Danish Diabetes and Endocrine Academy

Application
Danish Diabetes and Endocrine Academy
2023-2027

Addendum to Application for Danish Diabetes and Endocrine Academy 2023-2027

This is an addendum to the Application for Danish Diabetes and Endocrine Academy 2023-2027 submitted to the Novo Nordisk Foundation on 1 April 2022. After a peer review process, the Novo Nordisk Foundation Board of Directors approved the application with the below-mentioned changes, as described in the grant agreement.

Changes have been made to the following chapters in the application:

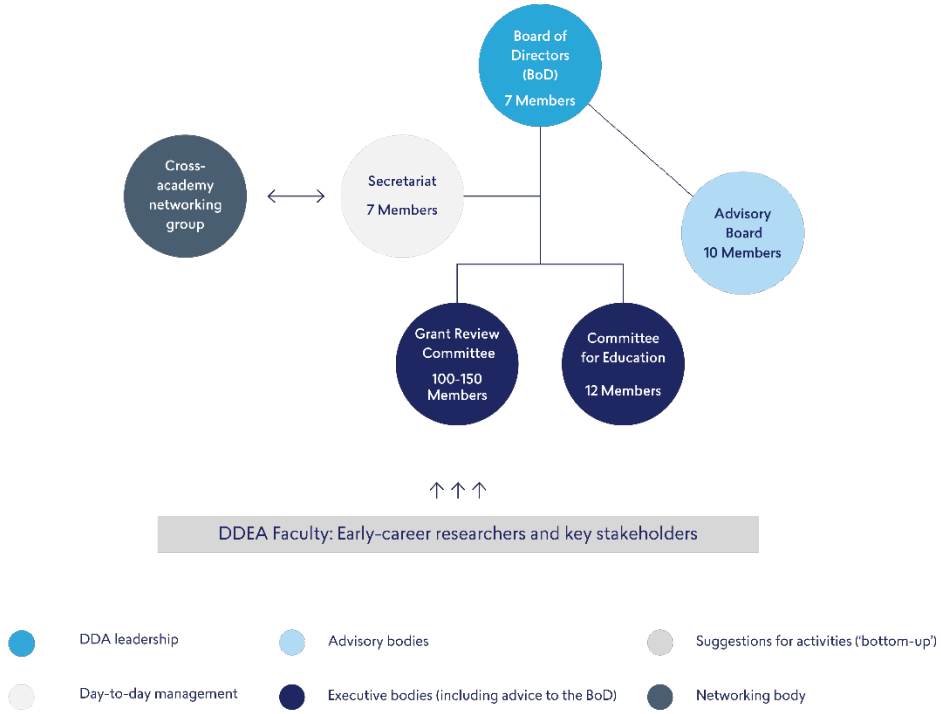
- Chapter 5: Organisation, governance and structure, pages 20-24
- Chapter 6: Financial Overview, page 25

The changes are a result of a reduced number of staff members of the DDEA Secretariat from eight employees (full-time) and three student assistants (part-time) to seven employees (five full-time and two part-time) and two student assistants (part-time). The Fundraising Officer and one student assistant have been cut, and the Communications Officer and the Network and Grant Coordinator are part-time instead of full-time.

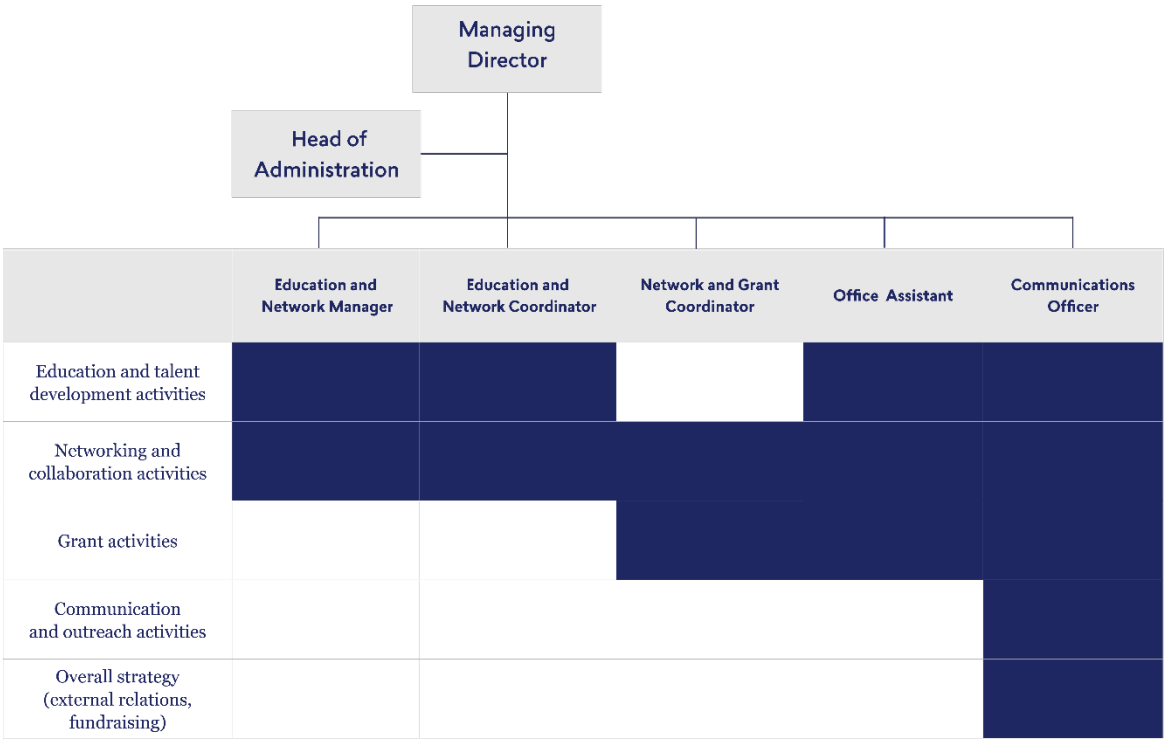
The changes in the DDEA Secretariat and the budget (as described below) will not have an effect on the activities described in the application, and we confirm that we will be able to meet the overall objectives and success criteria described in the application, chapter 2, pages 3-8.

Re Chapter 5: Organisation, governance and structure, pages 20-24

The organogram (***Figure 8, page 20***) has been changed: The number of members of the Secretariat has been changed to 7 in stead of 8. The new organogram is presented below.



The composition of the DDEA secretariat (***Figure 9, page 24***) has been changed: The Fundraising Officer has been removed. The new composition is presented below.



Re Chapter 6: Financial Overview, page 25, and Appendix 11 (detailed budget for DDEA 2023-2027)

The budget for the years 2023-2027 has been reduced to a total of DKK 194,620 million (EUR 26,164 million) (***Table 5***). The following budget items have been changed: Secretariat (salary) and Host institutions' direct costs associated with DDEA. The changes are due to the reduced number of staff members of the DDEA Secretariat and a revised estimation of personnel costs for host institution (payroll and human resources).

Table 5. Budget for DDEA for 2023-2027 (million DKK)

Budget 2023-2027						
(Amounts are stated in TDKK)	**Budget 2023**	**Budget 2024**	**Budget 2025**	**Budget 2026**	**Budget 2027**	**TOTAL budget 2023-2027**
Educational and Talent Development Activities	3.700	3.700	3.700	3.700	3.700	**18.500**
Networking and Collaboration Activities	1.500	1.500	1.500	1.500	1.500	**7.500**
Grant Activities	18.875	33.925	35.075	29.425	13.225	**130.525**
Secretariat (salary)	4.224	4.657	4.719	4.612	4.598	**22.810**
Running Costs	2.670	2.145	2.145	2.545	1.545	**11.051**
Host institutions' direct costs associated with DDEA	822	834	847	860	872	**4.235**
Total	**31.791**	**46.761**	**47.986**	**42.641**	**25.441**	**194.620**

No further changes have been or will be made to the application.

Danish Diabetes and Endocrine Academy

Contents

Executive Summary

Danish Diabetes Academy (DDA) was established in 2012 with the vision to promote high-quality research and research-based treatment of diabetes in Denmark, and a mission to enhance the quality of diabetes research education in Denmark and train the next generation of researchers in the field of diabetes.

This proposal describes a **Danish Diabetes and Endocrine Academy (DDEA)** that embraces a broad approach to encompass all diabetes and other endocrine diseases and that builds on DDA's former achievements.

DDEA's vision is to promote world-class research to improve the prevention and treatment of diabetes and endocrine diseases.

DDEA's mission is to foster early-career research talent through education and talent development, networking and collaboration, and grants.

To foster this early-career research talent and support them in performing world-class research, the overall objectives of DDEA are to:

- Provide excellent research education and talent development for early-career researchers in diabetes and endocrinology.
- Promote networking and collaborations in diabetes and endocrine research across research fields, sectors and borders, by unifying academia, hospitals and life science industry.
- Fund talented early-career researchers and visiting professors in diabetes and endocrinology to increase the supply of world-class research talent.

To achieve this, we have devised a multi-pronged strategy, powered by the Novo Nordisk Foundation's (NNF) funding support, to carry out activities that altogether will generate a set of impactful outputs and outcomes, outlined in a detailed impact framework with clear success criteria for assessing the desired outcomes and long-term impact of DDEA.

DDEA will thus offer four key activity classes: education and talent development; networking and collaboration; grants; and communication and outreach. Across each of these activity classes, DDEA will apply four strategic themes: i) digitalization and new technologies; ii) public involvement and outreach; iii) strategic partnerships; and iv) translational research.

This application describes the strategies; operational principles and decision-making mechanisms; proposed activities for DDEA; and a governance model that ensures a broad and diverse representation of key stakeholders across diabetes and other endocrinology, who will be pivotal collaborators for implementing the strategy and activities of DDEA.

The total budget for DDEA for the years 2023-2027 is DKK 199,896 million (EUR 26,881 million).

1. Preface and introduction

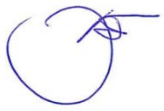
Danish Diabetes Academy (DDA) was established in 2012 with the vision to promote high-quality research and research-based treatment of diabetes in Denmark, and a mission to enhance the quality of diabetes research education in Denmark and train the next generation of researchers in the field of diabetes.

Funded by the Novo Nordisk Foundation (NNF), DDA was established with an initial five-year grant (2012-2017) of DKK 201,880,000 (EUR 27,148,274) and subsequently received an additional grant of DKK 156,000,000 (EUR 20,978,457) for activities and operations spanning 2018-2022.

With the second five-year funding period ending in 2022, NNF has tasked DDA to apply for a potential continuation and development of DDA into a **Danish Diabetes and Endocrine Academy (DDEA)**. Accordingly, this application allows NNF to decide whether to fund the establishment of DDEA for the years 2023-2027.

DDEA will build on DDA's former achievements to now promote world-class research excellence within the entire field of Danish endocrinology to improve the prevention and treatment of diabetes and endocrine diseases. DDEA's strategic scope will thus broaden that of DDA's, which will create vital opportunities for restoring and strengthening collaborations between diabetes and general endocrinology in Denmark. DDEA will also build important research capacity by educating and developing the skills and careers of early-career researchers across a major section of the Danish research ecosystem, by creating collaborative synergies and activities with other NNF-funded academies, i.e. the Danish Cardiovascular Academy (DCA) and the Danish Data Science Academy (DDSA).

This application has been prepared in accordance with the guidelines set out by NNF. In developing the application, DDA involved key stakeholders from basal, clinical, and translational research, and all fields of diabetes and endocrinology, which included: members of the DDA bodies; current and former DDA-funded researchers; representatives of university hospitals (including the Steno Diabetes Centers, departments of endocrinology and the host institution Odense University Hospital); universities; the life science industry; professional societies (the Danish Endocrine Society); non-governmental organisations (NGOs); and NNF-funded academies (DCA and DDSA) (*Appendix 1*). Further, to formulate the application, the DDA Board of Directors (BoD) established a writing group, including two representatives appointed by the Danish Endocrine Society, and an external strategic advisor. Finally, DDA consulted with NNF Impact (for developing the impact framework for DDEA), and received support from a scientific writer.



Allan Flyvbjerg
Chairman of the DDA BoD
CEO, Steno Diabetes Center Copenhagen

Niels Nørgaard Pedersen
CEO and Grant Holder for DDA
Odense University Hospital

2. Overall objectives and success criteria

Diabetes and other endocrine diseases are major contributors to morbidity and mortality in Denmark and globally. There is therefore a pressing need to develop training, scientific and clinical know-how, policies, and practices to enable the development, optimisation, and implementation of effective prevention and treatment strategies for diabetes and endocrine diseases, in order to maximise the number of healthy life-years for people afflicted by them.

We aim to tackle this major challenge through a concerted capacity-building effort that fosters research talent – by educating and developing the skills and careers of early-career researchers and by uniting representatives from academia, hospitals, life science industry, relevant professional societies, and NGOs to co-create, generate and disseminate high-quality research.

Taken together, this holistic effort will enable DDEA to reach its long-term objective of promoting world-class Danish diabetes and endocrine research excellence that generates ground-breaking advances in the prevention and treatment of diabetes and endocrine diseases. To do this, we have devised a multi-pronged strategy, powered by NNF's funding support, to offer four key activity classes: education and talent development; networking and collaboration; grants; and communication and outreach (the fourth underpinning the other three activity classes). These activity classes will altogether generate a set of impactful outputs and outcomes. We summarise this in the *Logic Model* for DDEA in ***Figure 1*** *(page 4)*, and outline the detailed impact framework in *Appendix 2*.

Based on this long-term objective and multi-pronged strategy, DDEA's vision, mission, and overall objectives are as follows.

Vision

We promote world-class research to improve the prevention and treatment of diabetes and endocrine diseases

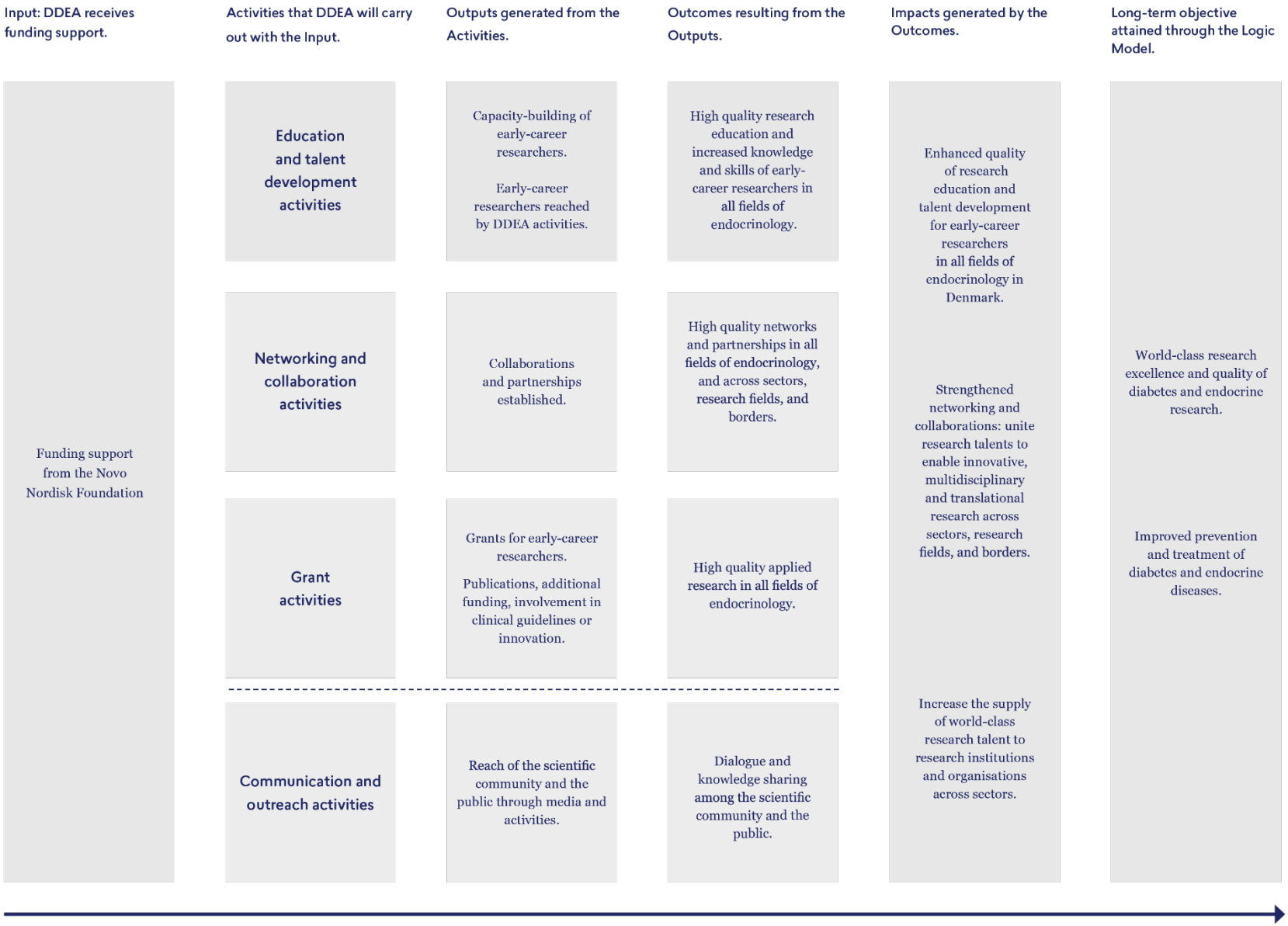
Mission

We foster early-career research talent through education and talent development, networking and collaboration, and funding

Overall objectives

- We provide excellent research education and talent development for early-career researchers in diabetes and endocrinology.
- We promote networking and collaborations in diabetes and endocrine research across research fields, sectors, and borders, by unifying academia, hospitals, and the life science industry.
- We fund talented early-career researchers and visiting professors in diabetes and endocrinology to increase the supply of world-class research talent.

***Figure 1. Logic Model for DDEA**. Framework for describing the inputs, activities, outputs, outcomes, and impact to realise DDEA's long-term objective.*



Success criteria and key performance indicators

To assess and measure the desired outcomes and long-term impact of DDEA and DDEA-funded researchers for the years 2023-2027, we have used the *Logic Model* (***Figure 1*** and *Appendix 2*) as a point of departure for identifying success criteria and key performance indicators linked to the inputs, activities, outputs, outcomes, and impacts described therein. We describe these criteria and indicators in ***Table 1*** *(pages 6-8)*.

The success of DDEA will be determined by the achievement of success criteria that are demonstrable within three to five years, and by the end of the five-year grant period (2023-2027). As such, the success criteria and key performance indicators mainly consider the short-term impact of DDEA. Assessing the long-term and downstream impact of DDEA alone will only be possible five to ten years after the end of the grant period in 2027.

To be able to evaluate the impact of DDA/DDEA across a longer time period, we will also collect data for some of the criteria (as indicated by an asterix (*) in ***Table 1***) for the second DDA grant period (2018-2022). In addition, to implement learnings from and follow-up on the second DDA grant period, we will collect data annually from this grant period (relating to the success criteria of DDA). The data will include information on time to completion of PhD study; completed stays abroad; current positions and employment in research institutions or research organisations across academia, hospitals, and life science in Denmark and abroad; engagement in innovation; engagement in evidence-based activities; and additional external funding obtained. Further, we will collect data on scientific output with focus on interdisciplinary publications and joint publications with researchers from abroad or from life science industry and analyse these data using bibliometric analysis. We will use these data as benchmarks for comparison with data to be collected in DDEA.

DDEA will use relevant monitoring methods and systems to collect relevant data (e.g. Researchfish®, data warehouse, bibliometric analysis and surveys). All DDEA-funded researchers will submit an annual report through Researchfish® to measure the outputs and outcomes of their activities. DDEA will also carry out qualitative surveys and use communications monitoring systems to assess the quality and the achievement of the success criteria and key performance indicators.

Strategy for evaluation of DDEA and its activities

To assess the quality of the DDEA activities and ensure that the overall objectives, defined success criteria, and key performance indicators will be achieved, the DDEA Board of Directors (BoD) – together with the DDEA governing bodies (*Chapter 5*) - will annually evaluate and report on the DDEA activities and organisation.

The annual report will also include data on *other evaluation factors* (***Table 2****, page 8*) that we will assess and measure continually. The aim of these evaluations are to assess the integration of all fields of endocrinology in all DDEA activities to monitor the progress and to assess the balance of the DDEA activities with regard to career level, gender, geography, education and employment sector. The *other evaluation factors* will not determine the success of DDEA as such.

Overall, the evaluations will inform any adjustments to future activities to ensure that DDEA ultimately reaches its desired outcomes and impact. The evaluations will justify the actions to be taken and the activities to be offered. For example, in relation to grant activities, we expect an initially unbalanced funding ratio of diabetes vs. other endocrinology fields (e.g. obesity, non-alcoholic fatty liver disease, thyroid, osteoporosis) for PhD and postdoctoral fellowships the first two years. Therefore, we will, already from 2023, introduce measures or activities to strengthen grant applications from other endocrinology fields (e.g. grant or scientific writing courses), and we will slightly increase the number of grants available from 2023 to 2026 to allow the measures introduced to have an effect. Further, when evaluating applications for fellowships, the chairs of the Grant Review Committee will point out overall areas of development for applications that are not successful to define skills needed for these applications to be successful. DDEA will thus be able to provide the activities needed to enhance the quality of future applications. Finally, the BoD will evaluate the funding ratio for grants each year to secure a balanced ratio of diabetes vs. other endocrinology fields for PhD and postdoctoral fellowships by 2025.

Table 1. Success criteria and key performance indicators (KPIs) for evaluating DDEA in the period 2023-2027

KPI = Key performance indicators; DCA=Danish Cardiovascular Academy; DDSA=Danish Data Science Academy; NGOs=non-governmental organisations
[1] The five Danish universities: University of Copenhagen, Roskilde University, University of Southern Denmark, Aarhus University and Aalborg University
[2] Other endocrinology fields including e.g. obesity, non-alcoholic fatty liver disease (NASH), thyroid, osteoporosis
** KPIs including data from both the second DDA grant period and the DDEA grant period (2018 to 2027)*

Education and talent development		
Impact Marker	**Success criteria**	**Key performance indicators (KPIs)**
High-quality research education and talent development.	# of education and talent development activities.	• PhD graduate programme established at five Danish universities[1] • 4 symposia (annually) • 5 postdoctoral courses, including 1 Winter School (annually) • 6 PhD courses, including 1 Summer School (annually)
Fostering of research talent.	# of education and talent development activities in other endocrinology fields than diabetes.	50% of disease-specific education and talent development activities to be in other endocrinology fields than diabetes[2] by the end of the grant period (2027). Minimum 25% in 2023, gradually increasing to 50% 2027.
	# of education and talent development activities resulting in attendants acquiring new knowledge, skills, and competences.	90% of DDEA-funded researchers – and attendants of two selected activities per year - have acquired new, applicable skills, knowledge, and competences.
	# early-career researchers in principal investigator or equivalent positions.	30% of DDEA-funded early-career researchers become principal investigators, research leaders or hold tenure positions (within five years after completing their PhD or postdoctoral projects).
Networking and collaboration		
Impact Marker	**Success criteria**	**Key performance indicators (KPIs)**
Strengthening of networking and collaborations across sectors, research fields, and borders.	# of networking and collaboration activities.	8 networking and collaboration activities (annually).
	# of networking and collaboration activities.	50% of DDEA-funded early-career researchers – and participants of two selected activities per year - find new collaboration partners through participating in DDEA networking and collaboration activities.
	# of education and talent development activities, and networking and collaboration activities, in collaboration with other partners, i.e. NNF-funded academies, industry or research institutions abroad.	DDEA education and talent development activities or collaboration and networking activities are organised and executed in collaboration with DCA/DDSA (two annually), industry (one annually) or research institutions from abroad (two annually).

	DDEA recognised as a national hub by stakeholders.	75% of stakeholders acknowledge that DDEA has had an impact in the field of diabetes and endocrine research and within the diabetes and endocrine research environment in relation to research education, networking, and grants.
Grants		
Impact Marker	**Success criteria**	**Key performance indicators (KPIs)**
Increased supply of world-class research talent. **High-quality applied research in all fields of endocrinology.**	# of grants.	% of grants given to diabetes vs. other endocrinology fields than diabetes[2]: 2023: 75% vs. 25%; 2024: 60% vs. 40%; 2025: 50% vs. 50%; 2026: 50% vs. 50%.
	# of publications (in high-impact journals, highly cited, open access, fields other than diabetes).	50% of publications by DDEA-funded early-career researchers published in the top 10% most cited journals in the diabetes field or the subfields of other endocrinology[2].* 20% of publications by DDEA-funded early-career researchers published in the top 10% most cited journals worldwide* 3% of publications by DDEA-funded early-career researchers among the top 1% most cited publications worldwide*
	#DDEA-funded researchers employed in research institutions or research organisations.	70% of DDEA-funded early-career researchers stay in research and are employed by research institutions or research organisations across sectors within five years after completing their PhD or postdoctoral project.*
	#DDEA-funded researchers engaged in innovation.	15% of DDEA-funded early-career researchers are engaged in innovation. 25% of DDEA-funded early-career researchers are employed by industry/collaborating with/co-funded by industry.*
	#DDEA-funded researchers engaged in evidence-based activities.	10% of DDEA-funded research publications are cited in clinical guidelines, policies, text books etc. *
	External funding obtained by DDEA-funded researchers.	30% of DDEA-funded researchers obtain further funding for their research activities.*
Communication and outreach		
Impact Marker	**Success criteria**	**Key performance indicators (KPIs)**
Dialogue and knowledge sharing among the scientific community and the public.	Collaboration with NGOs.	1 activity annually organised in collaboration with NGOs. Collaborations on specific activities established with at least three NGOs (over five-year period).
	# of citations of DDEA-funded researchers in media.	25 citations (comments/sharing) of DDEA-funded researchers' research in media, e.g. newspapers, social media, etc. (annually). 20% increase in citations (comments/sharing) of DDEA-funded researchers' research in media, e.g. newspapers, social media, etc., from 2023 to 2027.

	# of DDEA-funded researchers engaged in dissemination activities.	400 dissemination activities by DDEA-funded early-career researchers as key note speakers, invited speakers, presenting their research at scientific conferences or to the public (over five-year period). 20% DDEA-funded researchers share their research in meetings for NGOs, students, general public, or through publications in semi-scientific journals.
	Digital presentation or output of DDEA activities.	30% of DDEA activities within education and talent development and networking and collaboration per year presented online and/or result in digital output. 10% increase in visitors to the DDEA website from 2023 to 2027. 90% of visitors to the DDEA website are satisfied with the website/find it useful/get new knowledge.

Table 2. Other evaluation factors for evaluating DDEA in the period 2023-2027

Education and talent development	
Impact Marker	**Other evaluation factors**
High-quality research education and talent development. **Fostering of research talent.**	Percentage of attendants from other endocrinology fields than diabetes[2]. Percentage of attendants with regard to career level, gender, geography, education, and employment sector.
	Percentage of speakers with regard to career level, gender, geography, education, and employment sector.
	Participant satisfaction with the scientific programmes of each education and talent development activity should be minimum 4.0 on a scale from 1 (unsatisfactory) to 5 (very satisfactory).
Networking and collaboration	
Strengthening of networking and collaboration across sectors, research fields, and borders.	Percentage of attendants from other endocrinology fields than diabetes[2]. Percentage of attendants with regard to education, research field, geography, employment sector, and institution.
	Participant satisfaction with the networking of each networking and collaboration activity is minimum 4.0 on a scale from 1 (unsatisfactory) to 5 (very satisfactory).
Grants	
High-quality applied research in all fields of endocrinology.	The success ratio for grants with regard to gender, education, geography, and institution/sector is evaluated each year by the BoD to secure a balanced ratio.
Communication and outreach	
Dialogue and knowledge sharing among the scientific community and the public.	The number of followers of DDEA social media channels (Twitter, LinkedIn, Instagram). The number of subscribers to the DDEA newsletter.

3. Strategy

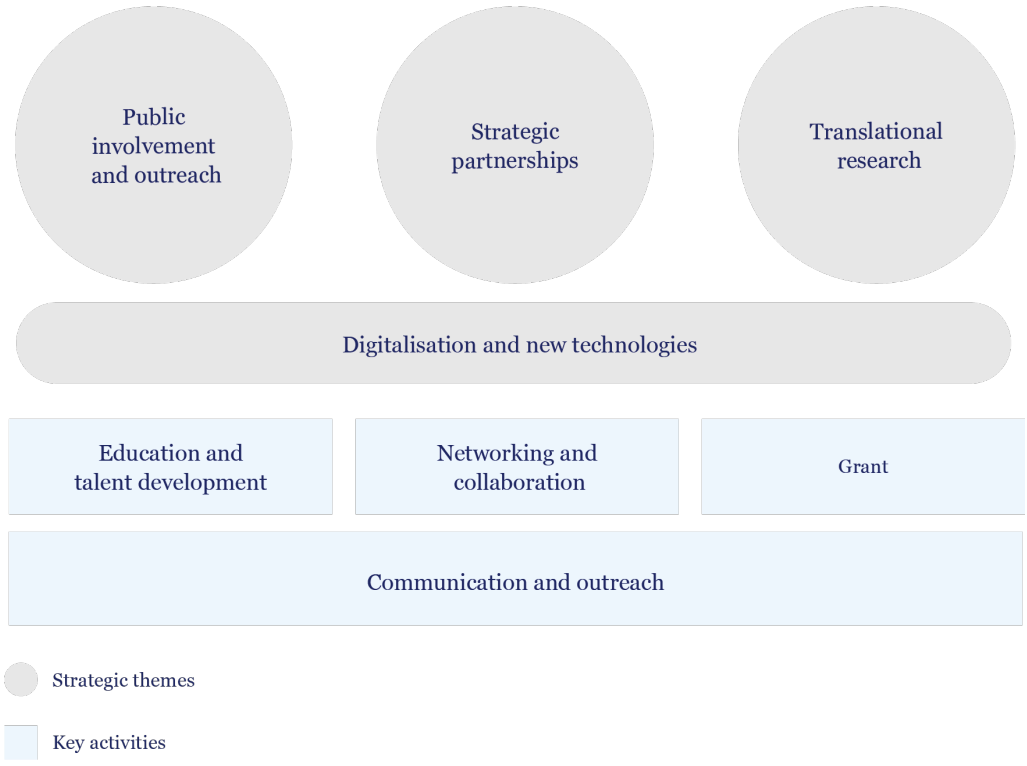
To determine strategic priorities of activities and ensure equitable development of the entire diabetes and endocrinology field, DDEA will, in collaboration with its stakeholders (see below), carry out an evidence-based background analysis of the current diabetes and endocrine landscape in Denmark. This analysis will identify current needs in individual areas of diabetes and endocrinology, including which areas need (additional) support, collaborations or infrastructure to improve or to build on existing high quality and develop further. Further, the analysis will serve as benchmarking for the continual evaluation of the DDEA and its activities.

Further, we will build on the strategy, experiences, and achievements realised by DDA during the past ten years. Specifically, we will extend DDA's established frameworks to bring together diverse stakeholders through activities to catalyse impactful research, to now expand the framework and activities to include a wider set of endocrine diseases. DDEA's strategic focus will be to build capacity by developing the skills, talent, and careers of early-career researchers. This will support their ability to perform high-quality research, with the short-term impact of enhancing the quality of research education, strengthening networking and collaboration, and increasing the supply of world-class research talent. This will in the medium and longer term lead to significantly improved prevention and treatment strategies for the benefit of people with or at risk of diabetes and endocrine diseases.

Key activities and strategic themes

To be able to implement our capacity-building strategy, we will offer four key activity classes (*Chapter 2*) and pursue four strategic themes to be applied across all four key activity classes (***Figure 2***).

Figure 2. DDEA strategy overview



- **Digitalization and new technologies:** The aims are to a) contribute to innovative treatment modalities that benefit society and citizens by implementing training in new technologies to be applied within diabetes and endocrine diseases, such as big data, artificial intelligence, and omics (*Chapter 4.1*); and b) widely share DDEA's activities and outputs across national and international networks by using digital solutions (*Chapter 4.4*).

- **Public involvement and outreach:** The aim is to facilitate collaborations between researchers and the public to create user-driven solutions that benefit society and citizens by a) offering training in public outreach and co-design and co-creation of research involving the public (*Chapter 4.1*); and b) organising events to support the training in public outreach and offering a platform where early-career researchers and citizens can enter into dialogue about the future needs and demands for research (*Chapter 4.2 and 4.4*).
- **Strategic partnerships:** The aim is to support research areas and environments that need (additional) support or collaborations to improve or to develop further and rise to international prominence by facilitating and establishing transnational strategic partnerships across research fields and sectors (see below).
- **Translational research:** The aim is to promote translational research that benefit society and citizens by a) strengthening links between basic and clinical research environments through DDEA activities; and b) nurturing and expanding the existing national network by acting as a proactive and strategic *broker* to facilitate cohesion among individual research institutions and centres and among diabetes and other endocrinology research environments, at universities and university hospitals, and in the life science industry (*Chapter 4.2*).

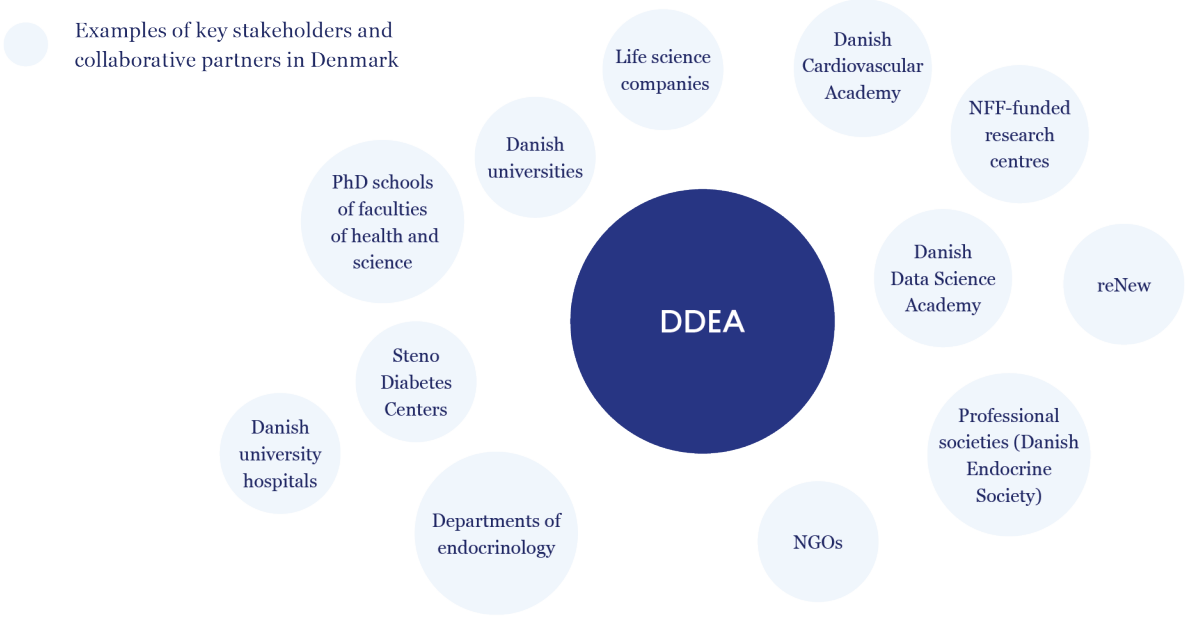
The individual activities within the four key activity classes will include one or more of the strategic themes (*Chapter 4*). The strategic theme of digitalisation and new technologies will be implemented across the other three strategic themes and across all four key activity classes.

The strategy for each of the four key activity classes and the implementation of the four strategic themes in these activities is described in *Chapter 4*.

Collaborators, partners, and stakeholders

Expanding the framework and activities will enable DDEA to play a central role in the Danish diabetes and endocrine ecosystem to unite the entire field of endocrinology, across research fields and sectors (***Figure 3***). It will therefore be essential for DDEA to collaborate with relevant partners for organising - and potentially co-financing - the DDEA activities (***Figure 3***) (letters of support are provided in *Appendix 1*).

Figure 3. DDEA's envisioned central role in the Danish diabetes and endocrine ecosystem. *DDEA strategic focus will be the capacity-building of early-career researchers by uniting key stakeholders across research fields, sectors, and borders to enable world-class research to improve the prevention of diabetes and endocrine diseases.*



In particular, establishing collaborations with the Danish Endocrine Society and the Society for Young Endocrinologists, under the auspice of the Danish Endocrine Society, and with researchers at the departments of endocrinology at Danish university hospitals will be vital to ensure a successful integration of all fields of endocrinology into the activities of DDEA.

Collaborations with DCA and DDSA (and other NNF-funded research centres) are also highly important to support the new strategic themes, in particular to promote innovative, multidisciplinary and translational research and training in new technologies. The collaborations with DCA and DDSA will encompass co-funding of PhD scholarships and co-funding and co-organising of annual activities, as described in *Chapters 4.1-4.3* and mentioned in the support letters (*Appendix 1*). The aim of the collaborations are to bridge early-career researchers from the three academies; provide them with a basic understanding of each other's scientific ecosystem; and enable them to identify challenges and opportunities in using e.g. artificial intelligence and machine learning in diabetes- and endocrine-related projects to address clinically-relevant questions or discussing the underlying mechanism of the risk of premature cardiovascular death associated with having an endocrine disease. Finally, DDEA will also collaborate with DCA and DDSA to pursue fundraising opportunities (*Chapter 7*). Examples of specific cross-academy activities are included in *Appendix 3*.

To realise DDEA's ambitions to create a PhD graduate programme for diabetes, endocrinology, and metabolism and a postgraduate talent development programme (*Chapter 4.1*), collaboration with the Danish universities' faculties of health and science is pivotal. DDEA will also seek the endorsement and support from individual researchers and principal investigators of DDEA-funded early-career researchers at the universities, the Steno Diabetes Centers and the departments of endocrinology to act as lecturers and scientific organisers of the individual PhD and postdoctoral courses to be included in the programmes and to support the mentor-mentee relationship (*Chapter 4.2*).

DDEA will strengthen its collaborations with life science industry to enable DDEA to educate and train early-career researchers in relevant topics, and provide highly qualified talents to industry. To do this, DDEA will collaborate with life science industry to co-organise and co-fund activities (among others the above-mentioned PhD and postgraduate programme) and co-fund PhD scholarships and postdoctoral fellowships (*Chapter 4.3*).

To bring early-researchers closer to the end-users, and thus support the strategic theme of public involvement and outreach, DDEA will establish collaborations with relevant NGOs.

Finally, DDEA will collaborate with international world-leading experts for the DDEA activities, among others by involving international collaborators as speakers and co-organisers (*Chapter 4*) and in joint fundraising activities (*Chapter 7*) and by funding visiting professors (*Chapter 4.3*). In particular, DDEA will initiate and establish transnational strategic partnerships with world-renown international researchers and research centres and departments across sectors and research fields, and primarily with Nordic and European partners. Through the networking and collaboration activities (*Chapter 4.2*), DDEA will act as a strategic *broker* to establish the strategic partnerships, and the BoD will select the strategic partners on an ongoing basis based on the background analysis of the Danish endocrine research landscape and an annual evaluation of the partnerships (see below). DDEA will focus on selecting and establishing partnerships with partners that provide scientific competences over and above those available in Denmark, as the aim of these partnerships is to support research areas and environments that need (additional) support, infrastructure or collaborations to improve or to develop further and rise to international prominence. The strategic partnerships will facilitate collaborations in endocrinology between researchers from Denmark and abroad to support the mobility of researchers; provide opportunities for follow-up on DDEA networking and collaboration activities; promote joint research projects; and catalyse innovative, multidisciplinary and transnational research (strategic theme). DDEA will enter into formal agreements with the strategic partners, and annually evaluate the strategic partnerships to monitor whether the partnership reaches the outlined aims. In that respect, DDEA will set up specific evaluation criteria, e.g. joint projects, joint funding applications, lab exchanges, speakers involved in DDEA activities. The strategic partnership programme will involve co-organising and co-funding online and onsite education and talent development activities (*Chapters 4.1)* and networking and collaboration activities *(Chapter 4.2*); co-funding of PhD scholarships (*Chapter 4.3*); funding for travel fellowships to support stays

abroad for early-career researchers at the institutions involved; and pursuing fundraising opportunities (*Chapter 7*).

4. Key activities

The strategy for the four key activities is described below (education and talent development, networking and collaboration) and in *Chapter 4.3* (grants) and *Chapter 4.4* (communication and outreach).

Strategy and decision-making

DDEA will in close collaboration with our stakeholders (*Chapter 3*) and the DDEA governing bodies (*Chapter 5*), develop and implement a balanced, high-quality and well-rounded portfolio of onsite and online activities within education and talent development and networking and collaboration.

The DDEA Committee for Education will propose an annual programme for education and talent development activities and networking and collaboration activities. To that end, the committee will consider the results of the background analysis of the Danish endocrine landscape to ensure a full wide-ranging programme. Further, DDEA will employ a bottom-up process (*Chapter 5*) by inviting proposals, including suggestions for format and potential collaborators, for new activities from its stakeholders and the DDEA governing bodies on an annual basis. Proposals for networking and collaboration activities may also be submitted on an *ad hoc* basis to the Secretariat.

The Committee for Education will prioritise and select the proposals to make sure that the activities offered are aligned with the DDEA's overall strategy. The committee will use the following criteria: Relevance to the Danish diabetes and endocrine community and the DDEA's overall objectives; collaboration with the life science industry; collaboration with other NNF-funded academies; collaboration across diabetes and endocrine research fields; incorporation of the four strategic themes in the activities; the proposed scientific organising committee and speakers and expected number of participants, to ensure diversity with respect to disciplinarity, gender, career level, nationality, educational background, employment sector; incorporation of an interdisciplinary approach, pedagogic approaches, and up-to-date teaching methods; number of ECTS points; complementarity of the activity to activities at collaborating institutions and expected synergies with these; budget.
Together with the Committee for Education, the Secretariat will set up *ad hoc* sub-committees to organise individual activities (*Chapter 5*). These sub-committees will include national and international early-career and senior researchers across sectors with expertise within the theme of the individual activity, among others the strategic partners, DDEA visiting professors, DDEA-funded early-career researchers, and their supervisors will be involved in organising specific activities. The latter will further strengthen the mentor-mentee relationships between early-career researchers and their supervisors and engage supervisors in DDEA. The Secretariat will serve as the focal point for administrating and organising the activities, including inviting speakers, publicising the activities, registration, evaluating the activities, follow-up, and facilitating media coverage.

National and international early-career researchers within diabetes, endocrinology, and metabolism will have open and unfettered access to the activities. Should there be limited space, early-career researchers who have received funding from DDEA will be prioritised during the registration process. For activities where it is compulsory to submit an abstract, the respective organisation sub-committee will select attendees based on the abstracts submitted.

Roadmap and milestones for DDEA 2023-2027

Table 3 (*page 13*) presents a roadmap and milestones for the establishment of DDEA and its key activities.

Table 3. Roadmap and milestones for DDEA 2023-2027.

Start-up Milestones (2023)	**1st half-year**	**2nd half-year**
Background analysis of the Danish endocrine landscape	X	
Establishment of DDEA Secretariat	X	
Establishment of DDEA bodies and DDEA BoD	X	
First DDEA BoD meeting, Advisory Board meeting, Committee for Education meeting	X	
Launch of new DDEA website	X	
Establishment of the first strategic partnership	X	
Annual Day of DDEA		X
First call for applications to the DDEA fellowship programme	X	

Annual Milestones & Deliverables (from 2023-2027)	**2023**	**2024**	**2025**	**2026**	**2027**
BoD meetings	4	4	4	4	4
Meetings: Advisory Board, Committee for Education and Grant Review Committee *(number of meetings per committee)*	2	2	2	2	2
Annual report	1	1	1	1	1
PhD graduate programme in diabetes, endocrinology and metabolism*	4	4	4	4	4
Postgraduate talent development programme*	7	7	7	7	7
Strategic partnership programme (education and talent development)*	4	4	4	4	4
Diabetes-endocrine bridge programme*	3	3	3	3	3
Mentoring and alumni programme*	2	2	2	2	2
Public involvement and outreach networking programme*	1	1	1	1	1
Strategic partnership programme (networking and collaboration)*	4	4	4	4	4
Calls for and allocation of DDEA fellowships, including thematic calls	2	2	2	2	0
Calls for and allocation of cross-academy PhD scholarships	1	1	1	0	0
Calls for and allocation of strategic partnership fellowships	0	1	1	0	0
Calls for and allocation of strategic partnership travel fellowship grants	0	2	2	2	2
DDEA Awards	1	1	1	1	1
Established collaborations/activities with NGOs*	1	1	1	1	1
Newsletters	12	12	12	12	12

** number of activities*

4.1 Education and talent development activities

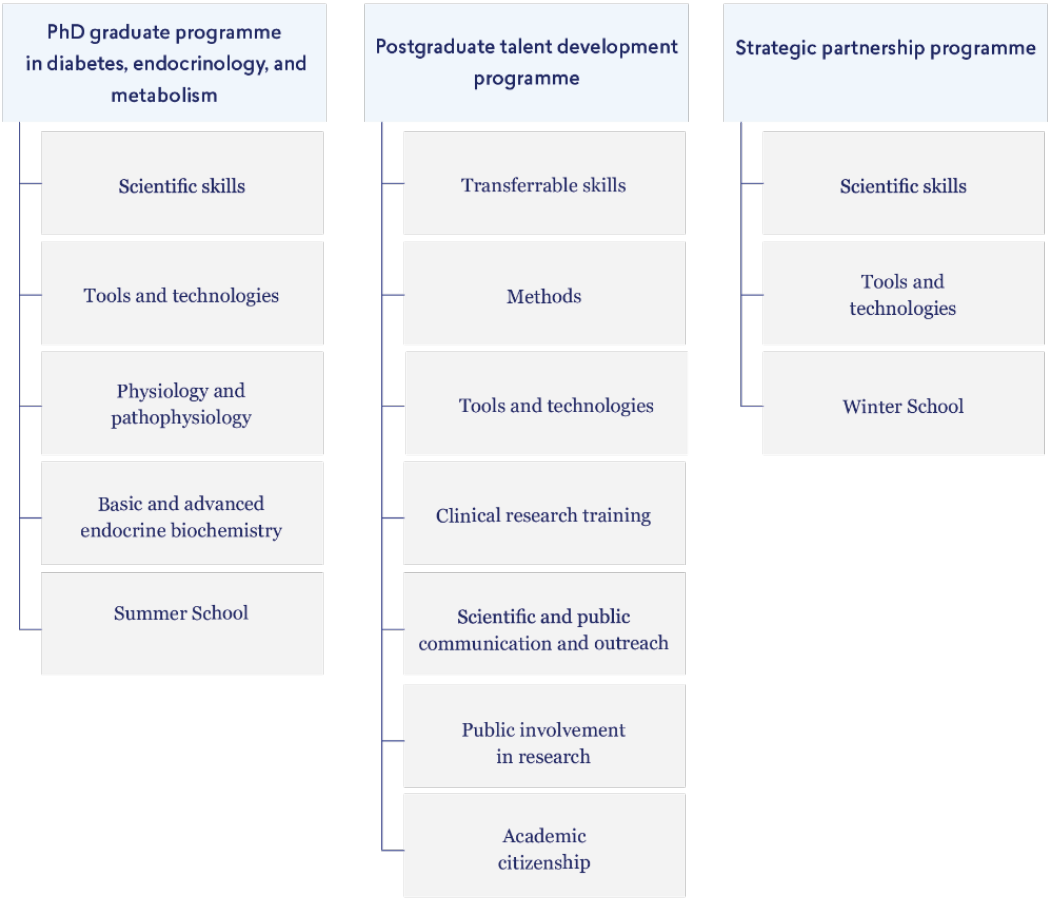
DDEA's education and talent development activities are divided into three programmes:

- **PhD graduate programme in diabetes, endocrinology, and metabolism:** The aim is to unify all fields of endocrinology in one joint high-quality PhD programme. DDEA will develop and organise the programme with stakeholders across sectors, in particular the health and science faculties of five Danish universities (*Appendix 1*), to obtain buy-in, ensure approval of the PhD courses for ECTS points, and prevent overlap between DDEA-organised courses and compulsory courses offered at the universities themselves.
- **Postgraduate talent development programme for PhD students and postdocs:** The aim is to support capacity-building among early-career researchers by offering transferable skills and methods courses. Three focal points of the programme will be education and training in 1) new and emerging technologies in diabetes and endocrine diseases to promote innovative, multidisciplinary, and translational research; 2) clinical and translational research training focusing on how to design and conduct a clinical study to strengthen the collaboration between research centres at universities, hospitals and the life science industry; and 3) public involvement and outreach to strengthen dialogue between the public and researchers and train early-career researchers in involving end-users in co-design and co-creation of research projects. Part of the programme will be co-organised and co-funded with DCA and DDSA.

- **Strategic partnership programme:** This programme covers both education and talent development; networking and collaboration (*Chapter 4.2*); and grant activities (*Chapter 4.3*), and is described in detail in *Chapter 3*. The programme will also include cross-academy activities.

Within these programmes, DDEA will offer PhD and postdoctoral courses and symposia, seminars, conferences, and webinars. Examples of activities and topics covered by the programmes are shown in ***Figure 4***.

Figure 4. Portfolio and examples of education and talent development activities offered by DDEA 2023-2027



4.2 Networking and collaboration activities

DDEA's networking and collaboration activities are divided into four programmes:

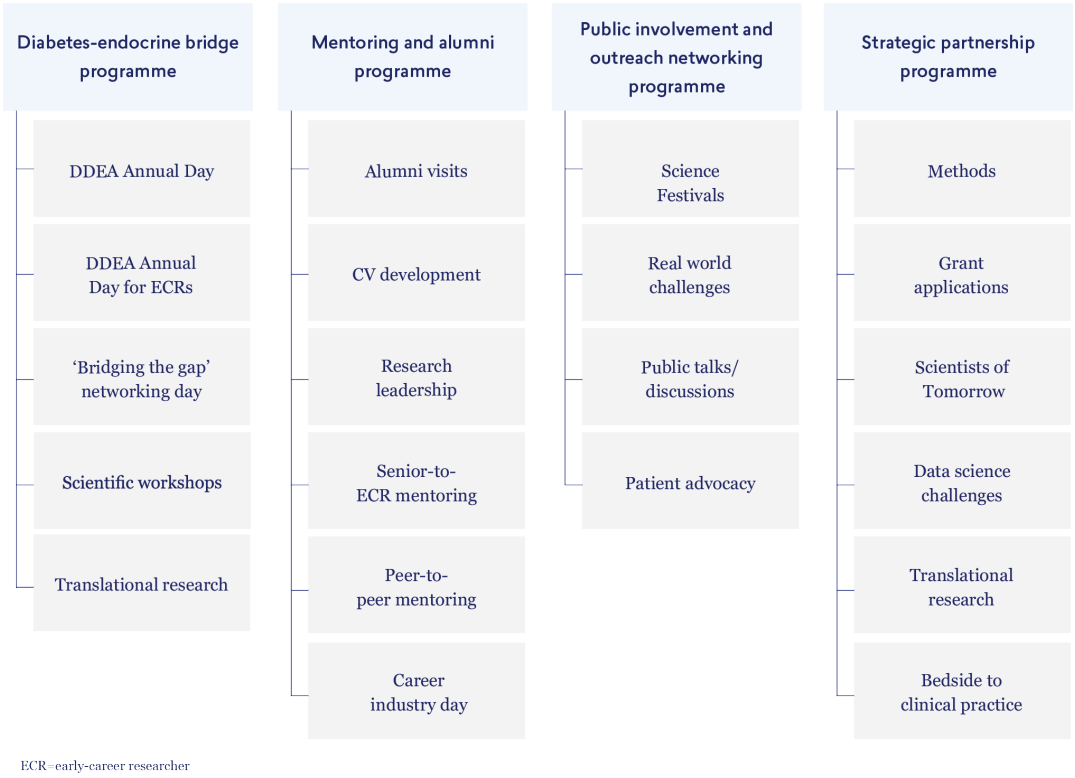
- **Diabetes-endocrine bridge programme:** The aim is to strengthen vital collaborations between researchers from diabetes and from other endocrinology fields throughout Denmark to promote innovative, multidisciplinary, and translational research. We will develop and establish this programme in collaboration with professional societies in endocrinology, university hospitals' departments of endocrinology, the Steno Diabetes Centers, and basic researchers at the universities. The activities will primarily be directed at early-career researchers, but two large annual events will be aimed at both early-career and senior researchers.
- **Mentoring and alumni programme:** The alumni programme aims to support the career development of early-career researchers currently or previously funded by DDA/DDEA. The mentoring programme aims to create and nurture mutually beneficial mentor-mentee working relationships and strengthen the mentor-mentee relationship between DDEA early-career researchers and their principal investigators. The programme will involve senior-to-early-career researcher mentoring across sectors

and research fields, and peer-to-peer mentoring by early-career researchers, e.g. DDA/DDEA alumni or other early-career researchers, and principal investigators/supervisors of DDEA-funded early-career researchers.

- **Public involvement and outreach networking programme:** The programme aims to bring together early-career researchers with individuals with, or at risk of, diabetes and endocrine diseases. This programme will be co-developed with NGO's, e.g. Danish Diabetes Association, Danish Osteoporosis Association, Danish Addison Association. The programme will be linked to the education and talent development activities covered by the postgraduate talent development programme (*Chapter 4.1*) and include activity opportunities for engagement and dialogue with the public.
- **Strategic partnership programme:** This programme covers both education and talent development (*Chapter 4.1*); networking and collaboration; and grant activities (*Chapter 4.3*) and is described in detail in *Chapter 3.* The programme will also include cross-academy activities.

Within these programmes, DDEA will offer workshops and networking events. Examples of activities and topics covered by the programmes described below are shown in ***Figure 5***.

Figure 5. Portfolio and examples of networking and collaboration activities offered by DDEA 2023-2027



ECR=early-career researcher

4.3 Grant activities

DDEA's grant activities are divided into three grant types: 1) a fellowship programme in diabetes and endocrinology for PhD students, postdoctoral fellows and visiting professors; 2) a strategic partnership travel fellowship programme; and 3) the DDEA Awards. In addition to the NNF-funded grants, DDEA will seek funding for further fellowships from the life science industry, Horizon Europe calls, and relevant foundations (*Chapter 7*).

DDEA fellowship programme

The grant schemes covered by this programme are: PhD scholarships; postdoctoral fellowships; and visiting professorships. ***Table 4*** (*page 16*) shows the number of fellowships by year.

Table 4. DDEA fellowships 2023-2027

Grant schemes	2023	2024	2025	2026	2027	Total
PhD scholarships (2/3 financed) (DKK 1.1 million each) with no specific themes	7	7	7	8	0	**29**
PhD scholarships (2/3 financed) DKK 1.1 million each) with specific themes	1	3	3	3	0	**10**
PhD scholarships with co-financing from industry (1/3 co-financed) (DKK 550,000 each)	4	4	3	2	0	**13**
Cross-academy PhD scholarships (1/3 co-financed) (DKK 550,000 each)	4	4	3	0	0	**11**
Strategic partnership PhD scholarships (1/3 co-financed) (DKK 550,000 each)	0	3	4	0	0	**7**
Postdoctoral fellowships (two-year) (DKK 1.2 million each) with no specific themes	7	7	7	8	0	**29**
Postdoctoral fellowships (two-year) (DKK 1.2 million each) with specific themes	1	3	3	3	0	**10**
Postdoctoral fellowships (two-year) with co-funding from industry (1/2 co-financed) (DKK 600,000 each)	4	4	2	2	0	**12**
Strategic partnership postdoctoral fellowships (DKK 600,000 each)	0	3	4	0	0	**7**
Visiting professorships (max. DKK 400,000 each)	7	6	6	6	0	**25**

The following types of fellowships will be granted:

- **Co-funded 2/3 PhD scholarships and two-year postdoctoral fellowships with no specific themes:** The aim is to increase the supply of research talent to research institutions and organisations across sectors and support researchers in their beginning of their career to develop into the research leaders of tomorrow.
- **Co-funded 2/3 PhD scholarships and two-year postdoctoral fellowships with specific themes:** The aim is to increase the supply of research talent to research institutions and organisations across sectors, specifically within fields that need support to improve or need acceleration to further develop and rise to international prominence, and support researchers in their beginning of their career to develop into the research leaders of tomorrow. The BoD will decide upon the themes based on the background analysis of the diabetes and endocrine landscape (*Chapter 3*) and will evaluate the themes annaually to optimize, strengthen, and, if necessary, adapt the themes. Examples of themes are neuroendocrinology, paediatric endocrinology, endocrinology in the elderly, endocrine cancer, nutrition, precision medicine, translational research, disease management.
- **Co-funded 1/3 PhD scholarships and two-year postdoctoral fellowships (1/2 co-funded) with co-funding from industry:** The aim is to facilitate and strengthen collaborations across public and private sectors and increase the supply of research talent to life science industry.
- **Co-funded cross-academy 1/3 PhD scholarships with co-funding from DCA or DDSA:** The aim is to establish cross-disciplinary collaborations with DCA and DDSA and between early-career researchers within these research fields.
- **Co-funded strategic partnership 1/3 PhD scholarships and two-year postdoctoral fellowships (1/2 co-funded):** The aim is to support the establishment of the strategic partnerships with international research institutions and strengthen collaborations with these international partners (*Chapter 3*). The fellowships *must* be co-funded by a DDEA strategic partner, but additional co-funding may come from other national or international collaborators. The fellowships will be allocated to candidates to be employed at a Danish research institution, but candidates may be from Denmark or

abroad. The fellowships will be within specified research areas according to the field of research of the strategic partners'.

- **Visiting professorships:** The aim is to stimulate collaborations between national and international research groups; attract international experts to Denmark; and facilitate to the establishment of the strategic partnerships (*Chapter 3*). To qualify for a visiting professorship grant, the prospective visiting professor needs to participate in organising, or teaching, education and talent development activities or networking and collaboration activities offered by DDEA (*Chapters 4.1 and 4.2*). The visiting professorship grants will cover individual expenses up to five months, including salary, travel, and accommodation.

Strategic partnership travel fellowship programme

The aim of the travel fellowship programme is to support the establishment of the strategic partnerships and strengthen collaborations with these international partners (*Chapter 3*). The programme will fund stays abroad for early-career researchers for up to six months (DKK 100,000 each) at international strategic partnership institutions.

DDEA Awards

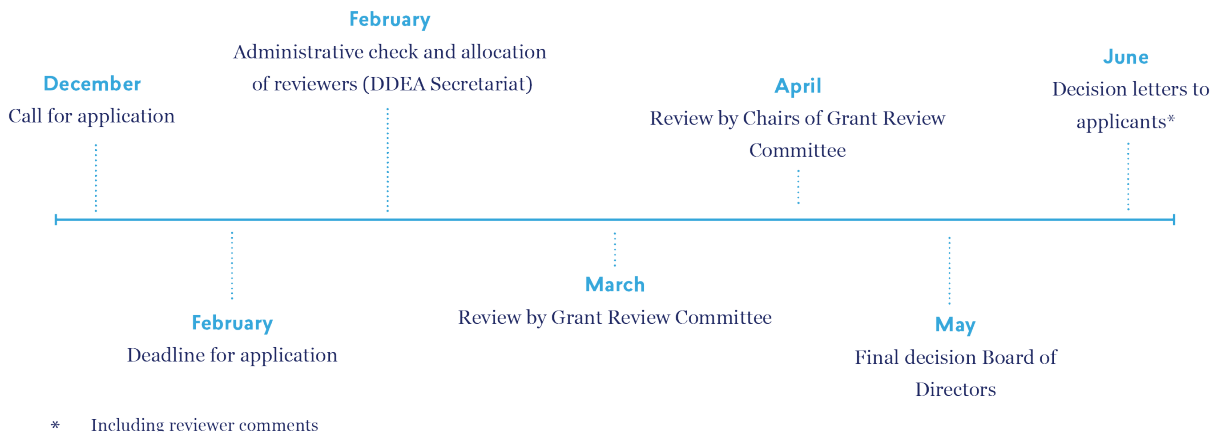
DDEA will award three annual DDEA Awards (of DKK 25,000 each) to recognize world-class research talent and excellence, innovation, and commitment in Danish diabetes research and research education:

1. *The DDEA-Funded Scientist Award*: To be presented to an early-career researcher (currently, or previously, funded by DDA/DDEA) who has shown great potential to be a world-class researcher within his/her field of expertise.
2. *The Young Investigator Award*: To be presented to an early-career researcher, below the age of 40, who is engaged in diabetes or endocrine research in Denmark, and who has shown promising research and made an important contribution to the understanding and treatment of diabetes or other endocrine diseases.
3. *The DDEA Research Education Award*: To be presented to an early-career researcher who has been engaged in diabetes and endocrine research education in DDEA and shown substantial academic citizenship by raising the knowledge and competences of early-career researchers within DDEA.

The award and review process

The award and review process is shown in ***Figure 6***.

Figure 6. Example of an award and review process
Grant calls and award allocations will be biannual starting in December and June, respectively.



The Secretariat will process all incoming applications. Applications for the DDEA fellowship programme will undergo international review by the Grant Review Committee (see below and *Chapter 5*), while the BoD will review - and decide upon - applications for the travel fellowship programme and the DDEA Awards (upon recommendation from a subcommittee).

All applications for the DDEA fellowships programme will be evaluated by three international experts selected among the pool of reviewers in the Grant Review Committee. The Secretariat will match reviewers and applications according to scientific topics and keywords related to the applicants' research fields, as described in their applications. The reviewers will provide a complete review of the applications according to the evaluation criteria described in *Box 1* and submit these via a web-based electronic system. This includes scoring each of the four evaluation criteria, providing an overall impact score of the application and describing strengths and weaknesses for each criterion and overall. When the reviewers have submitted their reviews, an average of the individual scores of each of the five scores (of each review) will be calculated (*total score*). Based on the *total scores* and the reviewers' comments, the chairpersons of the Grant Review Committee will then make a final evaluation of all applications (for each grant type) and recommend eligible applications to the BoD. Finally, the BoD will make the final decision as to which applications will receive funding.

Box 1: Evaluation criteria for PhD scholarship, postdoctoral fellowship and visiting professorship applications

- **Applicant:** Merits and competences of the applicant
- **Project:** Scientific quality, approach, and innovation described in the project plan
- **Research environment:** Investigator(s), supervisors, and collaborators
- **DDEA funding focus areas:** Internationalisation, interdisciplinarity, and collaboration across sectors
- **Overall impact:** Overall assessment of the application in consideration of the four above evaluation criteria

Strategy for recruitment

For the DDEA fellowship programme, DDEA will have biannual calls except for cross-academy and strategic partnership fellowship calls that will be annual). All calls will be in open and free competition, and the majority will be without a specific theme or without being directed at a specific disease group. The calls will contain links to standardised online application forms.

The calls will be posted through the DDEA´s communication channels (in particular social media and newsletters), the websites of the Danish Endocrine Society and the Society for Young Endocrinologists, national and international job portals, including the Danish universities, direct mail to national and international collaborators and partners and direct communication at international conferences or DDEA activities. Collaborations with the established strategic partners and current and former visiting professors may also contribute to further international recruitment.

Foreign applicants may contact the DDEA Secretariat that will assist by recommending a potential principal investigator (or host) associated with a Danish research institution.

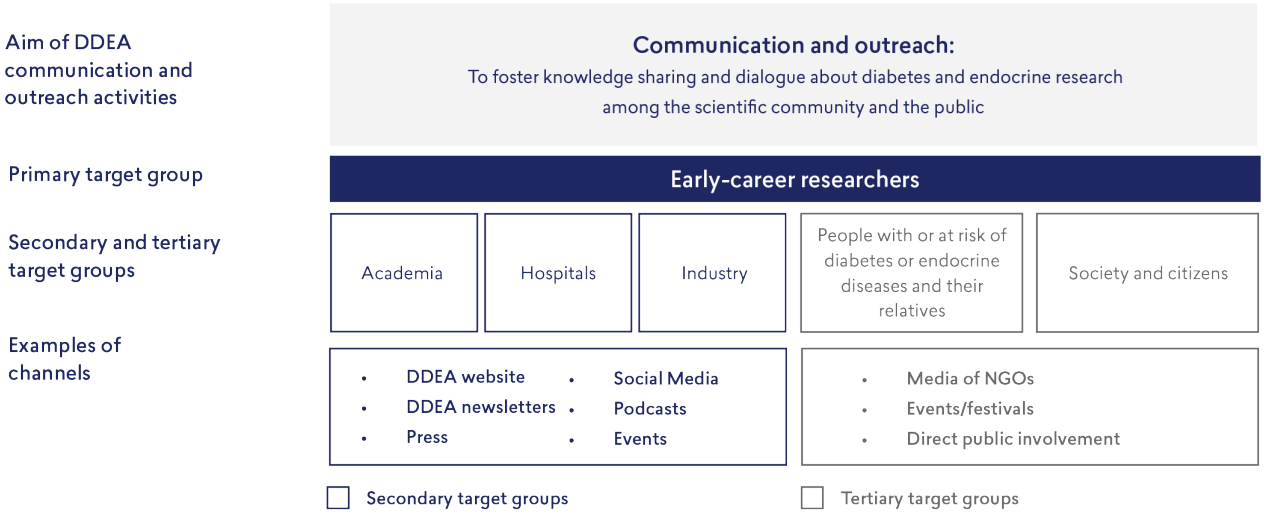
For all PhD scholarships (1/3 and 2/3-financed) and 1/3-financed postdoctoral fellowships, the grants are allocated on the basis that the remaining funding (2/3 or 1/3) can be assured by the principal investigator or host institution. For all grant types, the requirement is that the host institution (or private company in the case of industrial grants) undertakes to cover the operating costs for the project or that the candidate secures them through other funding schemes or other external partners.

4.4 Communication and outreach activities

The overall aim of the DDEA communication and outreach activities is to foster knowledge sharing and dialogue about diabetes and endocrine research among the scientific community and the public (***Figure 7***). Based on this overall aim, DDEA will engage in activities along three specific subsidiary aims:

1) Promoting DDEA key activities to gain maximum buy-in and uptake in DDEA's other three key activity classes related to the three overall objectives by publicising the activities before, during, and after the activity; and promoting relevant activities of key stakeholders.
2) Promoting DDEA-funded researchers' research to the scientific community and the public by increasing the involvement of our target groups in dissemination activities.
3) Educating and training early-career researchers in scientific and public communication by offering education and talent development activities (*Chapter 4.1*) and organising public events and direct public involvement activities that include the tertiary target group *(Chapter 4.2*).

Figure 7. Overview of DDEA communication and outreach strategy and DDEA target groups



Early-career researchers will be the primary target group for the communication and outreach activities, which will be a pre-requisite to reaching the secondary and tertiary target groups. While DDEA will primarily have a national focus for its communication and outreach efforts, most of the channels that will be used for communication and outreach (***Figure 7***) will also reach international stakeholders.

DDEA will reach the target groups through a variety of audience-relevant onsite and online approaches and channels (***Figure 7***), both traditional and new, including digital presentation and output of the DDEA key activities.

Scientific knowledge sharing and dialogue

To foster scientific knowledge sharing and dialogue with, to, and among early-career researchers and the scientific community in general (academia, hospitals, and industry), we will continue to promote and disseminate DDEA's key activities and DDEA-funded researchers' research through our online and onsite channels (***Figure 7***). Digital presentation and output of the DDEA key activities will ensure a broader reach of the primary and secondary target groups both nationally and internationally. To that end, the DDEA website will play an increasingly critical role in 'hosting' events and will also be a repository of all digital events and research outputs.

We will focus on meeting early-career researchers where they are naturally present, e.g. by using social media innovatively. By letting early-career researchers take over our social media accounts such as Instagram, for example, we will champion DDEA ambassadors and promote DDEA and DDEA activities. Furthermore, we

will provide researchers with tools (through the postgraduate talent development programme, *Chapter 4.1*) and channels to help them disseminate and promote their own research.

To that end, the DDEA website and social media channels (primarily LinkedIn, Twitter and Instagram) will serve as a hub for promoting both DDEA and other key stakeholders' activities (including activities of other NNF-funded academies), supporting collaborations and knowledge sharing, and for communicating DDEA-funded researchers' latest research to fellow researchers, clinicians, and relevant stakeholders.

Public knowledge sharing and dialogue

To reach people with or at risk of diabetes or endocrine diseases and society and citizens, DDEA will employ a three-pronged approach. First, DDEA will develop a tailor-made training programme for early-career researchers on how to communicate both scientifically and to the public online and offline (*Chapter 4.1)*. Second, DDEA will enter into close collaborations with NGOs within diabetes and endocrinology (*Chapter 3*). This will enable early-career researchers to disseminate their research through their channels, as well as elicit feedback and input from these target groups, fostering a two-way dialogue and knowledge sharing and knowledge exchange. Third, DDEA will facilitate interaction between early-career researchers and society by organising science festivals or direct public involvement activities (*Chapter 4.2*).

5. Organisation, governance and structure

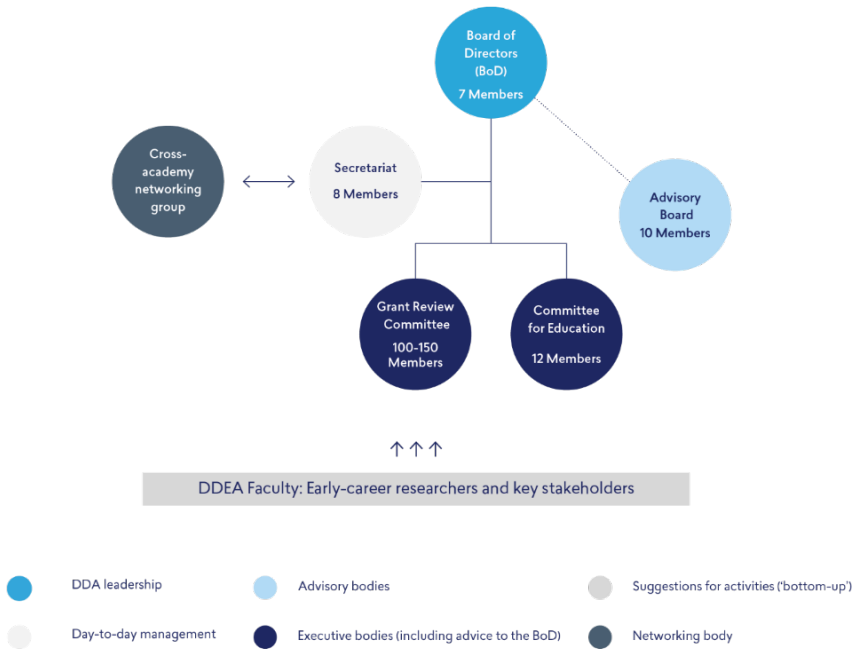
5.1 Organisation and governance

The organisation and governance of DDEA will build on the experiences gained, and relationships developed, by DDA during the past ten years. To account for the widened scope of DDEA, we have adjusted the organisation and governance model accordingly. The updated governance model:

- Ensures broad and diverse representation of key stakeholders across diabetes and other endocrinology fields, which allows for bottom-up feedback and recommendations to the BoD.
- Ensures efficient decision-making processes with clear roles and responsibilities and a BoD that functions at a high strategic level.

The organogram (***Figure 8***) shows the governance and reporting structure of DDEA, including the size of DDEA's bodies and its lines of decision-making.

Figure 8. Organogram of DDEA



Decision-making mechanisms

The BoD will be responsible for DDEA's overall strategy and key activities. Its top-down decisions will be informed with strategic input on key activities, strategy, and strategic themes from the DDEA governing bodies in a comprehensive bottom-up process. DDEA will also engage key stakeholders (in particular early-career researchers) to offer bottom-up feedback and suggestions on past, present, and future activities to ensure that they are aligned with their needs. To support and strengthen the bottom-up strategy and ensure the agility of the organisation, the Advisory Board and the Committee for Education will set up *ad hoc* sub-committees, as needed. The Secretariat will be the conduit between the BoD and the DDEA governing bodies and stakeholders, which will ensure that the advice and recommendations obtained from the bottom-up process are passed on to the BoD.

DDEA leadership

DDEA will be hosted by Odense University Hospital (OUH), but is fully independent from OUH with respect to strategy and policy making. The host institution will provide offices, facilities, and relevant resources needed for the Secretariat (*Appendix 4)* and will be legally and financially responsible for the NNF grant, through the institution's Management. The overall scientific responsibility will be handled by the Chair of the BoD, who will delegate the responsibility for daily operations to the Managing Director (*Chapter 5.2*).

The BoD's profile, composition, tasks and responsibilities, meetings, remuneration, and code of conduct are described in the terms of reference (*Appendix 5*). In brief, the BoD consists of seven members and includes a well-balanced and broad representation of stakeholders with regard to gender, age, national geography, and sector. The BoD thus includes representation from early-career researchers, senior researchers, and clinicians, as well as universities, hospitals, and life science industry, across diabetes and other endocrinology fields.

The members will have competence and experience as board members/chairpersons, researchers, or clinicians in diabetes and other endocrinology fields, education and talent development, innovation and entrepreneurship, fundraising, public-private partnerships, impact assessment, and NNF-funded initiatives and strategies.

The DDEA BoD will be composed as indicated below:

- Chairman of BoD (Allan Flyvbjerg, CEO, Steno Diabetes Center Copenhagen) (CV in *Appendix 6*) (currently Chair of the DDA BoD)
- Senior representative from the Danish universities (Lise Wogensen Bach, Vice-Dean, Aarhus University) (CV in *Appendix 6*) (current member of the DDA BoD) (appointed for three years)
- Senior representative from the diabetes field or the field of other endocrinology (clinic and research) (Kurt Højlund, Head of Research, Steno Diabetes Center Odense) (CV in *Appendix 6*) (current member of the DDA BoD) (appointed for two years)
- Senior representative from the field of other endocrinology (clinic and research) (to be decided)
- Early-career researcher from the diabetes and/or the field of other endocrinology (to be decided) (appointed for 2.5 years)
- Representative from the life science industry (to be decided)
- Representative from NNF (to be decided)

This composition will ensure both continuity and renewal in the members of the BoD.

The early-career researcher from the diabetes and/or the field of other endocrinology and the senior representative from the field of other endocrinology will be appointed by the BoD among two candidates in each category proposed by the BoD of the Society for Young Endocrinologists and the Danish Endocrine Society, respectively. Likewise, the BoD will appoint the representative from the life science industry among two candidates proposed by the BoD of the Danish Association of the Pharmaceutical Industry (Lif). NNF will appoint the representative from NNF.

The BoD members will be appointed for a period of five years, except for the two current members of the DDA BoD and the early-career researcher, who will be appointed for two/three and 2.5 years, respectively (as described above).

If the Chair of the BoD resigns before the end of his term, NNF will appoint a new chair. If another member resigns before the end of her or his term, a new member will be appointed according to the profile describe above.

The principal tasks of BoD will be to:

- Define and decide the overall strategy and the strategy for DDEA's four key activity classes and oversee its implementation, including approving the annual accounts and budget, the annual programme for the DDEA activities, and making the final decision on grant allocations.
- Perform an annual evaluation of DDEA and its organisation, including impact assessment of the success criteria, key performance indicators and other evaluation factors to decide whether the strategy for future activities needs adjusting.
- Appoint members to the three DDEA governing bodies upon nomination from the entire diabetes and endocrine research community and key stakeholders.

The BoD will make its decisions based on simple majority. In the event of a tie, the Chair of the BoD has the deciding vote. If a BoD member has a conflict of interest in respect of a specific case, that member may not take a decision, participate in the decision, or otherwise contribute to the consideration of the case in question. The BoD members will receive no remuneration or research funding from DDEA.

DDEA governing bodies

The BoD will re-constitute the current DDA bodies and set up three bodies, and a cross-academy networking group. The BoD will appoint new members to the three bodies to ensure alignment with the expanded strategic scope. The members will be appointed based on nominations from the Danish diabetes and endocrine research community and other relevant key stakeholders (*Chapter 3*). When setting up the bodies, the BoD will consider competences, gender, age, career level, geography, and sector to ensure a well-balanced composition.

The members and the Chairs of the bodies will be appointed for a period of five years, except for the Advisory Board and Committee for Education. To ensure the agility of the organisation and offer the opportunity for other stakeholders to be involved in the DDEA organisation, the members of these two committees will be appointed for 2.5 years, after which new members will be appointed for 2.5 years on the basis of new nominations. If a member resigns before the end of her or his term, a new member will be appointed based on the nominations received (see above). If the Chair resigns, a new chair will be appointed among the members. The members will receive no remuneration (except for the Grant Review Committee members), and the members of the Grant Review Committee will not be able to receive research funding from DDEA.

In general, the three bodies will include representation from key stakeholders (*Chapter 3*). The Grant Review Committee will solely have members from internationally renowned research institutions. Scientist working in Denmark cannot be appointed to this committee.

In general, the members of the three bodies must have competence and experience in at least one, and preferably several areas, including: research or clinical expertise in diabetes and other endocrinology fields; education and talent development (including online training); networking within and beyond Denmark; innovation and entrepreneurship; the life science ecosystem; fundraising; scientific communication and outreach; public involvement and outreach; or knowledge on competences requested by academia, hospitals and life science industry. The members of the Grant Review Committee must have competences within a broad range of research areas and disciplines across all fields of endocrinology.

Details about the profile, composition, rules and responsibilities, meetings, remuneration, and code of conduct of each of the three bodies are described in the terms of reference (*Appendices 7-9*).

Advisory Board

The Advisory Board will be headed by a Chair (national) and a Vice-Chair (international). The members will be 50% national and 50% international.

The principal tasks of the Advisory Board will be to:

- Critically review the overall strategy of DDEA and the strategy in DDEA's four key activity classes to provide feedback and recommendations to the BoD for revisions.
- Compile an annual report to DDEA assessing the success criteria, key performance indicators, and other evaluation factors in relation to the four key activity classes. The main points of the report will be included in the annual report of DDEA and create the basis for the DDEA BoD' decisions on whether the strategy for activities needs adjusting.
- Set up relevant *ad hoc* sub-committees for receiving recommendations on strategic focus areas or from experts or stakeholders that are not represented by the Advisory Board.

The Advisory Board will have no decision-making mandate, only an advisory one.

Committee for Education

The Committee for Education will be headed by a Chair and include members from research institutions in Denmark only.

The principal tasks of the Committee for Education are to:

- Establish an annual academic, scientific programme for the DDEA education and talent development activities and networking and collaboration activities, including the PhD graduate programme in diabetes, endocrinology and metabolism (to be approved by the BoD).
- Explore how to improve capacity building of early-career researchers and outcomes of the DDEA education and talent development activities and networking and collaboration activities.
- Set up relevant *ad hoc* sub-committees for organising individual activities.

The Committee for Education will be an executive committee and will make its decisions based on simple majority. In the event of a tie, the Chair will have the deciding vote.

Grant Review Committee

The Grant Review Committee will be headed by four Chairs, selected by BoD among the members of the committee. Its members will constitute a pool of reviewers.

The principal tasks of the Grant Review Committee are to:

- Perform a professional peer review evaluation of applications for PhD scholarships, postdoctoral fellowships and visiting professorships (twice annually).

The principal tasks of the Chairs of the Grant Review Committee are to:

- Provide a recommendation about the applications to the BoD based on the professional reviews performed by the members of the committee (twice annually).
- Perform an overall evaluation of the application pool with regard to quality, scientific level and relevance of the applications and provide the DDEA BoD with suggestions for improving the overall quality to secure a balanced ratio (twice annually).

The Grant Review Committee is an executive committee, but has no decision-making mandate. The members will be asked to report any conflicts of interest, and will not review the assigned application(s) if they have one.

Cross-academy networking group

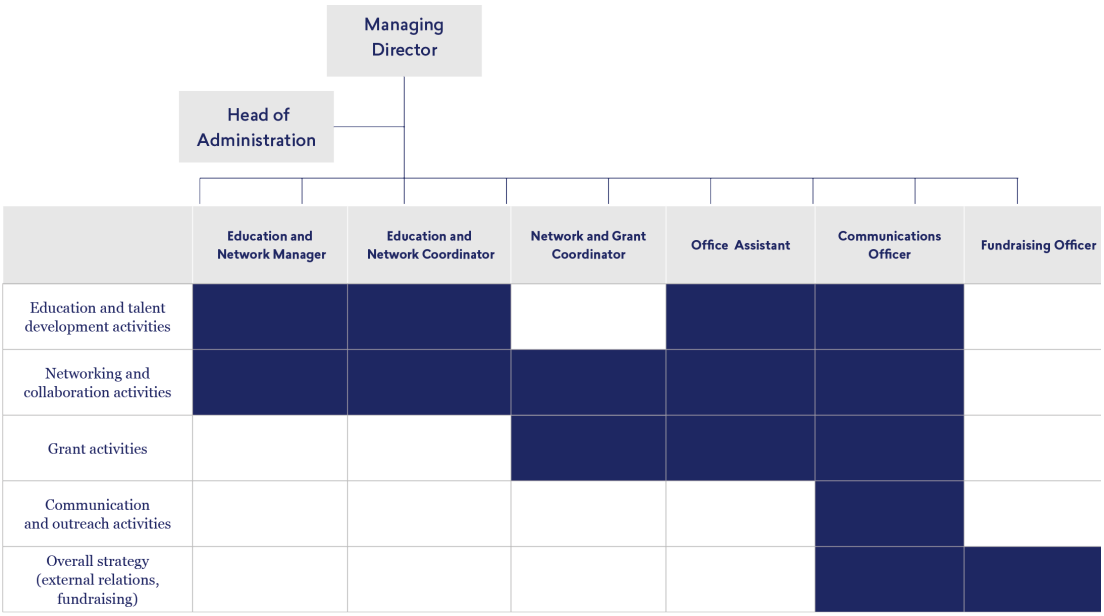
DDEA will also set up a new networking group that will include the managing directors of DCA and DDSA, to support knowledge sharing, collaboration and coordination of activities between the academies. As a minimum,

the networking group will meet four times a year. In addition, other members of the academies' secretariats may meet on an *ad hoc* basis for knowledge sharing on specific issues or coordination of specific activities.

5.2 DDEA secretariat

The Secretariat is headed by the Managing Director, who is assisted by seven full-time employees and three student assistants. ***Figure 9*** shows the composition of the Secretariat and the distribution of tasks and responsibilities among the staff members. These are described in detail in *Appendix 10*.

Figure 9. DDEA Secretariat. *Composition of the DDEA secretariat and distribution of tasks and responsibilities among staff members.*



The composition and size of the Secretariat reflects the transfer of DDA to DDEA and the updated strategy, increased activity level, and expanded strategic scope. To that end, it will be important to ensure both continuity and renewal by re-employing existing DDA staff members and employing additional staff members to increase resources and strengthen competences within:

- **Fundraising** to explore fundraising opportunities with a view to ensure the continuation of DDEA.
- **External relations** to coordinate activities with DCA and DDSA and to set up and cultivate collaborations and networks with early-career researchers, collaborators, stakeholders and strategic partners in Denmark and abroad, professional societies (e.g. the Danish Endocrine Society and the Society for Young Endocrinologists), and NGOs.
- **Communication and outreach** to support the new key activity class (communication and outreach) and the new strategic theme (public involvement and outreach).

To drive implementation of the strategy, including the strategic themes, and key activities, the Secretariat will include staff members with a broad range of competences (*Appendix 10)*. To ensure the continuous development of DDEA and its activities, the Secretariat will follow two directions: 1) act as a strategic broker between key stakeholders, in particular new stakeholders of DDEA, by being in constant dialogue with these and early-career researchers; and 2) continuously evaluate its key activities and bi-annually follow-up on the implementation of new strategies, including the new strategic themes, to ensure that the activities are aligned with the overall strategy, result in the desired output and outcomes, and adjust the activities, if needed, in dialogue with BoD (*Chapter 2*).

6. Financial overview

The total budget for DDEA funding for the years 2023-2027 is DKK 199,896 million (EUR 26,881 million) (***Table 5***). *Appendix 11* contains the detailed budget, including the projected allocation of funding to the key activities.

Table 5. Budget for DDEA for 2023-2027 (million DKK)

Budget 2023-2027						
(Amounts are stated in TDKK)	**Budget 2023**	**Budget 2024**	**Budget 2025**	**Budget 2026**	**Budget 2027**	**TOTAL budget 2023-2027**
Educational and Talent Development Activities	3.700	3.700	3.700	3.700	3.700	**18.500**
Networking and Collaboration Activities	1.500	1.500	1.500	1.500	1.500	**7.500**
Grant Activities	18.875	33.925	35.075	29.425	13.225	**130.525**
Secretariat (salary)	5.080	5.599	5.673	5.756	5.485	**27.593**
Running Costs	2.670	2.145	2.145	2.545	1.545	**11.051**
Host institutions' direct costs associated with DDEA	918	931	945	959	974	**4.727**
Total	**32.743**	**47.800**	**49.039**	**43.886**	**26.429**	**199.896**

7. Sustainability

DDEA will develop a strategy for fundraising to ensure additional funding to the key activities to seek an opportunity for obtaining partly or complete sustainability beyond the five-year funding from NNF. The Managing Director and the Fundraising Officer will manage the fundraising strategy, as decided by the DDEA BoD.

DDEA will seek targeted sponsorships from relevant life science industry companies to cover the cost of invited speakers' travel and accommodation, the venue and poster prizes, in relation to the education and talent development activities. DDEA will also explore co-funding opportunities from life science industry in relation to grants for PhD scholarships and postdoctoral fellowships (*Chapter 4.3*).

To cover additional costs in relation to the proposed strategic partnership programme, DDEA will apply for funding from the NordForsk programme in collaboration with relevant partners. It is also our ambition that the proposed PhD programme in diabetes, endocrinology and metabolism will be taken over by the Danish universities' faculties of health and science.

In relation to networking and collaboration activities, DDEA will seek further funding through joint applications to the European Cooperation in Science and Technology (COST) programme to strengthen the strategic partnership programme. Further, relevant and participating companies from the life science industry will be asked to co-finance individual activities.

Fundraising for additional PhD scholarships and postdoctoral fellowships will involve collaborations with DCA, DDSA, and partners within the strategic partnership programme. Funding will be applied for through the Marie Skłodowska Curie Actions (Innovative Training Network programme and COFUND), NordForsk, other large foundations (e.g. the Lundbeck Foundation, the Tryg Foundation), and the life science industry.