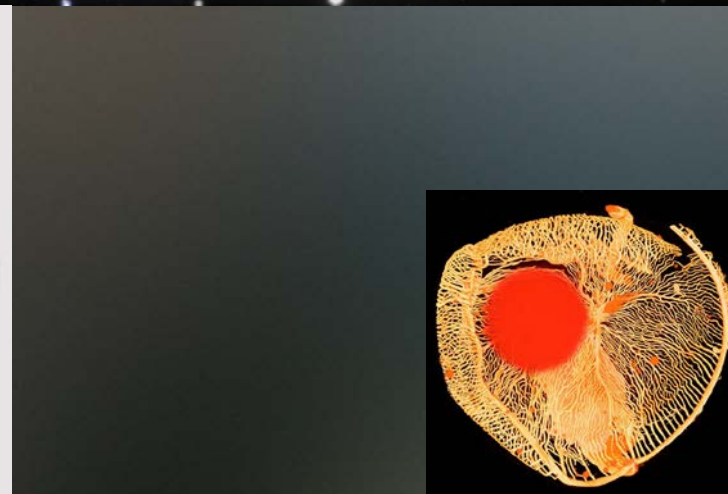
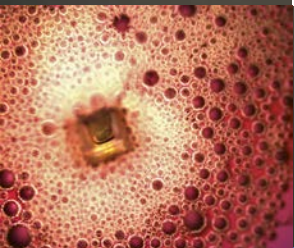


ANNUAL REPORT

2019



KEY FIGURES

	2019	2018	2017	2016	2015
Grants and distributions					
Total grants at year-end, centers and Niels Bohr professors	47	53	59	58	66
Annual distributions, million DKK	414.4	409.3	384.8	381.3	424.5
Return on investment					
Bonds and cash, million DKK	140.2	-12.6	128.6	218.6	-44.0
Equities, million DKK	484.4	-179.1	293.4	192.5	1.1
Total return, million DKK	624.6	-191.7	422.0	411.2	-42.9
Administrative costs					
Administrative costs including depreciation, million DKK	13.9	13.2	11.3	12.2	11.5
Administrative costs compared to distributions, %	3.4	3.2	2.9	3.2	2.7
Administrative costs per grant, million DKK	0.3	0.2	0.2	0.2	0.2
Capital					
Net capital at year-end, million DKK	5,841.0	5,468.5	6,086.2	6,064.2	6,051.8

CONTENT

04	Preface	42	Ongoing activities
08	10th application round – statistics	47	Total assets and return on investments
13	Meet the DNRF’s ten new centers	51	The board
24	Midterm evaluation of the 8th generation of Centers of Excellence	52	Statement by management
28	The DNRF’s annual meeting 2019	53	Independent auditor’s report
37	The DNRF Photo Competition	56	Accounting policies
		58	Income statement January 1 – December 31
		58	Balance sheet
		59	Statement of changes in Net Capital for 2019
		59	Notes
		65	Secretariat

PREFACE

Excellent basic research within all fields of research

The Danish National Research Foundation supports the best basic research within all fields in Denmark. After a thorough application process, the board selects the centers that are awarded one of the foundation's — relatively speaking — few but long-term and financially large grants.

The grants are awarded to people who have shown a special talent for developing groundbreaking research ideas, people who have experience in leading research groups, and people who enjoy international recognition and who, to a large extent, can create dynamic environments for top research, where younger researchers can develop and spearhead the next generation's research efforts.

The foundation's centers have a time horizon, a size, and a diversity that enable them to pursue long-term, risky research strategies and to reassess them along the way. You can meet the foundation's 10 new centers on pages 13-23 and read more about the application round on pages 8-12.

First year as chair

Last year was my first year as chair of the Danish National Research Foundation's board.

In 2019, we completed both an application round and a midterm evaluation of the centers from the foundation's 8th application round. It was inspiring to receive so many good applications from a wide field of research, and it has been interesting to gain insight into what a center achieves in the course of its first grant period. At the Danish National

Research Foundation, we are looking forward to continuing a close and fruitful collaboration with the research institutions at both the new and the established centers.

Strategic basic research with a transformative potential

On November 1, 2019, the foundation held its annual meeting. The theme at the 2019 meeting was transformative research, a topic that has gain renewed attention in connection with the start-up of the initiative to establish the Pioneer centers.

The Danish Parliament's parties allocated 177 million DKK for the Pioneer initiative, which will contribute to ensuring that Denmark maintains its position among elite research groups, globally speaking.

“ Denmark needs this type of large, strategic investments in order to solve the global societal challenges that we are all facing.

The Danish National Research Foundation, together with the Carlsberg Foundation, the Lundbeck Foundation, the Novo Nordisk Foundation, and the Villum Foundation, has agreed to collaborate on financing the Pioneer centers with a total amount of 1 billion DKK.

The ambition is to establish excellent research units that conduct basic research with a strategic aim of solving some of the great societal challenges within two selected topics: artificial intelligence and climate/energy. The focus is on building and further developing competencies targeted to knowledge-based solutions, rather than on mapping these research areas in further detail.

The implementation of the initiative is off to a good start, and we are enthusiastic about this ambitious, strategic stake in basic research.

Denmark needs this type of large, strategic investments in order to solve the global societal challenges that we are all facing.

The next generation

It is also important for Denmark that young researchers have the right conditions under which they can develop into the next generation of top researchers. Starting in the fall of 2019, the foundation has addressed the theme Centers of Excellence as Optimal Training Grounds for the Next Generation of Independent Principal Investigators at the annual follow-up meetings with the foundation's grantees. We will share what we have learned from these meetings with a wider group of stakeholders at the foundation's annual meeting in September 2020.

Over the last year, we have seen evidence that this generation's opportunities to obtain grants are somewhat limited, but we've also seen examples of talented researchers who get great support from senior principal investigators who help these younger researchers to establish themselves as independent PIs. At the 2020 annual meeting we will both share best practice experiences and discuss strategies with a wide circle of stakeholders from Denmark and abroad under the heading The Next Generation.

The board

In 2019, the board renewed its focus on "good governance," and it used the Committee on Foundation Governance's recommendations as points of orientation. The board has updated its Rules of Procedure with the

“ It is a strength for Denmark that we have foundations with different strategies for supporting research.

relevant recommendations. Among the new initiatives are; implementing an annual evaluation of the board and CEO, providing more systematic information about board members on the foundation's website, and publishing the Rules of Procedure on the [DNRF's website](#).

As we entered 2020, the foundation welcomed to the board Vigdis Broch-Due, Professor of social anthropology at the University of Bergen. The foundation's board totals nine people, five of whom are employed at foreign universities and four at Danish universities. You can meet the board members [here](#).

Communicating research to the public

In 2019, the emphasis of the foundation's communications has been on developing the

initiatives that were launched in 2018. The primary focus has been on communicating about our grantees' research via social media, the DNRF website, and newsletters. A new initiative was launched on the DNRF's website in April 2019: we established [a section showing the different ways](#) in which grantees engage the public in their research. The grantees are doing an impressive job, engaging the public in everything from Citizen Science projects to exhibitions and public lectures. Furthermore, it is gratifying to witness the enthusiasm and great skills with which the grantees communicate on their own Twitter accounts.

For the third year in a row, the foundation has invited all branches of the Danish research community to participate in the DNRF's photo competition, which is based on a photograph's

potential as documentation and communication of scientific research. Again in 2019, it was inspiring to see the creative, enlightening, and beautiful contributions submitted to the competition. The winners are portrayed on pages 38-41, and more examples and more detailed information about the competition can be found on the [DNRF's website](#).

Excellence continued

The Danish National Research Foundation values the collaboration with operators in the research community. In 2019, it was a great pleasure to expand our collaboration with the private foundations — the Carlsberg Foundation, the Lundbeck Foundation, the Novo Nordisk Foundation, and the Villum Foundation — in connection with the implementation of the Pioneer centers initiative.

The initiative has put us in touch with a large number of operators from Danish universities, and we are pleased with the great interest shown in the initiative. The foundations emphasize their joint ownership of the Pioneer centers and agree that the centers should be founded on ideas from the best and most visionary researchers in the global research community.

In 2019, we were also pleased with the innovative contributions to our discussion on the topic of transformative research. President of the Karolinska Institute, Ole Petter Ottersen; chair of the board of the Carlsberg Foundation, Flemming Besenbacher; and Professor Marie Louise Nosch showed what transformative research means in different research fields. The head of research at the Confederation of Danish Industry (DI) Mette Fjord Sørensen; chair of the board of the Independent Research Fund Denmark (DFF) David Dreyer Lassen; and CEO of the Novo Nordisk Foundation Birgitte Nauntofte, each from his or her perspective, shed light on different approaches and strategies for supporting research that has a potential to yield transformative solutions to great societal challenges.

It is a strength for Denmark that we have foundations with different strategies for supporting research and different approaches to solving great societal challenges.

However, there was wide consensus at the annual meeting that Denmark must dare to invest more. Danish research's significant and documented relevance to business and industry is evidence that increased investments in research will provide room to maneuver that can accelerate the green transition.

In 2019, Denmark got a new minister for Higher Education and Science, Ane Halsboe-Jørgensen, who, backed by her government, has great ambitions for the green transition.

We are looking forward to contributing to the accomplishment of those ambitions, together with the public and with the private research financing foundations.

Professor Jens Kehlet Nørskov
Chair of the board of the DNRF

Professor Søren-Peter Olesen
CEO of the DNRF

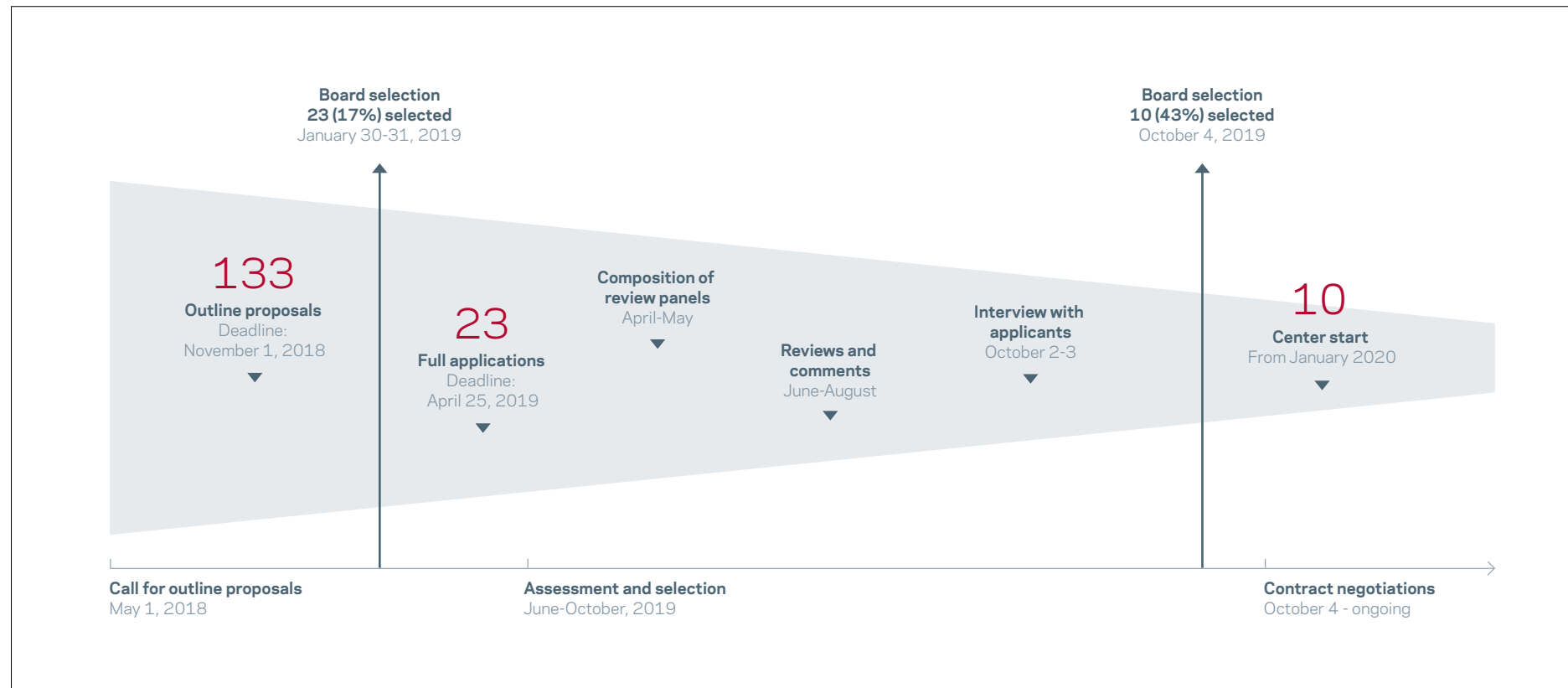


10TH APPLICATION ROUND FOR CENTERS OF EXCELLENCE

APPLICATION PROCESS

The Danish National Research Foundation's board made its decision regarding the foundation's 10th application round on October 4, 2019.

Prior to the decision came a thorough two-phase application process, starting with the announcement of the call on May 1, 2018, and the deadline for submission of outline proposals on November 1, 2018.

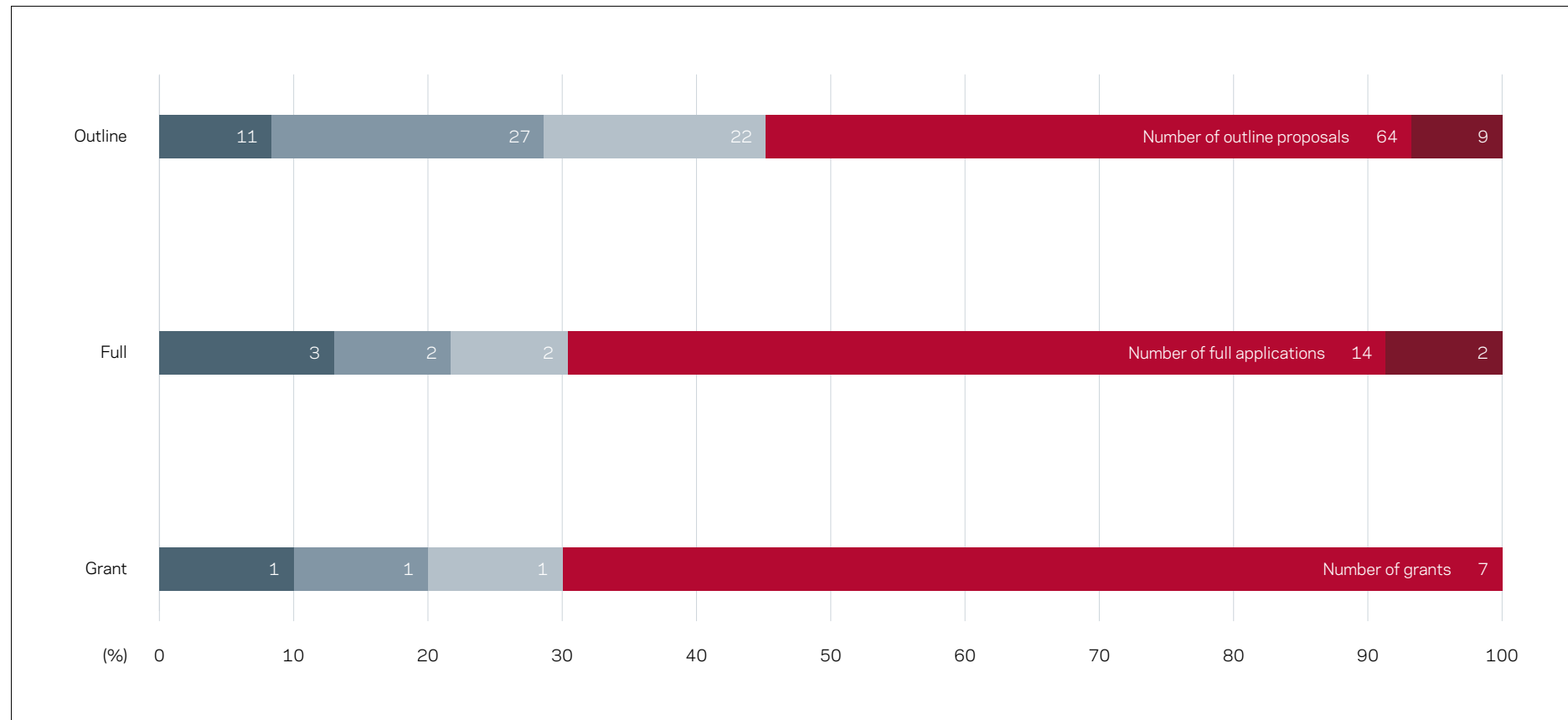


OUTLINE PROPOSALS, FULL APPLICATIONS AND GRANTS DISTRIBUTED ON FIELDS OF RESEARCH

The division into main fields of research is somewhat artificial, since approximately half the centers are interdisciplinary across main fields. Counting interdisciplinarity within the main fields, almost all centers have an interdisciplinary research portfolio.

The distribution of outline proposals among the five main fields of research usually presents an overweight of proposals from the life sciences and the natural sciences. In this application round the foundation received fewer proposals from the life sciences and an increasing number from the humanities compared to previous application rounds.

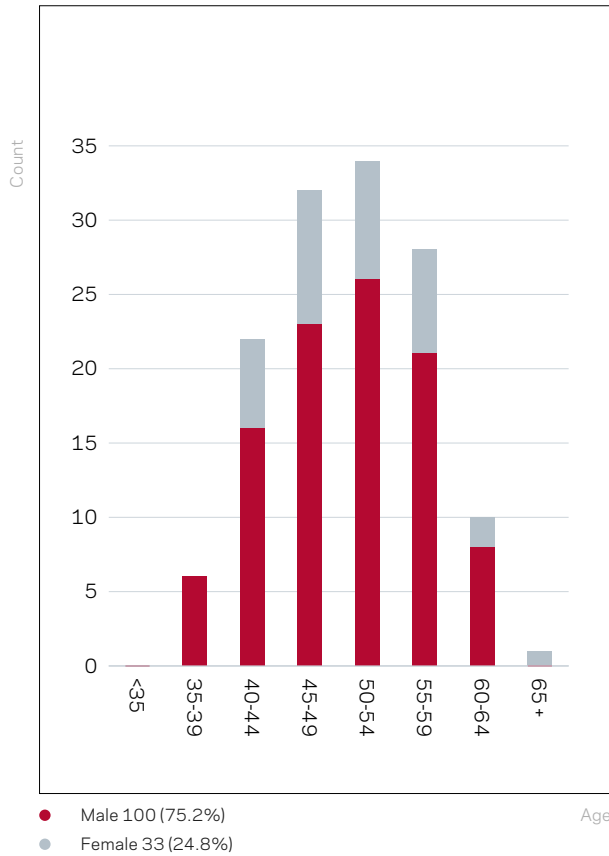
- Engineering and Technology
- Humanities and the Arts
- Medical and Health Sciences
- Natural Sciences
- Social Sciences



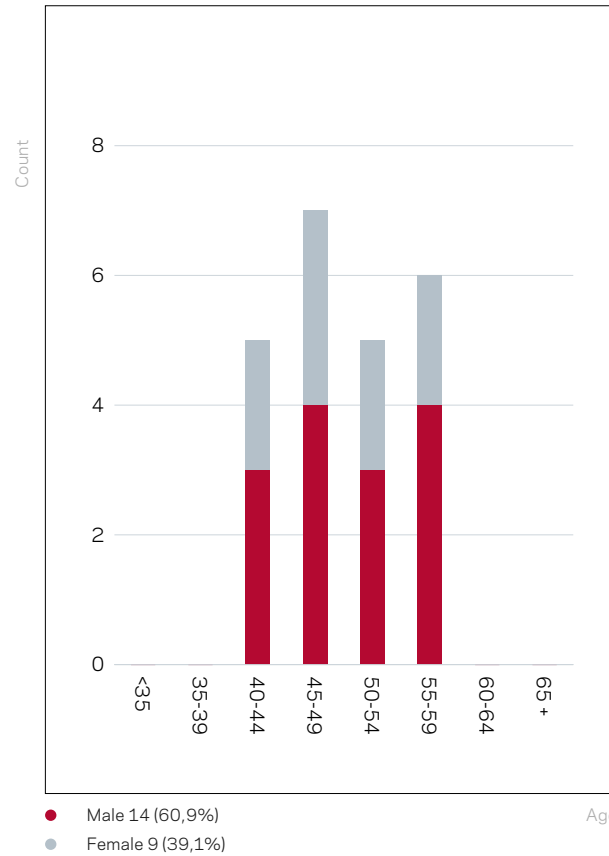
GENDER/AGE DISTRIBUTION FOR OUTLINE PROPOSALS, FULL APPLICATIONS AND GRANTS

The Danish National Research Foundation monitors the ratio of women to men at centers and encourages the centers to aim for gender balance among the staff.

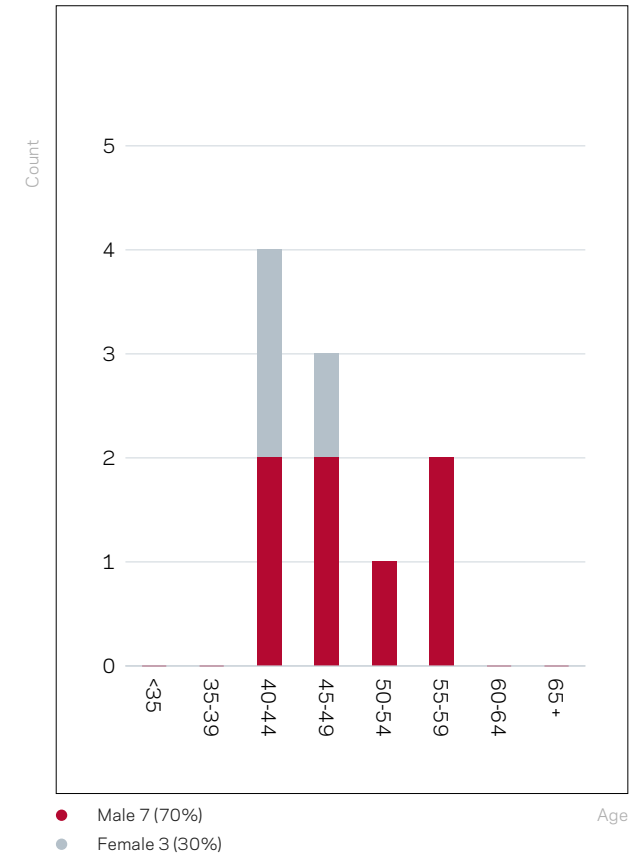
Gender/age distribution for outline proposals



Gender/age distribution for full applications



Gender/age distribution for grants

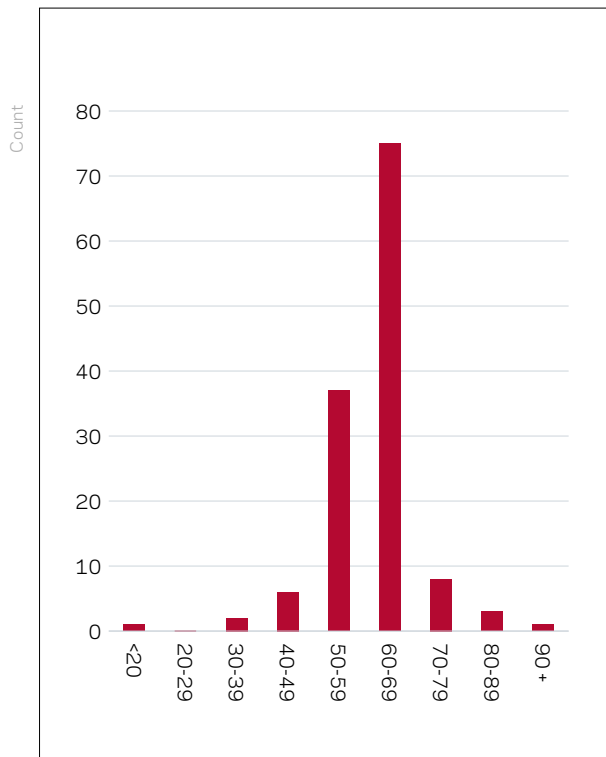


DISTRIBUTION OF APPLIED AMOUNT FOR OUTLINE PROPOSALS, FULL APPLICATIONS AND GRANTS

There is no fixed formula for creating a CoE. The centers may differ in size and mode of organization, depending on their subject and scope. Centers of Excellence can consist of one or more research groups that work together in an ambitious and visionary way to solve complex research questions. Some centers become rather large during the grant period, employing more than 60 people divided into several research teams, while others have fewer than 15 members.

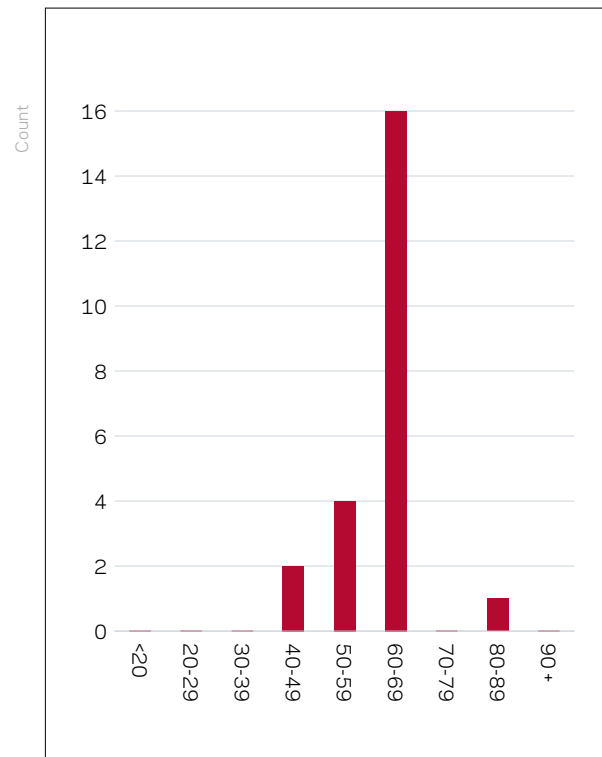
The important thing is that the center members share a common idea or vision and have a well-defined framework for cooperation, so that the sum of the center creates synergy in bringing together complementary competencies in a way that surpasses what the individual elements could achieve.

Outline proposals



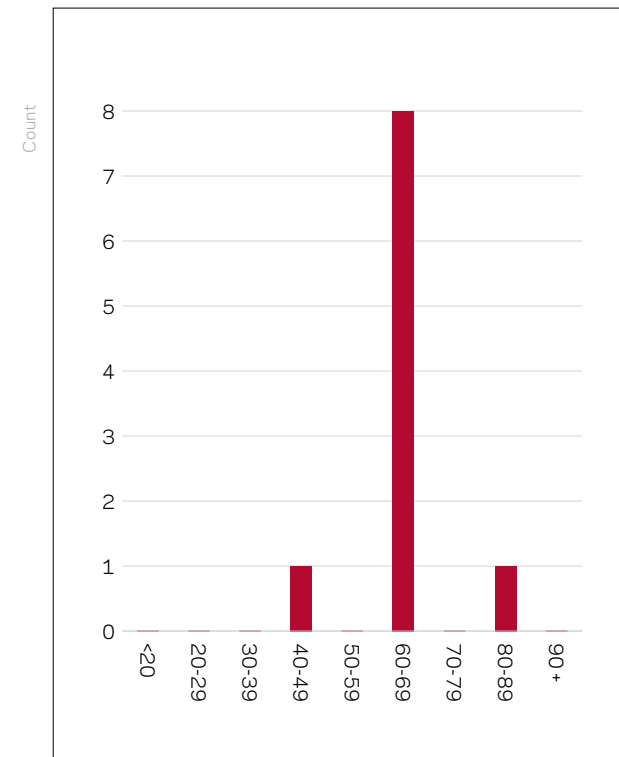
Amount MDKK

Full applications



Amount MDKK

Grants



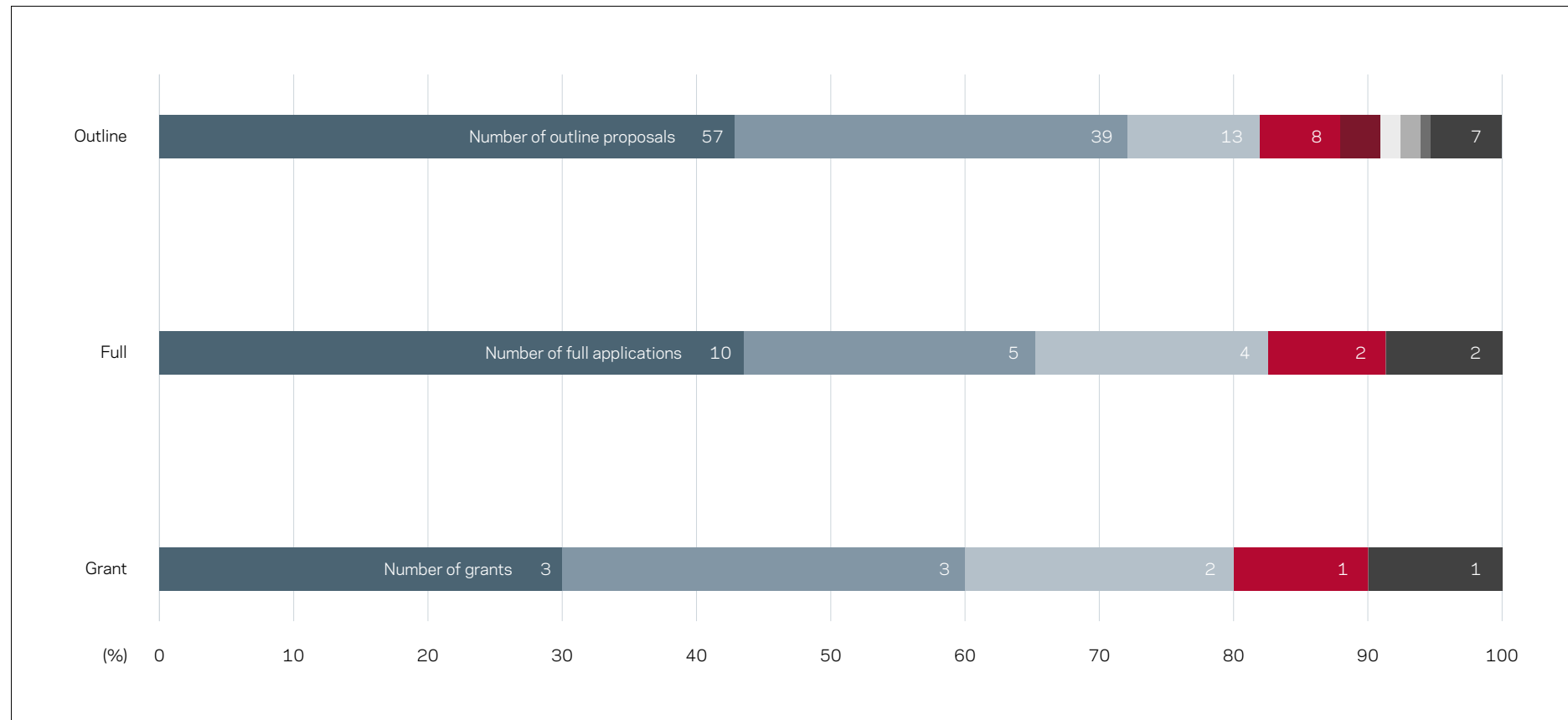
Amount MDKK

OUTLINE PROPOSALS, FULL APPLICATIONS AND GRANTS DISTRIBUTED ON HOST INSTITUTIONS

The figure states the center's main host institution. However, several centers have nodes at other institutions.

The foundation always encourages the best researchers to establish the strongest possible research environments at or across Danish research institutions.

- KU
- AU
- DTU
- SDU
- RUC
- AAU
- CBS
- ITU
- Others



MEET THE DNRF'S TEN NEW CENTERS

About CoE grants

"The Center of Excellence (CoE) program is the DNRF's primary funding mechanism and the foundation's flagship. A center grant is large and flexible, and a center may have a lifetime of up to 10 years. Only top researchers with the most ambitious ideas will be awarded a CoE through fierce competition involving a two-stage application process.

The objective of the CoE program is to strengthen Danish research by providing the best possible working conditions and organizational set-up for selected top researchers. It is the DNRF's clear strategy to focus on supremely talented individuals and provide them with sufficient funds, long-term funding horizons and autonomy. The CoE's may be established within or across all fields of research."

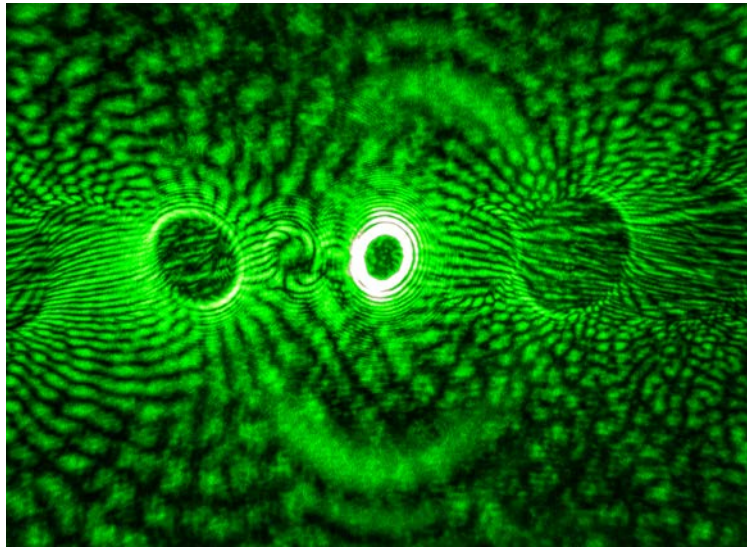
Note: Contract negotiations with the new centers are currently ongoing.

“ In Denmark, we are adept at creating the framework for excellent and interdisciplinary research environments that enable breakthroughs and the development of innovative solutions. On behalf of the Board of the DNRF, we are convinced that the future centers and center leaders will live up to this reputation and contribute to strengthening Denmark's position as a leading knowledge society.

Professor Jens Kehlet Nørskov, Chair of the DNRF

“ With the Centers of Excellence, it is the DNRF's vision is to provide a unique opportunity and frame for the researchers to create ground-breaking research. Research that may end up making a difference to the way we live and think.

Søren-Peter Olesen, CEO of the DNRF



CENTER FOR COMPLEX QUANTUM SYSTEMS (CCQ)



Center leader: Thomas Pohl

Host institution: Aarhus University

Period: 2020-2026

Grant: 66.6 MDKK

“ In CCQ we will design, explore and exploit emergent quantum phenomena in complex systems of light and matter. By harnessing and blending the individual properties across distinct physical platforms, we will engineer unique hybrid quantum systems with new collective properties and improved potential for future applications in science and technology.

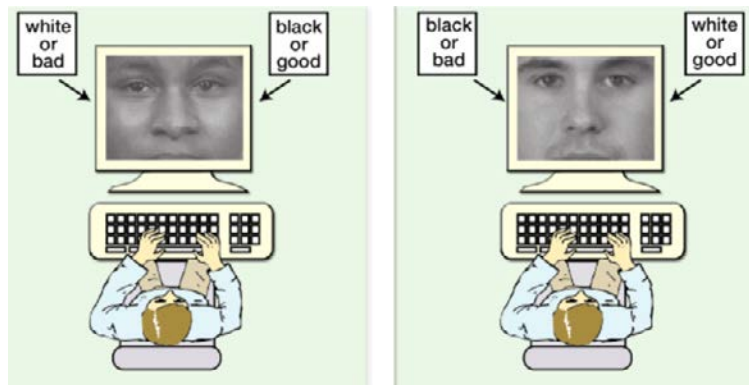


THE CENTRE FOR EVOLUTIONARY HOLOGENOMICS (CEH)



Center leader: Marcus Thomas Pius Gilbert
Host institution: University of Copenhagen
Period: 2020-2025
Grant: 67.7 MDKK

“ The Centre for Evolutionary Hologenomics (CEH) will develop and implement state of the art 'omics and associated computational techniques, to address through experimental and theoretical research, key themes underscoring the evolution and spread of life on earth.



CENTER FOR THE EXPERIMENTAL- PHILOSOPHICAL STUDY OF DISCRIMINATION (CEPDISC)



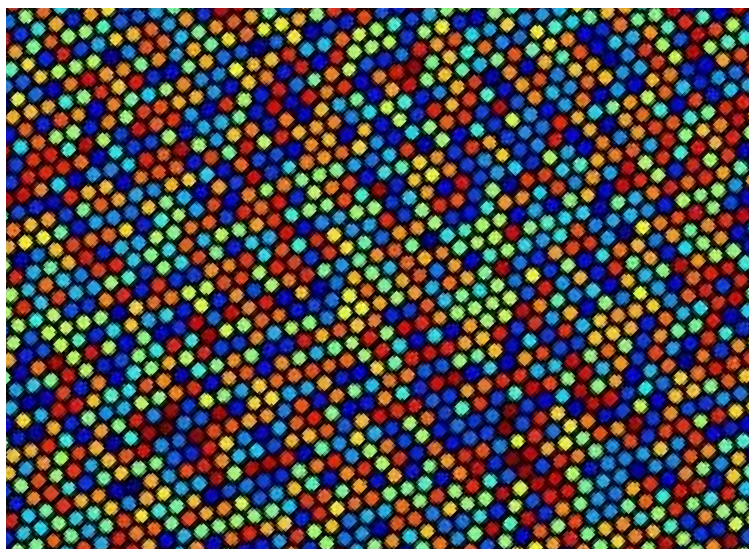
Center leader: Kasper Lippert-Rasmussen

Host institution: Aarhus University

Period: 2020-2026

Grant: 62.6 MDKK

“ CEPDISC’s vision is to explore the nature of discrimination from the perspective of experimental philosophy. Its core ambition is to provide an exemplar of a research program that integrates philosophical methods and the methods of experimental science in way that can be reproduced in the study of other topics in political philosophy.



CENTER FOR HIGH ENTROPY ALLOY CATALYSIS (CHEAC)



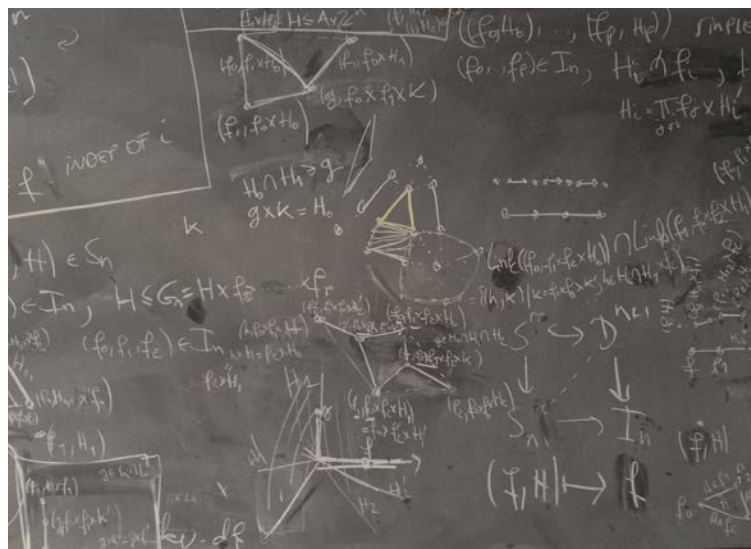
Center leader: Jan Rossmeisl

Host institution: University of Copenhagen

Period: 2020-2025

Grant: 61.1 MDKK

“ The vision is to pioneer the fundamental research in electro catalysis on High Entropy Alloys and thereby discover new catalysts for production of renewable chemicals. This includes developing the theoretical and experimental methodologies to start a statistical approach to catalysis.

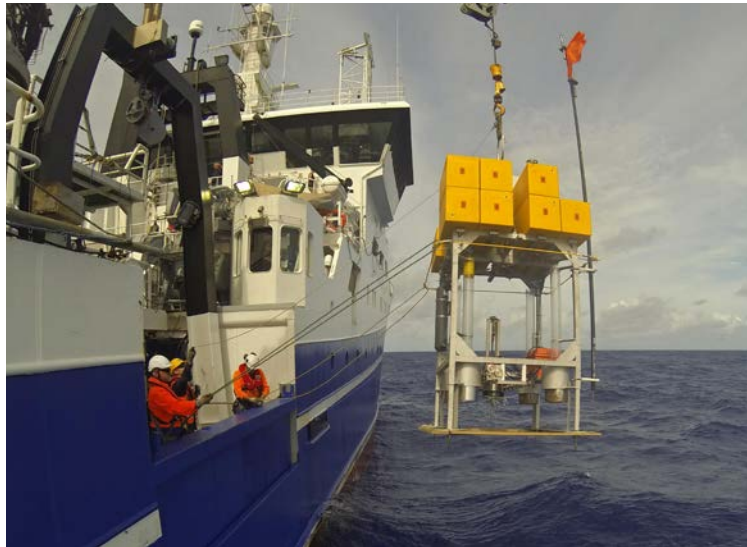


“ The goal of the Copenhagen Center for Geometry and Topology is to understand the topology of geometric structures. We seek to solve longstanding open problems at the intersection of geometry and topology, from the behavior of shortest paths to the shape of singularities, capitalizing on recent breakthroughs.

COPENHAGEN CENTER FOR GEOMETRY AND TOPOLOGY (GEOTOP)



Center leader: Nathalie Wahl
Host institution: University of Copenhagen
Period: 2020-2026
Grant: 60.2 MDKK



DANISH CENTER FOR HADAL RESEARCH (HADAL)



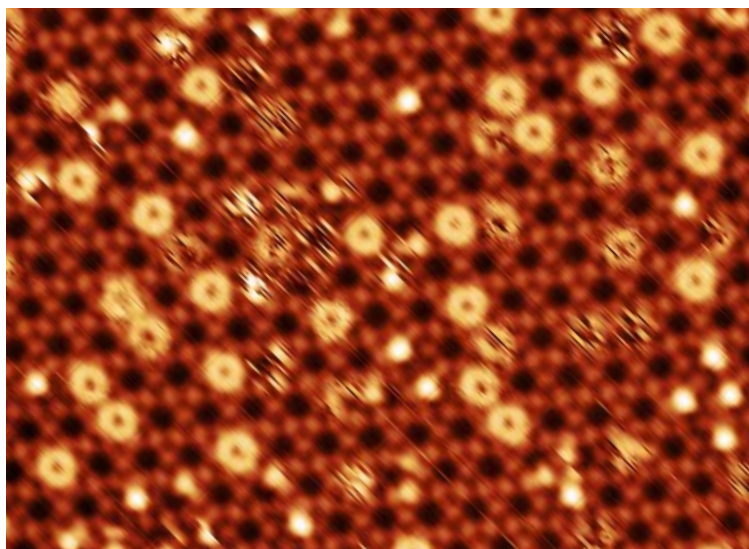
Center leader: Ronnie Nøhr Glud

Host institution: University of Southern Denmark

Period: 2020-2026

Grant: 54.6 MDKK

“ Using novel deep-sea instrumentation and experimental high-pressure facilities, HADAL will define the biogeochemical function and biological diversity of the deepest trenches on Earth, adding these unique and unexplored environments to our understanding of the global ocean.



CENTER FOR INTERSTELLAR CATALYSIS (INTERCAT)



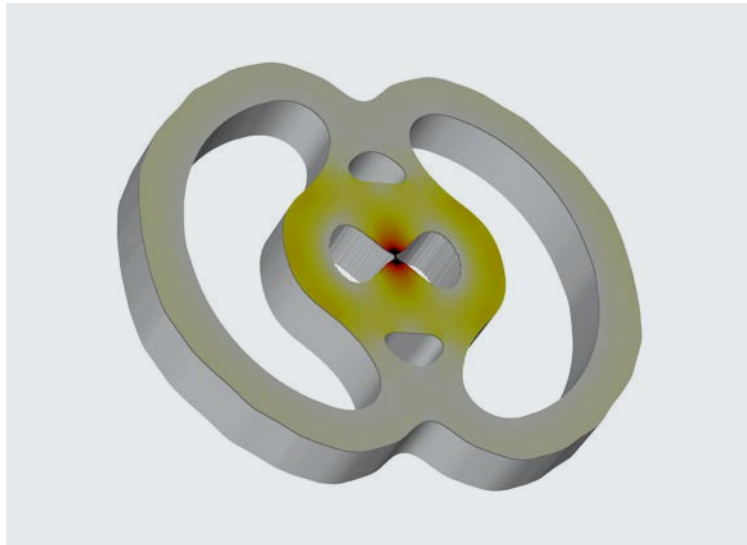
Center leader: Liv Hornekær

Host institution: Aarhus University

Period: 2020-2026

Grant: 67.4 MDKK

“ The goal of InterCat is to determine whether the molecular building blocks of life can form in interstellar space. We will uncover the degree of chemical complexity attainable via low temperature catalytic reactions on nanoscale interstellar dust grains, thus determining the molecular starting conditions for the origin of life across the universe.



CENTER FOR NANOPHOTONICS (NANOPHOTON)



Center leader: Jesper Mørk

Host institution: Technical University of Denmark

Period: 2020-2026

Grant: 62.5 MDKK

“ The research vision of NanoPhoton is to explore a hitherto inaccessible regime of extreme light-matter interaction in semiconductors, enabled by extreme confinement of light. Anticipated research breakthroughs will be used to solve fundamental outstanding challenges in chipscale information technology.



CENTER FOR MOLECULAR PREDICTION OF INFLAMMATORY BOWEL DISEASE (PREDICT)



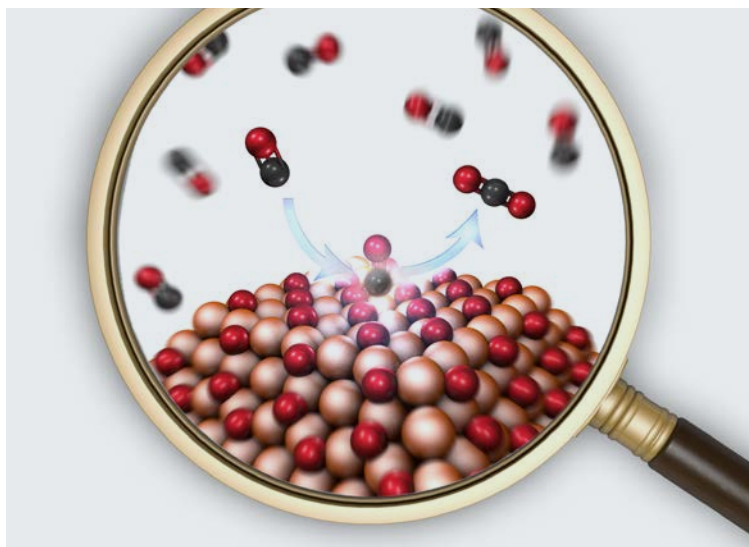
Center leader: Tine Jess

Host institution: Statens Serum Institut

Period: 2020-2026

Grant: 68.5 MDKK

“ PREDICT will unravel the biology behind the development and course of inflammatory bowel diseases, using unique Danish biobank and data resources. We aim to develop algorithms predictive for prognosis and treatment response, which may ultimately pave the way for personalized medicine in the field.



CENTER FOR VISUALIZING CATALYTIC PROCESSES (VISION)



Center leader: Stig Helveg

Host institution: Technical University of Denmark

Period: 2020-2026

Grant: 85.8 MDKK

“Catalysis — the science and technology of controlling chemical reaction rates — is key for producing sustainable chemicals, fuels and energy. Efficient catalysis of chemical reactions is achievable by nanoparticles, but understanding how their size, shape and structure affect catalytic processes is an immense scientific challenge.

VISION will address this challenge by combining new, emerging platforms for visualizing of the atomic structure, dynamics and functions of single nanoparticles during catalysis. With a radical new scientific paradigm, VISION will address the ultimate question in catalysis: how do single nanoparticles catalyze chemical reactions at the atomic level? By answering this question, VISION aims to make breakthrough scientific discoveries in thermal catalysis and electrocatalysis needed to tackle the grand environmental challenges of our time.

MIDTERM EVALUATION OF 8TH GENERATION OF CENTERS OF EXCELLENCE

It is a standard procedure of the DNRF to carry out a midterm evaluation approximately after five years of the grant's lifetime.

The evaluation is initiated by a the DNRF requesting the centers to submit a self-evaluation report and a research proposal for a new four-year funding period, along with a selection of publications by the center. The center is hereafter evaluated by three international experts within the center's

field(s). It is important that the members of the panel have, besides scientific expertise and status, considerable experience in research management and organization.

The members of the evaluation panel receive the center's self-evaluation reports, the first grant period's research plan and the center's application for a second grant period and a selection of the center's publications ahead of their evaluation. Further, the evaluation

consists of a site visit to the center for the evaluation panel. After the site visit, the evaluation panel produces a joint report.

The material which is produced in connection with the midterm evaluation will provide an overview of the center's research results, the ambitions for a second grant period, and an external evaluation of this.

The midterm evaluation forms part of the board's decision-making on the future of the center.

In 2019, the DNRF board decided to initiate contract negotiations for a second grant period with these 9 centers:



Center for Intelligent Oral Drug Delivery Using Nano And Microfabricated Containers (IDUN)

Center leader: Anja Boisen

Location: Technical University of Denmark



Center for Silicon Photonics For Optical Communications (SPOC)

Center leader: Leif Katsuo Oxenløwe

Location: Technical University of Denmark



Center for Neuroplasticity and Pain (CNAP)

Center leader: Thomas Graven-Nielsen

Location: Aalborg University



Center for Urban Network Evolutions (UrbNet)

Center leader: Rubina Raja

Location: Aarhus University



Center for Chromosome Stability (CCS)

Center leader: Ian D. Hickson

Location: University of Copenhagen



Carbon Dioxide Activation Center (CADIAC)

Center leader: Troels Skrydstrup

Location: Aarhus University



Center for Autophagy, Recycling and Disease (CARD)

Center leader: Marja Jäätelä

Location: The Danish Cancer Society



Center for Music In The Brain (MIB)

Center leader: Peter Vuust

Location: Aarhus University



Centre for Personalised Medicine of Infectious Complications in Immune Deficiency (PERSIMUNE)

Center leader: Jens Lundgren

Location: Rigshospitalet

EXCERPTS FROM THE EVALUATION REPORTS

- “ The center is an outstanding and world leading research center, which has made enormous impact in recent years. [...] The research agenda has followed the roadmap established in the original research agenda with different degrees of success. Some projects have reached results clearly beyond the state of the art while others have had less progress or even needed to be reconsidered. In our opinion this is exactly what one should expect from a center targeting extremely ambitious goals. The center has decided to follow a high-risk high-gain strategy towards quite challenging problems. The aim to pursue imaginative solutions to these problems is certainly very brave and can lead to very high added value.
- “ The Centre has made a number of ground-breaking discoveries that have impacted at a high level internationally. [...] It was also appreciated that many of the Centre group leaders are establishing themselves as independent investigators, with the expectation that projects will come to fruition in the next few years.
- “ We acknowledge the high levels of ambition and the center’s originality, novelty and quality. Clearly the researchers have been willing to take risks. The prudent approach with iterative discussions on research paradigms in the group, including careful piloting of experiments, led to successful outcomes and novel insights. The research questions are daring and risky, but the methodology led to truly novel outcomes.
- “ Bringing together different research expertises has the inherent risk of the lack of integrated focus. In any case, this can also be considered a strength if the collaborations are indeed strengthened by the existence of the center, and preliminary evidence from these initial years indicates that this is indeed the case. [...] The complementary strengths of the center-groups provide them with a unique opportunity to reach pioneering and fundamental discoveries.
- “ The center leader is a recognized world-leading researcher in the field. Taking into account the outcomes of the center in such a variety of topics during the first four years we would say that he has largely shown his qualifications as supervisor and team leader.

“ The D NRF is all about also daring to support the unpredictable basic research in which some things succeed beyond our expectations and some things fail. As documented in the midterm evaluation reports, the D NRF Centers of Excellence are highly ambitious and visionary, risk taking in their approach, strong in leadership, and supportive of the talented young scholar’s scientific freedom.

The reports also show that interdisciplinarity and risk taking depend on competent leadership and well-founded, systematic methodology in order to reach the scientific breakthroughs that are the ultimate goals.

Søren-Peter Olesen, CEO of the D NRF



THE DRNF'S
ANNUAL MEETING
2019



TRANSFORMATIVE RESEARCH — HOW, WHAT AND WHY?

THE DRNF'S ANNUAL MEETING 2019

On Friday, November 1, the Danish National Research Foundation's (DNRF) annual meeting 2019 was held on the beautiful premises of the Royal Danish Academy of Science and Letters. This year's theme was transformative research. The foundation had invited DNRF grantees and political stakeholders in Danish research to a day of presentations and debate.

The DNRF's booklet [Transformative Research — How, What and Why?](#) laid the foundation for a discussion of the concept of transformative research. The booklet is based on conversations about transformative research with a number of center leaders from the foundation's Centers of Excellence; all main research areas were represented. The journey to transformative discoveries and how research policy actors

and academia can create the best conditions for transformative research were some of the overall themes of the meeting and the publication.

Scientific breakthroughs often depend on incremental research

The DNRF's CEO, Professor Søren-Peter Olesen, outlined some of the points that appear in the foundation's booklet.

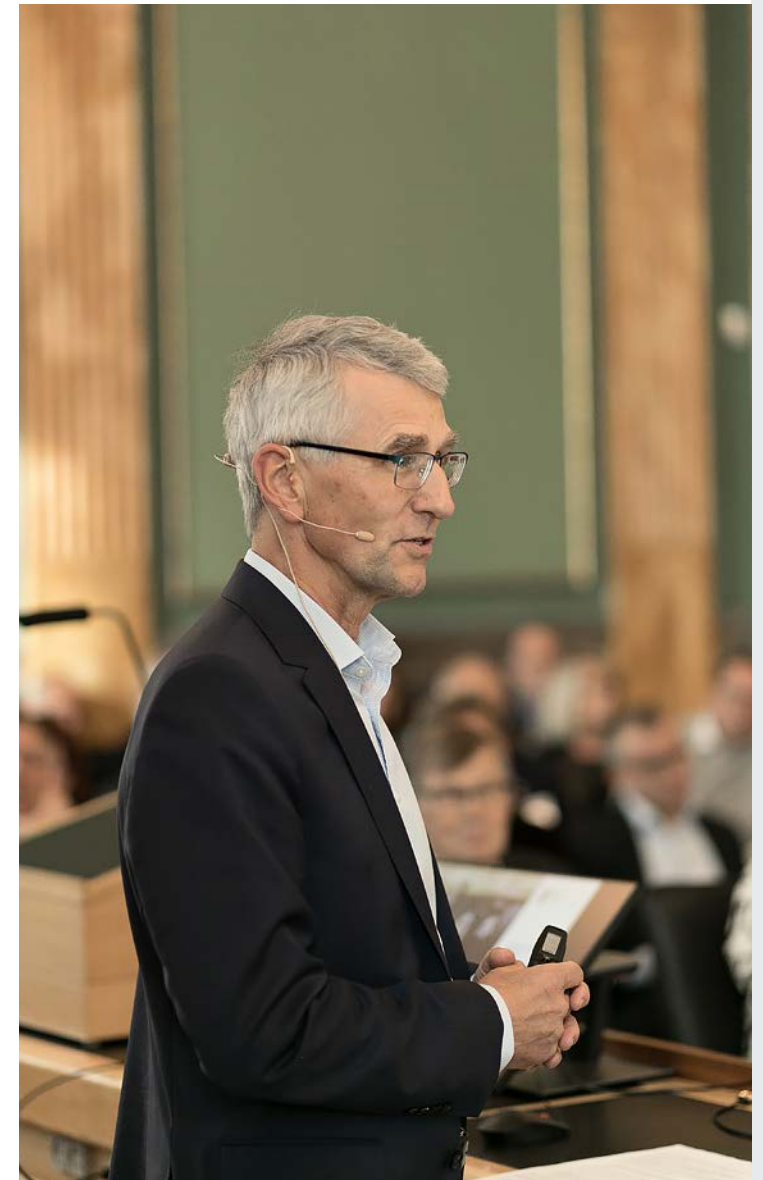
“ Without incremental research, there will be no transformative research, so it is important to appreciate both.

One of the main points was that it can be difficult to predict what will become transformative in the future, which also became one of the meeting's most debated themes. Sometimes it only takes a few years before we realize the significance of research; at other times it takes decades. And numerous prior breakthroughs and minor development steps can underpin the research that eventually becomes transformative.

“We cannot detect exoplanets without the technology to build space telescopes or the computing power to generate and analyze data. You need to build up the basic knowledge through focused work on a research field. Without incremental research, there will be no transformative research, so it is important to appreciate both,” said Søren-Peter Olesen.

He emphasized that, in this regard, foundations, universities, and politicians should be aware that researchers feel it is considered more prestigious to engage in transformative research than in incremental research, which can lead to an unhealthy focus on creating sensational results.

Olesen also highlighted a number of reflections from the center leaders on what can be done to promote transformative research. In relation to the role of universities, it was emphasized that the right environment and a focus on collaborating widely across Danish universities are important factors for new breakthroughs. He also mentioned how the concept of transformative research is understood differently in different fields and that it is offhand more easily applied in the technical sciences.



Søren-Peter Olesen, CEO of the DNRF

Broad responsibility to deliver transformative research

The need for wide collaboration across the different research stakeholders was generally a focal point among the speakers, and the theme was also addressed by the next speaker, Ole Petter Ottersen, president of the Karolinska Institute in Sweden. He pointed out that the need for wide cooperation is an important point, but that it should not be limited to Danish universities and stakeholders. Why not cooperate across the Nordic countries, for example?

In his speech, Ottersen also emphasized the importance of recognizing that there are many actors who must take responsibility for delivering what society expects in terms of creating transformative research. And he agreed that there is a problem in the way we address the concepts of transformative and incremental research.

“To what extent should we, as actors, focus on transformative research? I find that if we place too much emphasis on research to be transformative, then we risk researchers exaggerating the importance of their results,” Ottersen said. He continued:

“Nor should we use the concept of incremental research derogatorily. Very often, incremental research is more important than the discovery that ends up getting all the attention.”

“ I find that if we place too much emphasis on research to be transformative, then we risk researchers exaggerating the importance of their results.



Ole Petter Ottersen, president of the Karolinska Institute in Sweden



Professor Flemming Besenbacher, the chairman of the board of the Carlsberg Foundation

“ There is too much bureaucracy. We need to rely more on the scientists.

Many factors lead to transformative research

The chairman of the board of the Carlsberg Foundation, Professor Flemming Besenbacher, was the next speaker on the program. In addition to agreeing on the need for a strengthened broad cooperation, he mentioned the great importance of solid infrastructure as well as the composition of talents and skills in the right environments. Besenbacher also pointed out a need to secure freedom in research and therefore to rely more on the researchers' abilities, a message that was also highlighted by several center leaders quoted in the D NRF's meeting booklet.

“There is too much bureaucracy. We need to rely more on the scientists. Trust is declining, and we need to get that trust back into our system and society so we can focus on research and innovation,” said Besenbacher.

“ At the moment, in the humanities and social sciences, we are experiencing many major transformations, which may at times seem daunting, but I also believe it helps raise the bar for the research outcome.

In her speech, professor Marie Louise Nosch, head of Centre Textile Research, also pointed out that access to data and a, sometimes, unorthodox approach are important components in transformative research.

“At the moment, in the humanities and social sciences, we are experiencing many major transformations, which may at times seem daunting, but I also believe it helps raise the bar for the research outcome,” Nosch said.

Here she referred to three points: political and societal expectations of relevance; new types of collaboration with more contact with stakeholders such as municipalities, schools, media, NGOs, and companies; and digital databases and infrastructure that today enable both citizens and researchers to access and use unprecedented amounts of data.



Professor Marie Louise Nosch, center leader for Center for Textile Research



Mette Fjord Sørensen, head of research at the Confederation of Danish Industry (DI)



Jens Kehlet Nørskov, chair of the board of the DNRF

“ We sometimes forget the most important thing when debating research, namely, solving problems. We need pioneering and fundamental research, because if it is not present, there is no applied research.

Strategic basic research

The second session of the meeting focused on how to strategically make research transformative for society. The session was initiated by chair of the board of the DNRF, Jens Kehlet Nørskov, who presented the recently launched funding initiative called Pioneer Centers.

The initiative was praised by the meeting's next speaker, Mette Fjord Sørensen, head of research at the Confederation of Danish Industry (DI). In her speech, she emphasized that knowledge is our greatest resource in Denmark.

“We sometimes forget the most important thing when debating research — namely, solving problems. We need pioneering and fundamental research, because if it is not present, there is no applied research. But we need a closer link between the pioneering fundamental research and the solutions that companies can rely on. In other words, we must show that there is a ‘return on investment’ in Danish research,” Fjord Sørensen said.

“ We need to reassess the way we measure and reward researchers, and we need to increase risk-taking.

Strategic research should not harm risk taking

Although the speeches throughout the day talked about a need for strategic effort if we are to solve the major international challenges, and for close cooperation between research and industry, if Denmark is to be a research leader in the future, we must be careful not to shut down ideas with great potential, especially in regard to public money. This was the main issue in the speech by Professor David Dreyer Lassen, chairman of the board of the Independent Research Fund

Denmark (DFF), whose speech was based on a report on risk willingness, which DFF and the Think Tank DEA recently published.

“We need to reassess the way we measure and reward researchers, and we need to increase risk-taking. There must be room for flexibility in grants, room to go new ways, to fail and to restructure along the way within the framework of the grant,” said Dreyer Lassen.



Professor David Dreyer Lassen, chairman of the board of the Independent Research Fund Denmark (DFF)



Birgitte Nauntofte, CEO of the Novo Nordisk Foundation

“As a private foundation, we can build on top of the strong basic research that is secured by the public funding, and we can be very strategic and focused in selected disciplines.

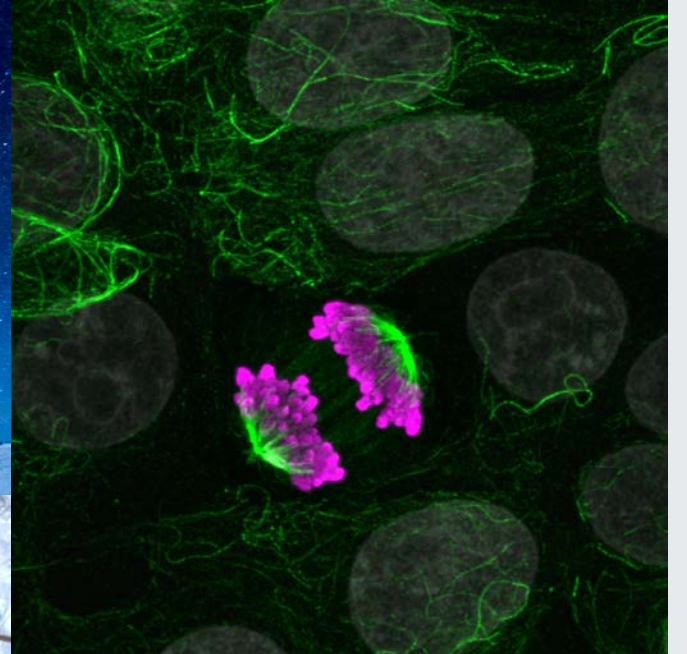
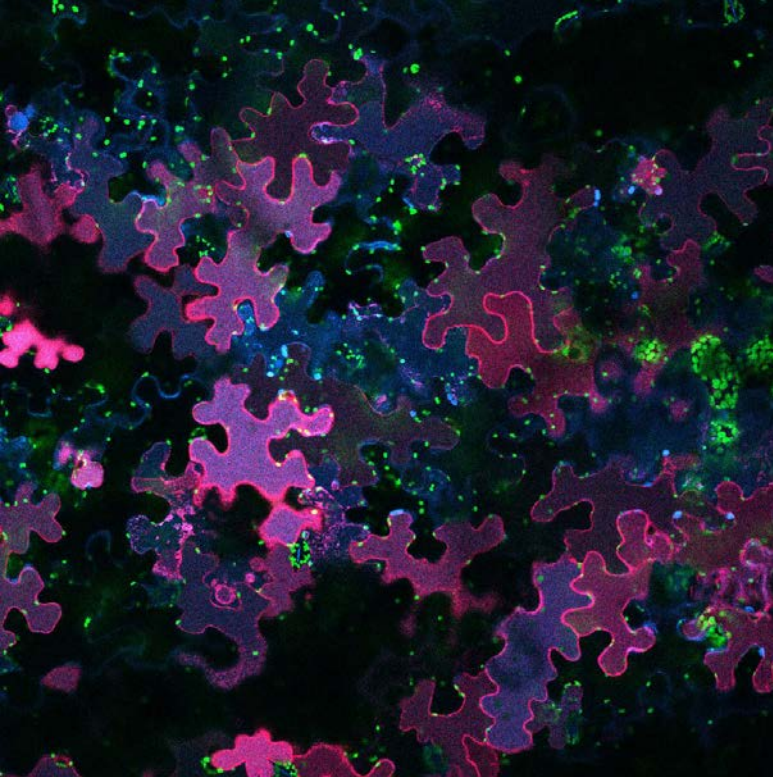
Research with an aim

The last speaker of the day was Birgitte Nauntofte, CEO of the Novo Nordisk Foundation. Like several of the meeting speakers, she pointed out that focused research — including focused basic research — can be a good initiative and that private foundations have options that public funds don't have.

“It is important for me to emphasize that we are a supplement to public funds. Public and private foundations have many things in common and play on the same piano, but we also have our own role to play. As a private foundation, we can build on top of the strong basic research that is secured by the public funding, and we can be very strategic and focused in selected disciplines,” Nauntofte said.

For the Novo Nordisk Foundation, it is also important to talk about “research with an aim” when grants are awarded.

“I think you can argue that all research has an aim – it starts somewhere. It all comes down to how specific that aim is and how much focus there is on the transformative perspective. When we talk about basic research with an aim in the Novo Nordisk Foundation, we mean high-quality research that has the potential to lead to new treatments and solutions that benefit society. In other words, you can call it research with a transformative potential,” Nauntofte said.



THE DNRF PHOTO
COMPETITION



THE DNRF PHOTO COMPETITION

Photos have the ability to uncover the world of science in a surprising and inviting way, by revealing its beauty and fascinating appeal. The DNRF would like to share with a broader audience how, each day, scientific discovery advances our knowledge of ourselves and the world we live in.

We do this by telling the stories of scientific advances or discoveries with a photo as a visual entry point.

To this end, each year the foundation launches a photo competition based on the photograph's potential as documentation and communication of scientific research.

In 2019, the competition invited the research community at large to submit photos.

The selection criteria were as follows:

- Degree to which the photo evokes emotions in the observer
- Degree to which the photo works as a visual entry point to the story behind the specific research result
- Aesthetic quality of the photo

The selection panel, consisting of Christine Buhl Andersen, Chair of the New Carlsberg Foundation; Louise Wolthers, Research manager/curator at the Hasselblad Foundation; and Minik Rosing, Professor at GLOBE Institute, vice chair of the DNRF board and member of the board of the Louisiana Museum of Modern Art, — chose the following photographs for first, second, and third prize:

First Prize: *Young Turbot* by Mads Christoffersen

The small turbot inside the hand expresses a fundamental human care for our fellow creatures. Thus, the picture addresses an important topic at a time when the biological diversity of the earth is threatened. Therefore, it represents the underlying research project in both an empathic and aesthetically engaged way.

Second Prize: *Skeletonized Mouse* by Patricia Petersen

The picture of the skeletonized mouse is extremely well composed and has a fascinating richness of detail. The backbone and the circular tale simply catch the eye of the observer. The small mouse almost bites its own tail as an archetypal illustration of nature's cycle.

Third Prize: *The Eye of an Anarctic Icefish*, by Henrik Lauridsen

The scanned icefish eye creates a spatiality with a high degree of materiality and structure. The picture is at once decorative and full of scientific information. The shredded structures indicate the sensitivity of the eye and the red circle adds mystery to the picture.

The picture shows a young turbot that, shortly after this picture was taken, was released in Roskilde Fjord together with all of its brothers and sisters. The release of young turbot is done in order to help populations in areas where they are not strong enough or big enough to make it on their own. Therefore,

our hope is that the release of turbot can help contribute to strengthening future generations so that, in time, they will be self-reproducing.

Oftentimes, the researchers tag the fish before they release them to follow, for instance, their growth, journeys, and survival.

Young Turbot

Mads Christoffersen, Senior Consultant, DTU AQUA, National Institute of Aquatic Resources, Section for Ecosystem based Marine Management, Technical University of Denmark



Pictured is an ordinary lab mouse (*Mus Musculus*) that has gone through the process of diaphonization. Diaphonization is an old-school technique that will make small vertebrates transparent, allowing for the study of bone development, movement, function and abnormalities in 3D. The process utilizes enzymes that will eat away the tissues until only bone, cartilage, and collagen are left to hold the specimen together. Specific dyes are then added to visualize the bone (purple) and cartilage (blue).

Besides being a useful scientific tool, diaphonization also has the advantage of producing something finely detailed that is very pleasing to eye.

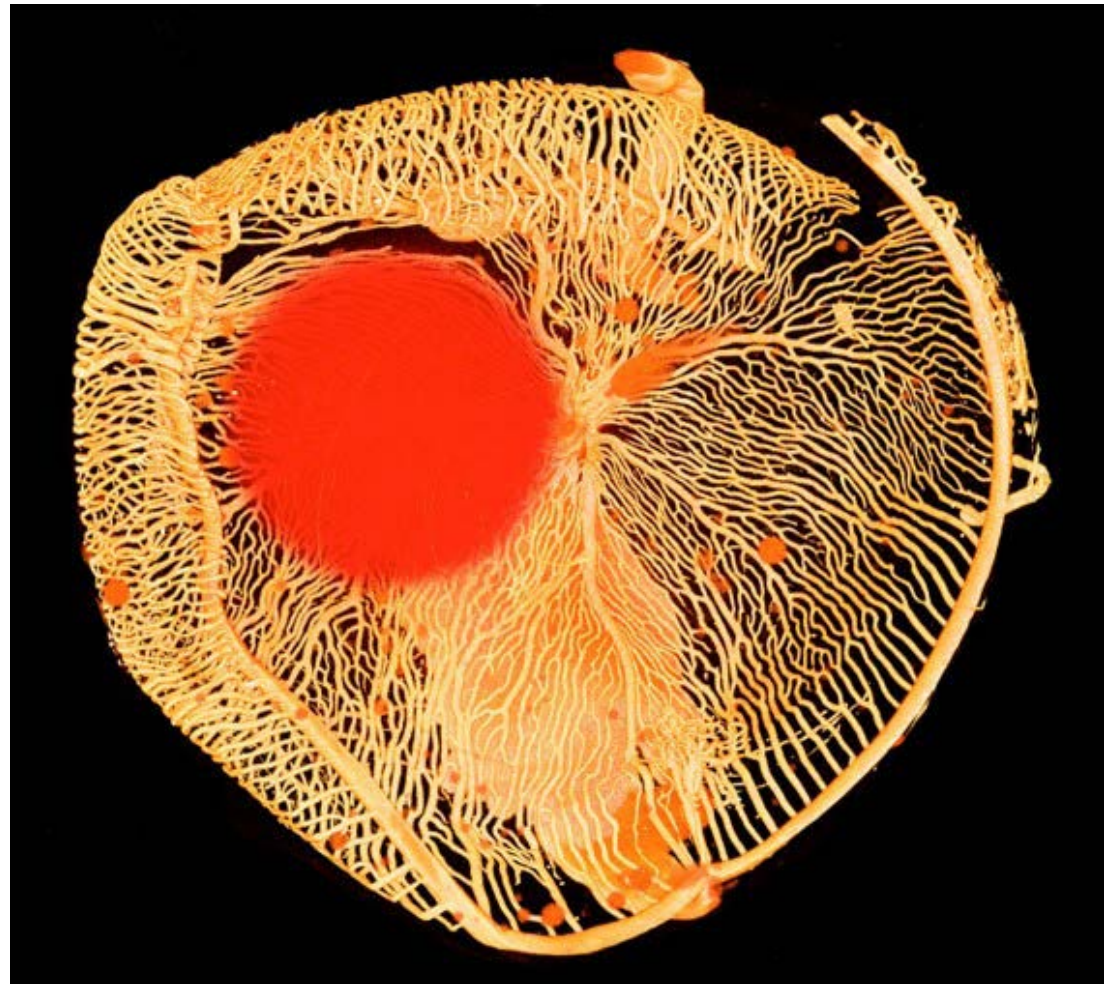


Skeletonized Mouse

Patricia Petersen, Staff Scientist, Faculty of Health and Medical Sciences, Novo Nordisk Foundation Center for Basic Metabolic Research, University of Copenhagen

The marine Antarctic fauna is rich and diverse. Below sea level lives the icefish, the only known vertebrate that does not contain the red oxygen-transporting pigment hemoglobin. This makes the fish's blood colorless and transparent and the tissues in the body that are big consumers of oxygen are under pressure. The retina of the eye is the most oxygen-demanding structure in the body of most animals, including icefish. To ensure sufficient blood supply, one finds the largest density of retinal blood vessels in icefish.

The picture is taken with a micro CT-scanner of the eye of an icefish collected during an expedition to the Antarctic Peninsula in 2018.



The Eye of an Antarctic Icefish

Henrik Lauridsen, Assistant Professor, Comparative Medicine Lab, Department of Clinical Medicine and Jesper Skovhus Thomsen, Associate Professor, Institute of Biomedicine, Aarhus University

ONGOING ACTIVITIES

CENTERS OF EXCELLENCE ESTABLISHED IN 2009/2010

Center on Autobiographical Memory Research (Con Amore)

Location: Aarhus University

Center leader: Professor Dorthe Berntsen

Total grant: 84.1 million DKK



Center for GeoGenetics

Location: University of Copenhagen

Center leader: Professor Eske Willerslev

Total grant: 101.0 million DKK



The Centre for Cosmology and Particle Physics Phenomenology (CP3 - Origins)

Location: University of Southern Denmark

Center leader: Professor Francesco Sannino

Total grant: 80.0 million DKK



Centre for Quantum Geometry of Moduli Spaces (QGM)

Location: Aarhus University

Center leader: Professor Jørgen Ellegaard Andersen

Total grant: 89.3 million DKK



Center for Particle Physics (Discovery)

Location: University of Copenhagen

Center leader: Professor Peter H. Hansen

Total grant: 80.0 million DKK



Center for Macroecology, Evolution and Climate (CMEC)

Location: University of Copenhagen

Center leader: Professor Carsten Rahbek

Total grant: 112.3 million DKK



Centre for Symmetry and Deformation (SYM)

Location: University of Copenhagen

Center leader: Professor Jesper Grodal

Total grant: 90.5 million DKK



Center for Star and Planet Formation (STARPLAN)

Location: University of Copenhagen

Center leader: Professor Martin Bizzarro

Total grant: 82.6 million DKK



Center for Materials Crystallography (CMC)

Location: Aarhus University

Center leader: Professor Bo Brummerstedt Iversen

Total grant: 105.2 million DKK



CENTERS OF EXCELLENCE ESTABLISHED IN 2012

Centre for Medieval Literature (CML)

Location: University of Southern Denmark

Center leader: Professor Lars Boje Mortensen

Total grant: 60.0 million DKK

**Center for Dynamic Molecular Interactions (DynaMo)**

Location: University of Copenhagen

Center leader: Professor Barbara Halkier

Total grant: 81.7 million DKK

**Center for Permafrost Dynamics in Greenland (CENPERM)**

Location: University of Copenhagen

Center leader: Professor Bo Elberling

Total grant: 99.7 million DKK

**Center for Quantum Devices (QDev)**

Location: University of Copenhagen

Center leader: Professor Karsten Flensberg

Total grant: 111.3 million DKK

**Center for Financial Frictions (FRIC)**

Location: Copenhagen Business School

Center leader: Professor David Lando

Total grant: 80.0 million DKK

**Center for Nanostructured Graphene (CNG)**

Location: Technical University of Denmark

Center leader: Professor Antti-Pekka Jauho

Total grant: 90.1 million DKK

**Center for International Courts (iCourts)**

Location: University of Copenhagen

Center leader: Professor Mikael Rask Madsen

Total grant: 70.0 million DKK

**Stellar Astrophysics Centre (SAC)**

Location: Aarhus University

Center leader: Professor Jørgen Christensen-Dalsgaard

Total grant: 91.7 million DKK

**Copenhagen Center for Glycomics (CCG)**

Location: University of Copenhagen

Center leader: Professor Henrik Clausen

Total grant: 103.5 million DKK

**Center for Vitamins and Vaccines (CVIVA)**

Location: Statens Serum Institut

Center leader: Professor Christine Stabell Benn

Total grant: 58.0 million DKK



CENTERS OF EXCELLENCE ESTABLISHED IN 2015

Center for Chromosome Stability (CCS)

Location: University of Copenhagen

Center leader: Professor Ian D. Hickson

Total grant: 65.0 million DKK



Center for Stem Cell Decision Making (StemPhys)

Location:	University of Copenhagen
Leader:	Professor Joshua Brickman
Total grant:	55.0 million DKK

Center for Music in the Brain (MIB)

Location:	Aarhus University
Center leader:	Professor Peter Vuust
Total grant:	52.2 million DKK



Centre for Carbon Dioxide Activation (CADIAC)

Location:	Aarhus University
Center leader:	Professor Troels Skrydstrup
Total grant:	60.0 million DKK



Center for Urban Network Evolutions (UrbNet)

Location:	Aarhus University
Center leader:	Professor Rubina Raja
Total grant:	65.0 million DKK



Center for Bacterial Stress Response and Persistence (BASP)

Location:	University of Copenhagen
Center leader:	Professor Kenn Gerdes
Total grant:	34.8 million DKK



Center for Neuroplasticity and Pain (CNAP)

Location:	Aalborg University
Center leader:	Professor Thomas Graven-Nielsen
Total grant:	60.2 million DKK



Center for Intelligent Oral Drug Delivery and Sensing using Microcontainers and Nanomechanics (IDUN)

Location:	Technical University of Denmark
Center leader:	Professor Anja Boisen
Total grant:	56.0 million DKK



Center for Silicon Photonics for Optical Communications (SPOC)

Location:	Technical University of Denmark
Center leader:	Professor Leif Katsuo Oxenløwe
Total grant:	59.0 million DKK



Center for Hyperpolarization in Magnetic Resonance (HYPERMAG)

Location:	Technical University of Denmark
Center leader:	Professor Jan Henrik Ardenkjær-Larsen
Total grant:	55.0 million DKK



Center for Autophagy, Recycling and Disease (CARD)

Location:	The Danish Cancer Society
Center leader:	Professor Marja Jäättelä
Total grant:	50.0 million DKK



Center for Personalized Medicine Managing Infectious Complications in Immune Deficiency (PERSIMUNE)

Location:	Rigshospitalet
Center leader:	Professor Jens Lundgren
Total grant:	60.0 million DKK



CENTERS OF EXCELLENCE ESTABLISHED IN 2017/2018

Center for Proteins in Memory (PROMEMO)

Location: Aarhus University

Center leader: Professor Anders Nykjær

Total grant: 62.0 million DKK

**Center for Economic Behavior and Inequality (CEBI)**

Location: University of Copenhagen

Center leader: Professor Claus Thustrup Kreiner

Total grant: 57.0 million DKK

**Center for Cellular Signal Patterns (CellPAT)**

Location: Aarhus University

Center leader: Professor Jørgen Kjems

Total grant: 61.0 million DKK

**Center for Electromicrobiology (CEM)**

Location: Aarhus University

Center leader: Professor Lars Peter Nielsen

Total grant: 56.0 million DKK

**Center for Microbial Secondary Metabolites (CiMiSt)**

Location: Technical University of Denmark

Center leader: Professor Lone Gram

Total grant: 58.0 million DKK

**Center for Privacy Studies (PRIVACY)**

Location: University of Copenhagen

Center leader: Professor Mette Birkedal Bruun

Total grant: 50.0 million DKK

**Center for Hybrid Quantum Networks (Hy-Q)**

Location: University of Copenhagen

Center leader: Professor Peter Lodahl

Total grant: 62.0 million DKK

**The Cosmic Dawn Centre (DAWN)**

Location: University of Copenhagen

Center leader: Professor Sune Toft

Total grant: 66.2 million DKK

**Center for Functional Genomics and Tissue Plasticity (ATLAS)**

Location: University of Southern Denmark

Center leader: Professor Susanne Mandrup

Total grant: 65.0 million DKK

**Center for Macroscopic Quantum States (BigQ)**

Location: Technical University of Denmark

Center leader: Professor Ulrik Lund Andersen

Total grant: 63.0 million DKK

**National Science Foundation (NSF)**

(6.8 million DKK, which is included in the above mentioned center grants).

NIELS BOHR PROFESSORSHIPS ESTABLISHED IN 2016/2017

Professor Rita Felski, University of Virginia

Location: University of Southern Denmark

Total grant: 28.0 million DKK



Professor Matthew Collins, The University of York

Location: University of Copenhagen

Total grant: 30.9 million DKK



Professor John McGrath, University of Queensland

Location: Aarhus University

Total grant: 29.9 million DKK



Professor Thomas Pohl, Max Planck Institute for the Physics of Complex Systems

Location: Aarhus University

Total grant: 30.0 million DKK



Professor Morten Bennedsen, INSEAD

Location: University of Copenhagen

Total grant: 29.9 million DKK



Professor Professor Enrico Ramirez-Ruiz, University of California

Location: University of Copenhagen

Total grant: 30.0 million DKK



CENTERS OF EXCELLENCE ESTABLISHED IN 2020

Center for Evolutionary Hologenomics (CEH)

Location: University of Copenhagen

Leader: Professor Marcus Thomas Pius Gilbert

Total grant: 67.7 million DKK



Center for High Entropy Alloy Catalysis (CHEAC)

Location: University of Copenhagen

Leader: Professor Jan Rossmeisl

Total grant: 61.1 million DKK



Course activities for center leaders/ outreach program for centers

Total grant: 11.2 million DKK

TOTAL ASSETS AND RETURN ON INVESTMENT

In 2019, the foundation realized a return on investment of 11.1%, and total return on investment was 624 million DKK. Broken down into asset classes, return on equities amounted to 484 million DKK and return on the fixed income portfolio amounted to 140 million DKK. The administrative expenses including the depreciation was 13.9 million DKK in 2019.

The net capital end of 2019 was 5,841 million DKK, compared to the net capital of 5,469 million DKK at the end of 2018.

The foundation distributed 414 million DKK to its grant holders in 2019, which is lower than the goal of an average distribution level in the Act on the DNRF of 475 million DKK (in 2019 prices). As a part of the parliament's agreement on the Research Reserve for 2019, the foundation received a capital injection of 177.4 million DKK in 2019 covering a part of the funding of the Pioneer centers.

The strategic asset allocation was unchanged during 2019, with an allocation to bonds and equities of, respectively, 65% and 35%.

414 mill.
DKK

Distributed to the grant holders in 2019

Total return

Calculated as a time-weighted return, the total return on investment in 2019 was 11.1%, which was higher than the benchmark-return of 10.7%. The main reason for the outperformance of the benchmark is the portfolio manager of the US high-yield bond portfolio's outperformance combined with higher than benchmark-return from the equity portfolio. From a five-year perspective, covering the period 2015 to 2019, the foundation's return of 4.6% was a bit higher than the annual benchmark return of 4.5%.

Return on equities

The foundation's equity portfolio consists of a combination of equities in developed countries and emerging markets countries. The split between the developed and emerging countries in the portfolio follows the breakdown in MSCI's benchmark for global equities (MSCI ACWI).

The return from the developed markets equity portfolio was 30.7% compared to a benchmark return of 30.2%. The developed markets equity portfolio is invested in the

following passively managed funds: Danske Invest Global Indeks, klasse DKK W d, Northern Trust World Custom ESG Equity Fund, Northern Trust World Custom ESG EUR hedged Equity Fund, and Nykredit Invest Globale A UIAB.

In the first three quarters of 2019 eighty percent of the exposure to USD and JPY in the developed markets equity portfolio was hedged to DKK. For cost reasons the hedging strategy was changed in the 4th quarter of 2019 so that eighty percent of the USD and JPY exposure is hedged to EUR instead of DKK.

All the currency exposure in the Northern Trust World Custom ESG EUR hedged Equity Fund, was is hedged to EUR in 2019.

Both the USD and the JPY were strengthening against the DKK and EUR during 2019, which resulted in a negative return from the currency hedging. The return on the developed markets equity portfolio, including the currency hedge, was 27.3%.

The emerging markets equity portfolio represented 4.2% of the total assets during the year. This investment took place through the mutual fund Danske Invest Global Emerging

Return on investment	2019	2018	2017	2016	2015
Bonds and cash, million DKK	140.2	-12.6	128.6	218.6	-44.0
Equities, million DKK	484.4	-179.1	293.4	192.5	1.1
Total return, million DKK	624.6	-191.7	422.0	411.2	-42.9
Foundation return, % ¹⁾	11.1	-3.1	7.1	6.8	1.5
Benchmark, %	10.7	-3.3	6.9	6.9	1.9
Foundation 5 years p.a. return, % ²⁾	4.6	4.2	6.0	6.7	6.4
Benchmark 5 years p.a. return, % ²⁾	4.5	4.1	6.0	6.6	6.2

¹⁾ The annual return on the total investment is a weighted average of each portfolio's return.

²⁾ The geometric mean.

Markets I the fund was replaced by GW&K Trilogy Emerging Markets Fund after an EU-tender. The return on the emerging markets equity portfolio in 2019 was 22.4%, which is better compared to the benchmark (MSCI emerging markets) return of 20.8%. The reasons for the overperformance was due to strong stock selection.

Return on bonds

Danish government and mortgage bonds represent the largest part of the fund's asset, and 37% of the strategic allocation is managed by Nykredit Asset Management. The Danish bond portfolio gave a return of 1.8%, which was slightly higher than the benchmark of 1.7%. The overweight of callable mortgage bonds with lower coupon (0.5%-2%) added positively to the performance of the portfolio relative to the benchmark. Although spreads on the callable bonds widen through 2019, this was more than compensated via the higher yield on the callable mortgage bonds compared to government bonds and other non-callable bonds.

The strategic allocation to global inflation-linked bonds is 11% and is managed by Danske Bank Asset Management. The non-EUR currency exposure is hedged to EUR. The portfolio's return in 2019 was 2.8% compared to the benchmark return of 2.6%.

The return on the European corporate bond portfolio in 2019 was 6.3% versus the benchmark return of 6.4%. The strategic allocation to European corporate bonds is 10% and the benchmark is Barclays Capital Euro Major Corporate Index. The portfolio is managed by Danske Bank Asset Management. The hedging strategy for the European corporate bond portfolio was changed during 4th quarter so the EUR-exposure no longer is hedged to DKK.

The US high-yield bond portfolio represents 7% of the strategic allocation and the portfolio is managed by Columbia Threadneedle. During 2019, the high-yield bond portfolio gave a return of 12.7%, which is higher than the benchmark-return of 10.7%. The benchmark for the high-yield portfolio is ML US High-Yield Bonds, constrained (hedged to DKK). The portfolio manager of the high yield bond portfolio outperformed because of a good security selection. Notably the security selection in the energy sector (where defaults have been high during 2019) contributed to the outperformance.

Responsible investment policy

The DNRN's responsible investment policy was updated during 2019 and published on the [website](#).

The responsible investment policy and the goal of acting as a responsible investor are an integral part of the foundations overall investment principles and strategy.

The DNRN acts as a responsible investor by investing in companies that live up to common internationally accepted principles and norms for treating environmental, social and governance (ESG) issues and by not investing in companies involved in the production of controversial weapons.

The guidelines are based on well recognized principles, guidelines, conventions and international ESG standards. When investing the portfolio managers of equities and credit bonds must:

- strives to live up to the United Nations Global Compact principles and/or OECD Guidelines for Multinational Enterprises.
- not invest in companies that violates broadly accepted international weapon-related conventions.
- not invest in producers of nuclear weapons, who act in violation of the treaty on Non-Proliferation of Nuclear Weapons.

Furthermore, when investing, most of the portfolio managers of equities and credit bonds live up to the following:

- The ILO conventions on labor rights.
- Exclusion of companies with high extraction of thermal coal.

The individual portfolio managers may have further criteria they use when investing.

The responsible investment policy for each of the DNRF's investment mandates or mutual funds varies. For example, some of the DNRF's mutual fund/portfolio managers do not invest in companies involved in the production of tobacco, while others do. An overview of the portfolio managers' responsible investment policies is in the table.

Investment committee

An investment committee was established in 2018. The members of the investment committee are CIO Peter Johansen (chair), Professor Peter Løchte Jørgensen and CEO Torben Möger Pedersen. The investment committee's tasks are to give the board recommendations about the investment strategy, risk management, portfolio managers, the responsible investment policy and the long-term forecast. The committee held three meetings in 2018 and two in 2019.

Portfolio/mutual fund	Danske Invest	Nykredit Invest	Northern Trust	GW&K Investment Management	SEB Invest	Danske AM
Asset type	Equities	Equities	Equities	Emerging markets equities	High-yield bonds	Investment grade bonds
UN Global Compact	✓	✓	✓	✓	✓	✓
UN Guiding Principles on Business and Human Rights	✓	✓	-	✓	✓	✓
OECD Guidelines for Multinational Enterprises	✓	✓	-	✓	✓	✓
The ILO conventions on labor rights	✓	✓	-	✓	✓	✓
Weapons-related conventions	✓	✓	✓	✓	✓	✓
Exclude tobacco producers	✓	-	✓	-	-	✓
Exclude producers of nuclear weapons and depleted uranium weapons	✓ ¹⁾	✓ ²⁾	✓	✓	✓	✓ ¹⁾
Exclusion of companies with high extraction of thermal coal	✓	✓ ³⁾	✓	✓	✓	✓
Exercises voting privileges	✓	✓	✓	✓	N/A	N/A
Engages	✓	✓	✓	✓	N/A	N/A

¹⁾ Danske Invest does not automatically exclude depleted uranium weapons but does exclude companies directly involved in R&D, the production of nuclear warheads, or related activities.

²⁾ Nykredit Invest excludes companies in violation with the Non-Proliferation-Treaty.

³⁾ Nykredit Invest exclude several companies involved in production of thermal coal producers, however not all companies are excluded.

Donation of 1,000,000 DKK from the J.H. Schultz Foundation

The board of the J.H. Schultz Foundation decided in 2019 to donate one million DKK to the DNRF. The J.H. Schultz Foundation was established in 1988 when Ole Trock-Jansen donated 95% of the Schultz company's stocks to the J.H. Schultz Foundation.

THE BOARD

In 2019, the board conducted six regular meetings and was represented at 25 follow-up meetings with the centers. The composition of the board March 2020 was as follows:



Jens Kehlet Nørskov (Chair)

Professor, Technical University of Denmark

Appointed by the Minister for Higher Education and Science (01.01.19-31.12.24)



Bart De Moor

Professor, KU Leuven

Appointed by the Minister for Higher Education and Science (01.11.13-30.11.21)



Eero Vuorio

Professor and Chancellor emeritus, University of Turku

Nominated by the Independent Research Fund Denmark (01.11.13-30.11.21)



Minik Thorleif Rosing (Vice Chair)

Professor, University of Copenhagen

Nominated by the Joint Committee of Directors at the Governmental Research Institutes (01.01.16-31.12.23)



Christina Moberg

Professor, Royal Institute of Technology, KTH

Nominated by the Independent Research Fund Denmark (01.11.13-30.11.21)



Morten Overgaard Ravn

Professor, University College London

Nominated by the Danish Rectors' Conference (01.01.16-31.12.23)



Anne Scott Sørensen

Professor, University of Southern Denmark

Nominated by the Independent Research Fund Denmark (01.01.16-31.12.23)



Clivia M. Sotomayor Torres

Professor, ICREA and Catalan Institute of Nanoscience and Nanotechnology

Nominated by Danish Academy of Technical Sciences (01.09.2018-30.11.21)



Vigdis Broch-Due

Professor, University of Bergen

Nominated by the Royal Danish Academy of Sciences and Letters (01.01.20-31.12.23)

STATEMENT BY MANAGEMENT ON THE ANNUAL REPORT

The board and the CEO have today considered and approved the annual report of the Danish National Research Foundation for the financial year 2019.

The annual report is presented in accordance with the Consolidated Act on the Danish National Research Foundation, the Danish Executive Order on the Administration of the Funds of the Danish National Research Foundation, the Royal Decree on the Charter of the Danish National Research Foundation and the provisions of the Danish Financial Statements Act with the adjustments resulting from the special nature of the Danish National Research Foundation.

In our opinion, the annual accounts give a true and fair view of the foundation's financial position at December 31, 2019 and of the results of its operations for the financial year January

1 to December 31, 2019. In addition, we believe that the management commentary contains a fair review of the affairs and conditions referred to therein.

Finally, it is our opinion that the established administrative procedures and internal controls covered by the financial statements comply with the appropriations granted, statutes, other regulations, agreements and usual practice, and that sound financial management is exercised in the administration of the funds and activities covered by the financial statements.

Copenhagen, March 27, 2020.

Søren-Peter Olesen (CEO)

Board members:

Jens Kehlet Nørskov (Chair)

Minik Thorleif Rosing (Vice chair)

Anne Scott Sørensen

Bart De Moor

Christina Moberg

Clivia M. Sotomayor Torres

Eero Vuorio

Morten Overgaard Ravn

Vigdis Broch-Due

INDEPENDENT AUDITOR'S REPORT

TO THE BOARD OF THE DANISH NATIONAL
RESEARCH FOUNDATION

REPORT ON THE FINANCIAL STATEMENTS

Opinion

We have audited the financial statements of the Danish National Research Foundation for the financial year 01.01.2019 - 31.12.2019, which comprise the accounting policies, income statement, balance sheet, statement of changes in net capital and notes. The financial statements are prepared in accordance with the Danish Financial Statements Act subject to the adjustments caused by the special nature of the Foundation.

In our opinion, the financial statements give a true and fair view of the Foundation's

financial position at 31.12.2019 and of the results of the Foundation's operations for the financial year 01.01.2019 - 31.12.2019 in accordance with the Danish Financial Statements Act subject to the adjustments caused by the special nature of the Foundation.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs) and additional requirements applicable in Denmark as well as the standards on public auditing as the audit was conducted in accordance with the provisions of section 9(2) of the Danish Auditor General's Act. Our responsibilities under those standards and requirements are further described in the Auditor's responsibilities for the audit of the financial statements section of this auditor's report. We are independent of the Foundation

in accordance with the International Ethics Standards Board of Accountants' Code of Ethics for Professional Accountants (IESBA Code) and the additional requirements applicable in Denmark, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Management's responsibilities for the financial statements

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with the Danish Financial Statements Act subject to the adjustments caused by the special nature of the Foundation, and for such internal control as Management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, Management is responsible for assessing the Foundation's ability to continue as a going concern, for disclosing, as applicable, matters related to going concern, and for using the going concern basis of accounting in preparing the financial statements unless Management either intends to liquidate the

Foundation or to cease operations, or has no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and the additional requirements applicable in Denmark as well as the standards on public auditing, will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit conducted in accordance with ISAs and the additional requirements applicable in Denmark as well as the standards on public auditing, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and

perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Foundation's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Management.
- Conclude on the appropriateness of Management's use of the going concern basis of accounting in preparing the financial statements, and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Foundation's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to

draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Foundation to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures in the notes, and whether the financial statements represent the underlying transactions and events in a manner that gives a true and fair view.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Statement on the management commentary

Management is responsible for the management commentary.

Our opinion on the financial statements does not cover the management commentary, and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the management commentary and, in doing so, consider whether the management commentary is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

Moreover, it is our responsibility to consider whether the management commentary provides the information required under the Danish Financial Statements Act subject to the adjustments caused by the special nature of the Foundation.

Based on the work we have performed, we conclude that the management commentary is in accordance with the financial statements and has been prepared in accordance with the requirements of the Danish Financial Statements Act subject to the adjustments caused by the special nature of the Foundation. We did not identify any material misstatement of the management commentary.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Statement on compliance audit and performance audit

Management is responsible for the transactions covered by the financial statements complying with the appropriations granted, statutes, other regulations, agreements and usual practice, and for ensuring that sound financial management is exercised in the administration of the funds and in the operation of the activities covered by the financial statements.

As part of our audit of the financial statements, it is our responsibility to perform compliance audit procedures and performance audit procedures on selected subject matters in accordance with the standards on public auditing. In our compliance audit, we test selected subject matters to obtain reasonable assurance about whether the transactions covered by the financial statements comply with appropriations granted,

statutes, other regulations, agreements and usual practice. In our performance audit, we make an assessment to obtain reasonable assurance about whether the systems, processes or transactions examined support the exercise of sound financial management in the administration of the funds and in the operation of the activities covered by the financial statements.

If, based on the procedures performed, we conclude that material critical comments should be made, we are required to report this.

We have no material critical comments to report in this respect.

Copenhagen, 27.03.2020

Deloitte

Statsautoriseret Revisionspartnerselskab
Business Registration No 33 96 35 56

Jens Sejer Pedersen
State-Authorised Public Accountant
Identification No. (MNE) 14986

ACCOUNTING POLICIES

The annual report is presented in accordance with the Consolidated Act on the Danish National Research Foundation, the Danish Executive Order on the Administration of the Funds of the Danish National Research Foundation, the Royal Decree on the Charter of the Danish National Research Foundation and the provisions of the Danish Financial Statements Act governing reporting class C enterprises (large) with the adjustments resulting from the special nature of the foundation.

The provisions of the Danish Financial Statements Act governing reporting class C enterprises (large) prescribe preparation of a cash flow statement. Due to the nature of the foundation's activities, the cash flows cannot reasonably be broken down by cash flows from operating, investing and financing activities, for which reason the cash flow statement has been omitted, referring to Section 11(3) of the

Danish Financial Statements Act. In addition, the foundation has decided to derogate from the format requirements laid down by the Danish Financial Statements Act for the income statement in order to illustrate the special nature of the foundation.

The presentation of distributions made by the foundation has been changed for this financial year. The distributions paid during the year have been deducted from the pre-disposed capital under the net capital; see the detailed description in the net capital section below. In previous years, the distributions were recognized as costs in the income statement. The comparative figures have been restated accordingly.

Apart from the above, the accounting the accounting policies applied are consistent with those applied last year.

INCOME STATEMENT

Interest income

Interest income from bonds and bank deposits are accrued so it relates to the financial year under audit.

Dividend

Dividend received on shares is included in the income statement at the time of distribution.

Realized capital gains and losses on and market value adjustments of securities

Realized capital gains and losses on and market value adjustments of securities (bonds and equities) are included in the income statement.

Other income

Other income comprises general donations from private donors. The funds are recognized when transferred to the foundation.

External expenses for the scientific activities of the Foundation

Such expenses comprise expenses for the foundation's scientific activities, including expenses for the consideration of applications and evaluation of grants.

Income tax

The foundation is not liable to tax.

BALANCE SHEET

Fixed assets

Leasehold improvements are recognized in the balance sheet at cost less accumulated depreciation. Fixed assets are depreciated straight-line over their estimated useful lives of five years.

Office equipment and furniture is recognized at cost less accumulated depreciation. Office equipment and furniture is depreciated straight-line over their estimated useful lives, meaning three years for IT hardware and software and five years for other office equipment.

Assets costing less than DKK 25,000 per unit are expensed in the year of acquisition.

Securities

Listed securities (bonds and equities) are measured at fair value (quoted price) at the balance sheet date.

Bonds redeemed at the time of presentation of the annual accounts are recognized at par value.

Other investments are measured at the lower of the value at the date of acquisition and fair value.

Net capital

Distributions by the foundation mainly take the form of multiannual total grants awarded over a number of years concurrently with, and conditional on, the actual completion of the research projects. An amount corresponding to the unpaid share of such total grants is recognized as predisposed capital under the net capital. Other net capital is classified as non-predisposed capital. An amount corresponding to the total grants provided during the year is transferred from the non-predisposed capital to the predisposed capital. The grants paid during the year are deducted from the predisposed capital.

Foreign currency translation

Foreign currency transactions are translated into DKK applying the exchange rate at the transaction date.

Realized and unrealized gains and losses are recognized in capital income in the income statement.

Bank deposits and securities denominated in foreign currencies are translated into DKK applying the balance sheet date exchange rate. Realized and unrealized foreign exchange gains and losses are recognized in capital income in the income statement.

Derivative financial instruments

The Danish National Research Foundation only applies derivative financial instruments to hedge the currency and interest rate risks involved in the portfolio of securities.

Changes in the fair value of derivative financial instruments classified as and complying with the requirement for hedging the fair value of a recognized asset or a recognized liability are recorded in the income statement together with changes in the value of the hedged asset or the hedged liability. In doing so, symmetrical recognition of gains and losses on the item hedged and the hedging instrument, respectively, is ensured.

Premiums received or paid as well as forward premiums and discounts are recognized in the income statement over the terms of the instruments.

The fair value of derivative financial statements classified as and qualifying for hedging of an instrument to hedge a recognized asset or liability is recognized in the balance sheet along with the asset or liability to which hedging relates.

INCOME STATEMENT JANUARY 1 - DECEMBER 31

	Note	2019	2018
Return on investment			
Realized gains and losses, bonds		50,900,992	73,870,242
Unrealized gains and losses, bonds		89,482,349	-86,330,728
Realized gains and losses, equities		111,638,245	11,194,997
Unrealized gains and losses, equities		372,786,399	-190,300,176
Interest, bank deposits		-169,863	-138,756
Return on investment, total		624,638,122	-191,704,421
Other receipts, net	1	1,000,000	0
Costs			
Custody and bank fees etc.	2	-2,308,678	-3,936,163
Salaries etc.	3	-9,165,507	-8,742,941
Office expenses	4	-578,306	-650,692
Premises	5	-1,019,307	-1,008,984
Accountant/attorney remuneration etc.	6	-1,191,758	-1,735,527
External expenses, research activities	7	-1,251,983	-369,425
Other expenses	8	-546,293	-527,892
Depreciation	9	-133,989	-170,101
Costs, total		-16,195,821	-17,141,725
Result for the year		609,442,301	-208,846,146
Predisposed capital:			
Predisposed capital, January 1		1,230,846,116	1,344,943,160
Distribution disbursed in the year	15a	-414,416,791	-409,291,437
Grants transferred from non-predisposed capital	15a	155,687,124	295,194,393
Predisposed capital, December 31		972,116,449	1,230,846,116

BALANCE SHEET AS OF DECEMBER 31

	Note	2019	2018
ASSETS			
Fixed assets			
Tangible fixed assets			
	10		
Leasehold improvements		180,840	85,402
Office equipment and furniture		79,765	124,142
		260,605	209,544
Fixed asset investments			
	11		
Deposits		255,104	243,860
		255,104	243,860
Fixed assets, total		515,709	453,404
Current assets			
Receivables			
Accrued interest		13,816,408	16,759,090
Other receivables		20,164,538	901,473
Deferred charges		78,463	126,541
		34,059,409	17,787,104
Liquid assets			
Securities, bonds	12	3,729,426,782	3,607,080,612
Securities, equities	13	2,062,569,957	1,832,149,579
Bank deposits	14	19,081,620	13,261,609
		5,811,078,359	5,452,491,800
Current assets, total		5,845,137,768	5,470,278,904
ASSETS, TOTAL		5,845,653,477	5,470,732,308
EQUITY AND LIABILITIES			
Net capital		5,840,962,654	5,468,537,144
Payables			
Short-term payables			
Payables and back costs		4,690,823	2,195,164
Payables, total		4,690,823	2,195,164
EQUITY AND LIABILITIES, TOTAL		5,845,653,477	5,470,732,308
Distribution obligations	15c		
Contingent liabilities	16		

STATEMENT OF CHANGES IN NET CAPITAL FOR 2019

	Non-Predisposed capital	Predisposed capital	Total Net Capital
Net Capital at January 1, 2019	4,237,691,028	1,230,846,116	5,468,537,144
Result for the year	609,442,301	0	609,442,301
Capital contribution regarding Pioneer Centers	177,400,000	0	177,400,000
Distribution disbursed in the year	0	-414,416,791	-414,416,791
Grants transferred from non-predisposed capital	-155,687,124	155,687,124	0
Net Capital at the end of the year	4,868,846,205	972,116,449	5,840,962,654

According to the Danish Executive Order no. 325 of March 29, 2016 on the financial management of the funds of the Danish National Research Foundation, the foundation's net capital consists of the capital contributed at the formation of the Danish National Research Foundation, the return on this capital and public grants less subsequent spending and losses.

The predisposed capital includes the commitments given to the grantees of the Danish National Research Foundation to carry out the operating activities, which have not yet been paid at the balance date; see the specification in note [15a].

The capital contribution regarding Pioneer Centers consists of public grants received to establish a few special and unique research centers, the so-called Pioneer Centers.

NOTES 1-4

	2019	2018
1 OTHER RECEIPTS, NET		
Private donation	1,000,000	0
Other receipts, total	1,000,000	0
2 CUSTODY AND BANK FEES, ETC.		
Bonds	2,105,783	3,740,037
Equities	180,122	175,352
Fees, portfolio managers	2,285,905	3,915,389
Bank	9,917	6,318
Other	12,856	14,456
Custody and bank fees, total	2,308,678	3,936,163
3 SALARIES ETC.		
CEO and board members	2,933,061	2,783,757
Salaries, other employees	5,458,428	5,388,884
Wage reimbursement	-312	-195,487
Pension costs	737,879	708,186
Danish Labor Market Supplementary Pension Scheme (ATP)	36,451	57,601
Salaries etc., foundation staff, total	9,165,507	8,742,941
Average staff number, accounting year	11	11
4 OFFICE EXPENSES		
Office supplies	28,000	32,906
Postage and freight	4,219	11,280
Telephone, Internet	189,314	141,440
Minor acquisitions	109,141	164,719
Journal, books, etc.	34,309	26,360
Servicing contracts etc.	213,323	273,987
Office expenses, total	578,306	650,692

	2019	2018
5 PREMISES		
Rent of office	765,312	731,580
Electricity, heating	74,794	76,687
Cleaning	147,429	151,049
Repairs and maintenance	31,772	49,668
Premises, total	1,019,307	1,008,984
6 ACCOUNTANT/ATTORNEY REMUNERATION ETC.		
Accountant remuneration, Deloitte	225,000	221,250
Accountancy consultation, Deloitte	-10,000	0
Attorney's remuneration	597,250	323,938
Other consultancy services	379,508	1,190,339
Accountant/attorney remuneration etc., total	1,191,758	1,735,527
7 EXTERNAL EXPENSES, RESEARCH ACTIVITIES		
Peer review expenses	733,389	0
Preparation of publications	211,891	240,148
Research presentations, meetings etc.	246,728	83,960
European Science Foundation, Science Europe membership fee	59,975	45,317
External expenses, research activities, total	1,251,983	369,425
8 OTHER EXPENSES		
Travelling and accommodation	294,440	271,568
Advertising	0	16,481
Entertainment expenses, gifts	25,955	4,166
Courses	19,665	41,969
Insurance	91,043	110,943
Cost of staff and board	115,190	82,765
Other expenses, total	546,293	527,892
9 DEPRECIATION		
Leasehold improvements, see note 10	89,612	111,041
Office furniture and equipment, see note 10	44,377	59,060
Depreciation, total	133,989	170,101

	Leasehold improvements	Office equipment and furniture	Total
10 TANGIBLE FIXED ASSETS			
Acquisition cost, January 1, 2018	2,100,942	1,275,321	3,376,263
Additions	185,050	0	185,050
Disposals	0	0	0
Acquisition cost, December 31, 2018	2,285,992	1,275,321	3,561,313
Depreciation, accumulated, January 1, 2018	-2,015,540	-1,151,179	-3,166,719
Depreciation for the year	-89,612	-44,377	-133,989
Reversed depreciation, disposals for the year	0	0	0
Depreciation, accumulated, December 31, 2018	-2,105,152	-1,195,556	-3,300,708
Book value at year-end	180,840	79,765	260,605

	2019	2018
11 FIXED ASSET INVESTMENTS, DEPOSITA		
Acquisition cost, January 1, 2019	243,860	240,784
Additions	11,244	3,076
Disposals	0	0
Acquisition cost, December 31, 2019	255,104	243,860
Value adjustments, accumulated, January 1, 2019	0	0
Value adjustment for the year	0	0
Reversed value adjustments, disposals for the year	0	0
Value adjustments, accumulated, December 31, 2019	0	0
Book value, at year-end	255,104	243,860

	2019	2018
12 SECURITIES, BONDS		
Asset classes		
Danish bonds	2,134,714,423	2,072,331,513
European corporate bonds	555,708,939	554,434,445
Global inflation-linked bonds	625,820,353	616,798,177
US High yield bonds *	413,183,067	363,516,477
Bonds, total	3,729,426,782	3,607,080,612

* Option adjusted duration, December 31, 2019: 2.86 (December 31, 2018: 4.17)

Danish bonds

Distribution by type of security:

	2019	2018
Mortgage bonds	2,059,798,933	2,069,155,329
Government bonds	71,745,165	0
Other bonds	3,170,325	3,176,184
Total	2,134,714,423	2,072,331,513

Option adjusted duration December 31, 2019: 3.78 (December 31, 2018: 5.05)

	2019	2018
12 SECURITIES, BONDS (CONTINUED)		
European corporate bonds		
Distribution by rating category and forward currency contract:		
AA	21,502,077	9,535,577
A	0	159,942,672
BBB	534,136,428	384,915,759
Forward currency contracts	0	-540,710
Collateral	70,434	581,147
	555,708,939	554,434,445

Rating category according to Standard & Poor's Long-Term Credit Rating.
Option adjusted duration, December 31, 2019: 5.13 (December 31, 2018: 4.97).

Global inflation-linked bonds
Distribution by country and forward currency contract:

Denmark	2,962,714	2,929,880
Canada	3,732,655	35,182,640
Germany	2,926,159	14,782,300
France	70,197,848	108,623,309
Great Britain	74,798,630	56,447,462
USA	445,852,780	385,318,385
New Zealand	2,679,958	2,486,986
Australia	20,758,553	9,127,601
Forward currency contracts	1,911,056	1,899,614
	625,820,353	616,798,177

Adjusted duration, December 31, 2019: 2.63 (December 31, 2018: 2.61).

	2019	2018
13 SECURITIES, EQUITIES		
Nykredit Invest Globale A UIAB	134,728,980	128,528,259
NT World Custom ESG Equity Fund	564,954,478	493,283,315
NT World Custom ESG EUR HDG EQY	566,467,269	493,950,031
Danske Invest Global Indeks, klasse DKK W d	535,506,365	497,978,799
GW&K Trilogy Emerging Markets Fund	252,603,735	217,945,476
Forward currency contracts and swaps	8,309,130	463,699
Equities, total	2,062,569,957	1,832,149,579
14 LIQUID ASSETS		
Cash	3,239	3,911
Current bank accounts	769,817	731,879
Portfolio accounts	18,308,564	12,525,819
Liquid assets, total	19,081,620	13,261,609

NOTE 15A

15a DISTRIBUTION OBLIGATIONS

2019 distributions and total grants, DKK thousand

Grant No	Grant 1st period	Grant 2nd period	Changes in 2019	Grants total	Disbursed 2019	Residual disbursement, expected
Closed grants	3,074,184	2,182,676	0	5,256,860	0	0
Course activities for center leaders/outreach program						
88. Management course/communication	3,550	7,600		11,150	1,792	4,063
Centers established in 2009/2010						
89. Center on Autobiographical Memory Research	42,085	42,000		84,085	8,136	605
90. Center for Particle Physics Phenomenology	40,000	40,000		80,000	8,152	0
91. Centre for Particle Physics	40,000	40,000		80,000	10,604	0
92. Center for Symmetry and Deformation	50,104	40,415		90,519	12,262	0
93. Center for Materials Crystallography	50,174	55,000		105,174	13,772	0
94. Center for Geogenetics	50,210	50,743		100,953	3,243	0
95. Centre for Quantum Geometry of Moduli Spaces	54,271	35,000		89,271	4,158	0
96. Center for Macroecology, Evolution and Climate	60,747	51,590	104	112,441	10,966	0
97. Center for Star and Planet Formation	38,400	44,219		82,619	3,266	0
Centers established 2012						
98. Centre for Medieval Literature	36,000	24,000		60,000	6,456	12,592
99. Center for Dynamic Molecular Interactions	49,000	32,700		81,700	9,569	16,824
100. Center for Permafrost dynamics in Greenland	60,242	39,500		99,742	9,699	20,624
101. Center for Quantum Devices	64,408		46,900	111,308	13,034	33,866
102. Center for Financial Frictions	48,000	32,000		80,000	8,297	17,637
103. Center for Nanostructured Graphene	54,138	36,000		90,138	11,154	17,444
105. Center for International Courts	42,000	28,000		70,000	5,255	17,815
106. Stellar Astrophysics Centre	55,000	36,700		91,700	10,745	19,913
107. Copenhagen Center for Glycomics	62,000	41,507		103,507	10,794	21,752
108. Center for Vitamins and Vaccines	58,000			58,000	444	0
To be carried forward	4,032,513	2,859,650	47,004	6,939,167	161,798	183,135

15a DISTRIBUTION OBLIGATIONS

2019 distributions and total grants, DKK thousand

Grant No	Grant 1st period	Grant 2nd period	Changes in 2019	Grants total	Disbursed 2019	Residual disbursement, expected
Brought forward	4,032,513	2,859,650	47,004	6,939,167	161,798	183,135
Centers established in 2015						
115. Center for Chromosome Stability	65,000			65,000	12,834	17,792
116. Center for Stem Cell Decision Making	60,000		-5,014	54,986	7,891	12,759
117. Center for Music in the Brain	52,207			52,207	10,934	15,937
118. Center for Carbon Dioxide Activation	60,000			60,000	11,454	12,939
119. Center for Urban Network Evolutions	65,000			65,000	15,164	9,914
120. Center for Bacterial Stress Response and Persistence	50,000		-15,186	34,814	6,631	1,972
121. Center for Neuroplasticity and Pain	60,242			60,242	13,045	11,975
122. Center for Intelligent Oral Drug Delivery and Sensing using Microcontainers and Nanomechanics	56,000			56,000	9,450	12,062
123. Center for Silicon Photonics for Optical Communications	59,000			59,000	9,334	10,315
124. Center for Hyperpolarization in Magnetic Resonance	55,000			55,000	11,627	18,782
125. Center for Autophagy, Recycling and Disease	50,000			50,000	7,058	9,884
126. Center for Personalized Medicine Managing Infectious Complications in Immune Deficiency	60,000			60,000	13,431	11,860
Niels Bohr Professorships established in 2016-2017						
127. Rita Felski, University of Southern Denmark	27,997			27,997	5,895	7,286
128. Matthew Collins, University of Copenhagen	30,860			30,860	7,071	13,929
129. John McGrath, Aarhus University	29,948			29,948	4,435	12,077
130. Thomas Pohl, Aarhus University	29,976			29,976	6,708	12,388
131. Morten Bennedsen, University of Copenhagen	29,909			29,909	3,779	16,413
132. Enrico Ramirez-Ruiz, University of Copenhagen	29,959			29,959	6,484	12,968
To be carried forward	4,903,611	2,859,650	26,804	7,790,065	325,023	404,387

NOTES 15A-15B

15a DISTRIBUTION OBLIGATIONS

2019 distributions and total grants, DKK thousand

Grant No	Grant 1st period	Grant 2nd period	Changes in 2019	Grants total	Disbursed 2019	Residual disbursement, expected
Brought forward	4,903,611	2,859,650	26,804	7,790,065	325,023	404,387
Centers established in 2017 and 2018						
133. Center for Proteins in Memory	62,000			62,000	10,063	44,931
134. Center for Economic Behavior and Inequality	57,000			57,000	4,958	47,195
135. Center for Cellular Signal Patterns	61,000			61,000	11,625	39,579
136. Center for Electromicrobiology	56,000			56,000	11,590	31,275
137. Center for Microbial Secondary Metabolites	58,000			58,000	6,167	48,552
138. Center for Privacy Studies	50,000			50,000	8,865	35,474
139. Center for Hybrid Quantum Networks	62,000			62,000	14,344	40,043
140. The Cosmic Dawn Centre	66,000		173	66,173	5,367	57,761
141. Center for Functional Genomics and Tissue Plasticity	65,000			65,000	8,201	48,058
142. Center for Macroscopic Quantum States	63,000			63,000	8,214	46,151
Centers established in 2020						
143. Center for Evolutionary Hologenomics			67,654	67,654		67,654
149. Center for High Entropy Alloys Catalysis			61,056	61,056		61,056
Grant and distribution, total	5,503,611	2,859,650	155,687	8,518,948	414,417	972,116

The number of grants listed in the key figures includes the Centers of Excellence and the Niels Bohr Professorships, listed on pages 42-46.

15b ANNUAL DISBURSMENTS

Annual disbursements, DKK thousand

Year	Disbursed	Expected disbursements to activities listed above	Total
1993	19,133		
1994	141,708		
1995	154,509		
1996	176,194		
1997	200,876		
1998	247,751		
1999	243,346		
2000	224,484		
2001	228,789		
2002	256,877		
2003	239,916		
2004	173,489		
2005	195,185		
2006	195,225		
2007	242,803		
2008	321,277		
2009	274,998		
2010	387,270		
2011	358,754		
2012	390,990		
2013	423,039		
2014	435,944		
2015	424,512		
2016	381,286		
2017	384,769		
2018	409,291		
2019	414,417		
2020		389,084	
2021		286,124	
2022		154,183	
2023		101,630	
2024		29,968	
2025		11,127	
	7,546,832	972,116	8,518,948

The disbursements specified above are distributed according to the expected year of disbursement.

Disbursements are made on the basis of the grant holders' revised budgets. In consequence, the final presentation of accounts to the foundation may result in adjustments of the disbursements for the following years.

15c EXPECTED DISTRIBUTIONS 2020-2024

In addition to the distribution obligations listed in notes 15a and 15b, new grants are expected to be established as a result of application rounds for Centers of Excellence, DNRf Chair and Pioneer centers. Total (including given and planned) distributions are expected to be as follows:

Year	Million DKK
2020	479
2021	470
2022	423
2023	490
2024	471
	2,332

16 CONTINGENT LIABILITIES

The foundation has to give six months' notice to terminate the tenancy agreement, at December 31, 2019 at the earliest. The obligation amounts to DKK 765,312

The foundation has entered into forward currency contracts and swaps for the purchase and sale of the following currencies (amounts calculated in the currencies in question):

Currency	2019	
	Purchase	Sale
USD	2,699,732	164,382,106
JPY	65,020,744	1,426,957,604
CAD	9,000	746,000
EUR	173,257,204	3,936,842
GBP	100,000	8,541,000
NZD	0	600,000
AUD	45,000	4,447,000
DKK	15,308,035	14,944,000

Currency	2018	
	Purchase	Sale
USD	15,101,510	159,155,136
JPY	168,740,103	1,507,512,229
CAD	0	7,255,000
EUR	901,408	90,453,000
GBP	127,000	6,985,000
NZD	0	566,000
SEK	0	5,000

The market price of the forward currency contracts and swaps as of December 31 is set at the value of the securities in question, see notes 12 and 13.

The foundation has entered into interest-rate futures for the purchase and sale of the following, calculated in the currencies in question:

Currency	2019	
	Purchase	Sale
EUR	4,300,000	1,700,000

Currency	2018	
	Purchase	Sale
EUR	8,900,000	5,700,000

The market price of the interest-rate futures as of December 31 is set at the value of the securities in question, see note 12.

SECRETARIAT



Søren-Peter Olesen

CEO, professor, MD-Ph.D.

spo@dg.dk



Steen Marcus

CFO, M.Sc.

sm@dg.dk



Argiro Hay Baltzis

Communication Assistant, M.A.

ahb@dg.dk



Asser H. Pelle

Communication Consultant, B.A.

ap@dg.dk



Boje Thosti

Investement Consultant, M.Sc.

bt@dg.dk



Connie Hansen

Bilingual secretary

dg@dg.dk



Gitte Tofterup Hansen

Senior Adviser, M.A.

gth@dg.dk



Jacob Frost Szpilman

Special Adviser, M.A.

jfs@dg.dk



Johanne Juhl

Senior Adviser, M.Sc.

jj@dg.dk



Mette Müller

Special Adviser, M.A.

mm@dg.dk



Metha Nielsen

Accounting Officer, B.Sc.

mn@dg.dk

Audit

The Office of the Auditor General and a chartered accountant shall audit the foundation's annual accounts. The board appoints the chartered accountant for a three-year term and the chartered accountant has to be approved by the Minister for Higher Education and Science. Jens Sejer Pedersen (Deloitte), State Authorized Public Accountant is appointed for the period May 1, 2019 to Maj 31, 2022.

Editors

Gitte Tofterup Hansen
Steen Marcus
Søren-Peter Olesen
Jens Kehlet Nørskov (in chief)

Design

Ineo Designlab / www.ineo.dk

Photo

Mikkel Østergaard
page 30 - 36

Danish National Research Foundation
Holbergsgade 14, 1
DK-1057 Copenhagen K, Denmark

T: +45 3318 1950
F: +45 3315 0626
E: dg@dg.dk

www.dg.dk