

Danish Cardiovascular Academy

2021
Annual Report



Indhold

Introduction.....	2
Deliverables 2021.....	2
The 2021 objectives.....	2
Secretariat and organisational structure:.....	2
Educational Activities	3
Annual Summer Meeting 2021.....	3
Official Opening.....	4
Empower Your Talent.....	4
Planned activities for 2022 (major events).	4
Winter Meeting:	4
Summer Meeting.....	4
Introduction Course for Grant Recipients	5
Sex-Difference Course	5
Grant Call I.....	5
DCAcademy PhD Programme:.....	5
DCAcademy Postdoctoral Programme.....	5
Grant Call II.....	6
Future Perspectives:.....	6
DCAcademy Courses.....	6
Secretariat	6
DDA and DDSA collaboration:	6
Attachment A - DCAcademy employees.....	7
Attachment B - Activities 2021	8
Attachment C - Activities planned for 2022.....	9
Attachment D - Statistics for Grant Call I.....	10
Attachment E - Grant recipients Call I.....	11

Annual Report 2021

The Danish Cardiovascular Academy (DCAcademy) will in this first annual report provide a brief status on the administrative structure, an overview of the training, educational and funding activities undertaken by the Academy 2021 and the current planned activities for 2022.

Introduction

The main focus during the Academy's first year has been to establish a foundation for the Academy and to meet the deliverables outlined in the contract between the Academy, the Novo Nordic Foundation and The Danish Heart Association.

Deliverables 2021

As outline in the contract,

- February 2021: Recruitment of management assistant, talent and recruitment assistant, communications officer and secretary
- March 2021: Host the 1st Board of Directors meeting
- April 2021: Launch website
- May 2021: Send out 1st DCA Newsletter (4 pr. year)
- June 2021: International announcement for recruitment of visiting professors
- July 2021: IT infrastructure regarding applications established
- August 2021: Opening of call for DCA Elite scholar and fellowships
- December 2021: Announcement of grant recipients

With the deliverables as point of reference, the Executive Management team formulated a series of objectives for 2021, which should create a solid foundation for the Academy.

The 2021 objectives

- Establish the organisational and administrative setup
- Create awareness of the academy
- Establish a course portfolio of cardiovascular courses
- Host national courses and meetings
- Award the first PhD and Postdoctoral grants

We are extremely proud to announce that the Academy has achieved all of the 2021 objectives and as described in the following, truly outperformed the outlined deliverables.

Secretariat and organisational structure:

The secretariat is housed at Department of Biomedicine, Aarhus University with a hub housed at Department of Biomedical Science, University of Copenhagen. When fully staffed by February 2022, the secretariat will comprise of 2 Executive Directors, an Executive Assistant, 3 Course managers/coordinators and a communication officer. It has been pivotal for the executive

management team to put together a secretariat of different, yet relevant and synergistic, competences to ensure the Academy's ability to support the traditional scientific *modus operandi*, but also, and even more importantly, to be able to challenge and develop this *modus* into new, exciting and better ways of organising, hosting and executing events within the scientific communities. The secretariat thus includes 2 professors, a PhD-scholar in Physiology, a postdoctoral fellow in Biomedicine, a former professional windsurfer and adventure sport instructor, who also has a degree in sport science, a *cand.ling.merc* with expertise in scientific communication and a newly graduated *cand.mag* in English and Psychology. For details on the employees, please see attachment A.

The Academy has established the Board of Directors, the Grant Committee, the Training and Educational Committee, a PhD-advisory board, organizing committees for the upcoming winter and summer meetings, and are in progress of establishing an International Advisory Board. The Academy has also established a close relationship with the other Novo Nordisk Foundation supported academies, the Danish Diabetes Academy (DDA) and the newly established Danish Data Science Academy (DDSA). In our start-up phase, we have been very inspired by the DDA and their elaborate and high-end performance in terms of course portfolio and quality of courses and events. DDA has been of great help, and willing to share their knowledge and experiences with both course and event management and the administrative structure of the Academy, thus, with the help, support and inspiration from DDA, the Academy has come off to a flying start. Currently we are also creating strong ties with the newly established DDSA. We have weekly online meetings with DDA and DDSA and are sharing our experiences on how to start an academy. Together with DDA and DDSA, we are planning an NNF-Academy day in April for all Academy employees.

To create awareness of the Academy, the Executive Directors have in 2021 visited the university hospitals' cardiology departments and the major pre-clinical research groups. The focus of these visits has been to introduce the Academy and the mission and visions behind it, as well as to inform about the different grant types and the extensive training/education/meeting course portfolio. Furthermore, the Academy is committed to be present on social media platforms, such as LinkedIn, Twitter and Instagram.

Educational Activities

To create awareness of the Academy we set out with an ambitious educational programme. Thus, we have in 2021 hosted a total of 11 PhD-courses and events. Several of these activities have been held in collaboration with the Graduate School of Health and Medical Sciences, University of Copenhagen. In the following, we will briefly describe the highlights of the DCAcademy 2021 activities: the annual DaCRa/DCAcademy Meeting at Sandbjerg Gods in June, the official opening ceremony at Hotel d'Angleterre in collaboration with The Danish Heart Foundation, and the Empower Your Talent-course in Aarhus in November 2021.

See Attachment B for complete overview of DCAcademy 2021 activities.

Annual Summer Meeting 2021

The Sandbjerg meeting marked the official transition from the former DaCRA to the Danish Cardiovascular Academy as the unifying organ within the Danish cardiovascular environment. Due to Covid-19 restrictions, a restricted number of participants were allowed. However, the

Academy gathered more than 60 participants, varying from scholar and master students to PI's and the Senior Vice President of the Novo Nordisk Foundation. With more than 20 speakers, international participants and successful networking activities, the meeting was both an organisational success and promoted the Academy in the best possible way to the cardiovascular research communities. We further instituted a "Lifetime Achievement Award" for a unique and long-lasting contribution in Denmark to the cardiovascular field. The first recipient of the award was Professor Michael J Mulvany who has made a lifetime contribution to vascular research in Denmark.

Official Opening

The official opening of the Academy was celebrated In November. In the presence of Her Royal Highness Crown Princess Mary, the Academy was declared open by Managing Director Christian Aalkjær and member of The Board of Directors and CEO of The Danish Heart Foundation, Anne Kaltoft. The ceremony was held at Hotel D'Angleterre in connection to The Danish Heart Foundations Annual prize ceremony.

Empower Your Talent

In November, the Academy hosted the course Empower Your Talent. The aim of the course was to inspire participants with tools to undergo personal development, both in a private and work-related context. To underpin the objective of creating awareness of the Academy among the Danish cardiovascular PhD and postdoctoral students, we engaged some of the most prominent speakers in Denmark. To give inspirational lectures, we invited leading cardiovascular researchers within both industry, the pre-clinical and the clinical setting. The course also included workshops on topics such a meaningfulness with philosopher Morten Albæk, "The influence of music in the brain" by Prof. Peter Vuust, and Career planning and ample time for networking and socializing.

Planned activities for 2022 (major events).

It is the Academy's intention to continue the high level of activity achieved in 2021. Together with the Training Committee we have therefor outlined an ambitious course programme for 2022. Some of the highlights will be the DCACademy Winter and Summer Meetings, the introductory courses for the first grant recipients and a three-day meeting at Sandbjerg Gods on Sex Differences with +10 international highly esteemed speakers. The highlights are briefly described in the following. For full programmes, please visit the Academy webpage. www.dcacademy.dk. For an overview of current planned 2022 activities, please see attachment C.

Winter Meeting:

Applicability and Global Impact of Research are the themes for the upcoming DCACademy Winter Meeting. A four-day meeting for 32 postdoctoral fellows held in Malaga, Spain in March. Through challenge work, scientific sessions and workshops, the meeting will give the participants a broader perspective on global scientific impact and applicability of their research, as well as increase their transferable skills within publication, communication, presentation and career development.

Summer Meeting

The Annual Summer Meeting is a three-day meeting in June at Hotel Sinatur Storebælt, Nyborg, with expected 150 participants from both preclinical and clinical research. The meeting is a

mixture of a PhD course, a scientific meeting with international speakers as well as the annual celebration of the Danish cardiovascular research environment. The meeting offers an opportunity for young researchers to present their project findings and interact with senior scientists.

Introduction Course for Grant Recipients

All DCAdemy grant recipients are invited to a 1 ½ -day obligatory introduction course. The course will introduce the grant holders to the Academy and to the Danish cardiovascular research environment. At this course, participants will be appointed official science ambassadors for the Danish Heart Foundation, and through mentoring circles and networking activities we aim to give the DCAdemy grant holders the best possible offset for their cardiovascular research projects.

Sex-Difference Course

In September, we are organizing a three-day course on the importance of sex and gender differences in cardiovascular research. There are well known and important sex differences in the pattern of cardiovascular disease and many studies have a sex/gender bias, which may compromise the applicability of the research results. With this course, we wish to put focus on this problem. The course programme is set up by two prominent Danish researchers, one pre-clinical and one clinical researcher, with interests in sex related issues. The course is organized in collaboration with DDA and DDSA with DCAdemy as the lead organizer.

Grant Call I

The first DCAdemy Call for PhD and Postdoctoral grants opened in June 2021 with a deadline 10th September 2021. The Call offered a total of 12 PhD Scholarships and 8 Postdoctoral Fellowships. The call was open to projects within any field of cardiovascular research and all applications were evaluated by the independent Grant Committee. The Committee consists primarily of international experts and are thus unbiased towards the Danish research environments. We received a total of 107 applications for the 20 grants, and the success rate was similar between genders and with respect to geography. See attachment D + E for further details.

DCAdemy PhD Programme:

The first call offered a total of 12 scholarships. Six of these to be either 1/3 or 2/3 PhD scholarships and 6 to be full scholarships co-financed by The Danish Heart Foundation. We received a total of 68 applications. All applications were initially evaluated by three reviewers and given one score. The 24 highest ranked applications were triaged for further evaluation at the Grant Committee meeting, held in Copenhagen 2nd -3rd December. At the meeting, each application was presented for the Committee by one of the reviewers before the application was discussed and finally granted or rejected.

DCAdemy Postdoctoral Programme

In Call I, the Academy awarded a total of eight Postdoctoral Fellowships. Five of these were 2-year full Postdoctoral Fellowship and three were 5-year 20 % clinical Fellowship supported by the Danish Heart Foundation. All applications were assessed by the Committee and the 16 highest rated were discussed at the Grant Committee meeting.

Grant Call II

In January 2022, we opened our second grant call. Deadline was 2. March 2022. We have received 87 applications for PhD and 51 applications for postdoctoral grants. The applications are currently undergoing review by the Grant Committee.

Future Perspectives:

In 2022 the Academy will continue the work to become the unifying organ within the Danish cardiovascular environment. In addition to the contractual deliverables, we have therefor outlined a number of strategic objectives and future perspectives for the main areas of the Academy.

DCAcademy Courses

The academy is dedicated to develop new and exciting courses underpinning the overall aim of providing excellence in training and education of young Danish researchers, but also, to increase its appeal to more senior scientists.

Secretariat

At the secretariat we will continue to strive for a working environment with focus on wellbeing for the employees by having an informal tone, interesting projects and meaningful tasks.

DDA and DDSA collaboration:

At the Academy we would like to nurture our close collaborations with DDA and DDSA with focus on areas with the potential to generate synergies. This could be a shared online platform for pod cast and video-lectures. Preferably hosted by NNF and be supported by a professional production company. We are also discussing the possibility of a the Academies in collaboration, and together with NNF, hosting an international conference in Copenhagen on CardioMetabolics in 2025, with 2,500 participants.

Attachment A - DC Academy employees

Executive Managing Director: Christian Aalkjær

Background: Dr.Med., PhD, MD, Professor in Physiology at Copenhagen and Aarhus University.
President of the Society for Microcirculation

Main tasks: Responsible for the over all performance of the Academy, it´s operation and strategy.

Executive Training Director: Thomas Jespersen,

Background: Dr. Med., PhD, MSc Professor in Biophysics of Cardiac Arrhythmia

Main tasks: Responsible for the Academies Training and Educational activities and strategy.

Executive Assistant, Head of Administration: Emil Toft Brøndum,

Background: MSc. In Biology, Ph.D. in medicine and portfolio management. Extensive experience in administration and project management from both university and hospital.

Main tasks: Coordinating the day-to-day operations and administration, supporting the executive directors in developing and reaching strategic goals.

Training Manager: Xenia Kessler,

Background: Journalist, BA physical education, former professional windsurfer and adventure sport instructor and training manager at Danish Sail Union.

Main tasks: Responsible for development, planning and execution of training and educational activities.

Communication Manager: Lene Skov Halgaard,

Background: cand.ling.merc., eight years of experience in dissemination of technical knowledge,

Main tasks: responsible for branding and communication, web and social media.

Course Coordinator; Marie Bach Søgaard,

Background: Cand. mag. In English and Psychology, experienced PhD-career event coordinator.

Main tasks: supporting development, planning and execution of training and educational activities.

Course Coordinator – CPH office; Arnela Saljic, post. doc.

Background: Msc.,PhD and Postdoctoral fellow at Dept. Biomedical Science, University of Copenhagen.

Main tasks: Planning and execution of training and educational activities in Copenhagen.

Attachment B - Activities 2021

Startdato	Slutdato	Kursusnavn	Universitet	Lokation
06-06-2021	08-06-2021	Sommermøde	DCA	Sønderjylland
25-08-2021	03-09-2021	Cardiovascular Winter School for PhDs	KU	KBH
21-10-2021	21-10-2021	Jepps Hybrid: "Understanding pathomechanisms of cerebral small vessel disease - basic and clinical research", Philip Ulbrich	KU	Hybrid/UCPH: MT15 room 7.15.92
28-10-2021	28-10-2021	Kursusdag på diabetes academy kursus (3. dag)	DDA	Nyborg
28-10-2021	28-10-2021	Jepps Hybrid: "Understanding the heartbeat at the nanoscale", William Louch	KU	Hybrid/UCPH: Faculty Club 16.6.16
01-11-2021	28-10-2021	Registerkursus	KU	København
02-11-2021	02-11-2021	"A multifaceted role for Pannexin1 in ischemic heart disease.", Brenda Kwak	KU	Hybrid/UCPH: Faculty Club 16.6.17
11-11-2021	12-11-2021	Empower your talent - DCAcademy elite course (promo) Promokursus DCA	DCA	Aarhus
11-11-2021	12-11-2021	Honorary Symposium for Prof. Mary Sheppards (+ hæderspris)	KU	KU, Maersk Building
25-11-2021	25-11-2021	ArteriKlubben - SDU/OUH Symposium on Artherosclerosis	OUH	Odense
11-01-2022	12-01-2022	Cardiovascular Winter school	KU	KU

Attachment C - Activities planned for 2022

Startdato	Slutdato	Kursusnavn	Universitet	Lokation
11-01-2022	12-01-2022	Cardiovascular Winter school	KU	KU
11-02-2022	11-02-2022	"Cardiac arrest survivors - diagnostic workup", Bo Winkel	KU	Hybrid/UCPH: Faculty Club 16.6.18
14-02-2022	16-02-2022	CMR værktøjskursus	KU	København
24-02-2022	25-02-2022	EKG	KU	København, RH + UCPH
11-03-2022	12-03-2022	Introkursus	DCA	Gl. Avernæs
27-03-2022	30-03-2022	Winter Meeting Postdoc.	DCA	Malaga
29-03-2022	08-04-2022	PhD Spring School: CARDIAC ELECTROPHYSIOLOGY - BASIC AND CLINICAL ASPECTS	KU	Taastrup/Panum/RH
04-04-2022	08-04-2022	VASCULAR FUNCTION AND ANGIOGENESIS IN RELATION TO HEALTH AND PHYSICAL ACTIVITY	KU	Sjælland
20-04-2022		AU Netværksarrangement	AU	Skejby Sygehus
20-04-2022	22-04-2022	HYPERTENSION, DIABETES AND CARDIOVASCULAR DISEASE (DDA, DDSA, DCA)	SDU	Korsør
16-05-2022	20-05-2022	Integrative Human Cardiovascular Control	KU	KU
02-06-2022	04-06-2022	DCAcademy Summer Meeting	DCA	Sinatur, Nyborg
01-08-2022	01-08-2022	DCA Introkursus 2 / program del 2 for hold I	DCA	Gl. Avernæs
22-08-2022	23-08-2022	Human Physiology in Extreme Environments	KU	KU
14-09-2022	16-09-2022	Sex-diff T2D	AU	Sandbjerg
12-10-2022	14-10-2022	Metabolisme kursus		Nyborg
November		Empower 2.0	KU	KBH
November/december		Internationalt kursus		
		Koronar fysiologi og hæmodynamik	AAU	Aalborg

Attachment D - Statistics for Grant Call I

DCAcademy PhD Programme	Total # applicants	# Granted	Succes rate
KU	37	8	22%
AU	19	2	11%
SDU	9	2	22%
AAU	1	0	0%
DTU	2	0	0%
Female	39	7	18%
Male	29	5	17%
DCAcademy Postdoctoral Programme	Total # applicants	# Granted	Succes rate
KU	22	3	14%
AU	5	1	20%
SDU	6	1	17%
AAU	4	0	0%
DTU	0	0	0%
Female	23	5	22%
Male	16	3	19%
DCAcademy Grant Programme (total)	Total # applicants	# Granted	Succes rate
KU	59	11	19%
AU	24	3	13%
SDU	15	3	20%
AAU	5	0	0%
DTU	2	0	0%
Female	62	12	19%
Male	45	8	18%
Distribution of research areas	Total # applicants	# Granted	Succes rate
PhD - Basic research	24	5	21%
PhD - Clinical research	35	7	20%
PhD - Epidemiological research	8	0	0%
PhD - Public Health research	1	0	0%
2-year full time postdoc	27	5	19%
5-year 20% clinica postdoc	12	2	17%

Attachment E - Grant recipients Call I

Student	Gender	University	Stipend	Area	Title
Simon Libak Haugaard	Male	UCPH	2/3 PhD	Basic research	Investigating the role of fibroblast activation in atrial fibrillation pathophysiology
Kristoffer Grundtvig Skaarup	Male	UCPH	Full PhD	Clinical research	Influenza and the Heart: An investigation into the acute and lasting cardiac effects of influenza infection
Sandra Hummelgaard	Female	AU	2/3 PhD	Basic research	The role of PCSK9 in kidney and cardiovascular diseases
Selma Hasific	Female	SDU	Full PhD	Clinical research	Coronary artery atherosclerosis and clinical consequences associated to vitamin K2 supplementation and vitamin K antagonist treatment
Kristina Cecilia Miger	Female	UCPH	Full PhD	Clinical research	Value of lung ultrasound, chest radiographs, chest CT and artificial intelligence to diagnose acute heart failure in unselected breathless patients: an interdisciplinary prospective study
Rasmus Henrik Reeh	Male	UCPH	Full PhD	Basic research	Modern society with irregular work-, sleep-, eating- and physical activity-patterns challenges human circadian rhythm, perturbing multiple physiological functions and predisposing to lifestyle-related cardiometabolic diseases
Pauline Kromann Reim	Female	UCPH	2/3 PhD	Basic research	Fetal growth and cardiometabolic diseases – an in-depth evaluation of the underlying genome, transcriptome and proteome
Katja Vu	Female	UCPH	2/3 PhD	Clinical research	Effects of Dapagliflozin on Echocardiographic Measures of Cardiac Structure and Function in Patients with Chronic Kidney Disease (DECODE-CKD)
Katja Thorøe Michler	Female	UCPH	2/3 PhD	Basic research	Fishing for novel targets: Omega-3 fatty acid-derived metabolites reduce risk of cardiovascular disease
Katrine Aagaard Myhr	Female	UCPH	Full PhD	Clinical research	T1 mapping in patients with symptomatic and asymptomatic aortic stenosis before and after aortic valve replacement
Henrik Laurits Bjerre	Male	AU	Full PhD	Clinical research	Novel technologies in pacing with cardiac implantable electronic devices
Nicolai Bjødstrup Palstrøm	Male	SDU	Full PhD	Clinical research	Identification of Plasma Protein Biomarkers Predictive of Abdominal Aortic Aneurysm Growth and Risk of Rupture

	Gender	University	Stipend	Area	Title
Marta Guindo Martínez	Female	UCPH	2-year Postdoc	Clinical research	Patient risk stratification for obesity to disentangle its link to cardiovascular disease
Maria Sofia Espejo	Female	AU	2-year Postdoc	Basic research	Bicarbonate sensing via RPTPgamma improves cardiac perfusion, limits inflammation, and protects against heart failure development
Nikolay Kutuzov	Male	UCPH	2-year Postdoc	Basic research	Decoding motion of microvessels in vivo with super-resolution microscopy
Sabrina Bech Mathiesen	Female	DSU	2-year Postdoc	Basic research	Maturation of induced pluripotent stem cell derived cardiomyocytes (iPSC-CMs) for heart repair
Freja Bach Kampmann	Female	Bispebjerg and Frederiksberg Hospital	2-year Postdoc	Clinical research	Effects of vitamin K supplementation on cardiovascular risk: a population-based placebo-controlled randomized study (The InterVitamink Trial)
Regitse Højgaard Christensen	Female	Rigshospitalet	5-year 20% Postdoc	Clinical research	Cardiovascular risk and cardiometabolic exercise effects in rheumatoid arthritis patients receiving interleukin-6 vs. tumor necrosis factor antibody therapy
Casper Bang	Male	Bispebjerg og Frederiksberg Hospitaler	5-year 20% Postdoc	Clinical research	The MAPP II Study - Monitoring of arrhythmias in patients treated with antipsychotics
Christoffer Polcwiartek	Male	Aalborg University Hospital	5-year 20% Postdoc	Clinical research	Statistical and mechanistic modeling of heart failure to improve cardiac resynchronization therapy response and increase life expectancy in patients with left bundle branch block