Danish Diabetes Academy

Annual Report 2014

DANISH DIABETES ACADEMY - ANNUAL REPORT 2014
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Printed at: ReklameTryk
ISBN: 978-87-996346-2-0
Published by: Danish Diabetes Academy
Odense University Hospital
Sdr. Boulevard 29
Entrance 112, 3rd floor
DK-5000 Odense C

www.danishdiabetesacademy.dk

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Annual Report 2014



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About the Danish Diabetes Academy

Established in 2012, the Danish Diabetes Academy has a dual mission:

- To maintain Denmark's position as a world leader in diabetes research; and
- To strengthen research in order to benefit present and future generations of diabetes patients.

The Academy has almost 500 national and international members. It recruits 150 researchers, mainly PhD students and postdocs in the five selected focus areas: Type 1 Diabetes, Type 2 Diabetes, Diabetes and Complications, Diabetes and Pregnancy, and Diabetes and Technology.

The Academy facilitates networking activities, such as workshops and events, and arranges at least four major national and international scientific seminars and two residential PhD courses annually.

The Danish Diabetes Academy (the Academy) was established in 2012 thanks to a five-year (2012 to 2017) donation from the Novo Nordisk Foundation of approximately DKK 200 million (Euro 26.9 million). It is co-financed by Danish universities and JDRF international.

The Academy focuses on three major areas:

- The organization and coordination of scientific meetings and PhD courses at the highest international level.
- The construction of a national and international network environment, facilitating cooperation between Danish and international research groups through workshops, events, websites, and social media.
- The recruitment of 150 national and international talented researchers in the Academy's five focus areas: Type 1 Diabetes, Type 2 Diabetes, Diabetes and Complications, Diabetes and Pregnancy, and Diabetes and Technology.

Preface

The aim of the Academy is an ambitious one: to help maintain and strengthen Denmark's position as one of the leading countries in the field of diabetes research. The Board is happy to see that this has been achieved.

It is the goal of the Academy to facilitate the creation of a knowledge-sharing environment at the highest international level, and I am delighted to see the high level of activity and quality in the many scientific seminars and courses that the Academy's Secretariat has organized and held in cooperation with the Academy's Education Committee.

We have been successful in offering a wide and varied program within the Academy's five research areas and in basic, epidemiological, and clinical research, as reflected in the high number of participants and good evaluations of all the activities.

The success of the Academy as a networking platform for Danish diabetes research is demonstrated in various ways, including the many applications the Academy receives for financial and logistical help for workshops, symposia, and PhD courses. Our success is also confirmed by the numerous inquiries about the use of the Academy's network for advertising relevant scientific meetings or to contact the Academy's 500 researchers.

The researchers funded by the Academy enjoy considerable renown for their research, as documented in the bibliometric analysis conducted by Videncenteret, University of Southern Denmark . A total of 18 publications were published in peer-reviewed journals by Academy-funded researchers, who, almost 50% of the cases, were the publication's first author.

In 2014, the Academy attracted more than 40 researchers

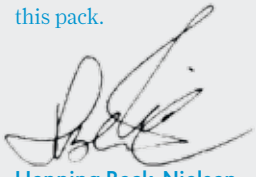
All of the Academy's grants for research positions at national universities and university hospitals will be posted for national and international competition. In 2014, we attracted over 40 skilled researchers from home and abroad, all of whom were assessed as belonging to the highest international research level by the Academy's Research Committee and national and international reviewers.

This year, the Board and Secretariat of the Academy have again enjoyed a fruitful and constructive cooperation with the Academy's International Advisory Board (IAB) and the Academy's Consultative Council. The IAB has played a significant role in the selection of the topic for the Academy's second five-year professorship, and over the year both the IAB and the Consultative Council have contributed valuable advice as to how the Academy can further develop.

Winter School in Malaga and conference in Copenhagen, in collaboration with the Joslin Diabetes Center, the Banting and Best Diabetes Centre, and the University of Copenhagen in 2015

The Academy is entering an exciting year. In addition to continuing the intense activity and quality with regard to seminars, doctoral courses, networking activities, and recruitment of talented researchers, I have particularly high expectations of two new activities: the Winter School in March in Malaga in southern Spain and a conference in October on beta cell plasticity in diabetes treatment. In Malaga, 60 postdocs from seven different countries will participate in a week's scientific program planned by the Academy's postdocs. The conference on beta cell plasticity in diabetes treatment, which will be held in Copenhagen, is organized in cooperation with the University of Copenhagen, the Joslin Diabetes Centre, and the Banting and Best Diabetes Center in Toronto, with participation from both established star researchers and postdocs from the three institutions.

One of the great pleasures of attending Academy events and meeting the many new students and postdocs is that you always leave with an unshakeable feeling that the stars of the future will emerge from this pack.



Henning Beck-Nielsen
Chairman of the Board

Overview

By and large, the Academy has achieved the targets set for 2014 within the framework of the budget for the year, and overall it has fulfilled the conditions set out in the funding agreement from the Novo Nordisk Foundation.

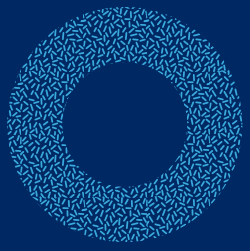
The Academy has arranged scientific seminars and PhD courses at the highest international level.

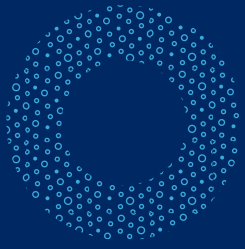
Five major national and international diabetes seminars were held with nationally and internationally recognized experts as lecturers.

The Academy also held two major residential courses for more than 100 Danish and foreign PhD students, and helped finance and organize a wide range of other relevant PhD courses and scientific meetings on diabetes at Danish universities.

The Academy has had a busy and eventful 2014. The Academy planned and carried out activities within its three focus areas:

- **The running and coordination of scientific meetings and postgraduate courses at the highest international level**
- **The construction of a national and international network environment**
- **The recruitment of national and international talented researchers**







National and international network environment

The Academy, which in 2014 reached a membership of almost 500, has facilitated networking activities in a wide range of areas. The Academy has organized and financially contributed to workshops with the participation of national and international research groups, and also conducted training courses in research management, supervision, presentation skills, and fundraising (with the involvement of PhD students and postdocs).

Recruitment of talented researchers

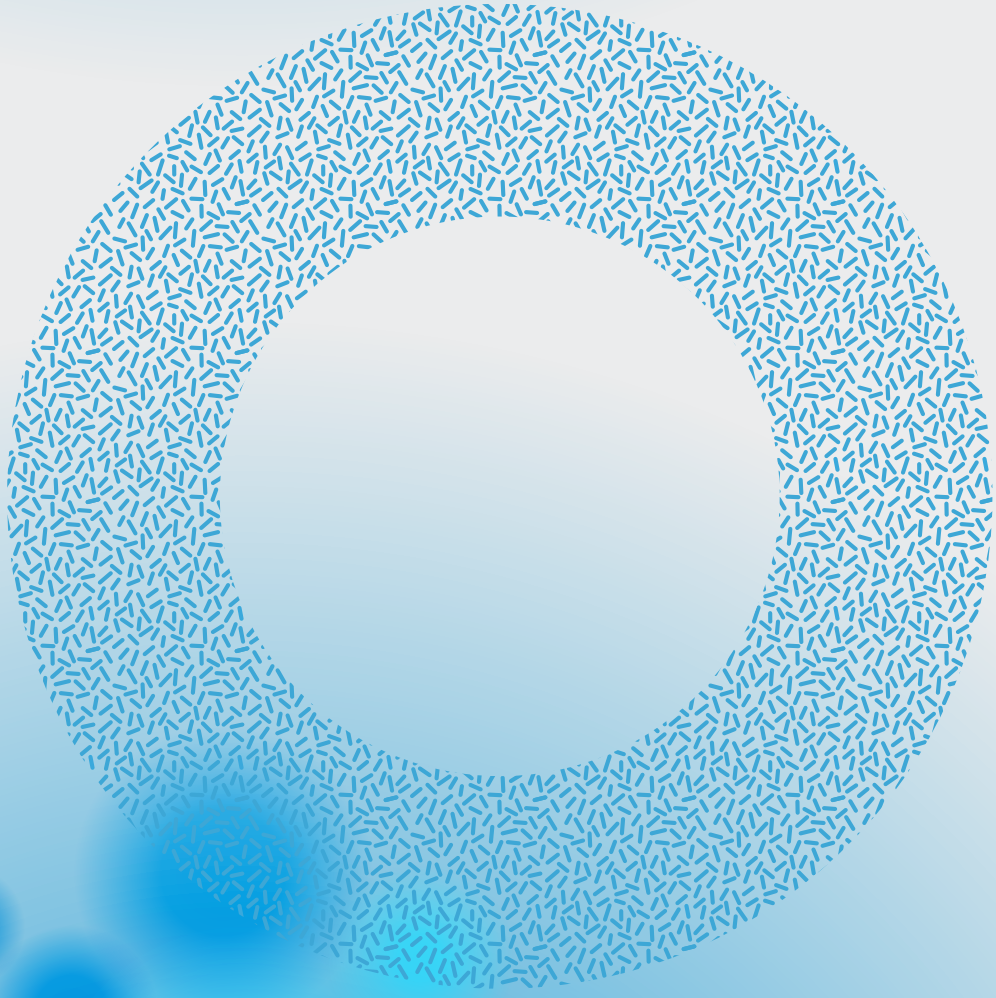
During 2014, the Academy granted research funding to a total of 44 talented national and international researchers in all of the Academy's five research areas:

- 30 one-third funded PhD programs;
- 10 three-year postdoc programs;
- four residencies for visiting professors/researchers who are working in cooperation with one or more Danish research groups.

In the course of 2014, researchers in receipt of a grant from the Academy published 18 peer-reviewed articles in international journals, held a series of oral and poster presentations at various national and international conferences journals, contributed chapters to professional journals, and had research stays of shorter and longer duration with foreign research groups.

Results of constructive cooperation

To summarize, the Academy's success in organizing and holding scientific courses and seminars, facilitating networking, and recruiting talented researchers is a result of constructive cooperation between the Academy's Secretariat, the Board, and the committees established under the auspices of the Academy.



Scientific seminars and PhD courses at the absolutely highest international level

It is the Academy's goal to facilitate the creation of a knowledge-sharing environment at the absolutely highest international level through the holding and coordination of scientific seminars, symposia, and PhD courses.

Seminars

In 2014, the Academy held four national seminars and one international seminar.

The Academy's Education Committee plans the themes of the year's seminars, which are organized in collaboration between the Academy's Secretariat and national and international experts. The aim of the seminars is to present and discuss new research results within the Academy's five research areas, involving basic, epidemiological, and clinical research.
The target group for the seminars is younger researchers, including PhD students, postdocs, and senior researchers in basic, epidemiological, and clinical research in both the public and private sectors.

By attending the seminars, PhD students can earn 0.8 ECTS credits as part of their PhD course.

The Academy announces the seminars via the Academy's website, newsletters, social media such as Facebook and LinkedIn, as well as via electronic bulletins, targeting the relevant professional societies and research environments in Denmark and Sweden.

Outcome

The seminar audience has expressed an overall increase in their knowledge level within the respective topics at the seminars including an understanding of the necessity of translational research. Furthermore, the participants have provided positive feedback on the format of the seminars including lectures, poster sessions and breakout. Overall, the feedback has resulted in increased collaboration among participants. In connection with the LADA seminar and the fetal programming seminar, preparations of two co-publications were initiated between Academy Post Docs and national as well as international senior researchers.

7 February 2014

Pathophysiological-based treatment of Type 2 diabetes

Sinatur Hotel Storebælt, Nyborg, Danmark

The possibilities for tailoring treatment to the individual Type 2 diabetic is much better today than in the past, partly as a result of new knowledge about the pathophysiology of Type 2 diabetes and partly due to a greater supply of different types of drugs for treatment. Under the direction of Professor Henning Beck-Nielsen, MD, Odense University Hospital, leading experts from Germany, USA, Denmark, and England were invited to Nyborg to give talks on the challenges in making the treatment of Type 2 diabetics more individualized than it is at present (refer to the program in Appendix 2).

A total of 128 audience members and speakers participated in the seminar. The proportion of participants according to their educational background is shown in Figure 1.

The participants' rating of the seminar was satisfactory (see Figure 2). All respondents said that the scientific level of the program was either very satisfactory (75%) or satisfactory (25%), corresponding to grades 5 and 4 on a scale of 1 to 5 (Figure 2).

"I have attended a highly motivating seminar on 'Pathophysiology-based treatment of Type 2 Diabetes' organized by the Danish Diabetes Academy. After listening to leaders from all over the world, I learned how important it is to focus on personalized treatment. Open debate after each session stimulated me with new research ideas for my budding research carrier. In my opinion, it was a wonderful opportunity for young scientists to interact with leaders and gain insights and updates."

Comment by Anil Mor, PhD student, Department of Clinical Epidemiology, Aarhus University Hospital

Figure 1.
Overview of the distribution of participants according to their educational background

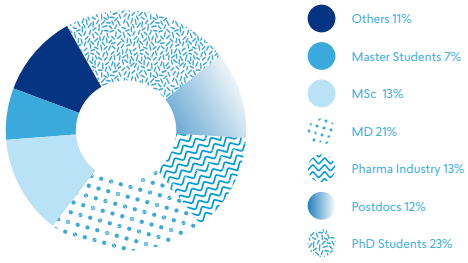


Figure. 1

Figure 2.
Summary of participants' assessment of the scientific level of the seminar

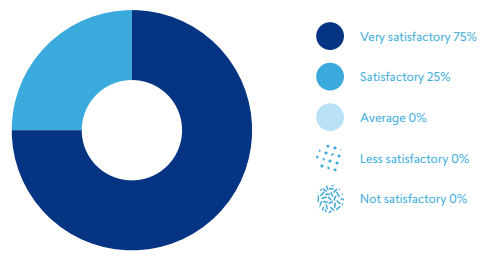


Figure. 2

"The seminar and workshop on LADA put the focus on a diabetes subgroup which I only had a very limited knowledge of from text-books, teaching and my clinical work.
The definition and justification for this diabetes subgroup was discussed by a number of the world's leading researchers in this field.
The workshop provided a unique opportunity for dialogue on all aspects of this subgroup from genetic characteristics, immunological and metabolic characteristics, to the clinical presentation and treatment of patients. All presenters delivered highly professional presentations, which contributed to two fascinating days."

Comment by Jakob Appel Østergaard, MD, PhD, who was granted a three-year postdoctoral fellowship by the Academy and who is employed at Aarhus University Hospital

4 June 2014

Latent Autoimmune Diabetes in Adults

The Auditorium, Novo Nordisk Foundation, København

Although diabetes is generally categorized as either Type 1 or Type 2 diabetes, it is now clear that not all types of diabetes fit into one of the two categories. One such example is Latent Autoimmune Diabetes in Adults (LADA), which initially presents as being non-insulin dependent, but which shares genetic, immunological, and metabolic properties with those seen in Type 1 diabetes. Under the direction of Professor David Leslie, MD, UK, leading experts from Sweden, Singapore, Italy, Germany, USA, Denmark, England, and Finland were invited to Copenhagen to give presentations on the challenges of the classification, genetic component, immunology, metabolic complications, and treatment of LADA (refer to the program in Appendix 2).

A total of 80 audience members and speakers took part in the seminar. The proportion of participants according to their educational background is shown in Figure 3.

The participants rated the seminar as satisfactory. Almost all respondents said that the scientific level of the program was either very satisfactory (74%) or satisfactory (21%) corresponding to grades 5 and 4 on a scale of 1-5 (Figure 4).

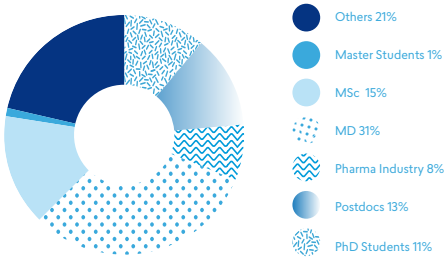


Figure. 3

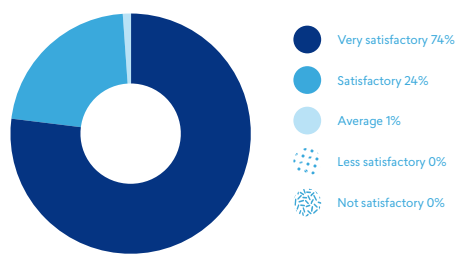


Figure. 4

Figure 3. Distribution of participants according to their educational background

Figure 4. Summary of participants' assessment of the scientific level of the seminar

21 August 2014

Hypoglycaemia in Type 1 diabetes

The Auditorium, Novo Nordisk Foundation, Copenhagen

Hypoglycaemia is one of the most serious complications of diabetes. Fear of hypoglycaemia can be a significant limiting factor in achieving good control of blood sugar and can also have a significant influence on the diabetic's quality of life. Under the direction of Professor Birger Thorsteinsson, Dept. of Cardiology, Nephrology and Endocrinology, Nordsjællands University Hospital Hillerød, leading experts from Holland, England, USA, and Denmark were invited to Copenhagen to give presentations on the challenges of hypoglycaemia in Type 1 diabetes, including understanding the underlying mechanisms, the physical and psychological consequences of hypoglycaemia, and possible interventions in Type 1 diabetics who are at high risk of hypoglycaemia (refer to the program in Appendix 2).

A total of 70 audience members and speakers participated in the seminar.

The participants' rating of the seminar was satisfactory. All respondents said that the scientific level of the program was either very satisfactory (75%) or satisfactory (25%), corresponding to grades 5 and 4 on a scale of 1-5 (Figure 6).

"In August 2014 the first international scientific seminar on hypoglycaemia in Type 1 diabetes in Denmark since 1984 was held. Since that time, the incidence of hypoglycaemia in people with Type 1 diabetes has unfortunately not significantly changed, and the risk of this condition so feared by patients is still the dominant reason that a blood glucose level desirable to avoid diabetic sequelae is not achieved by many people. Insulin cases are potentially fatal. The seminar covered the spectrum from cardiac arrhythmia and death by hypoglycaemia in rats to the psychological aspects of fear of hypoglycaemia, and there was a presentation of the new studies (unfortunately quite few) on intervention in the occurrence of insulin attacks. At the meeting dedicated researchers from Europe to Hawaii had a unique opportunity to get an overview of the topic, and new research contacts were established."

Professor Birger Thorsteinsson, Dept. of Cardiology, Nephrology & Endocrinology, Nordsjællands University Hospital Hillerød

Figure 5.
Distribution of participants according to their educational background

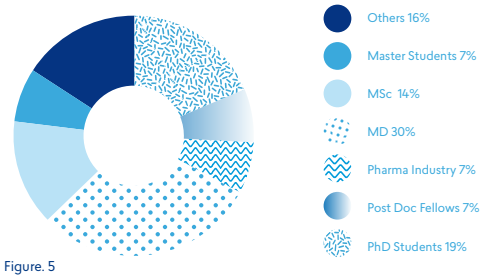


Figure. 5

Figure 6.
Summary of participants' assessment of the level of the scientific program of the seminar

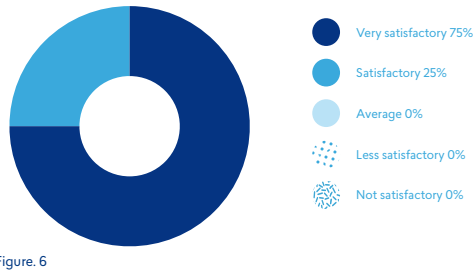


Figure. 6

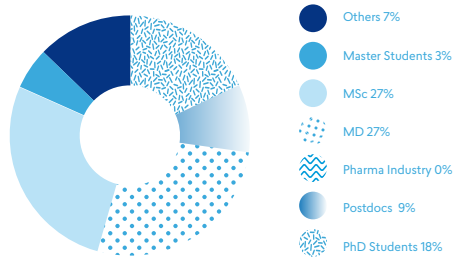


Figure. 7

Figure 7.
Distribution of participants according to their educational background

"In September 2014 I attended the Danish Diabetes Academy/JDRF symposium at EASD in Vienna. My colleague postdoc Dimitri Boiroux and I presented our artificial pancreas research and afterwards we had a lively scientific discussion with many great questions from the audience. The atmosphere was informal – an ideal setting for networking – and I got in contact with potential future collaborators."

Doctor Signe Smith, PhD,
who was granted a three-year postdoctoral fellowship by the Academy and is employed at Hvidovre Hospital

15 September 2014

Danish Diabetes Academy – JDRF Meeting and networking EASD Vienna 2014

In order to give younger Type 1 diabetes researchers the opportunity to present their research results and to facilitate cooperation between national and international Type 1 diabetes researchers, the Academy and JDRF holds an annual scientific seminar in connection with the yearly meeting of the European Association for the Study of Diabetes (EASD). In collaboration with the Chief Scientific Officer, Richard Insel, JDRF, four Danish diabetes researchers, including two of the Academy's postdoctoral fellows, were invited to EASD in Vienna to present their latest research results (refer to the program in Appendix 2).

A total of 55 audience members and speakers attended the meeting.

14 November 2014

Developmental Programming of Metabolism: Recent Advances, Current Controversies, and Future Challenges

The Auditorium, Novo Nordisk Foundation, Copenhagen

One of the reasons that people develop diabetes is that it might already exist in utero. Epidemiological, clinical, and experimental studies have shown that fetal programming can play a significant role in the development of Type 2 diabetes. Under the direction of Sjurdur Olsen, Head of the Centre for Fetal Programming, State Serum Institute, and Jens Høiriss, Professor at University of Copenhagen, Faculty of Health Sciences, Department of Biomedical Sciences, leading experts from the USA, Germany, Iceland, and Denmark were invited to Copenhagen to address a number of key research themes involving fetal programming (refer to the program in Appendix 2).

A total of 150 audience members and speakers participated in the seminar.

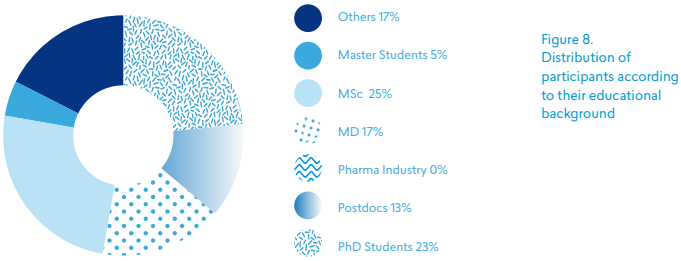


Figure. 8

Figure 8. Distribution of participants according to their educational background

"The fetal programming symposium was excellent. Young researchers had an opportunity to present their ongoing research at the workshop. During the seminar, we had outstanding international speakers who delivered inspiring talks about various aspects from famine incidences to the latest developments in the field of fetal programming. I really appreciated the organizers for including plenary discussion in the programme. Our discussions were on the ideal model organism and future challenges for fetal programming research, which is useful for young researchers like me. The opportunity I had to network and to get to know more about future directions for ongoing research was quite useful. Thanks to The Danish Diabetes Academy and The Danish Centre for Fetal Programming for coming together to organizing such an interesting, educative and excellent symposium."

Amar Nalla, PhD was granted a three-year postdoctoral fellowship by the Academy, and is currently on a laboratory visit at Toronto Medical Discovery Tower, Canada



The Academy encourages communication between scientists at all levels at functions that it hosts

As a PhD student you can often feel like the underdog when surrounded by senior scientists, but not in the Academy, says Anna Kaufmann Lindqvist, PhD-student at the University of Copenhagen



Thrilled to contribute to further understanding

Anna Kaufmann Lindqvist, PhD student, MSc at the Department of Nutrition, Exercise and Sports at the University of Copenhagen is thrilled to contribute to further understanding of a pandemic disease such as diabetes. 'For the last 18 months I have conducted research on the role of vascularisation in skeletal muscle to insulin sensitivity. My focus is both on the capillary net as a whole and on the cellular components of microvasculature in skeletal muscle. My hypothesis is that an increased density of microvasculature in skeletal muscle will increase insulin sensitivity.

My aim is also to give a plausible cellular explanation to this observation', she says. While adding to the knowledge of Type 2 diabetes and insulin resistance, her research could also contribute with a new treatment approach in early onset insulin resistance as a preventive measure to developing diabetes: 'We have been able to show that medically induced skeletal muscle specific angiogenesis in rats improve insulin sensitivity and we are now looking forward to completing clinical trials performed in a similar way. In both animal and human trials I have primarily worked with hyperinsulinemic euglycemic clamps. I also have plans to investigate the endothelial cell contribution to the observed phenomenon', Anna Kaufmann Lindqvist says.

She has already collaborated with the Faculty of Medicine, University of Western Ontario and is currently working on a new collaboration with a scientist at The Panum Institute, Copenhagen, in order to learn a cellular model that would be relevant to her project.

My goal is to take what I have learnt in academia out into industry

And Kaufmann Lindqvist has already decided what she wants to do next: 'After finishing my PhD my goal is definitely to take what I have learnt in academia out into the industry. The dream scenario is to work in R&D at Novo Nordisk where I would like to further contribute to the understanding and prevention of diabetes'.

Started with medicine but changed to biology

Swedish-born Anna Kaufmann Lindqvist - explains that she has always been intrigued by the complexity of the human body and how certain factors can interplay to cause disease. She started her university studies at The Faculty of Medicine, but after a period of soul searching she came to the conclusion that this was not the path for her. She was much more interested in the molecular and cellular changes that occur in the body and therefore changed direction somewhat and started studying at the Department of Biology, University of Copenhagen. During her masters thesis she studied pancreatic cancer cells and became fascinated by the pancreas. Alongside her masters studies Kaufmann Lindqvist also worked with cultivation of different cell lines.

'I have attended numerous courses, seminars and workshops at Danish Diabetes Academy and I have always appreciated their high quality. I feel truly privileged to have my PhD partly sponsored by the Academy. Not only is the academic level satisfying, but the events offered always provide opportunities to network with ellow students as well as renowned scientists. What makes these events so special is that they are designed in an informal, approachable style that does not intimidate the students.
As a PhD student you can often feel like the underdog when surrounded by senior scientists, but at functions hosted by the Academy communication between scientists at all levels is encouraged. The courses I have attended have also helped me
to gain a broader understanding of diabetes. This is key to all good research, because I think it is dangerous to get too detail-oriented and lose sight of the "big picture". I have also received important training in basic and important elements of research dissemination such as poster sessions and short to-the-point presentations.'

Anna Kaufmann Lindqvist



PhD Courses

One of the aims of the Academy is to strengthen the PhD program in the area of diabetes and metabolism by arranging courses at the highest international level.

In 2014 the Academy held two major residential courses with the participation of both national and international speakers.

These two courses are approved by the universities' research schools and both give four ECTS credits

The target group of the courses is PhD students in basic and clinical research. The courses are planned in collaboration between the Academy's Secretariat and the Academy's Education Committee. Information about the courses is promoted through the Academy's website, newsletters, and social media such as Facebook and LinkedIn.

The purpose of the two courses is to:

- increase the doctoral students' knowledge of basal metabolism and the pathophysiology of the metabolic syndrome at a molecular level
- create an understanding of the diagnosis and treatment of Type 2 diabetics
- facilitate networking among younger researchers.

Outcome

In their evaluations, the participants at the Academy PhD courses have expressed a significant academic and network-related outcome of the lectures as well as the poster sessions and the planned workshops. Furthermore, the participants have expressed a profound increase in their knowledge of the PhD projects of the other PhD students and have been provided the possibility of new research collaboration.

19 to 22 May 2014

PhD course in Basal Metabolism and Molecular Mechanism in the Metabolic Syndrome

Sinatur Hotel Storebælt, Nyborg, Danmark

Through lectures and workshops held by over 20 national experts in basic and clinical research, the Basal Metabolism course emphasizes giving PhD students a basic understanding of human metabolism, the molecular basis for the development of the metabolic syndrome and an understanding of the diagnosis and treatment of Type 2 diabetics.

The course was attended by 47 PhD students, approximately two-thirds of whom had an educational MSc background, as shown in Figure 9

The participants' overall assessment of the PhD course was satisfactory. Figure 10 indicates that the majority of respondents thought that the scientific level of the program on the PhD course was either very satisfactory (50%) or satisfactory (27%).

"Enrolling on a PhD course "Basal Metabolism" was a great opportunity for me to expand my knowledge on the topic of metabolic syndrome and its causes. Hearing lectures from university professors and medical doctors gave me perspectives not only about reviewed data but also about current research that are being held and their application in medical institutions. Very important experience was meeting young scientists interested in the same scientific field as I am, facing similar problems and unanswered questions."

Sanja Kovacevic,
ph.d student from Belgrade

Figur 9.
Distribution of participants according to their educational background

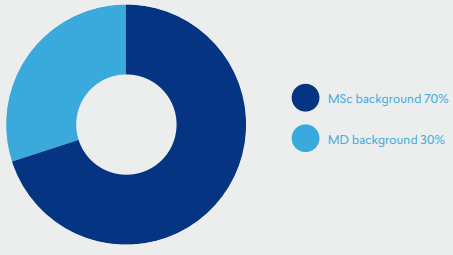


Figure. 9

Figur 10.
Summary of the participants' overall assessment of the level of the scientific program

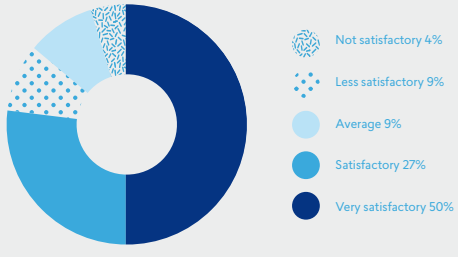


Figure. 10

2 to 5 September

Summer School on Diabetes and Metabolism

Gl.Avernæs, Fyn

The Summer School at Gl. Avernæs held its 10th anniversary with a record number of participating PhD students (66) and a large number of Danish and foreign lecturers.

The students experienced four intensive days with lectures, workshops, poster sessions, and PhD presentations. The overarching themes of the summer school were the biochemical consequences of disease-causing mutations, novel aspects of cholesterol metabolism, nutrient sensing and metabolic signaling, mechanisms of pancreatic b-cell dysfunction and glucose tolerance, and pregnancy and diabetes.

Of the 66 students, two-thirds were MSc students, as shown in Figure 11.

Figure 12 shows that the proportion of participants who rated the program at the summer school as average or above accounted for nearly two-thirds of the participants.

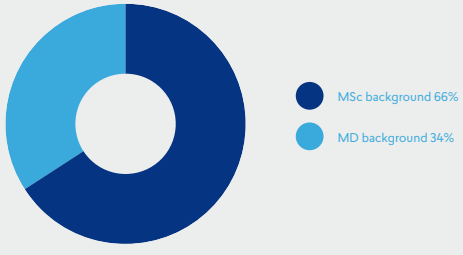


Figure. 11

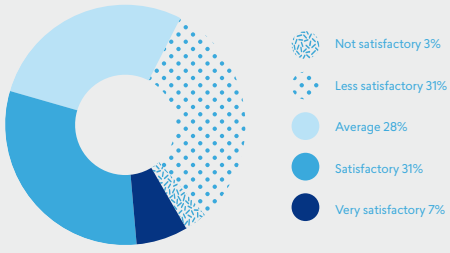


Figure. 12

Figure 11.
Distribution of participants according to educational background

Figure 12.
Summary of participants' overall assessment of the level of the scientific program

Further scientific meetings and courses

The Academy contributes to relevant scientific meetings and PhD courses based on the recommendations from the Academy's board and Education Committee and in accordance with our strategy for education activities, the Academy wants to contribute to other relevant scientific meetings and PhD courses at Danish universities and hospitals. The Academy's contribution in the form of financial support and, in some cases, logistical assistance will facilitate knowledge sharing and education at the highest possible level among national and international researchers and students.

Outcome

The ambition of the Academy is to make its strategy to support and holding of educational activities facilitate the creation of a knowledge- sharing environment at the highest international level which eventually will contribute to improved research. The participants at the various events have expressed a gain of new knowledge which has resulted in new research ideas together with an increase in their knowledge of other national and international research environments which potentially could lead to new research collaboration and eventually co-publication.

26 June 2104

Symposium : Mesenchymal Stem Cell Differentiation University of Southern Denmark

The Symposium was organized by Alexander Rauch, PhD, a Danish Diabetes Postdoc Fellow.

"The symposium was very successful. It provided an updated information regarding the biology of mesenchymal stem cells that is relevant to many diseases including obesity and Type 2 diabetes. The speakers are among the best researchers of the field and they gave very insightful presentations. The symposium also provided an opportunity for direct interaction between the international speakers and local researchers from the University of Southern Denmark and the University Hospital of Odense. I am sure that this contact and interaction have been very inspiring for many students and will be helpful in improving the quality of science."

Comment by
Professor Moustapha Kassem,
SDU and OUH

Seminars and PhD courses:

7 to 10 April 2014
PhD Course: Artery Disease
University of Southern Denmark
Course leader: Professor Michael H Olsen, Odense University Hospital

27 to 30 October 2014
PhD Course: Exercise as Medicine
Centre for Physical Activity, Rigshospitalet
Course leader: Professor Bente Klarlund Pedersen, Rigshospitalet

19 to 21 May 2014
8. Conference on Inflammation and Metabolism
Centre for Inflammation and Metabolism
Course leader: Professor Bente Klarlund Pedersen, Rigshospitalet

August Krogh Centre Seminars:

13 May 2014
Crosstalk between muscle cells and immune cells in high fat environments
Guest speaker Amira Klip, The Hospital for Sick Children, and Professor of Paediatrics, Biochemistry and Physiology, The University of Toronto, Canada

4 June 2014
Histone modifications and exercise adaptions
Guest speaker Mark Hargreaves, Department of Physiology, The University of Melbourne, Australia

13 June 2014
Estradiol, body fat distribution and insulin sensitivity in women: Am I confused ?
Guest speaker Robert C. Hickner, Department of Kinesiology, and Physiology Director, PhD Program in Bioenergetics and Exercise Science Co-Director, Center for Health Disparities East Carolina University Greenville, NC

23 June 2014
Metabolic Therapies for the treatment of heart failure: Looking Beyond the heart
Guest speaker Jason Dyck, Department of Pediatrics, Director, Cardiovascular Research Centre, Co-Director, Alberta HEART, University of Alberta, Edmonton, Alberta, Canada

14 November 2014
Redox regulation of muscle adaptations to contractile activity and ageing
Guest speaker Malcolm J. Jackson, Head of the Institute of Ageing and Chronic Disease at the University of Liverpool, Director of the MRC-Arthritis Research UK Centre for Integrated Research into Musculoskeletal Ageing (CIMA)

20 November 2014
Novel Mechanisms Regulating Glucose Metabolism with Exercise
Guest speaker Laurie J. Goodyear, Harvard Medical School, Senior Investigator and Section Head, Section on Integrative Physiology and Metabolism Joslin Diabetes Center, Boston USA

The number of participants in the events is given in Figure 13.

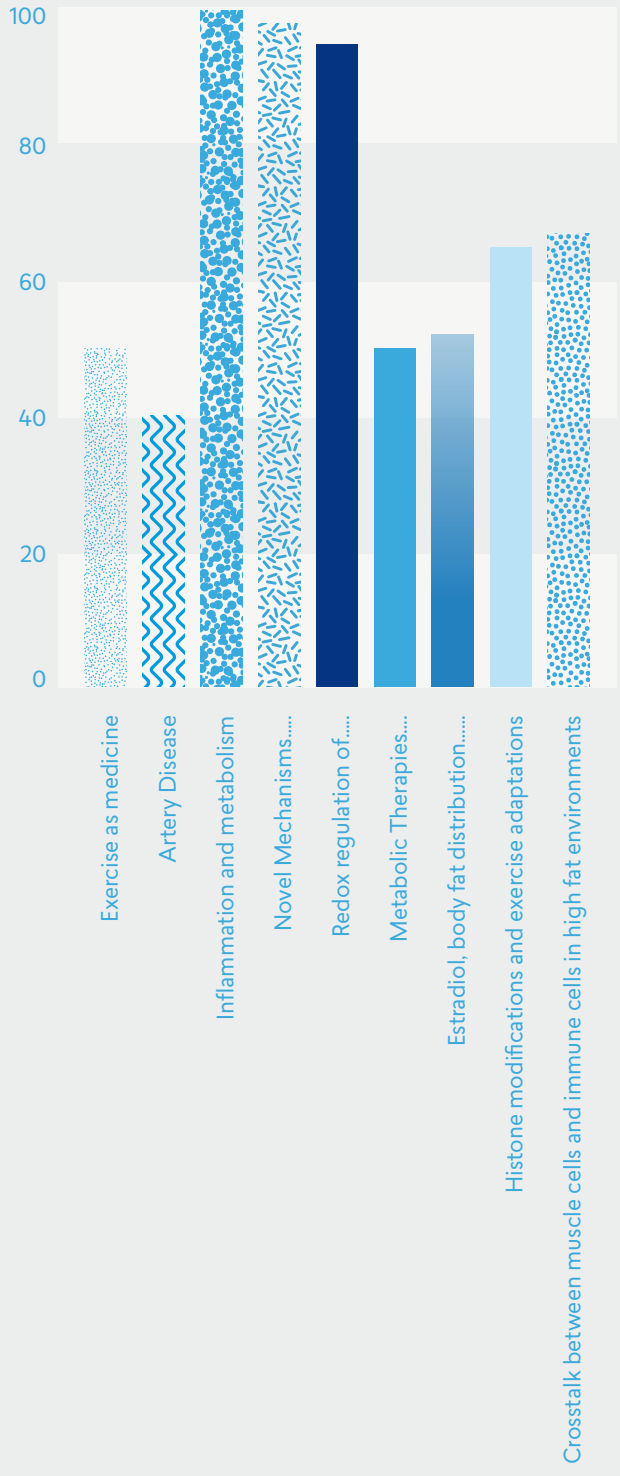


Figure. 13

Construction of a national and international network environment

It is the ambition of the Academy to build up a national and international network environment facilitating co-operation between Danish and international research groups through workshops, events, websites, and social media

The Academy reached a membership of almost 500 in 2014. During the year, it held three major workshops, supported the establishment and continuation of research consortia, organized a series of courses and network meetings (aimed particularly at postdocs), and held an annual gathering for Academy members. The Academy also took part in university PhD days as well as national and international diabetes meetings and conferences.

Through its website, newsletters, and social media (Facebook and LinkedIn), the Academy has also been continually promoting the Academy's own and others' forthcoming seminars, doctoral courses, funding, and new research.

Outcome

The effect of the Academy's efforts to create a national and international network should be measured by the requests from the diabetes researchers to become part of the network and the new research collaborations initiated through the Academy and possibly writing of co-publications. In 2014, more than 200 diabetes researchers have applied for membership of the Academy. Several of the Academy Post Docs have prepared research protocols in order to apply for funding for a PhD student and The Academy researchers are preparing for publication of a number of co-publications.

Workshops

To take advantage of the presence of internationally renowned speakers, in connection with some of the seminars the Academy has held small workshops where postdocs and PhD students in particular have been given the opportunity to network with international experts, and not least to test out and discuss their research ideas with them.

3 June 2014

Latent Autoimmune Diabetes in Adults (LADA)
Panum Institute, University of Copenhagen

Under the direction of Professor David Leslie, MD, Centre for Diabetes, The Blizard Institute UK, and attended by a total of 25 researchers, leading experts from Sweden, Singapore, Italy, Germany, USA, Denmark, England, and Finland were invited to Copenhagen to give a presentation on the challenges of the classification, genetic component, immunology, metabolic complications, and treatment of LADA

31 October 2014

Bile-Incretin -Microbiome
Gentofte Hospital

There is increasing interest in understanding the role of bile acid in the regulation of the human metabolism, with particular regard to glucose homeostasis and incretin secretion. Under the direction of the Head of Diabetes Research Division, Filip K. Knop, MD, PhD, Gentofte Hospital, and attended by 70 scientists from Danish and foreign research groups (USA and Holland), the workshop was held in order to discuss current knowledge in the area.

13 November 2014

Fetal Programming
Panum Institute, University of Copenhagen

The risk of developing Type 2 diabetes may be influenced by factors at work in the fetal period. Under the direction of Sjurdur Olsen, Head of the Centre for Fetal Programming, State Serum Institute, and Jens Høiriss, Professor at University of Copenhagen, Faculty of Health Sciences, Department of Biomedical Sciences, and with the participation of more than 20 Danish and foreign researchers from the USA, UK, Germany, and Denmark, the Academy and the State Serum Institute cooperated to run a workshop on fetal programming. The workshop provided the opportunity for all, including the younger researchers, to present their research projects and ideas.

Consortia

In 2014, the Academy granted financial support for the continuation of the consortium "Leadership in Epidemiological Analysis of Longitudinal Diabetes-Related Data" (LEAD), which was established last year, and for the establishment of a new consortium, "Network for the Study of Diabetes Among Inuit Populations in the Arctic" (ESDIPAN).

The purpose of the consortia are to set up, within the respective research areas, an international forum for sharing knowledge and collaboration, educating young researchers, and setting new standards for research in the area.

LEAD Consortium

Dorte Vistisen, MSC, PhD, and Kristine Færch, MSC, PhD, both from the Steno Diabetes Center, are the principal applicants behind the LEAD consortium, whose ambition is to build a strong European network among leading diabetes epidemiologists.

The ESDIPAN Consortium

Professor Torben Hansen, Copenhagen University, and Professor Marit Eika Jorgensen, Steno Diabetes Center, are the principal applicants behind ESDIPAN, a network based on various existing collaborations among diabetes researchers in the Arctic. Researchers in the consortium will represent six different research institutions, five universities, and four countries.

"The setting up of the LEAD consortium has been a great success. The consortium now has more than 50 members from 14 different countries and new members are joining all the time.

In the spring of 2014, LEAD held a satellite symposium at the annual meeting of the European Diabetes Epidemiology Group, and in April 2015 another symposium will be held. The symposia will focus on sharing knowledge about innovative new epidemiological methods for use in diabetes research both in Denmark and internationally. LEAD has helped to create new partnerships across national borders and research areas, which has led to research at a high international level and publications in leading medical journals (Lancet Diabetes & Endocrinology, PLoS Medicine, and others). We look forward in the coming years to the LEAD consortium setting the standard for epidemiological diabetes research and contributing to increased cooperation between research institutions in Denmark and abroad to the benefit of diabetes research worldwide."

Kristine Færch MSc PhD,
senior researcher at the Steno Diabetes Center

"It was a wonderful new venture that will make a difference for Arctic diabetes research."

- in a letter from Marit Jørgensen, professor at Steno Diabetes Center, after the Danish Diabetes Academy had awarded funding to ESDIPAN



I will become a much stronger researcher than if I had to work in the clinic at the same time

— There is no doubt that through my postdoc appointment I will be a much stronger researcher than if I had kept my research interest going alongside a full-time appointment as a doctor working in a clinic says Signe Schmidt, who works at Hvidovre University on a scholarship from the Danish Diabetes Academy. She is happy to list other benefits of the scholarship:

- It allows me to take the time to guide junior colleagues
- I can contribute to a good diabetes research environment
- I have the opportunity to develop my research skills and further immerse myself in and expand my own research field.

Signe Schmidt is delighted to be a member of the Academy.
"It gives me access to a wide range of professional events, not just courses specifically targeted at postdocs, but also seminars where some of the world's best researchers in the field present and discuss their latest findings. I often take part in these events, even when the subject is a little outside my own research field, because there is a high gain in terms of professional development and networking. Through academy initiatives I have established contact with many Danish and foreign research institutions, and I expect that these will translate into future academic and industrial collaborations"

Happy for the close patient contact

Signe Schmidt is a doctor, a Copenhagen University graduate in 2007. After two and a half years of work in the clinic, she started a PhD program at Hvidovre University Hospital and is now a postdoc. During her PhD program, she focused on new technologies in the treatment of Type 1 diabetes, and she is continuing this research direction in her postdoctoral course.

"In general, I am working on optimizing the treatment of Type 1 diabetes so that the costly late diabetic complications are minimized. I focus both on initiatives that could be readily implemented in the treatment of patients with Type 1 diabetes, and also on technologies which realization is a bit further away – and in all this work we have to bear in mind that we must take into account the risk of hypoglycaemia, the patients' satisfaction with the treatment and weight development.

— I am very glad about the close patient contact. It is incredibly rewarding and constantly reminds me of how important my work is, and the difference that I could potentially make to other people"

Diabetes Association research grant recipient grant in 2013

Signe Schmidt's research has already attracted a great deal of attention and she was awarded the Diabetes Association Research Grant 2013 of DKK 350,000. This money is going to her project to develop an artificial pancreas. Signe Schmidt's research aims to develop the system so that it becomes stable and safe enough to be extended to patients – children and adults with Type 1 diabetes – who will then have a much easier life with their chronic illness.

Postdoc Club Activities

In 2014, the Academy backed five different events, aimed particularly at postdocs, but also for PhD students in diabetes research. The Academy set up a working group of postdocs that put forward proposals for events where there is a desire, through a combination of vocational training and social activities, to establish a forum where knowledge-sharing and understanding of each other's research can occur.

Outcome

The Academy's efforts to create a larger network environment have been facilitated through the postdoctoral club activities. Participants have expressed great satisfaction with the professional level, as well as with the chance to meet research colleagues in an informal setting. Satisfaction with the activities is also reflected in the high number of participants. Many applicants have had to be turned down due to lack of space.

"The course is well organized, and should be very helpful for reseachers to build up and manage their research teams."

"High quality well targeted to the audience, highly skilled lecturer"

Two of the participants wrote in their evaluations of the course

"A very relevant and practical course. A fine balance between theories/ models and real-world experiences"

"Extremely competent teachers"

One participant wrote in the evaluation of the supervision course

9 to 10 January 2014

Research Management
Hotel Storebælt, Nyborg

The aim of the course was to give postdocs the professional tools to better carry out their own research as well as the tools to take over as team leaders or similar positions in their own research groups. The course, attended by 34 postdocs, was organized in collaboration with the Copenhagen Business School and the University of Copenhagen and was directed by Soren Barlebo Rasmussen, PhD.

The participants' rating of the course was satisfactory. Almost all participants indicated that the academic program was very satisfactory (67%) or satisfactory (30%), corresponding to grades 5 and 4 on a scale of 1-5 (Figure 14).

Figur 14.
Summary of participants' assessment of the scientific level of the seminar

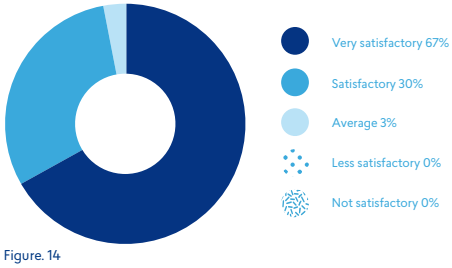


Figure. 14

24 to 25 April 2014

PhD supervision course
Hotel Storebælt, Nyborg

The aim of the course was to give postdocs the professional tools to act as supervisors for PhD students and to clarify the demands PhD students have for a good supervisor. A total of 30 postdocs and PhD students participated in the course, which was led by Associate Professor Robert Evans and PhD student Sofie Kobayashi, both of the Dept. of Science Education, University of Copenhagen.

28 August and 12 September 2014

Fundraising Course - The Successful Application Hotel Storebælt, Nyborg

The aim of the course was to give postdocs and PhD candidates the tools to prepare a successful application to private and public foundations in order to obtain operating funds for their projects.
The course was held by Maria Louise Bønnelykke Robertson, the Academy's Fundraiser in collaboration with Sven Olaf Svenningen, PhD, Senior Consultant and Head of Southern Denmark Research Support, and Helen Korsgaard, a colleague at Southern Denmark Research Support. A total of 25 postdocs and PhD students took part.

29 august 2014

Course in Presentation Skills Hotel Storebælt, Nyborg

The aim of the course was to improve participants' oral and poster presentations when they disseminate their esearch findings at scientific conferences. The course leader was Troels Krarup, MD, PhD, Aarhus University Hospital, and the teacher was communications expert Barry Stainthorp, England. A total of 30 postdocs and PhD students took part.
The participants' rating of the course was satisfactory. Almost all participants indicated that the course's academic program was very satisfactory (85%) or satisfactory (15%), corresponding to grades 5 and 4 on a scale of 1-5 (Figure 15).

"Really informative and engaging"

"Great tools – cannot wait to use them."

Two of the participants wrote in their evaluation of the presentation course:

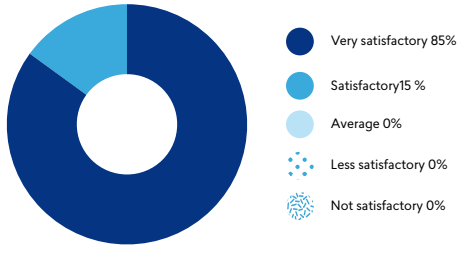


Figure 15.
Summary of participants' assessment of the scientific level of the seminar

29 August 2014

Postdoc Reception Hotel Storebælt, Nyborg

The Academy awarded ten three-year post-doctoral fellowships in 2014. To mark the event the Academy invited all the new grant recipients to a reception at Hotel Storebælt, where they could briefly present their research projects and subsequently meet many of the postdocs who are already working on a grant from the Academy.

13 November 2014

Annual day Konventum Konferencecenter, Helsingør

Academy members were invited to an "Annual Day" gathering in Helsingør. The aim was to mark the second anniversary of the Academy, as well as provide an overview of Academy's research areas, and facilitate networking through social activities.
A total of 130 of Academy members attended the event.

Other Networking Activities

In order to increase awareness of the Academy and its activities within the national and international diabetes field, the Secretariat took part in a number of diabetes conferences and training days.

17 to 18 January 2014
Danish Endocrinology Annual Meeting, Aarhus

24 January 2014
PhD Day, Aarhus University

13 to 17 June 2014
American Diabetes Association's Annual Meeting (ADA), San Francisco

25 June 2014
Euroscience Open Forum (ESOF), Copenhagen

16 to 19 September 2014
European Association of Study in Diabetes (EASD), Vienna

5 to 6 November 2014
1. Nordic symposium "The Diabetic Foot," Malmø

Communication

The Academy's communicative efforts rest on several pillars, each of which serves a different part in furthering networking and knowledge sharing between diabetes researchers.

Facebook and LinkedIn serve a communicative purpose where our researchers are able to communicate with each other and share knowledge from serious scientific articles to the lighter social news, e.g., promotions in the diabetes research community.

The website serves an informative purpose and is a focal point for the Academy's many events, news, and grant proposals. Furthermore, our complete organizational structure, along with all grant procedures and evaluation criteria, are publicly displayed here to ensure full transparency.

Membership registration is open for all researchers with an interest in the Academy's research areas; all members have a profile and receive our newsletter. In 2014, 299 researchers from around the world applied for membership of the Academy .

Our digital activity in numbers

The website had more than

35,000

visits

15,000

unique users - who each looked at close to 4 pages per session.

Our membership base has grown to

299

diabetes researchers.
More than 50 researchers signed up for our newsletter.

Our LinkedIn company profile gained approximately

150

followers in merely three months

40 %

of our visitors were classified as young researchers.

Our company newsletter has

526

subscribers

Around 60 % opens the newsletter. 30% click a link, whereas the rate of unsubscribing is between 0 and 0.2%

Our Facebook company profile gained approximately

250 likes

The profile itself reached the newsfeed of up to

3,000 people

on a monthly basis.

Recruitment of talented national and international researchers

In 2014, grants were awarded to 30 PhD students, ten postdocs, and four visiting professors / guest researchers. It was decided that the area for the Academy's second five-year professorship will be Molecular Mechanisms of Diabetes Pathogenesis, which will be promoted at the University of Southern Denmark.

It is the Academy's goal, through free and open announcements, to recruit younger talented Danish and international researchers into diabetes research in the Academy's five research areas.

PhD grants

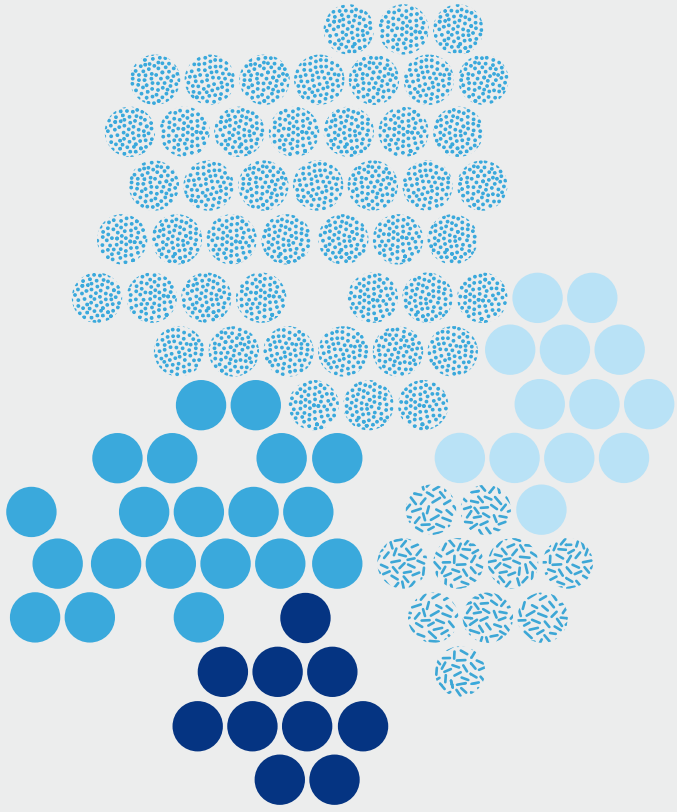
Via national and international channels, the Academy twice, on 15 January and 12 June, announced a total of 30 one-third funded PhD grants in free and open competition within the Academy's five research areas.

The Academy received a total of 105 applications, which were assessed by three national assessors and the Academy's Research Committee. The grant applications with the highest point score and quality were recommended to the Board by the Research Committee. The majority (90%) of the recruited PD students have Danish citizenship. The award ratio, which is the ratio between the number of applications received and the number of grants awarded, was 28.5%.

47%
University of Copenhagen Health

13%
University of Copenhagen Science

20%
University of Southern Denmark Health



10%
University of Southern Denmark Science

10%
University of Aarhus Health

The illustration shows how the Academy's 30 PhD grants were distributed at the various universities in Denmark.

Jakob suggests that ”friendly fire” may lead to the development of diabetic kidney disease

Jakob Appel Østergaard – recipient of the Danish Diabetes Academy Award for Best Clinical Researcher 2014 – resorts to military jargon when he talks about his research. – In the military, it is called ”friendlyfire” when forces mistakenly hit their own troops.
What we have highlighted in our research group is that the body's own defence, the immune system, is apparently mistaking its own cells for invasive bacteria. So when it opens fire, it hits the body's own cells, seemingly with the result that it contributes to the development of diabetic kidney disease”, he says.



Jakob Appel Østergaard has been interested in the research field for many years despite being only 35. As a student he already started researching the causes of diabetic kidney disease, considered to be a complication of diabetes

— What fascinated me about diabetes is that it poses the risk of getting many more diseases. How does that work? What is happening? he asks, adding that he was probably unconsciously influenced by his two brothers both having Type 1 diabetes. – So I have seen the impact of diabetes at close quarters. It is an illness with an enormous impact on people's lives. This is something that the public is not aware of, but when you are close to it you have the hope of being able to create improvements for the people who develop the disease, he says.

His goal is to find out how we can avoid or at least dampen the immune system's attack on its own cells and suggests that it will give health and quality of life to a great many people. Up to 30% of patients with Type 1 and Type 2 diabetes are affected to varying degrees by renal impairment, while each year about 150 diabetic patients in Denmark find that their kidney function has become so weak that dialysis or kidney transplantation is necessary.

— It's a really great honour to receive the award of DKK 25,000 from the Danish Diabetes Academy, and the money will contribute to finding out more details about how the immune system damages kidneys with diabetes. – Once we know these details, we will be much closer to the goal of halting the attack on diabetic cells, he says. Jakob Appel Østergaard is a doctor and PhD He holds a postdoc position at the University of Aarhus, but right now he is in England, at the prestigious Imperial College London, partly to take measurements on his own material, partly to learn their techniques, which in the future he can use in Denmark.

— The prospects for the experiments are very promising. Several drugs have been developed that control the immune system. It is reasonable to speculate about the use of these drugs to protect diabetes patients, he says.

And when you ask him what his dream is, he is in no doubt.
— I hope that what I am on the trail of now will still appear to be true when I reach retirement age. My task now is to test the hypothesis, to show that it is true, and thus have an access point to be able to inhibit it. The ultimate dream is that these inhibitors will be able to be used by people with diabetes. And in the short term – yes, I would like to describe the mechanisms. That is what is realistic in the short term.

"– I hope that what I am on the trail of now will still appear to be true when I reach retirement age. My task now is to test the hypothesis, to show that it is true, and thus have an access point to be able to inhibit it. The ultimate dream is that these inhibitors will be able to be used by people with diabetes. And in the short term – yes, I would like to describe the mechanisms. That is what is realistic in the short term."

Being one of over 100 in the Danish Diabetes Academy

Jakob Appel Østergaard is now one of over 100 PhD students and postdocs who have their research funded by the Danish Diabetes Academy.
— As we reached 100, I thought that it is really cool to now have over 100 people at the Academy who have the same mission, who are interested in the same things. It is very special and extremely important for Denmark that Novo Nordisk Foundation has chosen to prioritize it through the academy, he says.

Jakob Appel Østergaard is currently working in London and says that the difference between the English postdocs and himself is that they work very closely on what their supervisor wants, whereas he can largely define his own project himself. This opportunity is given to him by Aarhus University and the Academy.
I feel both lucky and blessed that the College is 'open for business' just now and that it supports the subject area I am interested in. I am sure that in any case I would have received a postdoctoral fellowship, but it is special that we now have so many young researchers who are moving over to us in our field. It is a very important strategic research decision that has been taken and there is no doubt that it will strengthen the research field.

THE HYPOTHESIS

One of the immune system's functions is the ability to recognize patterns. For example, the immune system normally distinguishes bacteria from the body's own cells partly because the surface of a bacterium is different from the surface of our own cells. This difference in surface pattern is due largely to differences in the sugar molecules that can be found both in our cells and the bacteria. A number of so-called pattern recognition molecules of the immune system circulate in the blood and react with the bacteria entering the body. They recognize the sugar pattern on the surface of the bacteria, but do not react with the body's cells. Using this pattern recognition, targets are marked out for attack by the immune system in just the same way as a laser sight marks out targets for a fighter jet. We know that the sugar pattern in diabetic cells changes, and we think that this leads to the immune system mistakenly attacking them.



Recipients of the Academy's PhD Scholarships 2014



Adrija Kalvisa
MSc, PhD student
Enrolled at University of Southern Denmark

Workplace
Faculty of Science with Asst. Professor Lars Grøntved as main supervisor

Project
"A genomics approach to identify transcriptional signaling networks regulating hepatic response to feeding".



Ajenthen Ranjan
MD, PhD student
Enrolled at University of Copenhagen

Workplace
Faculty of Health with Professor Jens Juul Holst as main supervisor

Project
"Dual-Hormone Treatment in Type 1 Diabetes".



Alireza Kashani Pour
MSc, PhD student
Enrolled at University of Copenhagen

Workplace
Faculty of Health with Asst. Professor Manimozhiyan Arumugam as main supervisor

Project
"Machine Learning Methods for Elucidating the Role of Gut Microbiome in Type 2 Diabetes".



Amelie Keller
MSc, PhD student
Enrolled at University of Copenhagen

Workplace
Faculty of Health with Director of Research Berit Lilienthal Heitmann as main supervisor

Project
"Prenatal exposure to vitamin D fortified food and risk of Type 2 Diabetes later in life".



Anne Bo
MSc, PhD student
Enrolled at Aarhus University

Workplace
Faculty of Health with Asst. Professor Helle Terkildsen Maindal as main supervisor,

Project
"Development of a complex evidence- and theory-based intervention for Type 2 diabetes management among young adults (aged 20-40 years)".



Caroline Maag Kristensen
MSc, PhD student
Enrolled at University of Copenhagen

Workplace
Science Faculty with Professor Henriette Pilegaard as main supervisor

Project
"Impact of exercise training on Hepatic ER Stress"".

Recipients of the Academy's PhD Scholarships 2014



Cecilie Nandrup-Bus
MSc, PhD student
Enrolled at University of Copenhagen

Workplace
Health Faculty with Professor Bente Klarlund Pedersen as main supervisor

Project
"Role of long non-coding RNAs in metabolic function of human brown fat".



Dorte Enggaard Kristensen
MSc, PhD student
Enrolled at University of Copenhagen

Workplace
Faculty of Science with Professor Jørgen Wojtaszewski as main supervisor.

Project
"Exercising' with insulin action".



Esben Hansen
MSc, PhD student
Enrolled at Aarhus University

Workplace
Faculty of Health with Professor Won Yong Kim as main supervisor

Project
"Evaluation of the Cardioprotective Effects of Remote Ischemic Conditioning in Diabetic Myocardial Infarction by Cardiovascular Magnetic Resonance and Hyperpolarized [13C]".



Eva Iepsen
MD, PhD student
Enrolled at University of Copenhagen

Workplace
Faculty of Health with Professor Jens Juul Holst as main supervisor

Project
"Is a functional melanocortin-4 receptor (MC4R) essential for the appetite inhibiting effect of GLP-1? – GLP-1 response and effect in obese adults diagnosed with obesity causal MC4R mutations".



Gitte Skajaa
MD, PhD student
Enrolled at Aarhus University

Workplace
Faculty of Health with Asst. Professor Per Glud Ovesen as main supervisor.

Project
"Insulin sensitivity during pregnancy and post partum".



Han Chow Koh
MSc, PhD student
Enrolled at University of Southern Denmark

Workplace
Faculty of Health with Asst. Professor Niels Ørtenblad as main supervisor

Project
"The role of interactions and localization of mitochondria intramyocellular lipids and glycogen in Type 2 Diabetes mellitus – effects of physical training".



Isabel Forss
MSc, PhD student
Enrolled at University of Southern Denmark

Workplace
Faculty of Science with Professor Susanne Mandrup as main supervisor.

Project
"Transcriptional networks involved in differentiation and maintenance of human brown adipocytes".



Kasper Meidahl Petersen
MD, PhD student
Enrolled at University of Copenhagen

Workplace
Health Faculty with Clinical Professor Henrik Poulsen as main supervisor

Project
"Biomarkers of DNA and RNA oxidation in Type 2 Diabetes".



Line Engelbrechtsen
MD, PhD student
Enrolled at University of Copenhagen

Workplace
Health Faculty with Asst. Professor Henrik Vestergaard as main supervisor.

Project
"Progression of Type 2 Diabetes: The role of pharmacogenetic interactions".



Line K. van Hauen
MSc, PhD student
Enrolled at University of Copenhagen

Workplace
Science Faculty with Asst. Professor Henriette Pilegaard as main supervisor.

Project
"Impact of inflammation on PDH and GS regulation in skeletal muscle".



Louise Lang Lehrskov-Schmidt
MD, PhD student
Enrolled at University of Copenhagen

Workplace
The Health Faculty with Asst. Professor Thomas Solomon as main supervisor

Project
"Effect of glucotoxicity on adaptations to physical activity in patients with Type 2 Diabetes".



Mette Lundgren Nielsen
MD, PhD student
Enrolled at University of Southern Denmark

Workplace
Faculty of Health with Professor Michael Hecht Olsen as main supervisor

Project
"HOMA-index – As a Prognostic Marker in the General Population and as a Marker of Metabolic Phenotype in Type 2 Diabetes Mellitus – An ITT Substudy (HOMAPMetabolic)".

Recipients of the Academy's PhD Scholarships 2014



Mette Søndergaard Nielsen
MSc, PhD student
Enrolled at University of Copenhagen

Workplace
Faculty of Science with Asst. Professor Anders Sjödin as main supervisor

Project
"How does appetite regulation affect weight loss in severely obese insulin resistant subjects after Roux-en-Y gastric bypass (RYGB) surgery?".



Monija Mrgan
MD, PhD student
Enrolled at University of Southern Denmark

Workplace
The Health Faculty with Ass Professor Niels Peter Rønnow Sand as main supervisor.

Project
"Coronary plaque morphology and plaque progression in patients with newly diagnosed Type-2 Diabetes mellitus (DD2-plaque study)".



Morten Dall
MSc, PhD student
Enrolled at University of Copenhagen

Workplace
The Health of Faculty with Asst. Professor Jonas Thue Treebak as main supervisor.

Project
"NAD-salvage systems in insulin sensitivity and mitochondrial function: Implications for Type 2 Diabetes".



Naja Jespersen
MD, PhD student
Enrolled at University of Copenhagen

Workplace
Faculty of Health with Professor Bente Klarlund Pedersen as main supervisor.

Project
"Brown Adipose Tissue – Implications for Improving Glucose Tolerance in Humans".



Natasha Chidekel Bergmann
MD, PhD student
Enrolled at University of Copenhagen

Workplace
The Health Faculty with Asst. Professor Filip Knop as main supervisor.

Project
"Gip/glp-1 co-Activity in Subjects with Obesity: Lowering of food Intake".



Pedram Shokouh
MD, PhD student
Enrolled at Aarhus University

Workplace
Health Faculty with Asst. Professor Søren Gregersen as main supervisor.

Project
"How Coffee and Its Constituents Affect the Development of TD2 and NAFLD".



Rie Dybboe
MSc, PhD student
Enrolled at University of Copenhagen

Workplace
Science with Professor Jørgen Wojtaszewski as main supervisor.

Project
"The role of hexokinase in regulation of insulin sensitivity in skeletal muscle of rodent and man. Development of new methods to address an old problem"



Rugivan Sabaratnam
MSc, PhD student
Enrolled at University of Southern Denmark

Workplace
Faculty of Health with Professor Kurt Højlund as main supervisor.

Project
"Molecular effects of acute exercise and testosterone in skeletal muscle of patients with Type 2 Diabetes".



Seyed M. Ghiasi
MSc, PhD student
Enrolled at University of Copenhagen

Workplace
The Health Faculty with Professor Thomas Mandrup-Poulsen as main supervisor

Project
"Oxidation and nitration of RNA as a cause of beta-cell failure in Type 2 Diabetes".



Søren Madsen,
MSc, PhD student
Enrolled at University of Copenhagen

Workplace
The Health Faculty with Professor Juleen Zierath as main supervisor.

Project
"Regulation of the miRNA processing machinery under metabolic challenges".



Sten Vissing Fahnøe Hansen
MSc, PhD student
Sten Vissing Fahnøe Hansen

Workplace
The Science Faculty with Professor Blagoy Blagoev as main supervisor.

Project
"Unraveling ubiquitination dependent signaling in human health and diseases".



Theresia Schnurr
MSc, PhD student
Enrolled at University of Copenhagen

Workplace
The Health Faculty with Professor Torben Hansen as main supervisor.

Project
"The role of genetics on objectively assessed physical activity and sedentary behavior and its association to obesity and diabetes related traits".



The award means that hard work pays off

„The outcome of Michaela Tencerova's study will contribute to building a new multidisciplinary area - the study of crosstalk between bone and adipose tissue metabolism in obesity and insulin resistance."

Professor Moustapha Kassem, Molecular Endocrinology, Department of Endocrinology, University Hospital of Odense and University of Southern Denmark

"Michaela's possesses all the characteristics of a promising young researcher. She is committed, focused and hard working. She has international research experience. She also has a collaborative nature and provides help and support to her coworkers and students in the lab. I therefore recommend her for the post-doctoral prize (basic) without reservation".
Thus writes professor Moustapha Kassem to the Danish Diabetes Academy, recommending Michaela Tencerova for the prize 2014 – and the jury agreed with him and awarded Michaela the prize.

Michaela has worked with the professor at Odense University Hospital since September. She came to the island of Funen from UMASS Medical School in Worcester, MA, USA. Before that she obtained her PhD degree from Charles University in Prague in 2010.
She can't really say what it is like to live in Denmark, because she has been working almost all the time, but, she says: It is really nice to be back in Europe... finally with my husband.
One thing must be in the right place, no matter where she works:
-To do this job, you need to be

challenged every day when you come to work and the diabetes field provides this for sure, she says.

The prize makes the hard work of scientists meaningful and of value

She is very happy to have received the award and says: - I feel really honored and thankful to receive this prestigious award from the Danish Diabetes Academy. It means that hard work pays off and it encourages me to continue the research. It makes the hard work of scientists meaningful and of value.
Michaela has been a researcher in the diabetes field since her PhD studies, and her goal is to contribute to building a new multidisciplinary area - the study of crosstalk between bone and adipose tissue metabolism in obesity and insulin resistance.
She says that she works on the project to understand the role of bone marrow adipose tissue (BMAT) in the regulation of the entire body metabolism in lean and obese insulin resistant individuals.

- This topic is very interesting because it is merging the knowledge from the field of bone and adipose tissue biology.

Known for hundred years, but only recently received increased attention of researchers

She says that the existence of fat inside bones has been known for over a hundred years, but it is only recently that bone marrow fat has attracted increased attention from researchers.
- It is known that bone adiposity is associated with osteporosis and increased risk of bone fractures in obese patients. Moreover, recent studies have shown that the bone is also an insulin sensitive organ which contributes to the regulation of insulin production by beta cells in the pancreas. Despite enhanced attention on the regulation of bone versus fat formation in bone marrow, little is known on the function of BMAT and its contribution to whole body metabolism. While there is extensive literature on the role of peripheral adipose depots, in the development of insulin resistance and Type 2 diabetes, few studies so far have investigated the function of BMAT, she says.
Michaela obtained her PhD degree from Charles University in Prague in 2010. During her PhD studies, her research focus was on the study of molecular adaptations of human adipose tissue (AT) in response to dietary treatment of obesity.
In 2011, Michaela moved to a post-doctoral position at the laboratory of Dr. Michael Czech at the UMASS Medical School in Worcester, MA, USA. There, she employed several animal models of obesity to study the role of macrophages in adipose tissue and liver in relation to the complication of insulin sensitivity and lipid metabolism.
Michaela's current research will allow her to combine expertise from the field of AT and energy metabolism to stem cell and bone biology.
- Her project is highly relevant from a basic research point of view as well as clinical application.
The project will provide a mechanistic understanding of the role of bone marrow adipose tissue and bone in overall body metabolism under normal conditions and in patients with obesity or Type 2 diabetes, states professor Moustapha Kassem.

„I feel really honored and thankful to receive this prestigious award from the Danish Diabetes Academy. It means that hard work pays off and encourages me to continue my research. It makes the hard work of scientists meaningful and of value."

Michaela Tencerova



„To have a job as a scientist is very challenging and fascinating in every aspect. To do this job, you need to feel excitement every day when you come to work and the diabetes field provides this for sure.

Michaela Tencerova

Postdoctoral grants

On 15 January, through national and international channels, the Academy announced ten three-year postdoctoral Fellowships in open competition within the Academy's five research areas.

The Academy received a total of 39 applications, which were evaluated by three international reviewers and the Academy's Research Committee. The applications with the highest point score and quality were recommended to the Board by the Research Committee. The ten recruited postdocs represented six nationalities (Slovakia 10%; Iceland 10%; India 10%, France 20%; Sweden 10% and Denmark 40%)

The award ratio - which is the ratio between the number of applications received and the number of grants awarded - was 25.6%.

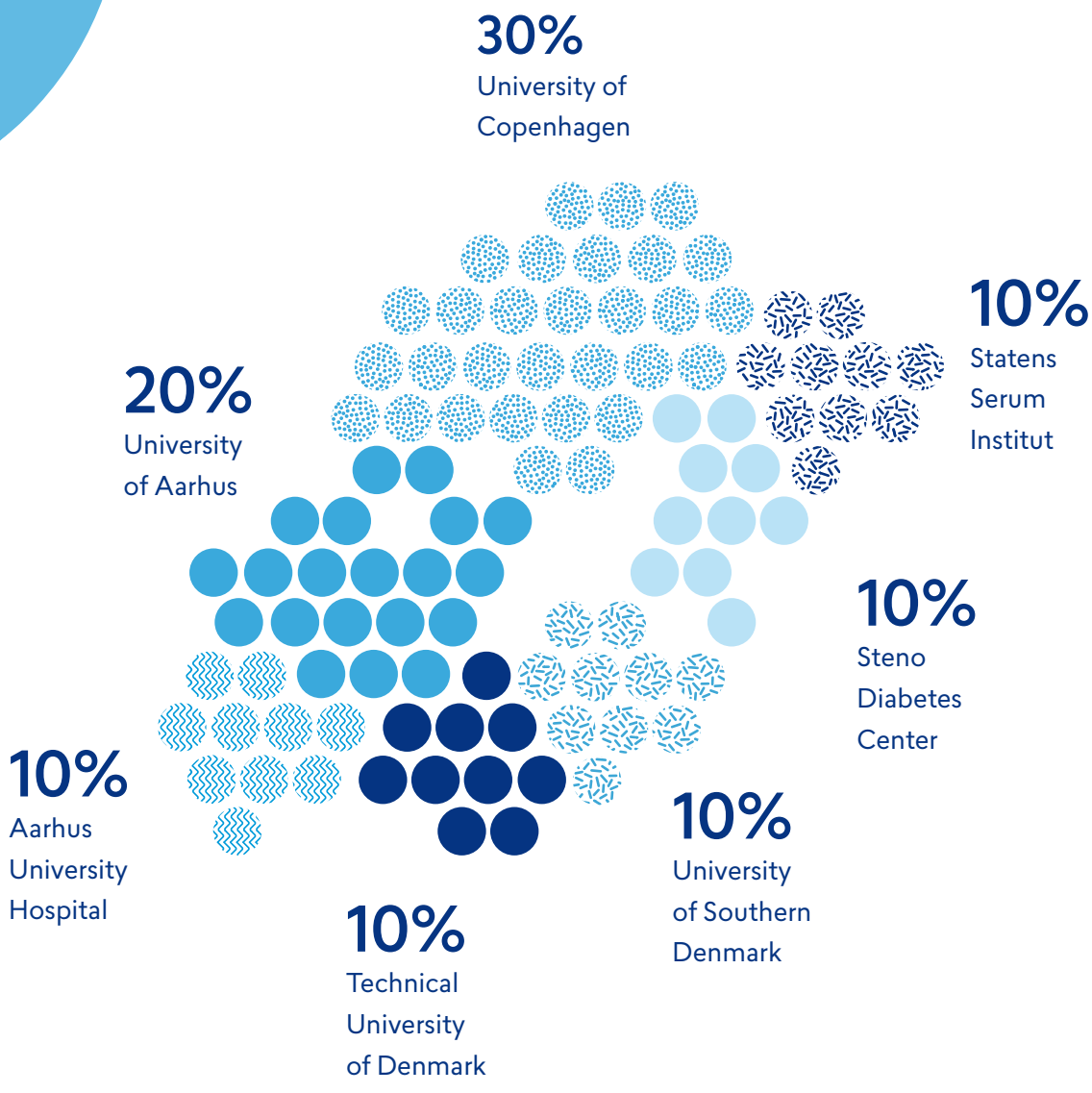


Illustration shows how the Academy's 10 postdoctoral grants were allocated to the various universities and research institutions and hospitals in Denmark.

Recipients of the Academy's Postdoctoral Fellowships 2014



Maja Storm Engelstoft
MSc, PhD and Postdoc
The University of Copenhagen

Workplace
Dept. of Center for Basic Metabolic Receptology with Professor Thue Walter Schwartz as main supervisor.

Project
"Understanding the enteroendocrine system at the single cell level as the basis for development of novel treatments for diabetes and obesity".



Dimitri Boiroux
MSc, PhD and Postdoc
The Technical University of Denmark

Workplace
Dept. of Applied Mathematics and Computer Science, Scientific Computing with Asst. Professor John Bagterp Jørgensen as main supervisor .

Project
"A bi-hormonal artificial pancreas based on an ensemble nonlinear model predictive control algorithm".



Ekaterina Maslova
MSc, PhD
ScD and postdoc
The State Serum Institute of Denmark

Workplace
Dept. of Epidemiology Research with Adjunct Professor Sjurdur Olsen as main supervisor.

Project
"Maternal diet and physical activity in pregnancy and the propensity for Type 2 diabetes mellitus in 11 to 16 year-old children".



Kasper R. Andersen
MSc, PhD, and Postdoc
Aarhus University

Workplace
Dept. of The Institute of Molecular Biology and Genetics – Structural Biology with Professor Gregers Andersen as main supervisor.

Project
"Structural studies of mTOR signaling in glucose homeostasis".



Mads Fuglsang Kjølby
MD, PhD and Postdoc
Aarhus University

Workplace
Dept. of Biomedicine with Professor Anders Nykjær as main supervisor.

Project
"SorCS1: a novel drug target in diabetes and obesity?".



Michaela Tencerova
MSc and PhD and Postdoc
The University of Southern Denmark

Workplace
Dept. of Endocrinology with Professor Moustapha Kassem as main supervisor

Project
"Characterization of BMAT in lean healthy and obese insulin resistant mice and humans".



Odile Fabre
MSc, PhD and Postdoc
The University of Copenhagen

Workplace
Novo Nordisk Foundation Center for Basic Metabolic Research, Integrative Physiology with Asst. Professor Roman Barrés as main supervisor.

Project
"The role of environmental factors on the epigenetic inheritance of metabolic traits".



Páll Ragnar Karlsson
MSc, PhD and Postdoc
Aarhus University Hospital

Workplace
Dept. of Health with Professor Troels Stahelin Jensen as main supervisor

Project
"Sensory changes, orofacial somatosensory function and nerve fiber analysis on DPB patients and healthy controls".



Trine Koustrup Sønder
MD, PhD and Postdoc
Steno Diabetes Center

Workplace
Dept. of Diabetes Complications Research with Professor Peter Rossing as main supervisor

Project
"Endothelial Dysfunction in patients with Type 2 Diabetes (EDF-T2D)".



Yuvaraj Mahendran
MSc, PhD and Postdoc
The University of Copenhagen

Workplace
Dept. of Section of Metabolic Genetics at The Novo Nordisk Foundation Research Center for Basic Metabolic Research with Professor Torben Hansen as main supervisor.

Project
"Early onset Type 2 Diabetes: Genetic and metabolic characterization of amino acid metabolism".

Four grants to visiting professors/ guest researchers

In 2014, thanks to grants from the Academy, the Danish research environment was enriched with visiting professors and researchers from England, Israel, Italy, and Norway. The goal of this initiative is to increase cooperation between Danish and foreign research groups and to help to attract new knowledge and skills to Denmark.

The Academy uses national and international channels to promote the availability of grants, as a visiting professor in Denmark, for a period of one to six months with a connection to one or more research groups. The award ratio - which is the ratio between the number of applications received and the number of grants awarded - was 44%

Applicants who meet the application criteria are assessed by the Academy's International Advisory Board, and subsequently the best-qualified candidates are recommended to the Board for grant approval.

In addition to their research, grant recipients must also provide academic training to the Academy's PhD students and postdocs at various courses and seminars.

The recruited visiting professors contributes to the Academy and Danish diabetes research in several ways. In collaboration with Professor Thorkil Ploug, The Panum Institute, Ari Meerson contribute to new knowledge about biomarkers for dysfunctional adipose tissue. In collaboration with Matej Oresic, Steno Diabetes Center, Gertude Mingrone contributes to new knowledge about the Duodenal/ Jejunal intestinal tract secretion of hormones and its relation to insulin resistance. In collaboration with professor Jørgen Wojtaszewski, Panum Institute, Jørgen Jensen will establish and validate a rapid radiochemical filter paper assay for measurement of hexokinase activity in muscles. In collaboration with Professor Asbjørn Drewers, Aalborg University Hospital,

Adam Farmer will implement novel methods hopefully leading to improvement in analysis and interpretation of automatic nervous system parameters involving Type 1 diabetic patients. In addition to the four new recruited visiting professors, Antonio Muños has during 2014 continued his visiting professorship at University of Copenhagen where he in collaboration with basic and clinical researchers at the University are looking into mutations of the Glucokinase gene in the pancreatic cells.



Adam Farmer
Post doctoral research fellow and Honorary Consultant Gastroenterologist (UK)

Workplace
Visiting Department of Gastro-enterology & Hepatology, Aalborg University Hospital, for six months with Professor Asbjørn Mohr Drewes as collaborating research host manager. Adam Farmer will be affiliated with the Academy from December 2014 - June 2016

Project
"The effect of liraglutide in preventing the progression of gastrointestinal dysmotility in Type 1 diabetic with established autonomic neuropathy".



Gertrude Mingrone
Associate Professor at the Catholic University, Faculty of Medicine, in Rome (Italy)

Workplace
Visiting Steno Diabetes Center for six weeks with Matej Oresic, PhD, Adj Prof Principal Investigator, Systems Medicine as collaborating research manager. Gertrude Mingrone will be affiliated with the Academy from December 2014 - december 2015

Project
"Insulin sensitivity during oral administration or isoglycemic graded intravenous infusion".



Ari Meerson
Senior Researcher PhD MIGAL Galilee Research Institute (Israel)

Workplace
Visiting Department of Biomedical Sciences, The Panum Institute, University of Copenhagen, for six weeks with Associate Professor and Director of Studies for Human Biology Thorkil Ploug as collaborating research manager. Ari Meerson will be affiliated with the Academy from December 2014 - December 2015

Project
"Extracellular RNAs as biomarkers and mediators in metabolic function and disease".



Jørgen Jensen
Professor Department of Physical Performance, Norwegian School of Sport Sciences, Oslo (Norway)

Workplace
Visiting, Molecular Physiology Group, Dept. of Nutrition, Exercise and Sport, University of Copenhagen for six months with Professor Jørgen Wojtaszewski as collaborating research host manager. Jørgen Jensen will be affiliated with the Academy from September 2014 - December 2017

Project
"Physiological regulation of hexokinase activity in skeletal muscles: Methodological developments in the search for the role of hexokinase in the regulation of insulin sensitivity in humans"

Professorships

Upon the recommendation of the Academy's International Advisory Board, the Board of the Academy decided that the subject for the second of the Academy's five-year professorships would be Pathogenesis in Diabetes, and that it will be advertised at the University of Southern Denmark.

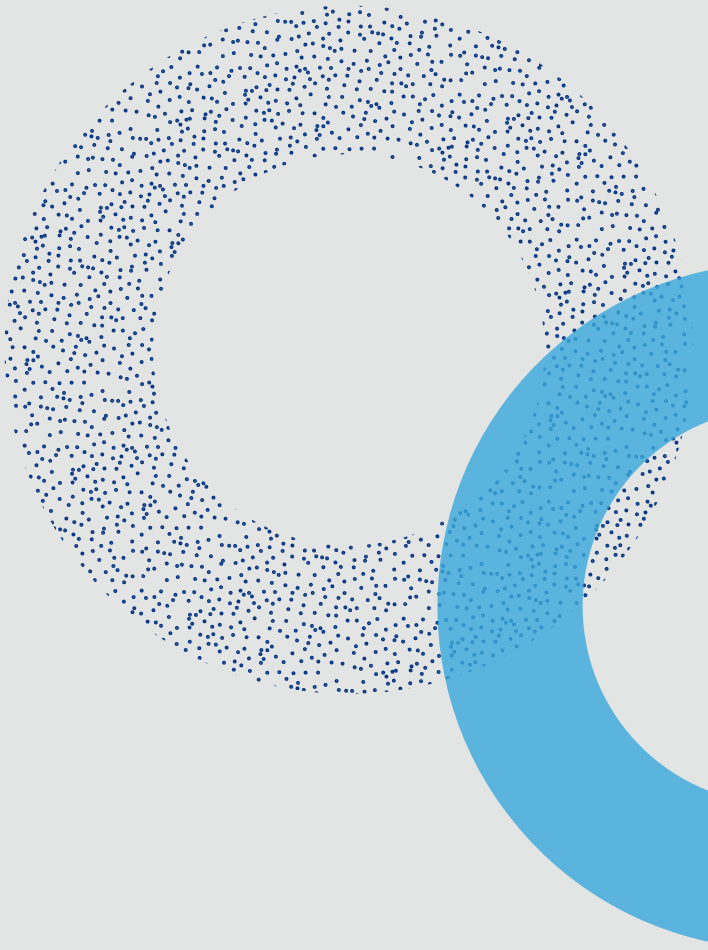
The professorship in diabetes and epidemiology, which is the area chosen by the Board of the Academy in 2014 for the first five-year professorship, was advertised at Aarhus University. The decision regarding who will be awarded the professorship is expected to be made at the beginning of 2015.

The aim of allocating the two professorships is to stimulate the Danish diabetes research environment in one of the Academy's five research areas. Besides their own research, the professors will contribute to graduate teaching and supervision of dissertation students for bachelor and masters projects. They are expected to supervise graduate students and postdocs and to participate in the training activities of the Danish Diabetes Academy.

Match funding postdoc fellowship between the Academy and JDRF

The Academy and JDRF have an agreement to co-finance (50% vs 50%) a number of postdoctoral grants of one to five years by free and open announcement on the Academy and JDRF's websites and within the Academy and JDRFs focus areas. It is a requirement that international applicants and potential grant recipients have a documented collaboration with Danish diabetes researchers.

The Academy and JDRF did not succeed in co-financing candidates with these funds in 2014.



Scientific activity among Academy-funded researchers

In 2014, 10 researchers in receipt of a grant from the Academy published 18 articles in peer-reviewed journals (Appendix 3, Academy authors in bold).
Additionally researchers in receipt of a grant from the Academy gave 19 oral and 25 poster presentations at national and international diabetes-related conferences, and contributed chapters in academic books.

The Academy continually follows the researchers in relation to their scientific activities, including publications in peer-reviewed journals, oral and poster presentations at national and international diabetes conferences, laboratory switches or periods abroad, and their contribution to academic literature. Furthermore, it is the Academy's ambition to discover whether any researchers in receipt of a grant from the Academy have been distinguished by receiving awards for their research in the form of prizes.

A Bibliometric Analysis

by Tove Faber Frandsen PhD, SDU

Data on publications and citations derive from the citation index Journal Citation Reports, which in the area of health is based on data from the Science Citation Index (SCI). According to Moed (2005), SCI covers the majority of health science disciplines extremely well (over 80%) and the clinical disciplines are among those that are suitable for bibliometric analyses.

The purpose of the bibliometric study is to analyze the impact of the research published at the Danish Diabetes Academy. The analysis only includes journal articles, based on self-reporting by researchers. As stated in their letter of funding from the Academy, it is important that researchers give 'the Danish Diabetes Academy funded by the Novo Nordisk Foundation' in the Acknowledgements as this increases the possibilities of assessing the research bibliometrically. Because this type of analysis can typically only be made after a number of years, the journal's impact is used as a proxy in this context. It is well known that the impact factor is affected by outliers (in the form of highly cited publications, etc.) just as many high-impact articles are not published in high-impact journals (Acharya, 2014), so one must so be careful about predicting the individual article's impact based on the journal's impact.

The number of citations of a publication can be measured by JIF. JIF is the most widely used bibliometric indicator and can be formulated orally as the average number of citations an average article receives per year in the prescribed time period after its year of publication. For JCR, JIF is calculated on the basis of a two-year publication window and a one-year citation window, which means that 1 year's received citations are taken as a basis for 2 years of publications, for example, citations in 2013 for articles published in 2011 and 2012. The latest version of JCR is used (2013).

As different scientific disciplines have very different citation patterns (see, for example, Moed, 2005), journals cannot be compared across subjects without the use of complex normalization parameters. A comparison is possible, however, with the overall level for the JCR category.

The analysis is based on which quartile the journal is in where the article is published.

The use of divisions into quartiles or percentiles is an effective method of normalization for different disciplines (Bornemann, 2013). Journal Citation Reports assign subject categories to registered journals. A journal can be registered with one or more subject categories. Therefore, it may be the case that a journal is registered with overlapping subject categories (for example, a journal may be registered with the subject categories immunology and endocrinology). So these publications could be counted more than once.

An additional proxy for the quality of the publications is whether the examined journal publications from the Danish Diabetes Academy are in journals indexed in SCI or not (for example, Ugeskrift for Læger ("Doctors' Weekly") is not indexed in SCI). Approximately 3/4 of journal articles were published in journals indexed in the JCR (if we do not count the new journals that have not yet been indexed, then 4/5 are in JCR-indexed journals).

Overview of included publications

Journal articles published in 2014:	18
Number of articles in journals that are not indexed in JCR:	4

In conclusion:

"The research published by researchers associated with the Academy is assessed using the citation index Journal Citation Reports (JCR), which is a multidisciplinary database that analyses the impact of journals. The journals are divided into four quartiles according to the expected impact and it can be seen that 58% of the articles published under the auspices of the Academy are in the top quartile and almost 95% in the 1st and 2nd quartile."

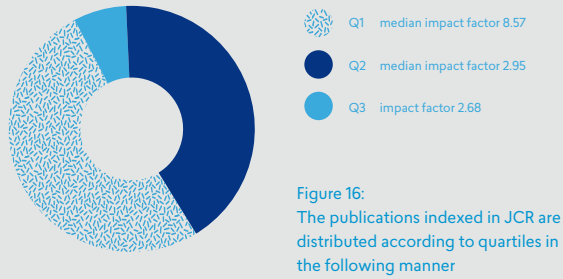


Figure 16:
The publications indexed in JCR are distributed according to quartiles in the following manner

Publications

A total of 18 publications were published in peer-reviewed journals by Academy-funded researchers, who, in 50% of the cases, were the publication's first author.
A Bibliometric analysis of Danish Diabetes Academy publications 2014 was conducted by Tove Faber Frandsen PhD, Head of Videncenteret, University of Southern Denmark.

Oral presentations

19 oral presentations were given at national and international diabetes-related conferences in Europe and the USA, including those at EASD in Vienna, ADA in San Francisco, the European College of Sports Science, Amsterdam, and the Annual World Congress of the Human Proteome Organization, Madrid.

Poster presentations

25 poster presentations were given at national and international diabetes-related conferences in Europe and the USA, including those at Experimental Biology, Boston, European Society of Hypertension, Athens, EASD in Vienna, ADA in San Francisco, European Society of Cardiology Congress, Barcelona, Spain, and the annual meeting of the American Society of Nephrology, Pennsylvania.

Other publications

Contributions to academic books, including book chapters dealing with gestational diabetes, child obesity, and patient education.

Stays abroad / laboratory switches

15 researchers reported that they had stays with research groups in Europe and the USA, including stays at Cambridge University, Joslin Diabetes Center, Boston, Oxford University, the Karolinska Institute, Stockholm, University Health Network, Medical Discovery Tower, Toronto, and Mayo Clinic, Jacksonville.

A total of 18 publications were published in peer-reviewed journals by Academy-funded researchers, who, in 50% of the cases, were the publication's first author.

Prizes

In 2014, the following prizes were awarded to researchers in receipt of a grant from the Academy:

On 18 January
Rasmus Ribel Madsen,
MSc, PhD, employed at the Department of Endocrinology, Rigshospitalet, received the Niels Schwartz Sørensen Memorial Prize at the Danish Endocrinology Annual Meeting.

On 24 April
Jacob Appel Østergaard,
MD, PhD, employed at the Department of Endocrinology, Aarhus University Hospital, received the Diabetes Association's Research Scholarship.

On 24 April
Esben Søndergaard,
MD, PhD, employed at the Department of Endocrinology, Aarhus University Hospital, received the Diabetes Association's Research Scholarship.

The Danish Diabetes Academy Annual Award

The Danish Diabetes Academy had the pleasure of awarding two excellent young scientists "The Danish Diabetes Academy Annual Award". The categories were "Best young clinical researcher" and "Best young basic researcher". Candidates for the prizes were young researchers under the age of 40. They were nominated by their principal investigator to the Academy's Board, which took the final decision about this year's award winners

On 12 November
Jacob Appel Østergaard,
MD, PhD, employed at the Department of Endocrinology, Aarhus University Hospital received the Academy's Award of Clinical Researcher of the Year.

On 12 November
Michaela Tencerova,
MSc, PhD, employed at the Dept. of Endocrinology at the University of Southern Denmark, received the Academy's Award of Basic Researcher of the Year.

Organization

Secretariat, Board, Councils, and Committees

The Academy's organization consists of a secretariat, a board, an international advisory board, a research committee, an education committee, and the "Council," an advisory body, as shown in the figure beneath. The terms of references for all the committees are attached in the Appendix 4

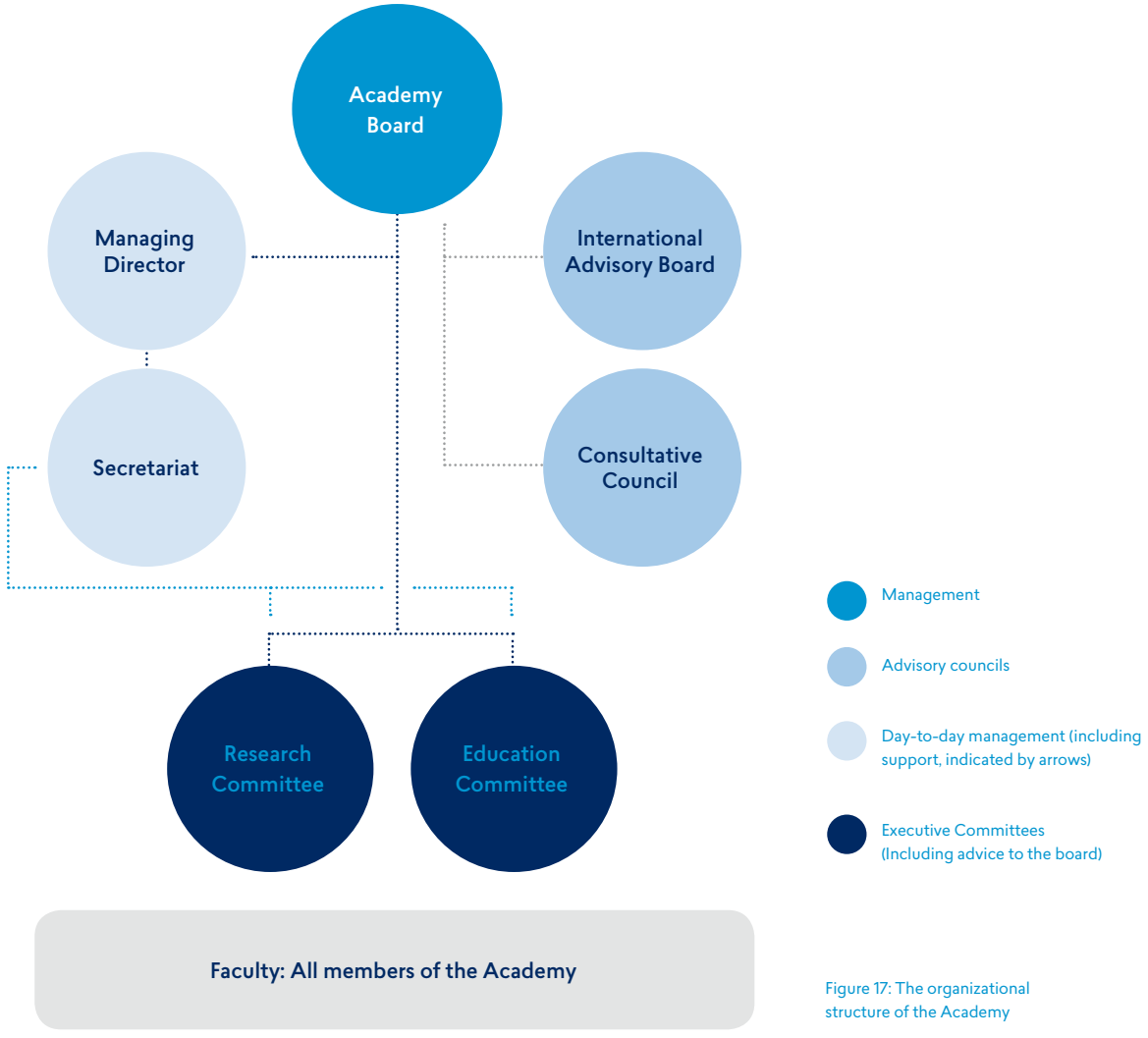


Figure 17: The organizational structure of the Academy

Academy Board

In the course of 2014, the Board held a series of meetings and discussed the current activity and the current and future strategy for the Academy.

The Board has ruled as needed on the ongoing activities within the Academy's three focus areas, including the organization and coordination of scientific seminars and courses, the construction of a national and international network environment, and the recruitment of talented national and international researchers.

Board members

Professor Henning Beck-Nielsen,
Chairman, Department of Endocrinology, Odense University Hospital

Professor Allan Flyvbjerg,
Department of Medical Endocrinology and Internal Medicine, Aarhus University, and Department of Clinical Medicine, Aarhus University (representative of the universities involved)

Chief Medical Officer Jannik Hilsted,
Copenhagen University Hospital (representative of the university hospitals)

Professor Oluf Borbye Pedersen,
NNF Center for Basic Metabolic Research (representative of the NNF centres at the Faculty of Health Science, University of Copenhagen)

Associate Professor Kurt Højlund,
Department of Endocrinology, Odense University Hospital (Chairman of the Consultative Council of the Academy)

International Advisory Board (IAB)

In 2014, the Academy held two meetings with the IAB, where the Academy's activities, including seminars and courses as well as recruitment of researchers, were discussed. In addition, the IAB was of particular assistance in assessing applications for the Academy's second five-year professorship, the Academy's postdoctoral grants, and the Academy's grants to visiting professors. The IAB also gave a written evaluation of the Academy's current status and recommendations for future activities.

The International Advisory Board members

Professor Christopher J. Rhodes,
Chairman, University of Chicago, USA

Professor Ulf Smith,
University of Gothenburg, Sweden

Professor Barbara Corkey,
Boston University School of Medicine, USA

Professor Ele Ferrannini,
University of Pisa School of Medicine, Italy

Professor C. Ronald Kahn,
Joslin Diabetes Center, Boston, USA

Consultative Council

The role of the Academy's Consultative Council is to advise the Board on how the Academy's future development. The Council held several meetings during 2014 and contributed suggestions for optimizing the evaluation processes used when recruiting researchers.

Consultative Council members

Associate Professor Kurt Højlund (Chairman), Department of Endocrinology, Odense University Hospital

Associate Professor Niels Jessen (Vice-Chairman), Department of Molecular Medicine, Aarhus University Hospital

Professor Allan Vaag, Institute of Clinical Medicine, Rigshospitalet

Professor Annelli Sandbæk, Institute of Public Health, Aarhus University

Professor Jørgen Wojtaszewski, August Krogh Institute, University of Copenhagen

Professor Susanne Mandrup, Department of Biochemistry and Molecular Biology, University of Southern Denmark

Education Committee

In 2014, the Education Committee was involved in the planning and running of the 2014 and 2015 scientific seminars, planning and coordination of the Academy PhD courses, and planning of the Winter School in Malaga in Spain next year.

Education Committee members

Professor Torben Hansen, Novo Nordisk Foundation Center for Basic Metabolic Research, University of Copenhagen (Chairman)

Professor Jørgen Wojtaszewski, Faculty of Science, University of Copenhagen

Professor Nils Færgeman, Dept. of Biochemistry and Molecular Biology, University of Southern Denmark

Asst. Professor Dorte Møller Jensen, Dept. of Endocrinology, Odense University Hospital

Professor Jan Frystyk, Department of Clinical Medicine - The Department of Endocrinology and Diabetes, Aarhus University

Asst. Professor Louise Torp Dalgaard, Dept. of Science, Systems and Models, Roskilde University

Professor Inge Tetens, Division of Nutrition, National Food Institute, Technical University of Denmark

Professor Peter Vestergaard, Dept. of Clinical Medicine, Aalborg University Hospital

Research Committee

In 2014, the Research Committee was involved in evaluations of applications and grants to 30 one-third funded PhD grants, 10 postdocs, and a number of visiting professor / visiting researcher grants.

On 28 August, three members left the Research Committee after agreement with the Board.

- Professor Michael Hecht Olsen, Department of Endocrinology, Odense University Hospital
- Clinical Associate Professor Per Løgstrup Poulsen, Faculty of Science, Aarhus University
- Professor Torben Hansen, The Novo Nordic Foundation Center for Basic Metabolic Research, Metabolics Genetics, Copenhagen University

It was the Board's judgement that since the work of the Research Committee has been going well, replacement of the committee members could happen without it affecting the committee's work in a negative way.

Replacement of committee members could provide an opportunity for more people to contribute their knowledge to the recruitment of the best researchers, while continuing to be well covered in all of the Academy's five research areas.

Research Committee members

Professor Peter Rossing,
Steno Diabetes Center
(Chairman)

Professor Susanne Mandrup,
Dept. of Biochemistry and Molecular Biology, University Of Southern Denmark

Vice-Dean Lise Wogensen Bach,
Faculty of Health Sciences, Aarhus University

Professor Thomas Mandrup
Poulsen, MD, DMSc, Dept. of Biomedical Sciences, University of Copenhagen (NEW)

Professor Tina Vilsbøll,
director of the Centre for Diabetes Research, Gentofte Hospital (NEW)

Consultant and Associate Professor Reimar Thomsen,
PhD, Aarhus University, Department of Clinical Epidemiology, Aarhus University Hospital (NEW)

2014 Secretariat employees

Managing Director
Tore Christiansen

Personal Assistant and Communications Coordinator
Tina Hansen Barbisan

Education Manager and Communications Coordinator
Kristine Melgaard Michailidis

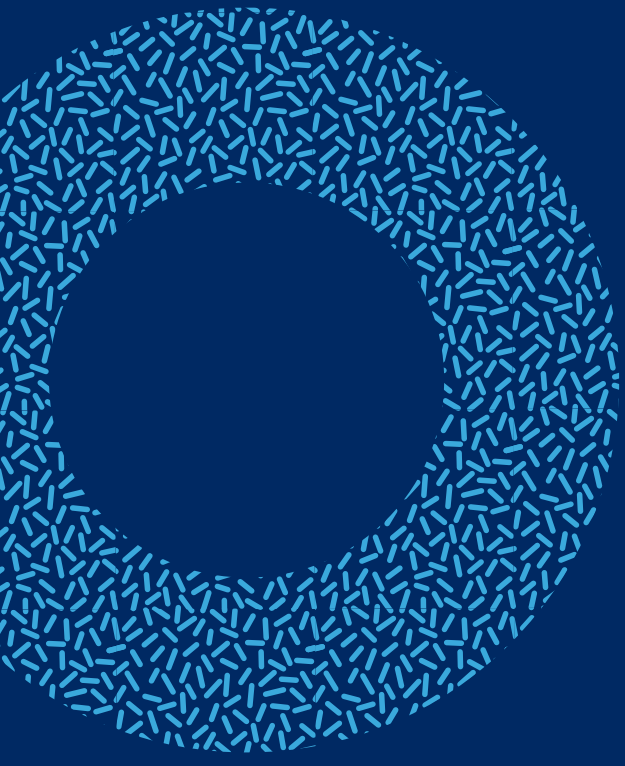
Education Manager and Communications Coordinator,
Anne Eskesen
(replacement for Kristine Melgaard Michailidis, who went on maternity leave in September 2014)

Fundraiser
Maria Bønnelykke Robertson

Personal Assistant to the Chairman
Tine Hylle

Office Assistant
Louise Hansen (part-time)

Office Assistant
Birthe Hansen (part-time)



Fundraising

In February 2014, Maria Bønnelykke Robertson was employed as a full-time fundraiser to seek out new avenues for attracting funding for the Academy.

Fundraising activities

Sending out a monthly funding overview for all Danish Diabetes Academy grant holders with information about relevant grant calls for diabetes research and open calls for travel stipends.
Providing individual support on grant proposals as needed.
Organizing an annual course for PhDs and postdocs on how to write successful grant applications. The first of these courses was organized in 2014 with speakers representing both private and public funding bodies.

Other Fundraising Activities

The Academy has sought out a number of other funding opportunities in 2014 for research activities, namely research funding from the EU, from the private sector, and from private foundations.

EU funding

In the first two quarters of 2014, the Danish Diabetes Academy participated in two EU funding applications through the Horizon2020 programs.

Sing Diabetes:

A partnership between 10 European partner organizations looking to improve the way diabetes is managed on a European level through innovative telemedical devices. The application was rejected.

HybriCell:

A public-private partnership between five European partner organizations looking to develop a more efficient way of treating Type 1 and Type 2 diabetes by providing novel implantable pancreatic islets based on interpenetrating polymer network for long term release of insulin. The application was rejected.

Private Sector

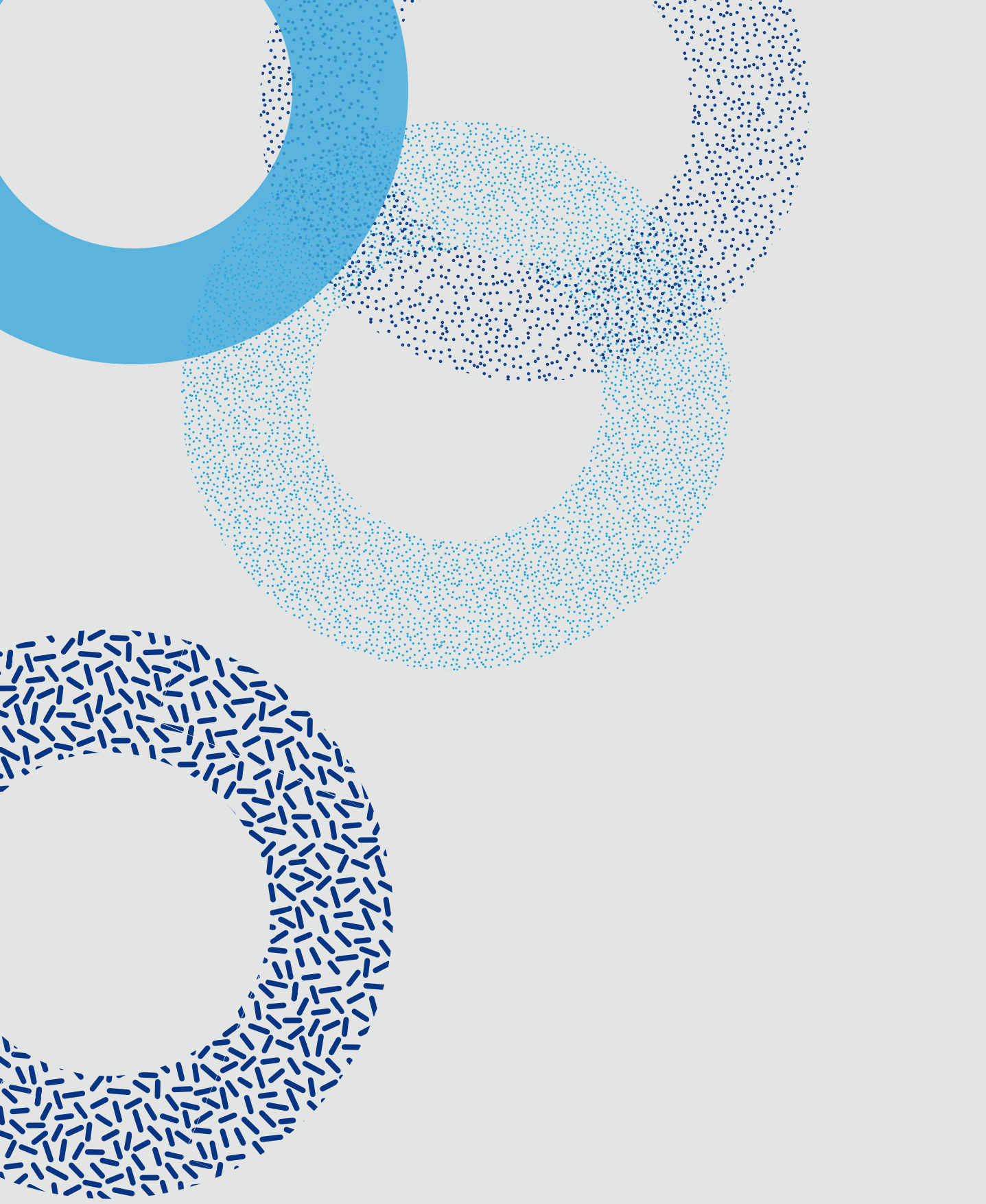
Throughout the year, we established contact with a wide selection of private companies involved in the field of diabetes care in order to establish partnership and build relations between academia and the private sector. In the last quarter of 2014, The Danish Diabetes Academy initiated collaboration with private partners in the food industry to apply for funding for through the Eurostars program to create a research center focusing on nutrition. This work is ongoing

Private Foundations

Private foundations represent a significant contributor to Danish research projects. In the last quarter of 2014, we began the work of pulling together the strongest scientific candidates for formulating a project on anxiety for treatment of type1 diabetes among children, hoping for funding through private foundations in the nearest future.

Public Research Grants

In the last quarter of 2014, The Danish Diabetes Academy applied for funding through the 3R program under the Ministry of Food, Agriculture and Fisheries of Denmark together with academic and industrial partners. In this project, we wanted to develop new continuous glucose monitoring via telemetry in diabetes and obesity rat models. The proposal was rejected.



Budget and Accounts

The accounts in details are provided in an enclosed audit from the financial department at Odense University Hospital including statement of warranties and representations (appendix 1)

The Accounts manager of Odense University Hospital, Lars Weber Strate functions as financial manager of the Academy and administrates the grant in cooperation with the Managing director of the Academy



Danish Diabetes Academy
Funded by the Novo Nordisk Foundation

Danish Diabetes Academy
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DK-5000 Odense C
www.danishdiabetesacademy.dk

ISBN: 978-87-996346-2-0

Danish Diabetes Academy

Annual Report 2014
Appendix

DANISH
DIABETES ACADEMY

Ledelseserklæring **31. december 2014**

Vi har dags dato aflagt regnskabet for perioden fra den 1. januar 2014 til den 31. december 2014 for "The Danish Diabetes Academy", som administreres på forskningskonto 10228201.

Regnskabet er aflagt i overensstemmelse med tilsagnsskrivelsen fra Novo Nordisk Fonden og samtidig skal vi erklære følgende:

- at regnskabet er korrekt opgjort og i overensstemmelse med bogføringen
- at tilskudsbetingelserne og forudsætningerne for tilskuddet er opfyldt
- at samtlige medtange indtægter og udgifter vedrør projektet
- at der ikke mangler indtægter og udgifter
- at afholdt udgifter er anvendt til det bevilgede formål
- at regnskabet vedrører den ovenfor angivne periode
- at der er taget økonomiske skyldige hensyn ved projektets gennemførelse

Tore Christiansen, Managing Director

Henning Beck-Nielsen, Bestyrelsesformand, professor

Niels Nørgaard
Adm sygehusdirektør
Odense Universitetshospital

Peder Jest
Direktør
Odense Universitetshospital

31. december 2014

Financial report (Amounts are stated i DKK)	Year 2 2014	Budget 2014
Grants	33.972.867	42.270.000
Professorships	2.500.000	5.000.000
Salaries, clinical professorships	0	0
Salaries, full professoirships	2.500.000	5.000.000
Postdoc Programme	15.399.186	19.200.000
NNF 3-year-positions	15.399.186	16.200.000
NNF match-funding (25 full-time equivalents)	0	3.000.000
PhD Programme	15.400.000	16.500.000
Salaries (DKK 550,000 annually)	15.400.000	16.500.000
Pregraduate Scholarship Programme	0	0
Salaries (DKK 120,000 annually)	0	0
Visiting Scientific Programme	673.681	1.570.000
Travel - Lodging - Food - Salary (DKK 500,000 annually)	673.681	1.570.000
Support to Research Projects	0	0
JDRF Danish Research Projects	0	0
Administration	10.550.230	11.568.100
Salaries	3.425.329	4.000.000
Managing Director	867.432	850.000
Education Manager	553.484	600.000
Fundraiser/Communicator	489.984	600.000
Administrative secretaries	942.798	1.450.000
Chairman of the Board, co-funding	571.631	500.000
Annual Conferences, Seminars and Courses	4.656.857	3.500.000
Venue - Travel - Lodging, estimated total	4.656.857	3.500.000
Other Administrative Costs	1.171.255	2.500.000
Small acquisitions	144.099	250.000
Marketing/Merchandise	405.515	1.200.000
Webpage	31.722	300.000
IT administration (Apps, Twitter, etc.)	67.947	50.000
Meetings (meals and transportation)	521.972	700.000
Estimated Total	0	0
OUH administrative costs and services (3 % of the total costs)	1.296.789	1.568.100
Applied funding, total DKK	44.523.097	53.838.100
Forwarded from previous years	5.866.448	5.866.448
Received on account, Year 2	47.972.000	47.972.000
Forward to next year	9.315.351	348
Net income, other parties	500.490	0



Tore S. B. Christiansen, Managing Director, **The Danish Diabetes Academy**

Appendix 2 - seminars

Programme

7 February 2014

Pathophysiological-based treatment of Type 2 diabetes

Place: Sinatur Hotel Storebælt, Østerøvej 121, DK-5800 Nyborg

09:00-10:00
Breakfast and Coffee

10:00-10:05
Introduction
by Professor Henning Beck-Nielsen, Dept. of Endocrinology, Odense University Hospital & Danish Diabetes Academy

Chairman: Professor Henning Beck-Nielsen, Dept. of Endocrinology, Odense University Hospital & Danish Diabetes Academy

10:05-10:45
"Different phenotypes behind the clinical diagnosis of type 2 diabetes"

by Professor Henning Beck-Nielsen, Dept. of Endocrinology, Odense University Hospital & Danish Diabetes Academy

10:45-11:15
"Subphenotypes in prediabetes: Role of fatty liver and brain insulin resinstance"

by Professor & Medical Director, Hans-Ulrich Häring, Institute for Diabetes Research and Metabolic Diseases, University of Tübingen

11:15-11.45
"Pathophysiology of type 2 diabetes"

by Professor, Ralph A DeFronzo, School of Medicine, UT Health Science Center, San Antonio, USA

11:45-12:15
"Molecular defects behind insulin resistance"

by Professor, Consultant, Kurt Højlund, Dept. of Endocrinology, Odense University Hospital

12:15-12:45
"Beta cell defects in type 2 diabetes"

by Professor, Steven Kahn, Division of Metabolism, Endocrinology and Nutrition, University of Washington, USA

12:45-13:30
Lunch

Chairman: Professor Philip Home, Newcastle University, UK

13:30-14:00
"Blood glucose target levels in the management of diabetes"

by Professor of Diabetes Medicine, Philip Home, The Medical School, Newcastle University, UK

14:00-14:30
"Is hypoglycaemia a matter of consideration in type 2 diabetes?"

by Professor Simon Heller, Dept. of Human Metabolism, University of Sheffield, UK

14:30-15:00
"Pathophysiological-based treatment: Triple therapy"

by Professor, Ralph A DeFronzo, School of Medicine, UT Health Science Center, San Antonio, USA

15:00-15:30
"Will Metformin keep the position as frist drug of choice in type 2 diabetes?"

MD Søren Lund, Boehringer Ingelheim, Germany

15:30–16:00
Coffee Break

Chairman: Professor Jørgen Rungby, Dept of Biomedicine, Aarhus University

16:00-16:30
"Is Sulfonylurea outdated?"

by Professor Jørgen Rungby, Dept. of Biomedicine, Aarhus University

16:30-17:00
"Incretins long-term effect and safety"

by Professor Jens Juul Holst, Department of Biomedical Sciences, Panum Institute, University of Copenhagen

17:00-17:30
"Personalized treatment; how to approach this goal?"

by PhD stud, MD Jacob Stidsen, Dept. of Endocrinology, Odense University Hospital and University of Southern Denmark

Programme

4 June 2014

LADA

Place: The Auditorium, Novo Nordisk Foundation, Tuborg Havnevej 19, Hellerup

09:00-10:00
Breakfast and Coffee

10:00-10:05
Introduction
by Professor David Leslie, Centre for Diabetes, The Blizard Institute, London, UK

Chairman: Professor David Leslie

Session 1
Are you a lumper or a splitter?

10:05-10:35
by Professor Åke Lernmark, Diabetes and Celiac Unit, Lund University, Sweden

10:35-11:05
by Professor Jerry Palmer, Diabetes Endocrinology Research Center, University of Washington, USA

Session 2
"Putting LADA in context: The genetics of adult onset diabetes"

11:05-11.35
By Professor Bernhard Boehm, Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore

11:35-12:05
by Associate Professor Struan Grant, Division of Human Genetics, Perelman School of Medicine, University of Pennsylvania, USA

12:05-12:45
Lunch

Chairman: Professor Åke Lernmark

Session 3
Immunology of LADA

12:45-13:15
by Professor Raffella Buzzetti, Department of Experimental Medicine, "Sapienza" University of Rome, Italy

13:15-13:45
by Professor Nanette C. Schloot, German Diabetes Center, Heinrich-Heine University, Düsseldorf, Germany

Session 4
Metabolic abnormalities associated with LADA"

13:45-14:15
Chairman: Professor Jerry Palmer

by Professor Henning Beck-Nielsen, Dept. of Endocrinology, Odense University Hospital & Danish Diabetes Academy

14:15-14:45
by Professor Tiinamaija Tuomi, Department of Internal Medicine & Diabetology, Helsinki University Central Hospital

14:45-15:15
Coffee Break

Chairman:
Professor Bernhard Boehm

15:15–15:45
"Treatment of LADA"

by Professor Paolo Pozzilli, Centre for Diabetes at Barts and The London School of Medicine & Dentistry, London, and University Campus Bio-Medico in Rome, Italy

15:45-16:15
"Are you a lumper or a splitter?"

by Professor David Leslie, Centre for Diabetes, The Blizard Institute, London, UK

Programme

21 August 2014

Hypoglycaemia in Type 1 diabetes

Place: The Auditorium, Novo Nordisk Foundation, Tuborg Havnevej 19, Hellerup

09:00-09:45
Breakfast and Coffee

09:45-09:55
Introduction & scope of today

by Professor Birger Thorsteinsson, Dept. of Cardiology, Nephrology & Endocrinology, Nordsjællands University Hospital Hillerød, Denmark

Session 1
Interventions in patients at high risk of severe hypoglycaemia

Chairman: Professor Birger Thorsteinsson, Dept. of Cardiology, Nephrology & Endocrinology, Nordsjællands University Hospital Hillerød, Denmark

09:55-10:30
"HypoAware: a light group and online psycho-educational program for patients with type 1 and 2 diabetes with problematic hypoglycaemia"

by MSc Stefanie Rondags, Dept. of Medical Psychology, VU University Medical Center, Amsterdam, The Netherlands

10:30-11:05
"Effect of insulin analogue therapy (the HypoAna trial)"

by Consultant, Ulrik Pedersen-Bjergaard, Dept. of Cardiology, Nephrology & Endocrinology, Nordsjællands University Hospital Hillerød, Denmark

11:05-11.40
"Effect of rigorous prevention of hypoglycaemia on hypoglycaemia awareness (the Hypo COMPaSS trial)"

by Professor, James Shaw, Inst. of Cellular Medicine, The Medical School, Newcastle University, UK

11:40-12:10
Discussion

12:10-12:55
Lunch

Session 2
Hypoglycaemia defence mechanisms and concepts in rats and humans

Chairman: Consultant Ulrik Pedersen-Bjergaard

12:55-13:30
"VMH glucose sensing and defective counter regulation at the meeting"

by Assistant Professor, Owen Chan, Yale School of Medicine, Connecticut, USA

13:30-14:05
"Is the mechanism of Hypoglycaemia-Associated Autonomic Failure (HAAF) really known?

by Professor Philip Cryer, School of Medicine, Washington University in St Louis, USA

14:05-14:35
Discussion

Session 3
Consequences of hypoglycaemia in rats and humans

Chairman: Professor Birger Thorsteinsson

14:35-15:10
"Mortality: mechanisms by which severe hypoglycaemia can be lethal in rats"

by Associate Professor Simon Fisher, School of Medicine, Washington University in St Louise, USA

15:10-15:40
Coffee Break

15:40–16:15
"Anxiety of hypoglycaemia"

by PhD, CDE William Polonsky, Behavioral Diabetes Institute, University of California, San Diego, USA

16:15-16:30
Discussion

Programme

15 September 2014

Danish Diabetes Academy - JDRFMeeting and networking EASD Vienna 2014

Venue:
Courtyard Vienna Messe, Trabrennstrasse 4, Vienna, Austria
Room: Prater 1+2 (10 minutes walk from the EASD conference venue)

17:30-17:45
Danish Diabetes Academy – the first year and upcoming funding activities

by Professor Henning Beck-Nielsen, Chairman of the Board, Danish Diabetes Academy, Dept. of Endocrinology, Odense University Hospital and University of Southern Denmark

Chairman: Chief Scientific Officer, Richard Insel, JDRF

17:45-18:10
"Gluten and Type 1 diabetes – An Update"

by Professor Karsten Buschard, Bartholin Institute, Rigshospitalet

18:10-18:35
"Development of a closed-loop glucose control system for type 1 diabetes - the engineer's and the clinician's perspectives"

by Post Doc Dimitri Boiroux, DTU Compute, Technical University of Denmark& Post Doc Signe Schmidt, Dept. of Endocrinology, Hvidovre Hospital

Chairman: Professor, Henning Beck-Nielsen, Danish Diabetes Academy

18:35-19:00
"Type 1 Diabetes in pregnancy – consequences for the offspring"

by Assistant Professor, PhD Dorte Møller Jensen, Dept of Endocrinology
Odense University Hospital

19:00-19.15
"Closing remarks – collaboration between Danish Diabetes Academy and JDRF"

by Chief Scientific Officer Richard Insel, JDRF

19:15-20:00
Get-together dinner including tapas and drinks

Programme:

14 November 2014

Symposium Developmental Programming of Metabolism: Recent Advances, Current Controversies, and Future Challenges

A symposium jointly organized by The Danish Centre for Fetal Programming and The Danish Diabetes Academy.

Hales and Barker were the first to suggest, in the early 9Oies, that the risk of developing type 2 diabetes may be influenced by factors working in the fetal period. Their 'thrifty phenotype hypothesis', cited more than 2OOO times, has had a tremendous impact, and today substantial evidence from studies in animals and humans provide support for this notion. However, many questions are still left unanswered and the present symposium aims to give an update on some central issues in this fast growing research field.

The symposium is organized jointly by the Centre for Fetal Programming and the Danish Diabetes Academy. The Centre, established in 2O1O, is based on funding from the Danish Council for Strategic Research and managed from Statens Serum Institut; its main objective is to explore and examine the impact of environmental factors working during the fetal period. The Academy, established in 2O12, is based on funding from the Novo Nordisk Foundation, The Juvenile Research Foundation and all universities in Denmark; its objectives include to enhance the quality of Danish diabetes research and to build up a platform of networking and knowledge sharing between national and international researchers within diabetology.

At the symposium, leading international experts will address a number of central issues in the field of fetal programming, including:

- Causes and consequences of gestational diabetes
- Programming of the endocrine pancreas
- Programming of the immune system
- Lessons from famine incidences
- Epigenetics and maternal nutrition
- Role of environmental chemicals
- Role of microbiota

The speakers come from National Institutes of Health, Harvard School of Public Health, University of Pennsylvania, Philipps University at Marburg, State University of New York at Buffalo, Rutgers New Jersey Medical School, and University of Copenhagen.

Registration

Please register for seminar and dinner before 1 November at www.danishdiabetesacademy.dk

The symposium will have two poster sessions, and you are hereby invited to forward your abstract together with your registration or after registration, but before Monday, 27 October 2O14 to info@danishdiabetesacademy.dk The abstracts will be evaluated, and we will let you know if you will be invited to be part of the poster session. Posters should be printed in the size 1m x 1,2Om. 3 prizes for the best posters will be awarded at the symposium.

Appendix 2

08:00-08:45
Registration and breakfast

08:45-09:00
Welcome

Sjurdur F Olsen, Symposium Chair & Leader of Danish Centre for Fetal Programming, Statens Serum Inst, Copenhagen

09:00-10:00
Role of environmental factors

Chairpersons: Mette Olaf Nielsen, University of Copenhagen, and Thorhallur Ingi Halldorsson, University of Iceland

"Developmental programming: lessons from famine incidences"
Professor Frank Hu, Harvard School of Public Health (Massachusetts)

"Role of environmental chemicals in fetal programming"
Dr Jerrold Heindel, National Institute of Environmental Health Sciences (North Carolina)

10:00-11:00
Poster session + Coffee and refreshments

11:00-12.00
Role of microbiota

Chairpersons: Lars Hellgren, Technical University of Denmark and Ekaterina Maslova, Statens Serum Inst.

"Programming of the immune system: role of microbiota"
Professor Harald Renz, Inst fâur Laboratoriumsmedizin und Pathobiochemie, Philipps University of Marburg (Germany)

"Potential etiologic role of infections in early programming"
Professor Ib Bygbjerg, Copenhagen School of Global Health, University of Copenhagen (Denmark)

12:00-13:00
Lunch

13:00-14:00
Role of maternal over-nutrition

Chairpersons: Sjurdur F Olsen, Statens Serum Institut, and Allan Vaag,
University of Copenhagen

"Determinants and health consequences of gestational diabetes"
Dr Cuilin Zhang, Senior Investigator, National Institute of Child Health and Human Development (Maryland)

Epigenetics and maternal nutrition
Professor Rebecca Simmons, Perelman School of Medicine ,University of Pennsylvania (Philadelphia

14:00-15:00
Impact on inter-organ communications

Chairpersons: Jens Høiriis Nielsen, University of Copenhagen, and Kirsten Raun, Novo Nordic Ltd.

"Fetal and neonatal programming of the endocrine pancreas"
Professor Mulchand Patel, Dept of Biochemisty, University of Buffalo, State University of New York

"The role of the brain in metabolic programming"
Professor Barry Levin, Dept of Neurology and Neurosciences, Rutgers New Jersey Medical School

15:00-16:00
Poster session + Coffee and refreshments

16:00-16:45
Plenary discussion:
Future perspectives for developmental programming research

Chairperson: Bjørn Quistorff, University of Copenhagen

16:45
Poster Awards and closing remarks

17:30-
Dinner at Restaurant Address;
Tuborg Havnepark 15,
29OO Hellerup
(on the other side of Tuborg havn from the seminar venue, 1O minutes walk

Speakers

Professor Frank Hu
Harvard School of Public Health, Boston, USA

Dr Jerrold Heindel
Health Scientist Administrator
National Institute of Environmental Health Sciences North Carolina, USA

Dr Cuilin Zhang
Senior Investigator
National Institute of Child Health and Human Development
Bethesda, USA

Professor Rebecca Simmons
Perelman School of Medicine
University of Pennsylvania, USA

Professor Mulchand Patel
Department of Biochemistry
University of Buffalo,
State University of New York at Buffalo

Professor Barry Levin
Department of Neurology and Neurosciences Rutgers New Jersey Medical School, USA

Professor Harald Renz
Institut für Laboratoriumsmedizin und pathobiochemie Philipps University of Marburg, Germany

Professor Ib Bygbjerg
Copenhagen School of Public Health University of Copenhagen, Denmark
Place: Sinatur Hotel Storebælt, Østerøvej 121, DK-5800 Nyborg

Chairpersons

Adjunct Professor Sjurdur F Olsen
Leader of the Danish Centre for Fetal Programming Statens Serum Institut, Denmark
Harvard School of Public Health, Boston, USA

Professor MSO Mette Olaf Nielsen
Vice-leader of the Danish Centre for Fetal Programming Department of Veterinary Clinical and Animal Sciences University of Copenhagen, Denmark

Professor Thorhallur Ingi Halldorsson
Faculty of Food Science and Nutrition University of Iceland

Professor Allan Vaag
Department of Endocrinology Rigshospitalet, Denmark

Professor Jens Høiriis Nielsen
Department of Biomedical Sciences University of Copenhagen, Denmark

Principal scientist Kirsten Raun
Department of Pharmacology Research Novo Nordisk, Denmark

Asst. Professor Lars Hellgren
Center for Biological Sequence Analysis Department of Systems Biology
DTU- Technical University of Denmark

Professor Bjørn Quistorff
Cellular and Metabolic Research Section University of Copenhagen, Denmark

Symposium

Symposium Executive Committee
Representing
Centre for Fetal Programming:

Sjurdur F Olsen,
Centre Leader and Symposium Chair
Centre for Fetal Programming, Statens Serum Institut

Representing
Danish Diabetes Academy:

Tore Sønne Christiansen,
Managing Director
Danish Diabetes Academy

Representing
both organizations:

Jens Høiriis Nielsen
University of Copenhagen

Symposium Secretariat

Inger Kristine Meder,
MA Project Coordinator of the Danish National Birth Cohort
Statens Serum Institut

Trine Helen Olesen,
MSc Gastronomy & Health
Secretary Centre for Fetal Programming Statens Serum Institut

Tina Hansen Barbisan,
Communications Coordinator
Danish Diabetes Academy

Louise Hansen,
Office Assistant
Danish Diabetes Academy
Section University of Copenhagen, Denmark

Appendix 3 – Publications (Academy authors in bold)

Blaabjerg, L., **Christensen, G.L.**, Matsumoto, M., van der Meulen, T., Huising, M.O., Billestrup, N., & Vale, W.W. 2014. CRFR1 activation protects against cytokine-induced beta-cell death. J.Mol.Endocrinol., 53(3), 417-427
Impact factor 3.62

Bogebo, R., Horn, H., Olsen, J.V., Gammeltoft, S., Jensen, L.J., Hansen, J.L., & **Christensen, G.L.** 2014. Predicting kinase activity in angiotensin receptor phosphoproteomes based on sequence-motifs and interactions. PLoS.One., 9(4), e94672
Impact factor 3.53

Brouwers, O., Niessen, P.M., Miyata, T., **Ostergaard, J.A.**, Flyvbjerg, A., Peutz-Kootstra, C.J., Sieber, J., Mundel, P.H., Brownlee, M., Janssen, B.J., De Mey, J.G., Stehouwer, C.D., & Schalkwijk, C.G. 2014. Glyoxalase-1 overexpression reduces endothelial dysfunction and attenuates early renal impairment in a rat model of diabetes. Diabetologia., 57(1), 224-235
Impact factor 6.88

Bruun, C., **Christensen, G.L.**, Jacobsen, M.L., Kanstrup, M.B., Jensen, P.R., Fjordvang, H., Mandrup-Poulsen, T., & Billestrup, N. 2014. Inhibition of beta cell growth and function by bone morphogenetic proteins. Diabetologia., 57(12), 2546-2554
Impact factor 6.88

Estampador, A.C. & Franks, P.W. 2014. Genetic and epigenetic catalysts in early-life programming of adult cardiometabolic disorders. Diabetes Metab Syndr.Obes., 7, 575-586
No impact factor

Holt, C.B., Thiel, S., Munk, K., **Ostergaard, J.A.**, Botker, H.E., & Hansen, T.K. 2014. Association between endogenous complement inhibitor and myocardial salvage in patients with myocardial infarction. Eur.Heart J.Acute.Cardiovasc. Care., 3(1), 3-9
Impact factor 14.72

Huang, H., Larsen, M.R., Palmisano, G., Dai, J., & Lametsch, R. 2014. Quantitative phosphoproteomic analysis of porcine muscle within 24 h postmortem. J.Proteomics., 106, 125-139
Impact factor 3.92

Karlsson, P., Nyengaard, J.R., Polydefkis, M., & Jensen, T.S. 2014. Structural and functional assessment of skin nerve fibres in small-fibre pathology. Eur.J.Pain. 10
Impact factor 3.21

Laustsen, C., Lipso, K., **Ostergaard, J.A.**, Norregaard, R., Flyvbjerg, A., Pedersen, M., Palm, F., & Ardenkjaer-Larsen, J.H. 2014a. Insufficient insulin administration to diabetic rats increases substrate utilization and maintains lactate production in the kidney. Physiol Rep., 2(12). pii, e12233
Impact factor 0.34

Laustsen, C., Lycke, S., Palm, F., **Ostergaard, J.A.**, Bibby, B.M., Norregaard, R., Flyvbjerg, A., Pedersen, M., & Ardenkjaer-Larsen, J.H. 2014b. High altitude may alter oxygen availability and renal metabolism in diabetics as measured by hyperpolarized [1-(13) C]pyruvate magnetic resonance imaging. Kidney Int., 86(1), 67-74
Impact factor 8.52

Lebeck, J. 2014. Metabolic impact of the glycerol channels AQP7 and AQP9 in adipose tissue and liver. J.Mol.Endocrinol., 52(2), R165-R178
Impact factor 3.62

Lundsgaard, A.M. & Kiens, B. 2014. Gender differences in skeletal muscle substrate metabolism - molecular mechanisms and insulin sensitivity. Front Endocrinol. (Lausanne)., 5, 195
No impact factor

Nalla, A., Ringholm, L., Sostrup, B., Hojrup, P., Thim, L., Levery, S.B., Vakhrushev, S.Y., Billestrup, N., Mathiesen, E.R., Damm, P., & Nielsen, J.H. 2014. Implications for the offspring of circulating factors involved in beta cell adaptation in pregnancy. Acta Obstet.Gynecol. Scand., 93(11), 1181-1189
Impact factor 2.05

Nielsen, J.H., Haase, T.N., Jaksch, C., **Nalla, A.**, Sostrup, B., Nalla, A.A., Larsen, L., Rasmussen, M., Dalgaard, L.T., Gaarn, L.W., Thams, P., Kofod, H., & Billestrup, N. 2014. Impact of fetal and neonatal environment on beta cell function and development of diabetes. Acta Obstet.Gynecol.Scand., 93(11), 1109-1122
Impact factor 2.05

Ostergaard, J.A., Thiel, S., Hovind, P., Holt, C.B., Parving, H.H., Flyvbjerg, A., Rossing, P., & Hansen, T.K. 2014. Association of the pattern recognition molecule H-ficolin with incident microalbuminuria in an inception cohort of newly diagnosed type 1 diabetic patients: an 18 year follow-up study. Diabetologia., 57(10), 2201-2207
Impact factor 6.88

Reiband, H.K., **Schmidt, S.**, **Ranjan, A.**, Holst, J.J., Madsbad, S., & Norgaard, K. 2014. Dual-hormone treatment with insulin and glucagon in patients with type 1 diabetes. Diabetes Metab Res.Rev. 10
Impact factor 3.59

Schmidt, S. & Norgaard, K. 2014. Bolus calculators. J.Diabetes Sci. Technol., 8(5), 1035-1041
No impact factor

Svendstrup, M. & Vestergaard, H. 2014. The potential role of inhibitor of differentiation-3 in human adipose tissue remodeling and metabolic health. Mol.Genet. Metab., 113(3), 149-154
Impact factor 2.87

Appendix 4 - Terms of references for the Consultative Council

Purpose

The Consultative Council is an advisory body to the Board of the Danish Diabetes Academy and its associated Executive Committees and Secretariat established 1 September 2012.

Functions

The functions of the Consultative Council are:

- To assist the Board in the development of talent recruitment and management strategies, and defining success criteria for the Academy
- To assist the Board and the Research Committee with ideas and solutions for procedures related to announcement and application and evaluation procedures of scientific positions.
- To assist the Board and the Educational Committee in planning of four annual symposia, and an annual EASD meeting.
- To assist the Board and the Managing Director in establishing effective networking between all members of the Academy.
- To keep under review novel scientific developments and "hot topics" in the field of diabetes and metabolism, and advise the Board when such developments may or should be considered for establishing novel Work Packages, or changes in the overall research strategy
- To enhance communication and consultation between the Board, the executive committees, the staff, the council and all members of the Academy to ensure continuous improvements in all aspects of the Academy
- To assist the fundraiser with ideas to different funding opportunities.

Membership

Membership of the Consultative Council comprises one Chairperson, one Vice-chairperson and a number of representatives from collaborating universities in Denmark. The aim is to include representatives from all the faculties and universities associated with the Academy.

The Chairperson must be a PI/ research manager, and is elected by the Academy Board

The responsibilities of the chairman include:

- Scheduling meetings and notifying Council members
- Inviting specialists to attend meetings when required by the Council
- Guiding the meeting according to the agenda and time available
- Ensuring that all discussion issues and tasks end with a decision
- Review and approve the draft minutes before distribution

The chairperson will be assisted by the Academy secretariat in:

- Preparing agendas and issuing notices for meetings, end ensuring all necessary documents requiring discussion or comment attached to the agenda
- Distributing the agenda one week prior to the meeting
- Taking notes of proceedings and preparing minutes of meeting
- Distributing the minutes to all Council members one week after the meeting

- The minutes shall be checked by the Chairperson and accepted by Council members as a true and accurate record at the commencement of the next meeting

The Vice-chairperson must be a PI/ research manager, and is elected by the Board

The other members represent PIs/ research managers of relevant research groups represented at different universities and faculties in Denmark.

The Chairperson and Vice-chairperson are appointed for a five year term, and can be reappointed for another five years by the board.

The other members are appointed for a 3 year period with the opportunity for additional continuation for 3 years.

Additional members can be appointed as requested by the Board.

Meetings

The Consultative Council will have min. four meetings per year.
Extraordinary meetings of the Consultative Council may be called by the Chair or the Board as required.

In attendance at meetings the secretariat, administration support and expert advisors are required.

Half of the members and either the Chairperson or the Vice-chairperson must be present before a meeting can process.

Internal (members of the Academy) or external persons (outside the Academy) may be invited to attend the meetings at the request of the Chairperson or on the behalf of the Board to provide assistance where necessary.

Decisions will be made by consensus. If it is not possible to arrive at a consensus on a particular item the recommendation to the Board should note the dissenting views.

Members will cease to be members if they fail to attend to 3 consecutive meetings without providing apologies to the chairperson.

Sub-committees

Sub-committees of the Consultative Council will be appointed as required to work with specific issues related to the functions described above.

Terms of reference for the Education Committee

Purpose

The primary aim of the Academy is to educate and train new scientists in diabetology. This will be obtained through the pre-graduate students', PhD students' and Post Docs' work with research projects, but it will also be based on theoretical and practical courses, seminars, symposia, summer schools and an international annual meeting. The Education Committee is responsible for organizing these events.

Members

The Education Committee consists of 8 members:

- Professor Torben Hansen (Chairman), Faculty of Health and Medical Sciences, University of Copenhagen
- Associate Professor Dorte Møller Jensen, Faculty of Health Sciences, University of Southern Denmark
- Professor Jan Früstyk, Faculty of Health Sciences, Aarhus University
- Professor Jørgen Wojtaszewski, Faculty of Science, University of Copenhagen
- Professor Louise Torp Dalgaard, Dept. of Science, Systems and Models, Roskilde University
- Professor Nils Joakim Færgeman, Faculty of Science, University of Southern Denmark
- Professor Peter Vestergaard, Faculty of Medicine, Aalborg University
- Inge Tetens, National Food Institute, Technical University of Denmark

The members of the committee are appointed by the Board for a 3-year period with the opportunity for additional continuation for 3 years. The Chairman is appointed by the Board.

Tasks of the committee

The principal tasks of the Education Committee are to coordinate and plan events offered by the Academy and manage the following functions related to the PhD graduate programme (PhD graduate programme of Diabetes and Metabolism/ former Danish PhD School of Molecular Metabolism):

- Establishment of an academic, scientific curriculum
- Management of PhD courses and seminars (preparation of course programmes, course evaluations etc.)
- Management of course budgets (to be approved by the Board)
- Explore the possibilities of co-financing

The Education Committee must collaborate with the PhD graduate schools of the university faculties in order to:

- Ensure approval of academic courses for the desired amount of ECTS points
- Prevent overlap between Academy events and the obligatory courses of the university

The Education Committee must collaborate with relevant PhD programmes (i.e. the PhD network of Diabetes and Metabolism/ former Metabolism and Endocrinology) in order to:

- Prevent overlap of academic course dates and topics
- Agree on how to cover possible course fees for each others' PhD students in relation to residential courses

The academic, scientific curriculum must be prepared and revised once a year.

An annual report including description of courses, seminars, symposia and other events offered by the Academy as well as an overview of the participants' evaluation of these events must be prepared and sent to the Board for approval.

The Education Manager is responsible for coordinating the above-mentioned activities and for coordinating the collaboration with the PhD schools of the university faculties and the PhD programmes (i.e. the PhD network), including drawing up the terms of reference for this collaboration together with the relevant partners.

The Education Committee will schedule its series of meetings and plan ad hoc how many from the Committee will attend the meetings.

All members of the Committee are obliged to attend the Summer Schools.

16 April 2015

Terms of reference for the Research Committee

Purpose

The principal task of the Research Committee is to be in charge of the professional evaluation of the candidates who apply for a scholarship to the Academy.

Members

The Research Committee consists of 6 members:

- Professor Peter Rossing, (Chairman), Steno Diabetes Center
- Professor Susanne Mandrup, University of Southern Denmark
- Pro-Dean Lise Wogensen Bach, Aarhus University
- Professor Tina Vilsbøll, Gentofte Hospital
- Professor Thomas Mandrup-Poulsen, University of Copenhagen
- Consultant Reimar Thomsen, Aarhus University Hospital

Secretary is the Managing Director of the Academy, Tore Christiansen

The members of the committee are appointed by the Board on recommendation from the Council.
The members are appointed for a 3-year period with the opportunity for additional continuation for 3 years.
The Chairman is appointed by the Board.

Tasks of the committee

The Research Committee is managed ad-hoc.
The Secretary will prepare the electronic applications for the Committee and the Chairman will divide the tasks in cooperation with the Secretary.

The primary task of the Research Committee is to evaluate the professional quality of the applications and for this purpose, expert and peer evaluation from two experts within the respective research area will be obtained out of a least one of these experts will be an international expert.

The Research Committee will initially evaluate whether applicants are likely to be qualified or not and will recommend peer reviewers for all applicants considered to be qualified.

Based on the peer reviews, the Research Committee will evaluate how qualified the applicants are for an advertised position and hand in a motivated recommendation to the Board.

The applicants are to be evaluated in the 3 following categories:

- Not qualified
- Qualified
- Very qualified

All applications from the applicants rated very qualified, will be sent to the Board who will select the applicants to be granted support from the Academy.

16 April 2015

Terms of reference for the International Advisory Board of the Danish Diabetes Academy

Background

The Danish Diabetes Academy [the Academy], established per 1 September 2012, includes the establishment of an International Advisory Board, as described in the project application to the Novo Nordisk Foundation of 11 July 2012.

The present terms of reference describe the purpose and tasks of the International Advisory Board.

Members

The members of the International Advisory Board are leading international scientists within the area of diabetes and metabolism. The members are elected by the Board of the Academy and invited to join the Advisory Board on the conditions described in these terms of reference.

Purpose

The main purpose of the International Advisory Board is to advise the Board of the Academy on scientific matters and to perform a continuous evaluation of the Academy.

Tasks

The International Advisory Board will have the following tasks:

- To guide and advise the Academy Board on scientific matters and the overall strategy of the Academy, including vision and strategy for research and educational activities.
- To perform an annual report together with the Board describing weaknesses and strengths of the Academy and proposing new activities. This report will be elaborated by the Secretariat of the Academy and it will be approved by the Board of the Academy and the International Advisory Board.
  Upon approval it will be forwarded to the Novo Nordisk Foundation, JDRF, other sponsors and relevant partners.
  The report will be performed during the annual Summer School to be held in Denmark where the International Advisory Board is expected to meet with the Academy Board.
- To serve as occasional reviewers on grant applications for pre-graduate scholarships, PhD fellowships, Post Doc positions and professorships forwarded to the Academy.
- To serve as supervisors for international PhD students or postdocs, if wanted. The members of the International Advisory Board may also apply for PhD fellowships or Post Doc grants, like all other researchers within the field of diabetes.

Meetings

The International Advisory Board is expected to attend the annual Summer School to be held in Denmark for one to three days, as described above, and to attend the annual seminar arranged by JDRF in connection with the annual meeting of the European Association for the Study of Diabetes.

Remuneration and covering of expenses

The Academy cannot offer a specific salary, but for every meeting planned by the Academy and attended by the member of the International Advisory Board, the Academy will pay the expenses for a business class round trip ticket and an honorarium of 1,000.00 EUR.

Timeframe

The membership of the International Advisory Board will start 1 September 2012 and will run for three years with the possibility for renewal.



Danish Diabetes Academy
Funded by the Novo Nordisk Foundation

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