


ANNUAL REPORT 2007
THE DANISH COUNCILS FOR
INDEPENDENT RESEARCH



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The Danish Councils for Independent Research (DFF) fund specific research activities, within all scientific areas, that are based on researchers' own initiatives and that enhance the quality and internationalisation of Danish research.

The Danish Councils for Independent Research also provide professional research-related advice in all scientific areas for the Danish Minister for Science, Technology and Innovation, the Danish Parliament and the Danish Government.

Furthermore, DFF strengthens the dissemination and application of research findings, as well as participates in international research collaboration.

The Danish Councils for Independent Research (DFF) are comprised of a Board and five research councils:

The Danish Research Council for the Humanities (FKK)

The Danish Natural Science Research Council (FNU)

The Danish Social Science Research Council (FSE)

The Danish Medical Research Council (F55)

The Danish Research Council for Technology and Production Sciences (FTP)



"If we expand a house without strengthening its foundations, in time it will inevitably collapse." Jens Christian Djurhuus, Chair of the Danish Councils for Independent Research

The nature and importance of researcher-driven research

In the autumn of 2007, a debate arose both in the media and internally in the research councils system on the researcher-driven research advanced by the Danish Councils for Independent Research (DFF) and its role in the Danish research system as a whole. This was a dedicated debate and went far beyond what is customary for these kinds of issues.

That in itself is positive. Research and the prioritisation of funding require discussion. At times however, the debate became more polarised than was merited. The Danish research councils system comprises a number of bodies that, notwithstanding their differences, share the same ambition: to provide Danish researchers with the opportunity to deliver excellent research for the benefit and enlightenment of us all.

Within DFF we have no doubts as to our *raison d'être*. Independent research, in which individual researchers draw on their qualifications and expertise to realise own ideas, is the very foundation for all research. Among other things, this is what guarantees a steady stream of well-qualified applicants for basic research

centres etc. and also, what makes it possible to realise the intentions and the needs of society at large for targeted research. This is worth bearing in mind at a time when the ambition is to strengthen Danish research in a considerable extent. If we expand a house without strengthening its foundations, in time it will inevitably collapse. And this would be of great detriment to Denmark in an ever-more competitive knowledge society.

Denmark and Europe have recognised that a great effort must be made to establish a larger and stronger new generation of researchers. However, if we are to retain and qualify the coming generation of researchers, it is an absolute precondition that we give them the opportunity to realise their own research aspirations. Through its commitment to investigator-driven research, DFF is a key player in this drive to secure the future of Denmark.

It is therefore imperative that politicians recognise that diversity and abundance of researcher-driven research are the foundations of future research. It is crucial to strike the right balance between

the resources allocated to independent research and those allocated to other types of research. When extending the more strategic research, the foundation also requires extension. If the aim is to achieve a larger – and altogether essential – new generation of researchers, they must have the means to realise their potentials.

Therefore, in this annual report, we devote a good deal of space to illustrate how independent research is not only a seedbed for the promising ideas on which our livelihood depends, but the very reason why so many talented researchers are willing to spend far more than an ordinary working day on their work.

DFF's ambition in 2007 has been to promote researcher-driven research in the media and to work to ensure that independent research carried out with funding awarded in open competition is provided for in future national budgets. In June, the Board of DFF submitted a proposal for future annual appropriations, which, among other things, will serve to strengthen the growth layer of research so that young researchers are as-



sured of their rightful place. Over the year, DFF has also extended its positive relations with the Minister for Science, Technology and Innovation, the Parliamentary committee on Science and Technology, and Universities Denmark.

In other ways too, 2007 has been an interesting year within DFF. At the annual conference for council members, the topic was quality of research and how it may be measured and assured. DFF regards itself as strongly instrumental in the efforts to develop tools for assessing the quality of research.

Year 2007 also brought a discussion of how cross-council research might be strengthened within the DFF system. The talks are still in progress. DFF for its part is seeking to stimulate the process by funding a number of interdisciplinary research projects.

In 2007, DFF received a DKK 1,035 billion appropriation under the Danish Finance and Appropriations Act, which the Board of DFF is responsible for allocating among its constituent scientific research councils. This allocation breaks down into basic grants and funds for special in-

itiatives which the Board of DFF finds important to implement. In 2007, DFF launched several special initiatives, including the establishment of a number of Visionary Research Areas, Young Elite Researcher's Awards, and an incentive scheme for large and long-term grants as well as increased focus on the internationalisation of Danish research.

2008 will be no less exiting. Danish research is flourishing and is in many ways headed in the right direction. But there are clouds on the horizon which may well be worth focusing our attention towards even now. Independent research must continue to be researcher-driven, and there must be scope for making the most of the best ideas. Every effort must be made to ensure that researchers and institutions have room for manoeuvre so that they can apply for all the grants – including the international ones – which talented Danish researchers can secure.

The commitment in recent years to train more young researchers is to a great extent a bonus for Danish research, but reaping the rewards of that commitment will call for focus on how the system can

create careers for them. Finally, DFF is committed to providing female researchers the best possible conditions. These are just some of the topics the Danish Councils for Independent Research are looking forward to addressing in the year ahead.

Jens Christian Djurhuus
Chair of the Danish Councils
for Independent Research



Unpredictable and indispensable **SEEDLINGS**

On 13 December 2007, there was every reason to be proud at the PUMPKIN basic research centre: the researchers had just gotten their pioneering findings on the mechanisms that control the transport of substances in and out of cells published.

The findings were published in the prestigious journal, *Nature*, and although that in itself is a mark of achievement, it is not exceptional in Danish research. But the researchers from PUMPKIN went a step further. They cleared the cover of the world's most prestigious scientific journal and released three articles all in one go, each of them presenting findings that in the years ahead may result in scientific breakthroughs – most likely in medicine, although the prospects range far beyond that one field. Crops that can be irrigated by salt water and biological batteries are just some of the potentials mentioned in the wake of the publication.

PUMPKIN is a centre funded by the Danish National Research Foundation, but like so many others of these specially selected research units, it all started with grants from the Danish Councils for Independent Research (DFF).

“It has been essential for our work that we previously received a grant from the Danish Natural Science Research Council to set up a centre, and before that also a Rømer Grant,” says Professor Poul Nissen, head of PUMPKIN, referring to two of the DFF funding instruments.

“We were given the opportunity of consolidating our work at a single centre. That gave us an identity and made it possible to support a number of our postdoctoral research fellows, who achieved some excellent breakthroughs. Since then, things have just snowballed,” he says.

“The PUMPKIN centre exemplifies how researcher-driven research forms the basis for the rest of the Danish research community,” asserts Professor Jens Christian Djurhuus, MD and Chair of the Danish Councils for Independent Research.

“Researcher-driven research is a determinant for all other research done in Denmark. Without independent research, we wouldn't have the foundation on which the strategic and more immediately lucrative research is based,” he says.

Within DFF, independent research is defined as research which, firstly, is subject to open competition and, secondly, – but no less significantly – based on the researchers' own bright ideas.

“It is crucial that independent research is defined by the researchers themselves – i.e., is researcher-driven. Firstly, because this is our guarantee that the ideas generated are original. Secondly, because it is essential for us to be able to offer our researchers inspiring projects. If people do not have anything stimulating to work on, if we don't give them the chance to try out their own ideas, then we will lose out to brain drain in the international competition for the best minds,” says Jens Christian Djurhuus.

Poul Nissen from PUMPKIN agrees: “There is nothing that to such an extent drives students to excel as doing their own research. Being assigned to work on material from other researchers just doesn't compare. But you have to be willing to accept that researcher-driven research is unpredictable. We have ended up with some insights that we certainly couldn't have predicted when we started

In 2007, DFF received 2,965 applications for its total funds of approx. DKK six billion. Of these, 922 were awarded grants, corresponding to more than DKK one billion. The success rate for amounts applied for was 17 per cent, while the success rate for applications was 31 per cent

The Board and the Group of Chairmen of the Danish Councils for Independent Research



in 2003. But along the way we have supplied some serious contributions to the textbooks as well as succeeded in gaining an international lead position where we are now doing research that is also geared to the development of new products,” explains Poul Nissen.

Danish researchers supply more than one per cent of the world’s scientific findings. This may not sound like much, but the quality and impact is high. It turns Danish scientific output into the admission ticket for much of the research done elsewhere in the world.

“You can’t just go out and buy access to new research. You have to earn entry, and the currency is your own findings to date.

If you want access to cutting-edge research, you have to be able to come up with the goods. If not, you just won’t be considered for the top research teams and won’t be able to attract the people who make results,” says Jens Christian Djurhuus.

He is cautious about putting a figure on what proportion of public research funds should be invested in researcher-driven research, but says:

“I’d put it at around 70/30 in favour of independent research, including the basic funding of the universities. That would ensure a basis for the more short-term oriented research, which has a more immediate return on investment. We certainly wouldn’t want to upset that bal-

ance. I reckon the other sectors of the research councils system would agree on that. They’ll be badly off if they can’t allocate their funds for proper research open to genuine competition because the growth layer of research is too weak,” says Jens Christian Djurhuus.

“DFF looks after the seedlings that are waiting for a chance to grow tall. That’s where we have to invest if we want to ensure the survival of Danish research. The tallest trees impress, and we should take pride in them, but at some stage they will most certainly come to a standstill. Our number one task is to ensure that new shoots are ready to pick up where they leave off,” says Jens Christian Djurhuus.

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Jens Christian Djurhuus, Chair of the Danish Councils for Independent Research

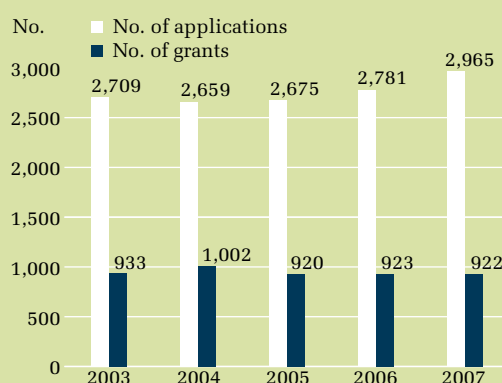


Amounts applied for and granted 2003-2007*

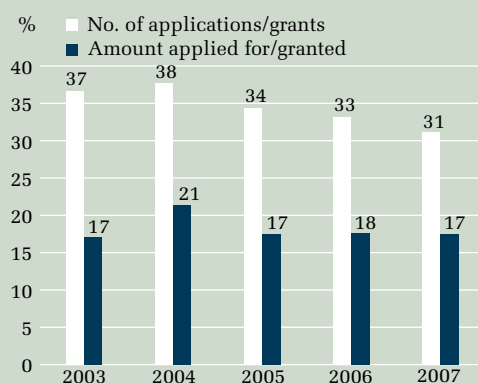


* Applications received and processed by DFF for the individual year. The same applies to grants. The figures include applications to the councils' ordinary funding function and to the Young Research Leaders Action Area in 2003. The figures also include funding for young female researchers in science and technology in 2006 and 2007. The councils' contributions to organisations and the like as well as any scientific consequential expenses are not included.

Number of applications and grants 2003-2007*



Average success rates 2003-2007



The success rates are calculated in two ways:
 1) The amount granted divided by the amount applied for
 2) The number of grants divided by the number of applications

The figures for the individual scientific research councils can be found at fi.dk under Councils & Commissions & Committees

More funding and more transparency

On 12 March 2007, the Danish Councils for Independent Research (DFF) held their annual internal conference. The members discussed the importance of lobbying to secure additional funding for DFF so that it may be possible to lay the foundation for high standards of research. At present DFF receives an eight per cent share of public-sector research funds. The ambition is to increase that share to 12 per cent.

At the conference, DFF also discussed the continued efforts to assure the quality of research and to develop parameters for assessing the quality of research projects. The Ministry of Science, Technology and Innovation is working to develop a bibliometric indicator model, and DFF wishes to make a positive contribution to this, but also to draw attention to the heterogeneity of research – especially the different ways in which the different disciplines publish their research – which makes this a highly complex task.

The grant funding of the Danish Councils for Independent Research

The Danish Councils for Independent Research (DFF) receive a wide range of different types of funding research applications. The applications can be divided into two categories: The major funding instruments such as research projects, centres, postdoctoral grants, etc. and these are mainly processed at the research councils' two annual funding sessions. Grants to these purposes account for more than 95 per cent of the councils' total funding. Competition for these funds is keen, since only approximately 17 per cent of the amounts applied for are granted. The other category includes a number of smaller allocations for dissemination, internationalisation, etc. These are typically awarded over the course of the year and represent less than five per cent of DFF's total grants. There is less competition among these applications as approximately half of the amounts applied for are granted.

Applications and grants by grant purpose 2007

	Research projects, centres, postdoctoral grants, etc.	Dissemination, internationalisation, etc.
Amount applied for (DKK million)	5,783	101
Amount granted (DKK million)	975	50
Success rate	17 %	50 %

Amounts applied for and granted, by major funding instruments (research projects, centres, postdoctoral grants, etc.) and minor funding instruments (dissemination, internationalisation, etc.) processed by DFF in 2007.

	Research projects, centres, postdoctoral grants, etc.	Dissemination, internationalisation, etc.
Applications	2,376	589
Grants	554	368
Success rate	23 %	63 %

No. of funding applications for major funding instruments (research projects, centres, postdoctoral grants, etc.) and minor funding instruments (dissemination, internationalisation, etc.) processed by DFF in 2007.



“Independent research in health sciences is vital for the patient-centred research conducted within our healthcare services. Independent research contributes with great creativity and original ideas on which applied research can be based. And independent research is all-important for our efforts to nurture and retain talents in the Danish research community in order to develop our existing strengths in research and industry.”

Karin Verland

Managing Director of Pfizer Denmark and Chair of the Danish Association of the Pharmaceutical Industry



“We can predict neither which basic research will result in the next Danish Nobel Prize in 10-20 years, nor the next major industrial breakthrough. This is why it is so important to understand that a very substantial proportion of basic research must be wholly independent.”

Mads Krogsgaard Thomsen

Chief Science Officer
Novo Nordisk



“The European universities are at present poorly equipped to meet the increasing expectations which industry and society have with respect to research. It’s a question of establishing the long-term financial conditions that will encourage the most outstanding researchers to dare to address the difficult, more fundamental questions which have the potential for producing the breakthroughs that go beyond contemporary science and conceptions. We need a great deal more research in the Nobel Laureate class.”

Gunnar Öquist

Secretary General of The Royal Swedish Academy of Sciences, which selects the Nobel Laureates in physics and chemistry

Members of the Board of the Danish Councils for Independent Research 2007

- Peder Andersen, Head of Department (appointed 1 August 2007)
- Carl Bache, Professor, DPhil
- Klaus Peter Bøgesø, Vice President, DPharm
- Bent Tolstrup Christensen, Research Professor, DSc
- Bjerne Steffen Clausen, Head of Research (appointed 1 August 2007)
- Jens Christian Djurhuus, Professor, MD (Chair; appointed 1 August 2007)
- Bente Aagaard Lomstein, Associate Professor
- Ebba Nexø, professor, MD (Vice Chair)
- Preben Terndrup Pedersen, Professor (Vice Chair) (retired 31 December 2007)
- Nina Smith, Professor (Chair until 31 June 2007, retired 31 June 2007)



An important pat on the back

Little acorns have the potential to grow into great oaks. But are they not watered, nothing will happen.

The Danish research institutions are filled with young, talented researchers waiting for the opportunity to sprout and grow. They just need that vital drop of water. And this is the whole idea behind the Young Elite Researcher's Award granted by the Danish Councils for Independent Research (DFF).

The research career is not a bed of roses for the young talents. The pay is not particularly good and is rarely dependable for longer periods of time. It takes years to get work published, and recognition from peers and the public is far from easy to attain. In other words, it can be very tempting to choose other directions for one's career, and by doing this not fulfilling one's potential within the world of research.

DFF's Young Elite Researcher's Award contributes to reward and nurture the blossoming research elite in Denmark. The award was granted for the first time in year 2005.



Young Elite Researcher's Award spurred to professorship

One of Denmark's young talents, 36-year-old Helena Skyt Nielsen, now Professor of Economics, received the award two years ago. In 2005 she was one out of 24 talented "acorns" chosen by DFF to be nurtured with a Young Elite Researcher's Award. For Helena, the award was an important signal that she was on the right track.

"It was an immensely important pat on the back and it motivated me to keep at it. As a Junior Researcher, this is the kind of recognition you crave for. There are few successes to be had as a researcher, especially in the beginning of your career. It's tough doing research for years and then

only getting an article published every other year or so. And researchers are not that good at praising each other. There simply isn't a tradition or culture for that in Denmark," she explains.

While there has been a stronger tradition abroad for recognising talented researchers with awards and honourable mentions, until a few years ago this has not been customary in Denmark.

"Being a researcher is very exciting. But when you start out you spend a lot of energy on constantly striving to get articles published and applying for funding. While that's going on, many young researchers are regularly getting great job

offers from the private-sector industry as consultants for example. The Young Elite Researcher's Award can help to retain young talents so that fewer of them give in to the temptation of abandoning research," says Helena Skyt Nielsen.

Besides the award itself, Helena Skyt Nielsen also received two grants amounting to a total of DKK three million for a research project on young people and career choices, which she embarked on at the School of Economics and Management at the University of Aarhus.

"When I received the award I was on the point of applying for professorships, and it's very difficult to obtain that kind



In 2007, the Danish Councils for Independent Research presented a total of 24 Young Elite Researcher's Awards to highly talented researchers under the age of 35. The Award is worth DKK 200,000

of appointment. You get a lot of rejections and it's easy to get the idea that you should be doing something else. Had I not received the recognition of this award, I reckon it's a lot more likely that I would have pursued a different career path," she says.

Young researchers as role models

DFF's Young Elite Researcher's Award is handed out each year in January to talented researchers under the age of 35 from all branches of the academic world. The award is granted to young researchers who have applied for and been awarded a grant from one of the five scientific research councils of at least DKK one million. The awards are granted by all the councils under DFF, that is, the Danish Research Council for the Humanities, the Danish Natural Science Research Council, the Danish Social Science Research Council, the Danish Medical Research Council, and the Danish Research Council for Technology and Production Sciences.

The Young Elite Researcher's Award of the Danish Councils for Independent Research is presented simultaneously with the Minister for Science, Technology and Innovation's Elite Research Prize for excellent researchers under the age of 45. Elite Research Scholarships for the most promising PhD students are also awarded on this occasion. For the Government, the Elite Research-programme is also part of the objective of cultivating a strong research elite that may be looked upon as

role models for young people as well as generate an interest in the life as a researcher.

This past year, Helena Skyt Nielsen has been on maternity leave, but she will shortly be returning to her professorship, which is split between the University of Aarhus and the independent research institute AKF. She will be resuming the work on her project 'Intergenerational Transmission of Human Capital: Career Aspiration and Non-Monetary Returns', for which she received the Young Elite Researcher's Award 2005.

The project has been in progress for almost two years. Helena Skyt Nielsen is researching the influence of parental career choices and financial standing on children's subsequent occupations. She is also investigating the influence of non-monetary factors on career choices. These factors might include the images attributed to the various disciplines or the general outlook on life among youth of today

"We know that there is a strong correlation between the parents' level of education and financial standing and the children's subsequent careers. But we haven't precisely determined the causal relation," Helena Skyt Nielsen explains.

"It's completely new for economists and labour market researchers to be taking identity factors into account," she says.

"If someone is generally very socially oriented, then it's more probable that he or she will end up opting for nurse train-



"It was an immensely important pat on the back and it motivated me to keep at it", says Helena Skyt Nielsen

ing or becoming a social welfare worker. We can see that those who achieve a high score in social orientation are more likely to become nurses or doctors, whereas a higher score in the more career-oriented life perspective means a greater probability of becoming lawyers or economists," she explains.

Helena Skyt Nielsen's research might provide a useful tool for determining how the various professions can attract undergraduates.

"All the campaigns run by the universities to publicise their various fields of study and provide a true picture of life as a medical doctor, for example, are great because it's crucial to feel that you're well-matched with your chosen field of study and profession. That's almost as decisive for a choice of career as it is to do well in a Pisa test or to have highly educated parents," says Helena Skyt Nielsen.



The Minister for Science, Technology and Innovation's Elite Research Conference

On January 24 2008, the Chairman of the Board of the Danish Councils for Independent Research, Jens Christian Djurhuus, and the Minister for Science, Technology and Innovation, Mr. Helge Sander, presented the Young Elite Researcher's Award 2007 to the year's 24 recipients in Glyptoteket in Copenhagen. This convivial afternoon-event was attended, among others, by HRH The Crown Princess Mary. The DFF Young Elite Researcher's Award was presented together with the Minister for Science, Technology and Innovation's seven major Elite Research Prizes for researchers under the age of 45 as well as together with the Elite Research Scholarships for talented PhD students.

The opening address of Pro-rector for Academic Affairs, Nina Smith, University of Aarhus, concerned the career choices and paths open to PhD students. On the basis of a large-scale survey, she concluded that the two main reasons for pursuing a research career are on the one hand the creative and innovative aspects and on the other hand the extensive independence that comes with the job.

The principal speech of The Elite Research Conference was delivered by Nobel Laureate Emeritus Professor Bengt Samuelsson.



Recipients of the Danish Councils for Independent Research's Young Elite Researcher's Award 2007

The Danish Research Council for the Humanities

Jacob Busch, University of St. Andrews
 Anders Ehlers Dam, University of Copenhagen
 Mía Münster-Swendsen, University of Copenhagen
 Goetz Nordbruch, Danish Institute for International Studies

The Danish Natural Science Research Council

Marcus Thomas Pius Gilbert, University of Copenhagen
 Thomas Mailund Jensen, University of Aarhus
 Christina Lunde, University of Copenhagen
 Jesper Milán, University of Copenhagen
 Stergios Piligkos, University of Copenhagen
 Michael Marc Wolf, University of Copenhagen

The Danish Social Science Research Council

Kasper Møller Hansen, University of Copenhagen
 Mads Meier Jæger, SFI – The Danish National Centre
 for Social Research
 Jørgen Møller, University of Aarhus

The Danish Medical Research Council

Mark Schram Christensen, University of Copenhagen
 Anja Pernille Einholm, University of Copenhagen
 Anders Peter Hviid, Statens Serum Institut
 Niels Jessen, Aarhus University Hospital
 Niels Mailand, the Danish Cancer Society

The Danish Research Council for Technology and Production Sciences

Ulrik Lund Andersen, Technical University of Denmark
 Alexandra Boltasseva, Technical University of Denmark
 Thomas Lundin Christiansen, Technical University of Denmark
 Niels Asger Mortensen, Technical University of Denmark
 Henrik Toft Simonsen, University of Copenhagen
 Jan Østergaard, Aalborg University



The focus of expertise

On average, it happens just over once a day – if we include holidays and days off. The Danish Councils for Independent Research (DFF) are asked to assist. The requests for assistance come from politicians, from international colleagues, from ministries, and other research funding institutions.

The assignments are many and varied: DFF will be vouching for the requisite expertise of the nominees when members of a commission of board are to be found; DFF is asked to assess the implications of a bill or executive order; or DFF gives an opinion on an initiative from the EU or other international institutions. However, the majority of advisory assignments undertaken by DFF consist of advising other institutions that grant funding to researchers.

“The counselling provided by the Danish Councils for Independent Research plays a major role in our work. We have also

used the advisory services of the Danish Council for Strategic Research. These days we are very appreciative of the assistance we receive from the Danish Councils for Independent Research and especially the Danish Research Council for Technology and Production Sciences, with whom we have achieved a productive and efficient workflow,” says Klaus Bock, Vice Chair of the Danish High Technology Foundation and also Chair of the Danish National Research Foundation.

In this latter capacity, he finds it natural to involve DFF in the selection of international peers for evaluation of their choice of basic research centres, but in the more commercially-oriented Danish High Technology Foundation, input from researchers is also very valuable.

“This input supports our decision-making. Our Board is mainly made up of people who know how to conclude a good

The Danish Councils for Independent Research perform a range of different advisory assignments. Here is a selection of the 445 assignments performed in 2007:

- Consultation on the PhD Executive Order
- Consultation on the Act on national geological surveys of Denmark and Greenland
- Consultation on the EU's Green Paper on The European Research Area
- Assessment of applications for permission to market products containing components of genetically modified plants
- Recommendation of particularly well-qualified experts for the Danish Economic Councils
- Recommendation of members for the panel for Investment Capital for University Research-funding (UNIK)
- Recommendation of members for the Danish Committees on Scientific Dishonesty (UVVU)
- Proposal for a new Secretary General of the European Science Foundation
- Advice to the Danish High Technology Foundation
- Advice to the Danish National Research Foundation
- Advice to the Danish Council for Technology and Innovation

Advisory assignments performed by the Danish Councils for Independent Research in 2007

No. of assignments undertaken	2007
Consultations	28
Recommendations and nominations	25
Quasi-funding assignments	356
International assignments	36
Total	445

"The advice provided by the Danish Councils for Independent Research plays a major role in our work."

Professor Klaus Bock, Vice Chair of the Danish High Technology Foundation and Chair of the Danish National Research Foundation

business deal. They do not all have the insight into the research side that is required for assessing some of the projects," he says, but also stresses that:

"Having said that, if we can see useful and promising commercial aspects in a project, we might very well give the green light for a project even if there is no particular research value to it."

The advice from the researchers is most often decisive. The Danish Research Council for Technology and Production Sciences (FTP) is one of the scientific research councils that receive most advisory commissions. But the Council also coordinates a number of advisory assignments for other councils.

"We have an arrangement with the Danish Council for Technology and Innovation. Twice a year they contact us concerning their projects. We then distribute these to the scientific research councils if an assessment is required," says the Chair of FTP,

professor Marcel Somers. For the Chair of DFF, Professor Jens Christian Djurhuus, it is logical for other advisory and funding bodies to make use of the councils' competencies.

"The whole basis for serving on these councils is obviously that the members are definitively experts with an extensive scientific background in their respective fields. As such, the members follow developments in their field closely and have all the latest insights into what's going on. But serving as a member of a council in itself also provides them with a comprehensive perspective. The council members assess hundreds of applications a year. This gives them an incredible insight into what's going on in the research community right now. That level of knowledge is very useful for others to draw on", says Jens Christian Djurhuus.



The Danish Research Council for the Humanities (FKK) covers researcher-driven research within all aspects of culture, aesthetics, language, history and cognition disciplines



**Key figures for the Danish Research Council
for the Humanities' funding function 2007**

Amount applied for	DKK 815 million
Amount granted	DKK 127 million
Success rate	16 %
No. of applications	563
No. of grants	199
Success rate	35 %



Chair, Professor Kirsten Drotner

The Danish Research Council for the Humanities 2007

Merete Ahnfeldt-Møllerup, Associate Professor, Architect MAA
Anne Marie Bülow-Møller, Professor
Kirsten Drotner, Professor, DPhil (Chair)
Esther Fihl, Professor, DPhil
Hans Fink, DPhil (Vice Chair)
Lars Hem, Associate Professor
Katrin Hjort, Associate Professor (appointed 1 August 2007)
Kurt Villads Jensen, Associate Professor
Svend Erik Larsen, Professor, DPhil
Anne Løkke, Associate Professor, DPhil
Viggo Mortensen, Professor, DTh
Peder Kaj Pedersen, Associate Professor
Hanne Ruus, Professor, DPhil
Karen Skovgaard-Petersen, Senior Researcher, DPhil
Ingolf Thuesen, Associate Professor
Kirsten Weber, Professor (retired 31 July 2007)

The 15 members of the Council are recognised researchers and officially appointed by the Minister for Science, Technology and Innovation within their personal capacity

Humanities Research

Independent humanities research has a vital role to play if we are to understand the lives we lead and if we are to comprehend the cultural dynamics that form the basis for the shifts in the knowledge society. The Danish Council for the Humanities (FKK) rates the quality of the growth layer and the breakthroughs of established research within a wide array of humanities research fields. In 2007, besides its recurring funding for researcher-initiated research, FKK has focused on aspects such as the quality of research, international cooperation and free access to knowledge.

FKK's theme-day event in May 2007

In correspondence with the increasingly central role of research in society, the need for developing tools to assure and document the quality of research also increases. Responding to that need, FKK held a theme-day event in May 2007 on research quality, including the establishment of quality indicators.

If Denmark is to benefit from dynamic breakthroughs, knowledge must be quali-

fied and communicated across all prevailing divides. The establishment of relevant quality indicators requires cooperation between politicians, official bodies, research councils and research environments. Many different parties have to assume a joint responsibility and make a concerted commitment. At the theme-day event, there was consensus that the publication patterns in humanities research are heterogeneous and that developing differentiated quality indicators to cater for these patterns poses a major challenge.

International collaboration

Sources of scholarly creativity and innovation exist across the divides of different research environments and national borders. With a view to strengthening international research collaboration, FKK is participating in a European network of research councils – Humanities in the European Research Area (HERA). The outcomes include knowledge sharing concerning infrastructure and project assessment as well as the development of two joint research programmes: 'Cultural Dy-

namics: Inheritance and Identity' and 'Humanities as a Source of Creativity and Innovation'. The research programmes will be announced at the end of 2008. During 2008 meetings will be held for prospective applicants.

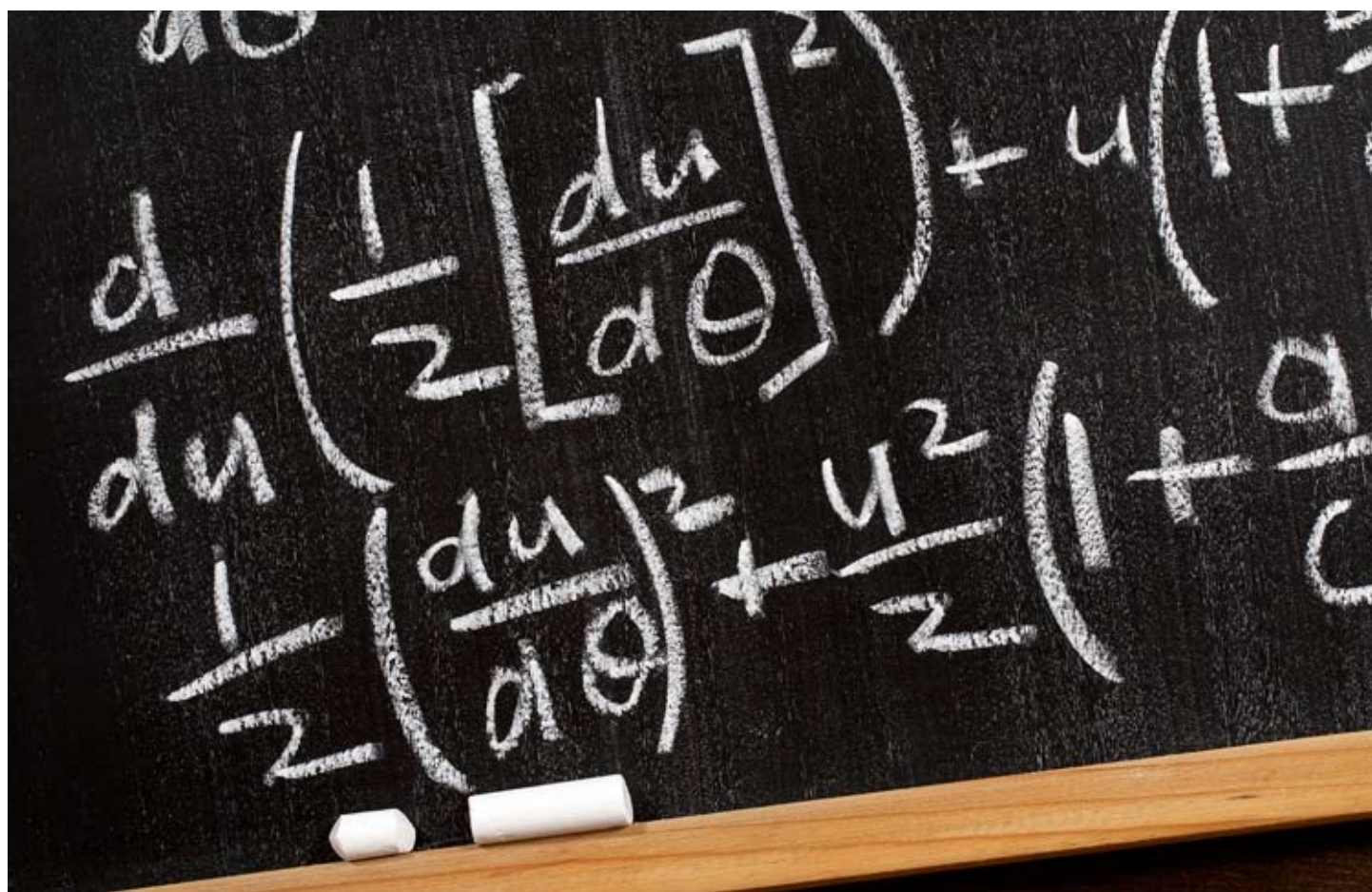
The accessibility of knowledge

Enhancement of the quality of research requires broad-based, cheap, and easy access to share the processes and findings of research. FKK believes that publicly financed research should, to the greatest possible extent, be freely available. Accordingly, in 2007, FKK decided that journals subsidised by FKK must henceforward make their articles available free of charge on the Internet at the latest one year after publication; FKK will be available to assist with editorial work.

The intention is to strengthen national and international knowledge sharing among researchers and between researchers and citizens, in recognition of the democratic society's dependence on having a well-informed general public.



The Danish Natural Science Research Council (FNU) covers all aspects of researcher-driven research geared towards basic scientific issues within the natural sciences, computer science and mathematics, where the aim is fundamental, but not necessarily applied research



**Key figures for the Danish Natural Science Research Council's
funding function 2007**

Amount applied for	DKK 1,110 million
Amount granted	DKK 266 million
Success rate	24 %
No. of applications	642
No. of grants	187
Success rate	29 %



Chair, Professor Jes Madsen

The 16 members of the Council are recognised researchers and officially appointed by the Minister for Science, Technology and Innovation within their personal capacity

The Danish Natural Science Research Council 2007

Thomas Bjørnholm, Professor
Hans Brix, Professor
Kirsten Seestern Christoffersen, Associate Professor (appointed 1 August 2007)
Valery Forbes, Professor (retired 31 July 2007)
Jens Jørgen Gaardhøje, Professor (appointed 1 August 2007)
Dorthe Dahl-Jensen, Professor (retired 31 July 2007)
Eva B. Vedel Jensen, Professor (retired 31 July 2007)
Morten Kielland-Brandt, Professor (retired 31 July 2007)
Jørgen Kjems, Professor (appointed 1 August 2007)
Jes Madsen, Professor (Chair)
Susanne Mandrup, Associate Professor
Christine J. McKenzie, Professor (appointed 1 August 2007)
Søren Molin, Professor
Brian Bech Nielsen, Professor
Niels Christian Nielsen, Professor (retired 31 July 2007)
Michael Gjedde Palmgren, Professor (appointed 1 August 2007)
Mikael Rørdam, Professor (Vice Chair)
Michael Schwartzbach, Associate Professor (appointed 1 August 2007)
Marit-Solveig Seidenkrantz, Associate Professor
Lars Stemmerik, Professor (retired 31 July 2007)
Annemarie Surlykke, Associate Professor
Hans Thybo, Professor (appointed 1 August 2007)

The growth layer of research - recruitment of researchers

Generational change is slowly progressing in the faculties of natural science. At the same time, the universities and other research institutions are witnessing an incipient growth of basic grants. This spurs consideration of how the Danish Natural Science Research Council (FNU) may strengthen Danish research in the best way possible. The Council wishes to create opportunities for individual researchers themselves to be able to propose activities characterised by a high standard of scientific excellence. FNU consequently regards it as a priority to balance its funding between well-documented research activities and more innovative and experimental projects.

In order to facilitate conditions conducive to ground-breaking research, it is crucial that as many talented researchers as possible secure funding for their research activities. Accordingly, for a number of years, the Council has supported generational change through grants for talented young researchers. In 2007, the Council, in consultation with the deans in the natural science faculties, decided to reform its grant-making programme. The Skou grant at associate pro-

fessor level has been discontinued, and the Steno grant at assistant professor/associate professor level has been made more flexible. The Rømer grant at professor/associate professor level is being retained in order to attract particularly eminent researchers from abroad. The Council hopes, through these initiatives, to optimise its funding for talent-nurture of young researchers and recruitment from abroad, while it leaves it to the institutions to ensure the retention of qualified researchers at the levels of associate professor and senior researcher.

Projects - funding for established researchers and research training

Researchers with permanent positions often need to have their expenses covered for research activities that lie beyond what their place of employment is able to finance. The Council closes this gap by offering the following funding instruments: Framework grants, Major framework grants, Major equipment grants and Logistics grants. In fact, the Council spends half of its annual budget on activities in which researchers in permanent positions head up large-scale activities with a significant researcher training component.

International collaboration

One important aspect for natural science researchers is to have access to international research infrastructures and participation in international collaborative projects. The Council funds a large number of international research activities which are either of interest to Danish research environments or facilitate the exchange of knowledge and experience.

In 2007, the Council granted DKK 40 million for research associated with three international collaborative projects for which the Danish membership fee is paid through the Danish Finance and Appropriations Act: high-energy physics (CERN), astrophysics (ESO), and synchrotron radiation activities (ESRF). All of these projects are making a substantial contribution to the competitiveness of European research. The grants from FNU ensure that researchers at Danish institutions have resources for using these facilities for the next two years.

For 2008 and onwards, FNU will be looking forward to qualifying Danish participation in the realisation of European Strategy Forum on Research Infrastructure (ESFRI), and very much anticipates the political and research-specific mapping of the next stages in the process.



The Danish Social Science Research Council (FSE) covers researcher-driven research within economics, sociology, political science and law, as well as the societal aspects of a number of interdisciplinary areas



**Key figures for the Danish Social Science Research Council's
funding function 2007**

Amount applied for	DKK 467 million
Amount granted	DKK 89 million
Success rate	19 %
No. of applications	310
No. of grants	93
Success rate	30 %



Chair, Professor Christian Lund

The 15 members of the Council are recognised researchers and officially appointed by the Minister for Science, Technology and Innovation within their personal capacity

The Danish Social Science Research Council (FSE) 2007

Heine Andersen, Professor
Peter Munk Christiansen, Professor (appointed 1 August 2007)
Nabanita Datta Gupta, Research Professor (appointed 1 August 2007)
Christoffer Green-Pedersen, Professor
Niels Haldrup, Professor (retired 31 July 2007)
Birthe Hansen, Associate Professor
Olli Kangas, Research Professor (retired 31 July 2007)
Lisbeth B. Knudsen, Associate Professor (appointed 1 August 2007)
Peter Kurrild-Klitgaard, Professor
Keld Laursen, Research Professor (appointed 1 August 2007)
Christian Lund, Professor (Chair from 1 August 2007)
Mette Mønsted, Professor
Mette Neville, Professor (retired 31 July 2007)
Søren Bo Nielsen, Professor
Per Baltzer Overgaard, Professor
Annick Prieur, Professor
Birgitte Sloth, Professor (Chair until 31 July 2007, retired 31 July 2007)
Jacob Torfing, Professor (retired 31 July 2007)
Erik Werlauff, Professor (appointed 1 August 2007, retired 31 December 2007)
Mette Wier, Managing Director, Professor

Social Science Research

The main purpose of the Danish Social Science Research Council (FSE) is to support researcher-driven, original, visionary and critical research in social sciences – be it discipline-oriented or interdisciplinary. If Denmark is to succeed as a knowledge society in a globalised world, independent funding must be allocated to the fields of social science in open competition without restrictive research themes or earmarking. There are many reasons for this: one, independent funding is the precondition for the accumulation of a critical mass of talented researchers in social sciences on which more targeted programmes will be based, and two, research-related breakthroughs are difficult to predict in an era characterised by rapid societal changes and major global challenges.

New funding instrument

Responding to the major challenges Denmark will face in the coming years, in autumn 2007 FSE initiated a new funding instrument – FSE Research Units – with effect from spring 2008. This funding instrument allows research teams to apply for a funding pool of a total of DKK 4-8

million over a three-to-five-year period. FSE Research Units will close the gap in research funding, where the leap from small-scale research projects to large-scale, joint research pools is long and difficult. With the introduction of the new funding instrument, FSE will be allocating funds for a special effort to ensure that social science researchers are given the capacity to join large-scale research collaborations bridging different disciplines and spanning national borders.

The growth layer of research

In 2007, FSE has also directed focus at young researchers and research training in order to resolve the problem of the impending generational change at the universities. In 2007, FSE awarded 22 post-doctoral grants and six PhD grants corresponding to 61 man-years to young talented researchers within social sciences. This is a massive increase over the previous year. Chair of FSE, Christian Lund, explains this development: "The Council's awards have resulted in a special initiative for recruitment and retention of a new generation of young, talented researchers in social science. This strengthens the growth layer of social science re-

search, while the Council is instrumental in safeguarding the role played by social sciences in the development of the Danish welfare and knowledge society and the nation's global competitiveness."

FSE conference on research quality and quality indicators

In autumn 2007, FSE held a conference on research quality and quality indicators. In furtherance of the Government's globalisation strategy, in which the vision is for Danish publicly funded research to be of first-class international standard, research funds will in the near future be awarded in open competition. In this way, the funds go to the best researchers and the best research environments. The Council's object for the conference was to provide input for the current debate on measurement of research quality, and especially to discuss the inherent challenges of measuring that quality in the social sciences. Through presentations from representatives of institutions and grant-making bodies, experience gained from implementing quality indicators in countries such as Norway and England was illustrated and discussed.



The Danish Medical Research Council (F55) covers researcher-driven research within all aspects of basic, clinical and socio-medical research geared towards human health and disease



**Key figures for the Danish Medical Research Council's
funding function 2007**

Amount applied for	DKK 1,552 million
Amount granted	DKK 243 million
Success rate	16 %
No. of applications	882
No. of grants	312
Success rate	35 %



Chair, Professor Lars Fugger

The 20 members of the Council are recognised researchers and officially appointed by the Minister for Science, Technology and Innovation within their personal capacity

The Danish Medical Research Council (FSS) 2007

Pia Haubro Andersen, Professor, DScVM (retired 31 July 2007)
Hans Bräuner-Osborne, Professor, DPharm
Jørgen Drejer, Director of Research (retired 31 July 2007)
Ulla Feldt-Rasmussen, Chief Physician, MD
Bente Finsen, Professor, MD
Lars Fugger, Professor, Chief Physician, MD (chair)
Albert Gjedde, Professor, MD
Anne Tybjærg Hansen, Chief Physician, MD, Associate Professor
Berit Lillienthal Heitmann, External Professor
Marianne Hokland, Associate Professor, MD (appointed 1 August 2007)
Inge-Lis Kanstrup, Chief Hospital Physician, MD
Søren Laurberg, Professor, Chief Physician, MD
Jørgen Lous, Professor, MD
Sten Madsbad, Professor, Chief Physician, MD
Mads Melbye, Professor, MD, Executive Vice President (Vice Chair)
Søren K. Moestrup, Professor, Chief Physician, MD (appointed 1 August 2007)
Merete Nordentoft, Professor, Chief Physician, MD
Court Pedersen, Professor, Chief Physician, MD
Mette Rosenkilde, Associate Professor (appointed 1 August 2007)
Preben D. Thomsen, Professor, DScVM
Bente Vilsen, Professor, MD
Cathrine Ørskov, International Medical Advisor, MD

Clinical research for the benefit of patients

In 2007, the Danish Medical Research Council (FSS) has concentrated especially on the conditions prevailing in patient-centred clinical research, which aims at directly transferring the latest knowledge in medical science to treatment and prevention. The tendency in several countries has been towards a decline in researcher-initiated clinical research, constricted as it is by factors such as increasing productivity requirements within tight budgets. The Council has addressed this issue by allocating funding for "Clinical Research" as a Visionary Research Area. The Council has also discussed this VRA at a special thematic meeting attended by the deans and the representatives of clinical research at the faculties/institutes of health science.

Recruitment and retention

A high-priority area for FSS is to promote recruitment to medical – including clinical – research, and the Council is therefore awarding funding to medical students who, on a one-year sabbatical from their studies, will engage themselves in a

specific research project. Through its postdoctoral grants, the Council is also seeking to retain the best PhD students in a research career.

In 2007, FSS continued its work on the new funding instrument "Fractional Appointments", the twofold aim of which is to give greater priority to clinical research and improve the chances of retaining researchers on a combined clinical and research-based career path. The "Fractional Appointments" provide a boost to that, which is in shortest supply during the busy clinical working day – that is, time. It is precisely the combination of clinical work and research that provides an ideal basis for the patient-centred clinical research. The appointments are limited in time, but if they prove to be a success as anticipated, FSS expects that authorities such as the Danish Regions will ultimately be willing to finance such appointments.

International collaboration

FSS participates actively in international work at a global, a European and a Nordic scale. The various medical research councils in the Nordic region are organised

under the Joint Committee of the Nordic Medical Research Councils (NOS-M), and for three years, starting in 2007, Denmark holds the chairmanship as well as the secretariat function. NOS-M deals with political issues of joint Nordic interest, including the opportunities for pan-Nordic lobbying in a European context.

Contact with the research environments

The Danish Medical Research Council hosts an annual seminar at which researchers within the same field, but from different research environments, meet with the Council. In 2007, the Council was thus the initiator of a conference at which cancer researchers from different research environments convened to discuss challenges and potentials in their field. The Council finds it important and useful to maintain ongoing dialogue with the research environments, as this allows the Council to supplement its insights into the research-related conditions prevailing in a given subject field. At the same time, these conferences represent a good opportunity for providing information about the Council's work.



The Danish Research Council for Technology and Production Sciences (FTP) covers researcher-driven research within technology and production sciences, focusing on application-oriented solutions to problems or new ways of meeting the needs of society



**Key figures for the Danish Research Council for
Technology and Production Sciences' funding function 2007**

Amount applied for	DKK 1,941 million
Amount granted	DKK 300 million
Success rate	15 %
No. of applications	568
No. of grants	131
Success rate	23 %



Chair, Professor Marcel A. J. Somers

The 22 members of the Council are recognised researchers and officially appointed by the Minister for Science, Technology and Innovation within their personal capacity

The Danish Research Council for Technology and Production Sciences (FTP) 2007

Fredrik Björkling, Director of Council Funding
Merete Blixenkron-Møller, Professor, DScVM (retired 31 July 2007)
Anja Boisen, Professor
Michael Brorson, Principal Research Chemist (appointed 1 August 2007)
Henrik Callesen, Research Professor, DScVM
Svend Christensen, Professor (appointed 1 August 2007)
Annette Kjær Ersbøll, Associate Professor
Inge S. Fomsgaard, Senior Researcher (appointed 1 August 2007)
Susanne Grøn, Head of Department
Ole Hassager, Professor
Preben Bach Holm, Research Professor, DSc (appointed 1 August 2007)
Asger Lundorff Jensen, Professor (appointed 1 August 2007)
Jørgen Juncher Jensen, Professor, DTech
Jens Stougaard Jensen, Professor (retired 31 July 2007)
Lars Lading, Managing Director (Chair until 31 July 2007; retired 31 July 2007)
Torben Larsen, Professor, DTech
Peter Lind, Senior Researcher, Professor, DSc (Vice Chair)
Henrik Hautop Lund, Professor (retired 31 July 2007)
Ole Lehrmann Madsen, Managing Director, Professor (retired 31 July 2007)
Jesper Mørk, Professor, DTech
Inge Sandholt, Associate Professor
Peter Sestoft, Associate Professor (appointed 1 August 2007)
Karen Skriver, Associate Professor
Marcel A. J. Somers, Professor, DEng (Chair from 1 August 2007)
Jakob Stoustrup, Professor
Ib Søndergaard, Associate Professor
Lone Møller Sørensen, Managing Director (retired 31 July 2007)
Raewyn M. Town, Professor (appointed 1 August 2007)

Dissemination in focus

Once again in 2007, the 22 members of the Danish Research Council for Technology and Production Sciences (FTP) agreed to place special emphasis on broad-based dissemination of the research activities funded by the Council. The intention has been to ensure that the knowledge produced by these research projects is utilised as widely as possible. The efforts for dissemination have resulted in publications such as "8 researcher stories 2007", 3,700 copies of which were sent out to researchers, journalists, the business community, libraries, upper secondary schools, and decision-makers. The Council's aim for this publication has been to arouse interest in natural and technical science among senior pupils at upper secondary schools.

Research training given high priority

In 2007, as in previous years, the Council was committed to research training as a high-priority activity. A total of 75 post-

doctoral grants and 51 PhD grants were allocated to research activities ranging from fear response in farm animals, to coding of digital TV signals. The competition for FTP funding is intense, and consequently the projects that do receive funding are all of a very high standard. This means that the Council often sees that a postdoctoral or PhD grant from FTP forms the basis for a subsequently productive career in research.

A broad foundation

FTP supports and nurtures emergent research fields with a wide array of funding instruments ranging from lesser amounts for compiling applications for EU's 7th Framework Programme, through as much as DKK six million for postdoctoral studies and research projects to the Council's major, multi-million investments. The common denominators of projects funded by FTP in 2007 are that they are researcher-initiated, involve basic research and are solution-oriented. In other words,

these are projects that strengthen the research foundation for finding innovative solutions to specific problems. This broad foundation paves the way for politically motivated strategic investments in fields of research assessed as being of particular significance for society.

International activities

Generally, research within FTP's field of study takes place in an international context, and in its assessment of applications, the Council places emphasis on the research being carried out in the international cooperation forums that are most relevant for the activity in question. In addition, FTP participates in the following ERA (European Research Area) networks: Wood Wisdom, Industrial Biotechnology, and Plant Genomics. During 2007, FTP was involved in preparing the ERA Industrial Biotechnology network's first transnational call for applications, and also granted funding for projects under Wood Wisdom and Plant Genomics.



The work of the Danish Councils for Independent Research is firmly founded on international collaboration. In 2007, the Council was consequently engaged in a large number of international activities, a number of which are presented here



International collaboration

The European Research Council (ERC)

The European Research Council (ERC) was established in 2005 with the purpose of funding basic research initiated by the researchers themselves within all research disciplines. ERC activities are funded by the EU Framework Programme for Research and Technological Development. The ERC, like the Danish Councils for Independent Research, DFF, funds outstanding research undertaken on the basis of the researcher's own initiative. The projects are selected in open competition, where the selection criterion is scientific excellence. The president of ERC's policy-setting body, the Scientific Council, is Professor

Fotis Kafatos. The Danish ERC representative is Jens Rostrup-Nielsen, Director R&D Division, Haldor Topsøe A/S.

DFF has supported the establishment of the ERC and regards it as a very important task to support ERC's development as the leading advocate of international competition for independent research funds in Europe. At the end of 2007, the ERC published the results of the first ERC call for applications aimed at young researchers. Four out of the some 300 ERC grants were awarded to applicants attached to a Danish research institution. A list of the awarded grants can be found at erc.europa.eu.

“Research is by nature international, and the Danish Councils for Independent Research work actively to take part in European and other cross-national activities. It’s a substantial and important task for the Council.”

Professor Ebba Nexø, Vice Chair of the Board for DFF, and member of EUROHORCs and European Science Foundation’s Governing Council

With a pool of some 500 million Euro, the European Research Council’s second call for applications is aimed at established researchers, and funding allocations will be made in the autumn of 2008. DFF finds it important to achieve appropriate interaction between DFF and ERC funding instruments and is consequently in ongoing dialogue with ERC to that end.

Nobel Laureate Meetings

In 2007, DFF formed a partnership with the Council for the Lindau Nobel Laureate Meetings, which gives DFF the opportunity to nominate candidates for participation in the prestigious Nobel Laureate Meetings. The Meetings are held annually at Bodensee in Lindau, Switzerland, and attract each year 20-25 Nobel Laureates and around 500 talented young researchers. The topic of the Meetings rotate each year between chemistry, physics, physiology/medicine, and economics, while an interdisciplinary topic is the focus every fifth year.

From the award-winners of the Elite Research Prizes granted by the Danish Councils for Independent Research and the Minister for Science, Technology and Innovation (cf. page 11), DFF recommends a small number of candidates within the scientific field addressed by the next Lindau Nobel Laureate Meeting.

The following candidates were selected by DFF to attend the Lindau Nobel Laureate Meeting 2007 for researchers in physiology and medicine:

- Marianne Jensby Nielsen, Postdoc, Department of Medical Biochemistry at the University of Aarhus
- Marina von Essen, Substituting Assistant Professor, Department of Medical Microbiology and Immunology, University of Copenhagen
- Robert Fenton, Assistant Research Professor, Postdoc, Water and Salt Research Centre, Institute of Anatomy, University of Aarhus.

Bilateral agreements

In recent years, the Ministry of Science, Technology and Innovation has concluded bilateral cooperation agreements concerning research and research training with India, Canada, Israel, Japan, and China, and is seeking to conclude a number of other agreements with countries such as the USA.

DFF wishes to promote opportunities for creating and utilising bilateral agreements concluded between Denmark/the Nor-

dic Region/the EU and growth regions in countries within and outside of Europe. In particular, DFF will be seeking to conclude agreements with countries of special interest for Danish positions of strength in research. Initially, DFF will be focusing on particularly high-powered research environments in high growth countries such as the USA and Korea. In the long run, however, other growth regions will come into focus such as Southeast Asia, Russia, and research environments elsewhere in the world of significance for global development and stability. To that end, in 2007, the initiative was taken to launch the following activities:

- A collaboration with the National Science Foundation (NSF) in the USA, which will promote Danish and American researchers’ funding opportunities for a research stay in the two countries. DFF intends to make a special commitment to post-doctoral researchers. The new opportunities will be presented in calls to be published on the DFF website (fi.dk) and the National Science Foundation website (nsf.gov) from autumn 2008.
- In 2008, DFF will be concluding a cooperation agreement with the Korean research council Korea Science and Engineering Foundation (KOSEF). The purpose of the agreement is to facilitate cooperation between researchers in Denmark and Korea, enabling individual researchers and research teams in each country to carry out joint research projects and hold joint seminars and workshops. In addition, the agreement aims at promoting the exchange of visiting researchers between Denmark and Korea.
- A collaboration with the Japanese research council Japan Science and Technology Agency to fund a number of research projects staffed by both Danish and Japanese researchers and research teams working within the field of life sciences. In spring 2008, calls for this programme will be made for the first time in the two countries.

DFF intends, where it serves the interests of Danish research objectives, to initiate additional agreements with its counterparts in other countries.



European Research Area NET (ERA-NET)

DFF is participating in the advancement of the cooperation and coordination of research activities with a number of its counterparts in Europe. This takes place within the framework of the European Union and is organised in a large number of European Research Area networks (ERA-NET). DFF is currently participating in eight ERA-NETs:

- BONUS for the Baltic Sea Science
- ECORD-net European Consortium for Ocean Research Drilling
- ERA-IB Industrial Biotechnology
- ERA-PG European Research Area Plant Genomics
- EURO-POLAR The European Polar Consortium
- HERA Humanities in the European Research Area
- NORFACE New Opportunities for Research Funding Cooperation in Europe
- WoodWisdom Net Networking and integration of national programmes in the area of wood material science and engineering

The ERA-NET scheme was a new funding instrument introduced as part of the EU's 6th Framework Programme and has been enhanced in the 7th Framework Programme. The main objective of the ERA-NETs is to develop and improve the coordination between national research funding organisations such as national research councils and/or ministries for the purpose of jointly developing new, lasting forms of cooperation.

During 2007, several of these ERA-NETs have implemented pilot programmes involving various forms of joint calls for research funding applications. On the basis of this, large-scale transnational programmes will be implemented in the coming years. The funding of these programmes will be coordinated through a "common pot" and all projects will be in open competition without regard for nationality.

European Science Foundation (ESF)

DFF's scientific research councils are members of the European Science Foundation (ESF), an association of 77 member organisations, including research councils, academies and similar bodies that provide funding for research. The object of ESF is to strengthen European basic research; to advise on research and research policy; to strengthen mobility between researchers in Europe and to organise scientific programmes, networks, workshops and conferences within all branches of science.

The ESF is under the ongoing supervision of the Governing Council, which is composed of representatives from the member countries (33 members). The Danish member of the Governing Council is the vice chair of the DFF Board, Professor Ebba Nexø, Aarhus University Hospital.

In November 2007, DFF participated in the annual ESF science policy conference, the focus of which was on coherence between the European and the global research areas: "Is ERA a first step to GLOREA? (Global Research Area). The ERA from an international perspective". Among other things, the conference addressed Europe's need to establish a broader European Research Area (ERA), which will be globally oriented and more inclusive of neighbouring, industrial and high growth countries, as well as the importance of aiming for increased integration of European research in the global knowledge society.

Through the scientific research councils' membership of ESF, Danish researchers have access to participate in a number of activities and programmes under ESF, and Danish researchers and research institutions have a means of making proposals for the initiation of new activities either directly or via DFF.

For more information about the Danish Councils for Independent Research's international cooperation, please contact Mette Bjerger (Special Adviser): mbj@fi.dk / +45 3544 6362

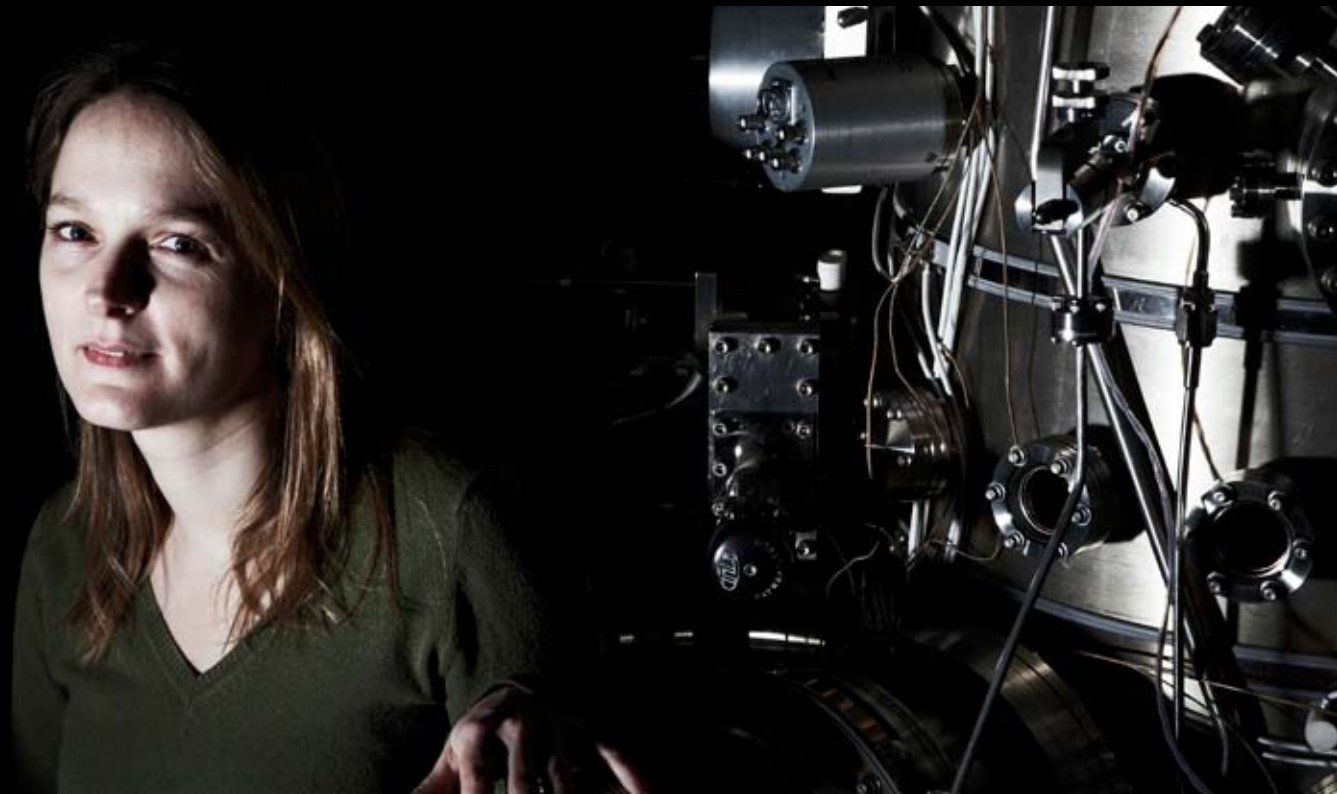
DFF also participates in:

Nordic cooperation: DFF's chief partners in Nordic research cooperation are the Nordic research councils within the framework of the joint committees for Nordic research councils (NOS), and within the Nordic research board, NordForsk. In association with the other Nordic countries, DFF works to promote Nordic research collaboration in areas where it will provide Nordic added value and where genuine synergetic potentials exist.

The Centre for Independent Research and Research Training provides secretarial services to NOS-M, NOS-HS and NOS-N.

EUROHORCS: an informal association of the heads of European research funding organisations. EUROHORCS was established in 1992 and is composed of 37 research funding organisations from all the EU Member States and a number of associated countries: Norway, Iceland and Switzerland. EUROHORCS aims at strengthening the research community's European policy on research and technological development, notably in relation to EU research programmes.

The Danish member of EUROHORCS is the vice chair of the DFF Board, Professor Ebba Nexø, Aarhus University Hospital.



Liv Hornekær awarded grant by the European Research Council (ERC)

Liv Hornekær from the Department of Physics and Astronomy, University of Aarhus, is one of the young Danish researchers who in the coming years will be benefiting from the increased international collaboration on funding for researcher-driven research. She has passed through the eye of the needle at the European Research Council (ERC), who in 2007 invited applications for its new Starting Grants: some 9,000 applications were submitted, of which 300 successfully secured a grant, which makes this a highly commendable achievement by Liv Hornekær. She has received a grant of just over DKK 11 million for a study on how hydrogen molecules are formed in space and on how the same processes can possibly be recreated in new techniques for storing hydrogen here on Earth.

Research funding from the EU has a reputation of being extremely difficult to get hold of, but the grants from the ERC, which in 2007 were focused on young researchers, were actually not that difficult to get a share of, claims Liv Hornekær:

”They had divided the process into two parts. The first application was not that demanding, and when I was in-

formed that I was through to the second round it seemed worth putting a big effort into the application, because by then my chances were really good.”

Researcher-driven research - both basic and applied research

Her project is twofold: one part is purely basic research to determine why such vast volumes of hydrogen molecules continue to occur in space since they are constantly destroyed by forces such as cosmic radiation. Liv Hornekær has a theory that challenges prevailing conceptions of the chemical process in space. Over the next three years, she hopes to be able to prove that hydrogen collects on the surface of complex molecules called polycyclic hydrocarbons.

The other part of her project becomes more one of applied science. If, as conjectured, the hydrocarbons form hydrogen molecules in space, they could perhaps also be used for storing hydrogen on Earth. And if there is one thing in demand in these years, it is a viable solution for a better way of storing hydrogen. The whole ambition of using hydrogen as a means of storing and transporting energy

from e.g. renewable energy sources, is dependent on better means of storing this volatile gas.

”For the first three years, we will be studying the processes closely so we know which polycyclic hydrocarbons are best at capturing the hydrogen atoms and supporting the formation of hydrogen molecules. We want to find out the optimal temperature for this process, and what happens to the energy released when the hydrogen molecules are formed. The data we obtain in these first three years will be able to tell us which hydrocarbons have the biggest hydrogen storage potential. We will then carry on working on those for another two years to investigate their potential as a hydrogen storage medium,” says Liv Hornekær.

For the past four years, her work has been funded by grants from the Danish Councils for Independent Research. When the money from ERC comes through this summer, it will be Liv who has to fund the work of others. One of her first tasks in the project will be to hire two PhDs and a Postdoctoral Researcher.



Propagating the **growth layer**

A good day for research is one on which things are demolished. Where generally accepted truths turn out to be more accepted than true, and where the potential arises for the emergence of new insights.

Thus, a good day for research is also one on which researchers present a novel idea, ideally one with the potential to shake the customary approaches and knowledge upon which we base our society with its products, structures and collective agreements.

It is ideas of that calibre which the five research councils that make up the Danish Councils for Independent Research (DFF) have to be able to identify when they turn up in their piles of applications. Because these are the kinds of ideas that

must be cultivated and nurtured like no other if DFF is to do justice to its role as guarantor of the continued existence of a vigorous growth layer in Danish research.

“Research exists to constantly ask new questions – even about the things that are generally held to have been answered. A good researcher will be balancing on the edge of the known and familiar,” says Kirsten Drotner, Professor at the University of Southern Denmark and Chair of the Danish Research Council for the Humanities.

In the efforts to retain and extend a vigorous growth layer in Danish research, DFF is a prominent actor. In 2007, for example, DFF granted funding for 261 new

PhD man-years and 531 man-years for postdoctoral researchers.

“But fertilising the growth layer is not solely a question of assisting young talent,” says Kirsten Drotner, adding that, “the Danish Councils for Independent Research create the best possible conditions for independent research by insisting that the part of research we fund must have originated inside the researchers’ own heads. It is their ideas that have the potential to create the new insights. And those ideas do not only come from the young researchers.”

“I believe that we should be very aware of the fact that we are managing venture capital here. If you only fund applicants with a glowing CV, you might very well

"A certain critical mass of people and funds is needed in the Danish research community. The answer is both to ensure the recruitment of young talents and to strengthen the scientific development opportunities of mature researchers."

Kirsten Drotner, Chair of the Danish Research Council for the Humanities

In 2007, the Danish Councils for Independent Research awarded funding for 261 PhD man-years (3,126 months) which corresponds to just under 87 full PhD programmes. A large proportion of council funding for PhD projects is awarded as co-financing, and the 261 PhD man-years thus break down into 151 different PhD projects

In 2007, the Danish Councils for Independent Research awarded funding for 531 postdoctoral man-years (6,368 months), which corresponds to 177 three-year postdoctoral programmes. Funding may vary from a few months up to three years, and the 531 man-years are thus distributed among 246 individuals

The figures for the individual scientific research councils can be found at fi.dk under Councils & Commissions & Committees

end up funding mainstreamers. However, we shouldn't be funding ideas just because they are off the beaten track. The ideal application is pioneering, but equally sets out a sound rationale for why new territory needs to be broken. Fortunately, the Danish Councils for Independent Research receive a lot of well-founded applications, and the broad composition of each council ensures that we have a differentiated perspective on their merits," says Kirsten Drotner.

Kirsten Drotner sees two challenges in retaining and extending a productive growth layer for Danish research. Firstly, we need to be better at collaborating across fields of research:

"We shall respect the integrity of the disciplines, but I maintain that we should be aiming at creating a certain porosity between fields of research. In my experience new angles and different questions often occur when we meet people who view our own particular problems from other perspectives and approaches."

The other challenge is volume.

"A certain critical mass of people and funds is needed in the Danish research community. The answer is both to ensure the recruitment of young talents and to strengthen the scientific development opportunities of mature researchers", says Kirsten Drotner.



Making way for large grants

Average size of DFF
grants in 2007:
DKK 1.1 million

Average size of DFF
grants in 2007; large
and long-term grants:
DKK 4.5 million

It is a natural trend in Danish research that talented young researchers are put in charge of large research teams and suddenly find themselves spending an increasing amount of their time on other things than research itself. Instead, the time is spent applying for funding to continue the team's work.

One solution to this is a special initiative taken by the Board of the Danish Councils for Independent Research (DFF) in 2006 of allocating a proportion of research funds for large and long-term research projects, the object being to allow time and peace of mind for important research.

DFF grant-making statistics indicate that the initiative has had the desired effect. In 2006, 23 per cent of DFF funding was awarded in grants of DKK 3 million or more – this being the DFF definition of what constitutes 'large grants'. In 2007, the proportion of large grants awarded increased to 40 per cent of total allocations. The average grant amount went up from DKK 920,000 in 2006 to just under DKK 1.1 million in 2007. However, in the midst of this success, it is worth bearing in mind that not all fields of research stand to benefit equally from large grants, as pointed out by Jes Madsen, Professor at the Faculty of Science, University of Aarhus and Chair of the Danish Natural Science Research Council (FNU). "You'd have a hard time disputing the merits of more money for a longer period of time. But our grant-making is always based on the funding requirements the researchers can document convincingly. Certain fields such as molecular biology entail major expenses on labs and so forth, while mathematical research is typically a lot less costly", he says.

But it surely makes sense to disburse fewer but larger grants so researchers don't have to spend such a large proportion of their time on amassing funding from multiple small sources?

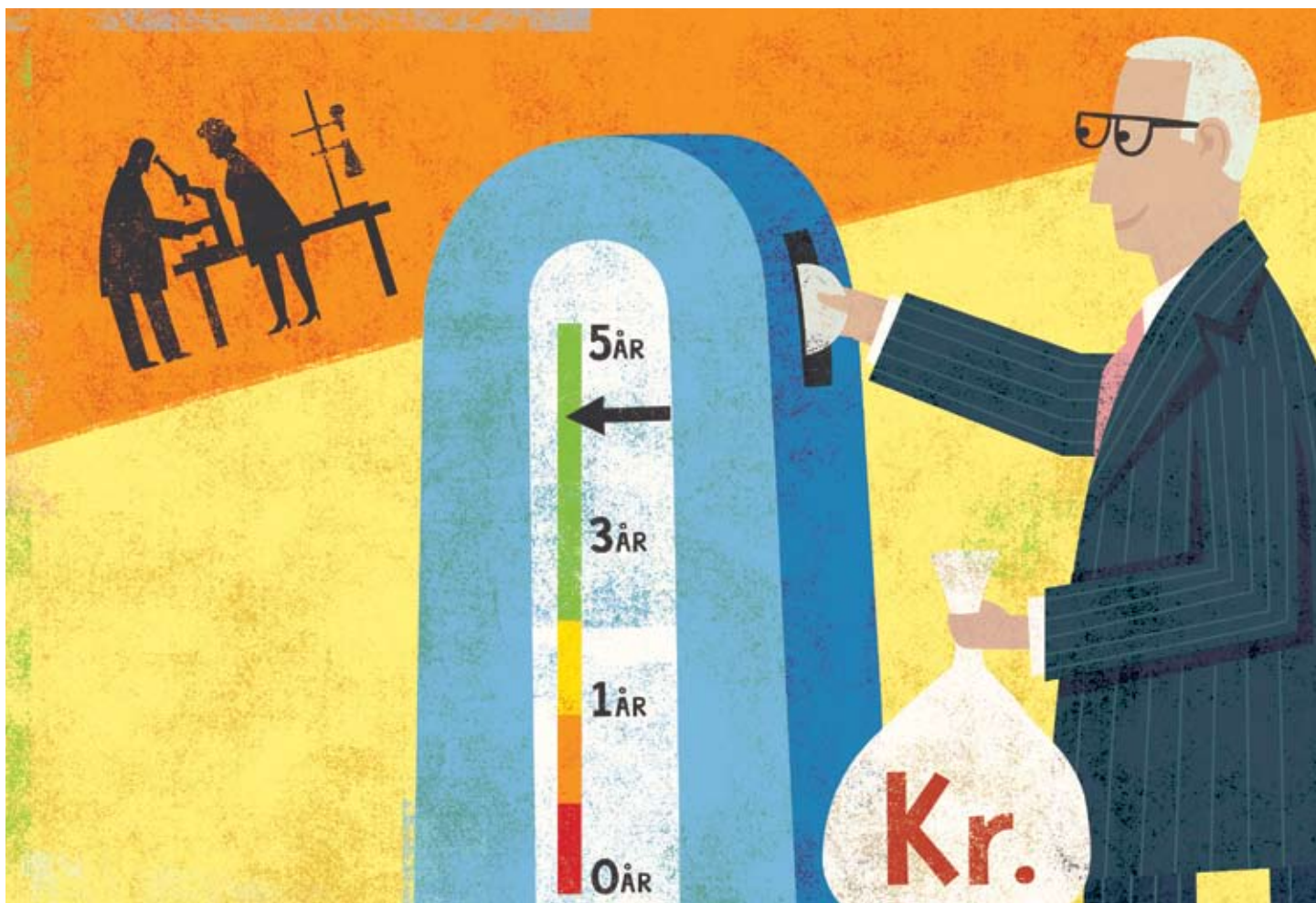
"Yes, undoubtedly, but it's also a question of making sure that the applicants' documented requirements match the size of the grants – be they big or small. The different councils have differing conventions for their grant-making. In the Danish Natural Science Research Council, we try as a rule to give the best researchers what they apply for – if they are able to provide convincing arguments in favour of their case. This means that applicants who receive funding do not have to spend a lot of additional time on piecing together the rest of their funding. For other disciplines, a grant from a research council may actually ease the researchers' access to funding from other sources, and that's a completely different situation. They all know that they mustn't over budget their application on the assumption that they might then be lucky enough to get the 60 per cent they actually need", says Jes Madsen.

Generally, he is calling for more money rather than more strings to how the funds should be allocated:

"Within the Danish Councils for Independent Research we believe that we are able to allocate far more funds without any detriment to quality. I like to say that if we had twice the funds to allocate, we'd still be able to disburse all our funds to first-rate projects – without having to resort to funding anything second-rate. That's how much outstanding research is just waiting to be done", says Jes Madsen.

“I like to say that if we had twice the funds to allocate, we’d still be able to disburse all our funds to first-rate projects - without having to resort to funding anything second-rate.”

Professor Jes Madsen, Chair of the Danish Natural Science Research Council

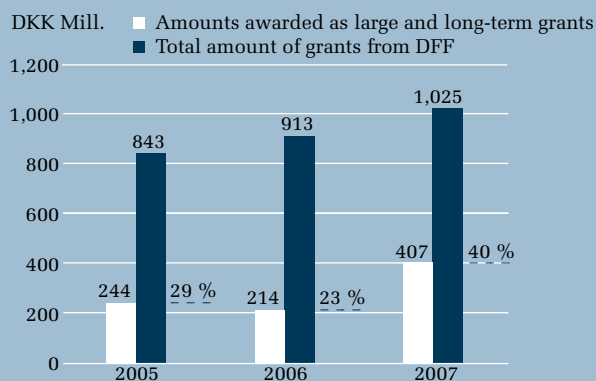


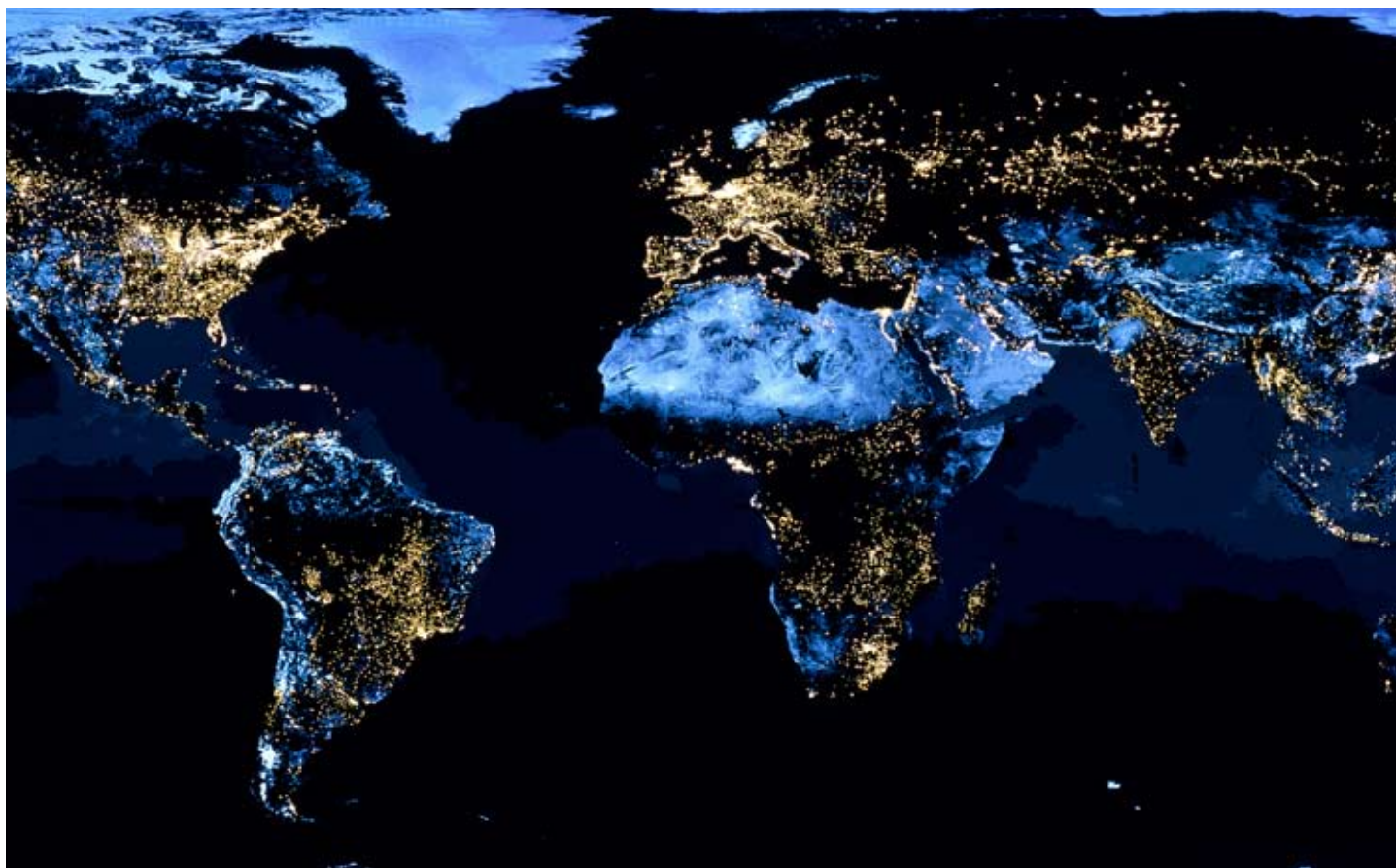
Large and long-term DFF grants 2005-2007

No. of grants of DKK 3 million and above

2005	2006	2007
49	47	90

The figures for the individual scientific research councils are available at fi.dk under Councils & Commissions & Committees





Bringing in the wider world

Research has always been an international undertaking. Eminent researchers have sought knowledge and inspiration from peers far away from their own departmental confines. It is in the nature of research to dispense with geographical borders when it comes to exchanging thoughts and ideas.

But in recent years, the internationalisation of research has started to increase in other ways. EU research funds are serving to lend a whole new international dimension to the funding of research, and, within a number of research fields, the leading institutions and researchers are coming together in joint programmes that consolidate both the financial and human capital needed for undertaking large-scale research projects.

This increasing internationalisation of Danish research is evidenced in applications for the START grants funded by the Danish Councils for Independent Research. These are grants awarded to researchers who intend to apply for funding from the EU or other major international research funds. The application process is often lengthy and laborious. More often than not, an international team of researchers and institutions has to be put together prior to the application, and that requires man-hours. In recognition of these demands, the Danish Councils for Independent Research came up with the START grants to provide

initial-phase assistance in applying for even the largest international grants.

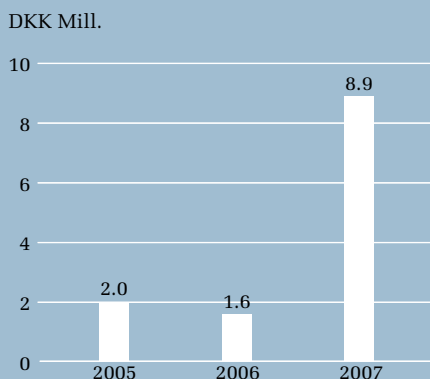
The number of START grants awarded has more than quadrupled from 2005 to 2007.

“We are delighted to see such an increase in applications for the START grants. It’s an indication that Danish researchers are increasingly applying for funding internationally, and I think we will see this reflected in the fact that in the years ahead Denmark will also be receiving more research grants from international sources,” says Christian Lund, Professor at the Department of Society and Globalisation, Roskilde University and Chair of the Danish Social Science Research Council (FSE).

“You’d think that research in social science would be less internationally oriented, but for the past few years this discipline has also increasingly been setting its sights beyond Denmark.”

“We’ve always had areas such as security and development studies which are intrinsically international, but we are also seeing local government researchers starting to work internationally. They are exchanging insights and collaborating with researchers investigating systems of local government in other parts of the world,” says Christian Lund.

DFF allocations for START grants 2005-2007



DFF allocations for research stays abroad 2005-2007



The figures for the individual scientific research councils can be found at fi.dk under Councils & Commissions & Committees

DFF allocations for the funding instrument of START grants increased from 2005 to 2007. The increase is related to the implementation of EU's 7th Framework Programme. Applications to DFF are for funding for preparation of international programmes. To date, DFF has not received applications for programmes outside the EU, although this is possible within the framework of the funding instrument.

Funding for individual research stays abroad has decreased over the period, but this figure does not necessarily reflect an absolute decrease, since many of the DFF grants include research stays abroad.

In total, the Danish Councils for Independent Research granted close to DKK nine million for START grants in 2007

He can see the trend reflected in the applications considered by FSE.

"We are receiving growing numbers of applications with an international aspect. It stands to reason that, as Denmark as a society increasingly seems to be part of a global system, there is a growing interest in seeing Danish conditions in that light, and sometimes the view of Denmark from the outside is just as interesting to explore," asserts Christian Lund.

But while applications for START grants have grown dramatically, applications for another international initiative – funding for research stays abroad – have showed a slight decline in 2007, "But," emphasises Christian Lund, "that may not necessarily be a bad sign". Among other things, this figure reflects that research stays abroad are increasingly integrated into the large grants.

"The Danish Councils for Independent Research will go a long way in funding researchers on their own terms. The START grants were not an idea dreamed up by the councils. They reflect a need felt by the researchers to which the councils responded. That's why they're a success," he says.

START –The object of the START grants is to support and strengthen the opportunities for Danish researchers to apply for international funding in order to maintain and improve the international competitiveness of Danish research. Grants are offered for preparing applications aimed at international research funds granted in open competition by bodies other than the Danish Councils for Independent Research (e.g. the European Research Council (ERC)).

"I think the increase in applications for the START grants will be reflected in the fact that in the years ahead Denmark will be receiving more research grants from international sources."

Professor Christian Lund,
Chair of the Danish Social Science Research Council



Across the traditional disciplinary divides



One of the big buzzwords in the scientific community in recent years has been convergence. In plain English ‘convergence’ means ‘blending’ or ‘coming together at one point’ and the term is often used in the context of new, high-profile research fields such as nanotechnology and biotechnology.

In practice, the term refers to the new trend whereby researchers in a large number of traditionally separated research fields are beginning to collaborate closely. If the aim is to understand intracellular protein mechanisms, a biologist, a chemist and a physicist will each be able to contribute with useful insights. Not to mention the computer expert who will be able to create the simulations and visual renderings that will make it a little more comprehensible for all disciplines.

Consequently, the Danish Councils for Independent Research (DFF) are seeking to facilitate conditions that will enable also Danish researchers to collaborate across the traditional academic divides.

A number of applications involving multiple disciplines can be dealt with by a single research council. A collaborative

project between economists and political scientists, for example, will fall within the remit of the Danish Social Science Research Council. But there are many indications that the future will produce more joint projects between people from radically differing traditions. Accordingly, DFF is seeking to make it easier to apply for ‘cross-council grants’.

All five of the research councils therefore operate with the same main application deadlines and are seeking to make their respective application requirements as mutually standardised as possible. This is not as easy as it sounds as the requirements of the various disciplines differ widely. Applications for START grants (to fund the preparation of international applications), applications for research stays abroad, and those for postdoctoral grants are identical for all five research councils.

One of the research councils with a strong tradition for dealing with interdisciplinary projects is the Danish Research Council for Technology and Production Sciences. Chair of the Council, Marcel Somers, Professor of Materials Technology at the Technical University of Denmark, says:

“We have to ensure that those who submit cross-council applications are considered on the same terms as other applicants.”

Professor Marcel A. J. Somers, Chair of the Danish Research Council for Technology and Production Sciences

“We have to ensure that those who submit cross-council applications are considered on the same terms as other applicants.”

A tally of applications from 2007 indicates that relatively few cross-council applications were submitted. 68 applications were processed by two councils, and three were processed by three councils. This means that cross-council applications currently account for about five per cent of the total submitted. However, Marcel Somers believes that this figure may very well increase in the future, noting especially that 35 of the 71 cross-council applications were for funding for postdoctoral projects:

“This may be due to the fact that we have harmonised the postdoctoral funding instrument, so that the same application form is used for all five councils. That makes it easier to apply across the councils, since the applicants do not have to complete several different forms for the same project,” he says, adding:

“But it may also be because young researchers tend more readily to take an interdisciplinary approach in comparison with their more established counterparts.”

In 2007, 71 applications to DFF were processed in at least two scientific research councils, corresponding to just under five per cent of applications received. In addition, a large number of interdisciplinary applications were received by the individual research councils.*

Of the 71 cross-council applications, 35 were postdoctoral applications, while the remaining 36 cross-council applications break down into 13 different funding instruments.

The application requirements for START grants (to fund the preparation of international applications), applications for research stays abroad, and those for postdoctoral grants are identical for all five scientific research councils

Cross-council applications to the Danish Councils for Independent Research in 2007

	No. of applications	No. of grants
Across FNU/FTP/FSS	39	9
Across FSE/FKK	19	3
Across FNU/FSS/FTP and FKK/FSE	13	1
Total	71*	13
DFF in total	2,965	922

The figures for the individual scientific research councils are available at fi.dk under Councils & Commissions & Committees

** The 71 applications are registered as 144, since each application is submitted to two or three of the five research councils*



Women still facing tougher odds

Regrettably, the figures speak for themselves. In spite of many years' efforts to equalise opportunities for male and female researchers, the figures indicate that it is still more difficult for women than for men to secure a grant from the Danish Councils for Independent Research (DFF).

Approximately one in three male applicants receives council funding. The same is true for only one in four women.

"This is a huge problem for the Danish society. It's an indication that we have failed to do all we can to get all the talented female researchers a slice of the action. We would do well to improve their opportunities and would be far better off if we weren't losing such a large contingent of the talent base", says Lars Fugger,

Professor of Clinical Immunology at Oxford University and Chair of the Danish Medical Research Council.

From his international career, he knows that the problem of securing grants for female researchers is an international phenomenon, but tackled in very different ways:

"In the US, the usual approach is called affirmative action, otherwise known as positive discrimination, to increase the representation of all groups, but we don't tend to go for that in Denmark," says Lars Fugger.

However, since 2006, the Danish Councils for Independent Research have had a special programme for young female researchers in natural science and technical disciplines, who each year are allo-

cated funds of DKK 15 million from the UMTS funds (the proceeds of the Government's sale of telecom licences). The young women are still required to submit an application of a standard matching that of their competitors of both genders and all ages. But if the applications are equal in standard, the young female researchers have a preferential right to the funds. This programme expires at the end of 2008.

But it is not just within natural science and technical disciplines that women have a harder time than men. The picture is the same across all the scientific research councils – especially for aspirants to the higher levels of any research career. Women applicants tend to be awarded grants more rarely, and receive a smaller



"We would be far better off if we weren't losing such a large contingent of the talent base."

Professor Lars Fugger, Chair of the Danish Medical Research Council

In 2008, the Danish Councils for Independent Research plan to launch a new initiative targeted female researchers with the aim of bringing the total research potential into use

proportion of the amount they apply for, than their male peers.

"I think the problems arise especially around the time when promising young female researchers have children," says Lars Fugger:

"For many young female researchers the situation is that two big things happen all at once: their career breakthrough coincides with having children. This means that for one, two or three periods of twelve to eighteen months they do no research,

and then they find it tougher to secure funding for their work when they are back from maternity leave. When we assess an application in the research council, the only thing that counts is quality. But obviously, if the female researcher has had one, two or three children, she won't be able to present the same continuous research career as a male counterpart. And if – like so many women – she has the main responsibility for the family at home, then it's more difficult to com-

pete in terms of scientific output," he says.

A new initiative for young female heads of research is due to be launched under the Danish Councils for Independent Research in autumn 2008.

"I believe that a great many outstanding female researchers are left behind at that point because we are failing to get them back into a research career when they return from maternity leave," says Lars Fugger.

Applications/gender 2007

DFF received 878 applications from female researchers

Total amount applied for: DKK 1,621 million

DFF received 2,087 applications from male researchers

Total amount applied for: DKK 4,263 million

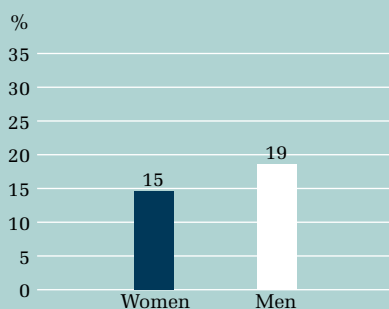
232 women secured a grant; the total amount granted was DKK 234 million

690 men secured a grant; the total amount granted was DKK 791 million

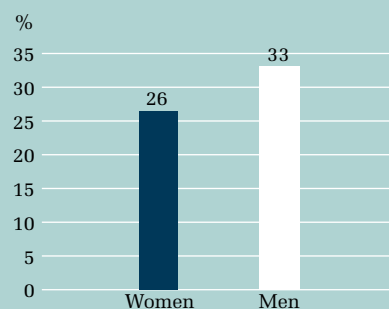
Breakdown by gender for grant recipients under the Danish Councils for Independent Research 2007

The figures for the individual scientific research councils are available at fi.dk under Councils & Commissions & Committees

Success rate for amount applied for



Success rate for no. of applications





Distribution of funds within the Danish Councils for Independent Research 2007

The principal task of the Danish Councils for Independent Research (DFR) is to support researcher-initiated bottom-up research. In 2007, the DFR Board opted to distribute 80 per cent of the total budgetary framework among the scientific research councils following adjustment and upgrading of the criteria employed by the Board in 2006. These criteria comprise an increase in the size of the underlying research community and research expenditure as an expression of the variability of research costs

within different fields of research. The objective of this distribution is to establish continuity between development within the research community and the funding that can be applied for.

The Board also decided to distribute the remaining 20 per cent of the funds to special initiatives as described below. DFR was allocated a total of DKK 1,035 million and the Board distributed the funds as follows:

Distribution of funds between the scientific research councils in 2007

	Basic grants (DKK million)	Special initiatives* (DKK million)	Women in Science and Technology (DKK million)	Total (DKK million)
The Danish Research Council for the Humanities	110.2	25.2		135.4
The Danish Natural Science Research Council	204.1	47.7	5.0	256.8
The Danish Social Science Research Council	79.2	20.5		99.7
The Danish Medical Research Council	190.2	46.6	5.0	241.8
The Danish Research Council for Technology and Production Sciences	232.7	53.0	5.0	290.7
Total	816.4	193.0	15.0	1,024.4

*The special initiatives support the individual activities of the respective scientific research councils in selected areas. In 2007, the following special initiatives were active: Visionary Research Areas, Young Elite Researcher's Award, International Postdoctoral Grants, Large and Long-term Grants together with START (grant for preparation of EU applications) and Research stays abroad. Besides the amounts stated in the table, the DFR Board allocated approx. DKK 11 million to the European Synchrotron Radiation Facility (ESRF) and the Board's budget.



Centre for Independent Research and Research Training 2008



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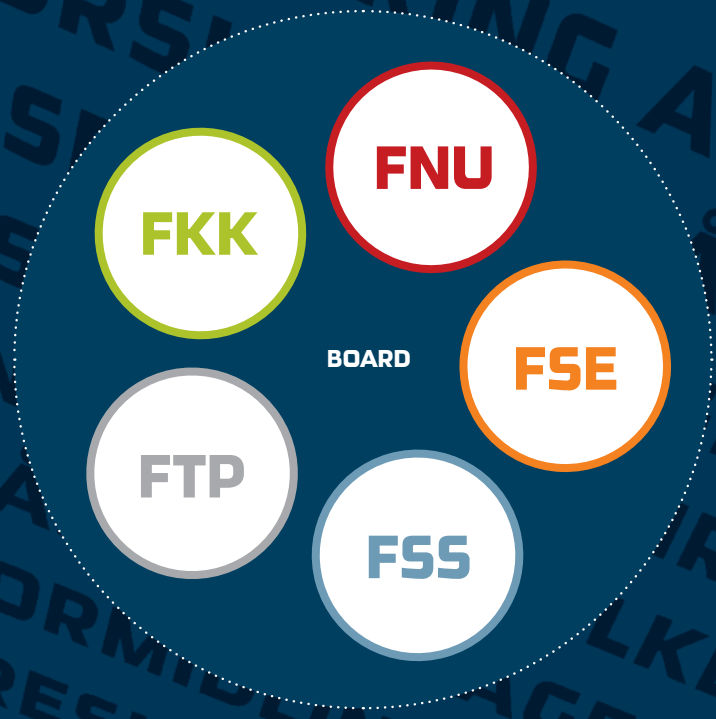
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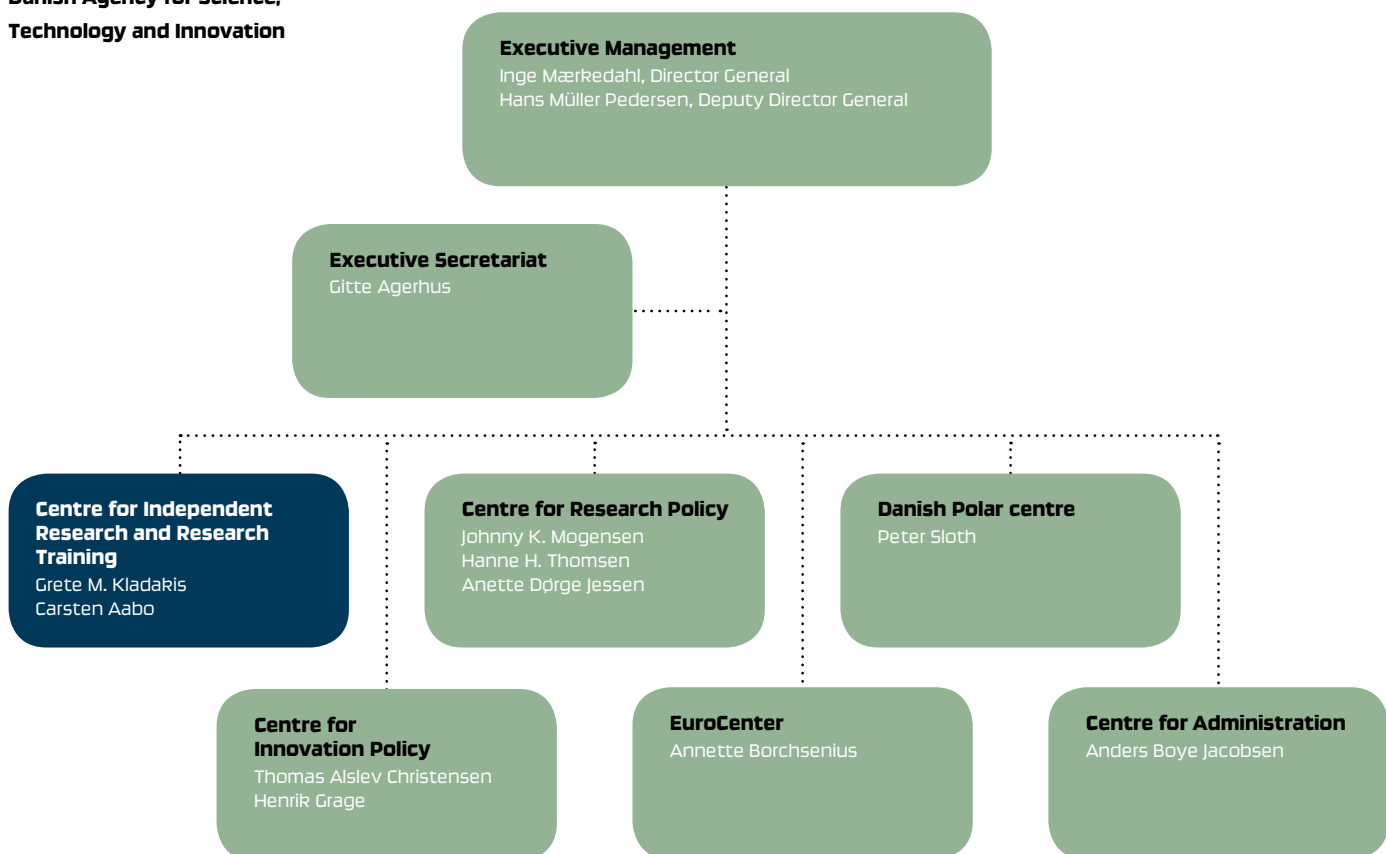
The Danish Councils for Independent Research

The Danish Councils for Independent Research are autonomous councils for which the Centre for Independent Research and Research Training provide secretarial services

- FKK: The Danish Research Council for the Humanities
- FNU: The Danish Natural Science Research Council
- FSE: The Danish Social Science Research Council
- FSS: The Danish Medical Research Council
- FTP: The Danish Research Council for Technology and Production Sciences



Danish Agency for Science, Technology and Innovation



ET FRIE FORSKNINGSRÅD GIV
FORSKNINGSFAGLIG RÅD
ALLE VIDENSKABEL
ENS KABS MIN
GERINGE
AT

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Annual Report 2007
The Danish Councils for Independent Research
April 2008
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