohde and published in Diabetologia.

The ultimate goal of the project is to see whether antidepressant medication protects against the development of conditions such as cardiovascular disease and cerebral thrombosis, and whether it increases longevity.

Christopher Rohde was very surprised at the results he has now published, which show, for example, that people who receive psychiatric drugs are better at managing their type 2 diabetes than those who don't.
Christopher Rohde has an idea for an explanation. He believes that many people with type 2 diabetes are – very understandably – living in a state of sub-clinical depression, and that antidepressants lighten their mood, giving them more strength to cope with their treatment, take exercise, live more healthily and thus also achieve the weight loss that reduces diabetes symptoms.

Christopher Rohde's patient group consists of newly diagnosed patients from Central Denmark and North Jutland.

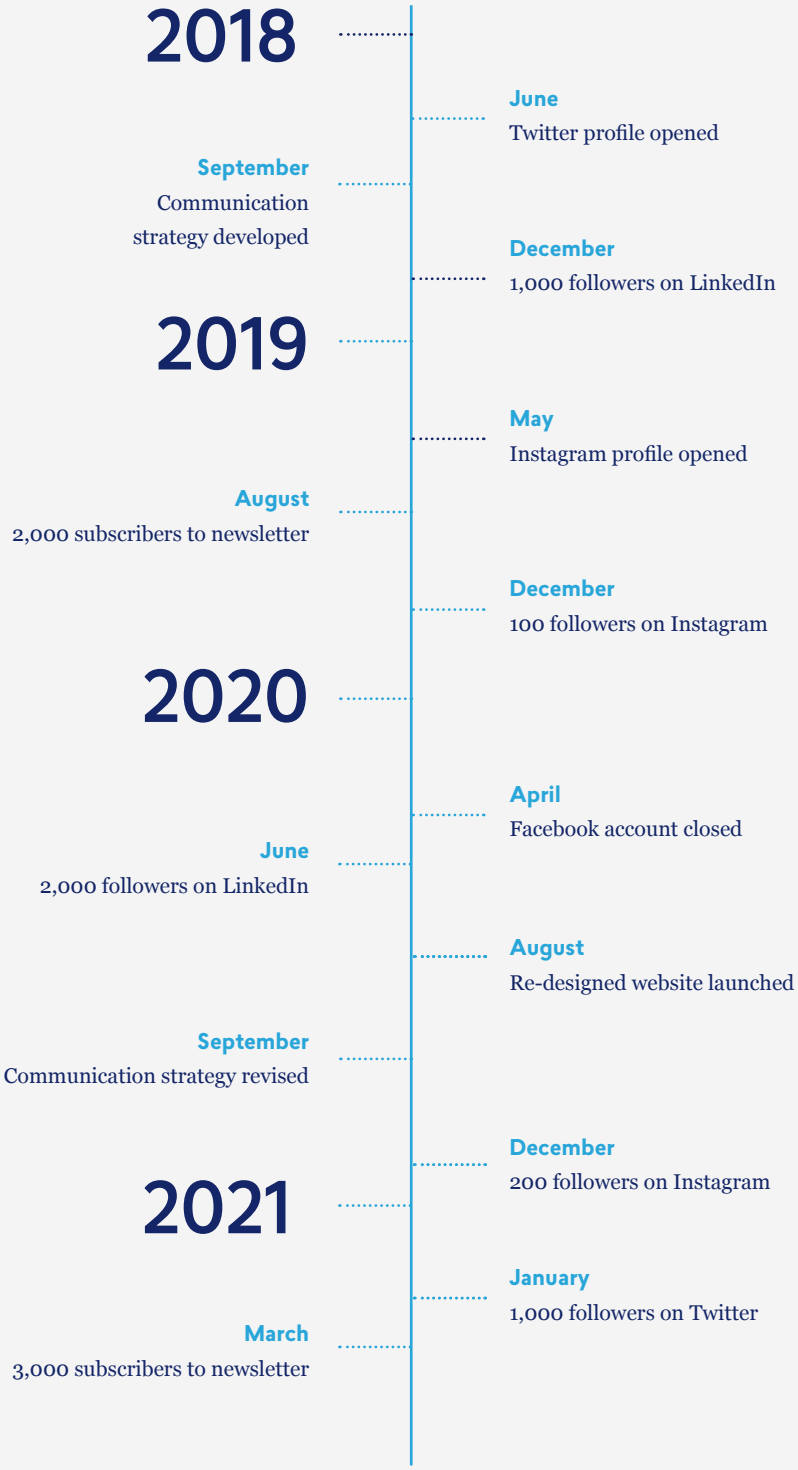


Christopher Rohde, MD, PhD student
Aarhus University Hospital,
Department of Public Health, Aarhus University

Appendix 21

Danish Diabetes Academy Outreach and Communication 2018-2021

Milestones of communication and outreach activities 2018-2021



Appendix 22

Case story of Danish Diabetes Academy Outreach and Communication activities 2018-2021

Participants now presenting to the public

How do I present my research to the public? On October 20, a group of participants took on this challenge. Now, they are presenting their research projects to the public in videos they made on their own. Here at DDA we are proud of the participants and their videos. Videos that have been made with hard work but also a bit of courage. The eight young scientists who participated in this challenge have written manuscripts, worked on their presentations and improved the way they deliver their messages in order to make these videos. So thank you for your great work. As one of the participants said to The Danish Diabetes Association: "I can tell for hours about my research but the most important thing is after all that the persons, who in the end benefit from my research, understand what I am saying."



The event of October where the participants learned to present their research to the public was hosted together with The Danish Diabetes Association and Elevate Scientific Academy. And we are very happy about this cooperation. Afterwards, The Danish Diabetes Association made an article in Danish about the event.

By Nanna Bach Andersen, Student Assistant, DDA

Appendix 23

Case story of Danish Diabetes Academy Outreach and Communication activities 2018-2021 by Jens Lund

Presenting at a DDA webinar can lead to international network

In June 2020, the DDA gave me the opportunity to present an 'Unsolved Mystery'-paper that I had first-authored in PLoS Biology a few months earlier. The paper discussed the existence of an unidentified hormonal defense system against weight gain, and the webcast hosted by the DDA allowed me to present our thoughts - not just to international colleagues and group leaders in metabolic research, but also to lay people with an interest in the obesity epidemic. Importantly, the advertisement of the webcast on Twitter caught the attention of a prominent obesity biologists, John Speakman, and thus helped highlighting myself as an junior researcher within the field of body weight regulation. To me, this is a great example of how the DDA provides opportunities for junior researchers to establish an international network.



Jens Lund, MSc, PhD student, University of Copenhagen, Novo Nordisk Foundation Center for Basic Metabolic Research

Appendix 24

Financial Overview

Table B. External funding (direct) 2018-2021

(Amounts are stated i DKK)	Result 2018	Result 2019	Result 2020	Result 2021 (31 March)
Grants (AstraZeneca)	801,016	1,207,062	1,418,911	218,578
Received on account	1,778,820	2,929,219	0	0
Forwarded from previous years	0	977,804	2,699,962	1,281,051
Forward to next year	**977,804**	**2,699,962**	**1,281,051**	**1,062,473**

Table C. External funding (direct) in % of the grant from Novo Nordisk Foundation 2018-2021

(Amounts are stated i DKK)	2018	2019	2020	2021 (31 March)	Total
Received on account Novo Nordisk Fonden	20,712,000	38,133,000	47,555,000	0	106,400,000
Received on account Medimmune	1,778,820	2,929,219	0	0	4,708,039
Medimmune in % af the grant from Novo Nordisk Foundation	**8.6%**	**7.7%**	**0.0%**	**0.0%**	**4.4%**