

# NOMINATION OF JENS BUKH

**66** The Novo Nordisk Foundation is awarding the 2015 Novo Nordisk Prize to Jens Bukh for his pioneering studies of the hepatitis C virus and their significance for diagnosis and treatment.

> Jens Bukh is 54 years old and graduated from the Faculty of Health and Medical Sciences of the University of Copenhagen in 1989. Following clinical duties in the Department of Hepatology at Copenhagen University Hospital, Hvidovre, Jens Bukh travelled to the United States in 1990, where he became visiting scientist and then principal investigator in the Laboratory of Infectious Diseases of Dr. Robert Purcell at the National Institute of Allergy and Infectious Diseases, National Institutes of Health. After spending 15 years in the United States, Jens Bukh returned to Denmark in 2006 as a chief physician in the Department of Infectious Diseases at Copenhagen University Hospital, Hvidovre and as a Professor at the Department of International Health, Immunology and Microbiology of the University of Copenhagen. In 2008, he also became Research Director of the Copenhagen Hepatitis C Program (CO-HEP), Clinical Research Centre, Copenhagen University Hospital, Hvidovre. During the last 25 years, Jens Bukh has conducted critical and unique studies on the life cycle of hepatitis C virus and the possibilities for developing drugs and vaccines.

> Infection with hepatitis C virus can lead to cirrhosis of the liver and liver cancer, which ultimately requires a liver transplant. About 15,000 people in Denmark and 150 million people worldwide are chronically infected with the hepatitis C virus. Globally, about 4 million people are newly infected each year, of which about 3 million develop chronic hepatitis C. A total of 350,000 people die of the disease annually. The hepatitis C virus is a small, enveloped, single-stranded RNA virus that is especially prone to mutations.

Jens Bukh's interest in hepatitis C research arose when he worked as a young doctor at Hvidovre Hospital. At that time, researchers in the United States had recently identified the virus that caused the disease. During his stay in the United States in the early 1990s, Jens Bukh identified six major genotypes of hepatitis C in a very technically innovative initiative. Since then, one rare seventh genotype has been discovered in Africa. The classification of the six clinically important genotypes was a



significant cornerstone of future global research, and it became evident that hepatitis C genotypes responded differently to the available interferon-based therapies. These studies, which were published in a series of articles in the highly esteemed Proceedings of the National Academy of Sciences of the United States of America, also laid the foundation for tests to detect hepatitis C RNA in clinical studies. In a pioneering study published in 1997, Jens Bukh and colleagues developed the first molecular infectious clone of hepatitis C. This was an outstanding study, in which molecular biological techniques for analysing and acquiring the infectious virus were combined with in vivo studies. This work and numerous subsequent studies thus provided important information on the critical components of infection and the significance of specific mutations in the virus and its adaptation in the host organism.

One challenge of hepatitis C research was that clones of the virus could still not be grown in laboratory cell cultures, which limited the opportunities for screening and analysing new drugs. Since 2006, Jens Bukh has been leading and supervising research in the Copenhagen Hepatitis C Program (CO-HEP) where, in outstanding research initiatives, he and his colleagues successfully developed cell culturing systems for the different genotypes of hepatitis C. This enabled the elucidation of basic knowledge on the required virus and host factors, which can be used in studies for generating the conditions to be able to directly culture patient isolates of the different genotypes. The experimental cell culture systems that were developed enabled important studies of the hepatitis C virus and its life cycle, with major perspectives for developing drugs and vaccines. The systems can also enable the testing of antiviral drugs specifically targeting the hepatitis C proteins, thereby facilitating studies that may contribute to offering optimal drug therapy to each individual infected with hepatitis C.

Jens Bukh has thus carried out comprehensive and targeted basic research on the hepatitis C virus, especially in relation to the heterogeneity of, pathogenesis of and immunity to the virus. He has also developed experimental systems that have enabled laboratories to manipulate the virus. He has conducted crucial and outstanding studies of the life cycle of the virus. They have been



instrumental for the development of novel effective drugs which, during 2014, made it possible to treat, and in most cases cure, patients with chronic hepatitis C. Several similar drugs are being developed and are expected to revolutionize the treatment of hepatitis C. Finally, his research has strongly influenced current efforts to develop an effective vaccine.

Jens Bukh's scientific activities over many years have been technically and conceptually innovative. Throughout his career, his comprehensive, systematic and original research has aimed at producing groundbreaking knowledge about hepatitis C with a translational focus on clinical applications.

Jens Bukh is thus one of the world's leading and most esteemed researchers of the hepatitis C virus. He has an impressive scientific output of 150 original studies published in highly renowned journals. His colleagues frequently cite his studies. He is also the author of several review articles in his field. Jens Bukh has impressive collaboration with highly esteemed researchers both nationally and internationally. Many laboratories worldwide use the experimental systems that have been developed through Jens Bukh's work. Since returning to Denmark, he has established a large and talented research group that has attracted considerable external funding and prestigious awards: most recently an advanced top researcher grant of DKK 12 million from the Sapere Aude Programme of the Danish Council for Independent Research. Through his host institutions, he has successfully obtained many patents for some of the discoveries made through his research. He has also shown great leadership and mentored numerous young researchers.

In summary, the Novo Nordisk Prize Committee finds that Jens Bukh is a worthy recipient of the 2015 Novo Nordisk Prize based on his contributing original, pioneering, systematic and highly esteemed international research on the hepatitis C virus, its life cycle and the opportunities for developing drugs and vaccines for treating people with hepatitis C.







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# CURRICULUM VITAE

### JENS BUKH

### **PROFESSOR**

BORN 10 APRIL, 1960, IN DENMARK

2008 –	Professor, Research Director, Copenhagen Hepatitis C Program (CO-HEP), Department of Infectious Diseases and Clinical Research Centre, Copenhagen University Hospital, Hvidovre, and Department of International Health, Immunology and Microbiology, Faculty of Health and Medical Sciences, University of Copenhagen
2006 –	Professor, Department of International Health, Immunology and Microbiology, Faculty of Health and Medical Sciences, University of Copenhagen
2006 –	Chief Physician, Department of Infectious Diseases, Copenhagen University Hospital, Hvidovre
1998 – 2005	Principal Investigator, Laboratory of Infectious Diseases, National Institutes of Health
1990 – 1998	Visiting Scientist, Laboratory of Infectious Diseases, National Institutes of Health
1989 – 1990	Clinician, Departments of Hepatology, Hvidovre Hospital and Gastroenterologic Surgery, Rigshospitalet
1989	Medical Doctor, University of Copenhagen
	Professor Jens Bukh has 159 publications. H-Index 47; >9000 citations.

# CHASING A SILENT KILLER VIRUS

BY MORTEN BUSCH

Jens Bukh has been hunting one of the world's most deadly viruses for 25 years. Hepatitis C virus is deadly but also unknown to many. With more than 350,000 deaths annually and at least 10 times as many people newly infected each year, the goal of controlling hepatitis C seemed utopian just a few years ago. Equipped with faith, systematic approaches and a good dose of persistence, Jens Bukh and his colleagues are close to catching this unpredictable killer.

It was in reality Jens Bukh's last day on the Department of Hepatology at Copenhagen University Hospital, Hvidovre. He was supposed to finish his first job as a physician and move on. Jens Bukh wanted to become a surgeon. With his usual determination, he had a plan for how and when to finish his clinical training. Next stop was an internship at the Department of Gastroenterological Surgery at Copenhagen University Hospital – Rigshospitalet.

On his last day at Copenhagen University Hospital, Hvidovre he got an unexpected offer: an offer he probably should have turned down, had he used common sense. But this was the beginning of a successful 25-year career in hepatitis C research.

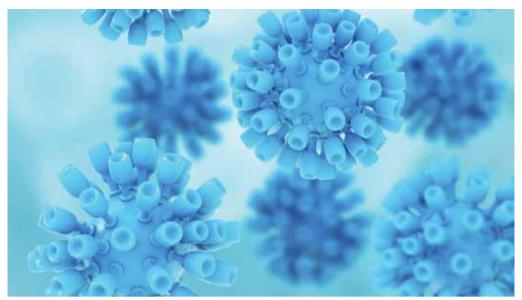
# THE SILENT VIRUS

Shortly before, in 1989, Michael Houghton and his colleagues had discovered that one of the world's important diseases – infectious chronic hepatitis – was caused by a new RNA virus named hepatitis C virus. This meant that hospitals around the world had to re-examine many medical records to determine whether hepatitis C virus could be the reason for their conditions.

In the early 1980s, when HIV spread with lightning speed, hepatitis C virus spread at almost the same speed. Unlike HIV, which causes the deadly condition AIDS, hepatitis C virus can hide for decades before the virus slowly but steadily makes its assault on the liver to cause cirrhosis or liver cancer. For this reason, scientists would not understand the scale of hepatitis C virus infection until much later.

"I was asked whether I would be interested in studying medical records to check for potential hepatitis C virus infections and the reasons for these. This meant that I took the trip to Hvidovre every evening after my work at Rigshospitalet was completed. I was here night after night studying medical records from patients who were suspected of having hepatitis C virus," Jens Bukh explains.

Jens Bukh was soon hooked on this work. And doctors at Copenhagen University Hospital, Hvidovre realized that he both had interest, patience and a fine sense of systematics. In 1990, Jens Bukh was therefore offered an internship at one of the world's leading research institutions in the study of hepatitis C virus – the National Institutes of Health in Bethesda, Maryland, United States.



xrender via Getty Images.

**HEPATITIS C VIRUS**Artist's conception.

#### ON HOME GROUND ABROAD

The encounter with the National Institutes of Health was a remarkable culture shock. Jens Bukh was used to sitting alone in the evenings at Hvidovre to read medical records. He now found himself at the entrance to the world's largest research hospital with thousands of researchers.

"I still remember the first time I entered the office area filled with desks. There was a researcher at each desk. And they were all involved in experimental research. Dr. Purcell, whom I was visiting, referred me to one of his senior investigators, Dr. Miller, and he sat me down at a desk and gave me a pile of articles and told me to start reading."

Jens Bukh was only meant to stay at the National Institutes of Health for 2 months to learn a few laboratory techniques to take home to Copenhagen University Hospital, Hvidovre. However, he soon discovered that he had a flair for experimental work. He stayed an extra month. Then 6 months extra. Later, he got a more long-term contract, and in 1998 he became a Principal Investigator with his own research group and budget.

Besides flair for the experimental work, it turned out that Jens Bukh had an extraordinary capability to analyse the results. This was perhaps also the reason why he only had to wait a few years before he got his big breakthrough. He was to solve one of the puzzles that hepatitis C virus researchers had tried to unravel for years.

#### A FAMILY OF 6 - OR 7

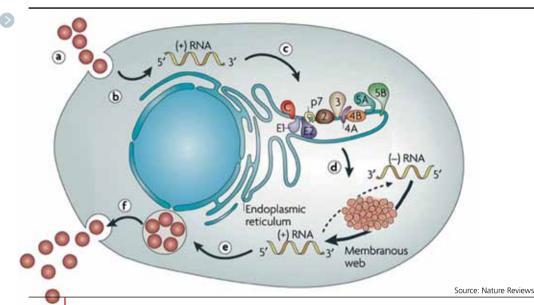
"The hepatitis C virus family has not just one but several genotypes. Using the PCR technique I was introduced to at the National Institutes of Health, I succeeded in 1993 in identifying the 6 major genotypes of hepatitis C virus. This discovery turned out to be of huge importance for further research, since the genotypes have many differences between them that influence the performance of diagnostic tests."

The six major genotypes of hepatitis C virus identified by Jens Bukh have since then been supplemented by a seventh – very rare – genotype. The seven types are spread geographically throughout the world. Genotypes 1–3 are in most parts of the world, but genotypes 4 and 5 are primarily in Africa and genotype 6 only in Asia.

"We quickly realized that this is incredibly important clinically. The different genotypes respond differently to treatment. Since treatments had many harmful effects on humans and were only effective for less than 10% of the people treated, it soon became important to customize treatment to the individual hepatitis C genotype and patients."

Thus, Jens Bukh's findings generated huge attention within the research and health communities. This was the first of his major contributions in the fight against hepatitis C virus. However, hepatitis C virus researchers faced an even greater obstacle. No one had yet succeeded in growing hepatitis C virus in a laboratory. This





#### THE CELLULAR LIFE-CYCLE OF HEPATITIS C VIRUS (HCV)

Virus binding and internalization (a); cytoplasmic release and uncoating (b); IRES-mediated translation and polyprotein processing (c); RNA replication (d); packaging and assembly (e); virion maturation and release (f). The topology of HCV structural and non-structural proteins at the endoplasmic reticulum membrane is shown schematically. HCV RNA replication occurs in a specific membrane alteration, the membranous web.

was a massive obstacle for developing new treatments.

# THE FINAL PROOF

The next major breakthrough in hepatitis C virus research came in 1997 – again from Jens Bukh's team. While hepatitis C virus researchers were still trying to work out how to grow hepatitis C virus in a petri dish, Bukh's team managed – in close competition with Charles Rice and his colleagues – to clone the infectious genome of hepatitis C virus and show that this gene sequence is responsible for and sufficient to produce infectious hepatitis in animals.

"Until then, we could not be completely sure that hepatitis C was caused by hepatitis C virus. Researchers speculated for decades that stomach ulcers were perhaps caused by stress. Only much later did they find the bacteria that were responsible for the disease. With these experiments, we delivered the proof once and for all that hepatitis C virus caused hepatitis."

Besides delivering the evidence of hepatitis C virus as the agent causing infectious disease, this study and subsequent studies from Jens Bukh's laboratory also combined advanced molecular virology techniques to gather and analyse infectious viruses with in vivo studies, which provided vital information about what is decisive in the infectious life cycle of the virus.

"While we were waiting to figure out how to work with viruses in the lab, the work with ani-

mals was necessary and vital, since it was the only alternative to performing experiments and drug tests directly on humans to find new ways to treat the disease. This knowledge also helped us to develop future culture systems," Jens Bukh explains.

# VIRUS IN THE LABORATORY

In 1999, Ralf Bartenschlager and his colleagues managed to get a hepatitis C virus clone to replicate – or copy itself – in a laboratory. This was important, but researchers still had to wait for a true infectious culture system, as this "replicon" did not include critical structural genes to complete its infectious cycle.

"Together with Bartenschlager's group, we found that the replicon clone depended on crucial adaptive mutations that prevented virus production. But it was a breakthrough that enabled scientists to better understand the replication strategy of hepatitis C virus, and the findings led to a boost in the development of drugs to combat hepatitis C virus.

In 2005, Takaji Wakita and his colleagues made a new breakthrough, producing a unique molecular clone of a hepatitis C virus genotype 2 from a patient with fulminant hepatitis, which could produce hepatitis C virus in cell culture.

"Thus, we could finally understand the life cycle of hepatitis C virus. How the virus enters the human cells, how it gets out again and how it affects the cell. Most important, we could deter-

mine how different treatments affect the virus. The only problem was that it seemed impossible to clone and cultivate other strains or genotypes in the same way."

Jens Bukh's technical ability and especially his perseverance turned out to be vital in overcoming this obstacle.

#### THE TENT PEGS ARE PULLED UP

From the outside it might appear to be skydiving without a parachute when Jens Bukh, after 15 years at one of the most highly regarded research institutions in the United States, chose to leave his research group in 2006 to go back to Denmark to start afresh. With only one assistant at his side – senior researcher Judith Gottwein – Jens Bukh built a whole new group from scratch. He had a clear goal.

"I felt that the time was right for a fresh start. When I started as a hepatitis C virus researcher back in the early 1990s, we could cure only 5% of the treated patients with hepatitis C virus. In 2006, we were able to cure 50%, but because of the severe side effects, few patients were treated. Clearly, there was room for dramatic improvements, and a vaccine was needed to control hepatitis C virus universally. At Copenhagen University Hospital, Hvidovre, I got the ideal conditions to reach these goals."

The Copenhagen Hepatitis C Program (CO-HEP) is a collaboration between the Department of International Health, Immunology and Microbiology of the University of Copenhagen and

the Department of Infectious Diseases and Clinical Research Centre of Copenhagen University Hospital, Hvidovre. This directly linked the clinical world, where patients are found, with the academic world.

Jens Bukh was determined to develop a tissue culture system for analysing all hepatitis C virus genotypes. Takaji Wakita was the only researcher who had done this, and for only one isolate. Jens Bukh's plan had to be systematic. One by one, he replaced parts of Takaji Wakita's clone with the corresponding parts from the clones he had developed during earlier studies.

Although Jens Bukh's research group soon started to publish numerous high-impact articles on new, highly efficient culture systems expressing important gene elements of the seven genotypes, in 2010 it was still only possible to grow viruses depending on gene elements from the original Japanese isolate.

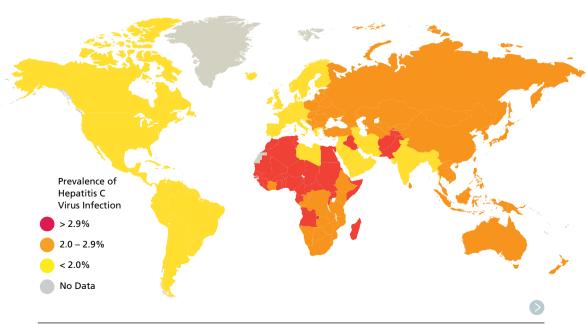
## THE BIG BREAKTHROUGH

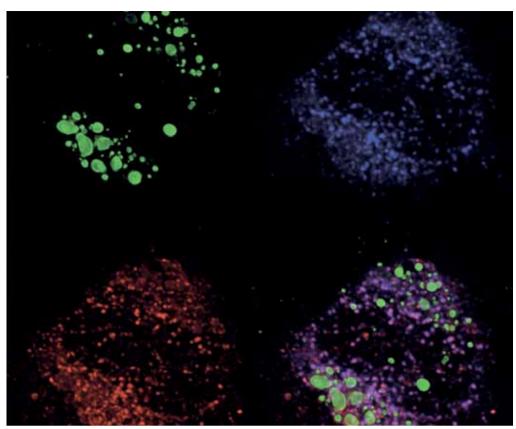
This breakthrough was long in coming, and one can hardly blame the closest colleagues and competitors around the world if they began to doubt Jens Bukh's endeavour. Everyone who had tried something similar had failed, so why should Bukh be successful? The big breakthrough, however, finally came in 2011.

"We knew we had to approach it systematically and take it one step at a time. I knew from my early work that the six genotypes were very different, and I assumed that it would take time,





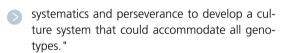




Source: Copenhagen Hepatitis C Program

#### HEPATIC CELL INFECTED WITH HEPATITIS C VIRUS (HCV)

Interaction between the viral capsid (red) and NSSA protein (blue) can be observed during the assembly of new HCV particles, which begins on cellular lipid droplets (green). An overlay of the three color channels highlights the co-localization of these different components.



In two landmark articles from Jens Bukh's group published in 2012 in the highly prestigious journal Proceedings of the National Academy of Sciences of the United States of America, they had finally succeeded in growing other isolates of hepatitis C virus, including an isolate of genotype 1, the world's most prevalent genotype.

During the years there has been a considerable demand for the cell culture systems developed by Jens Bukh and his colleagues. Researchers from around the world are using them, and thus these systems are contributing substantially to developing new drugs and vaccines for hepatitis C virus.

"It is great to feel that others can build on the research we have been doing. So although it might be others that will find the future drugs that can cure hepatitis C or the vaccine that can prevent the disease, our work will still have been a major part of it."

# 90% CAN BE CURED

The conventional treatment of people with hepatitis C virus combines pegylated interferon and ribavirin and has existed for more than 10 years. This combination improved the cure rate from barely 5% to 50% and was thus a major advance. Unfortunately, the treatment was also associated with serious side effects for patients.

"The development of new, more efficient and less harmful drug substitutes is very important. Our design of highly efficient culture systems have had a major impact on the studies of, for example, neutralizing antibodies, as well as novel drugs directed specifically against the hepatitis C virus proteins, such as protease and NS5A inhibitors."

The new cell culture systems have been a key factor, allowing researchers to focus on the best candidates and to measure the effect on the virus directly in the laboratory before testing the drugs on humans. Several new and safer and more effective drugs have been approved – based on antiviral substances targeting specific hepatitis C virus proteins.

"The latest treatments that are currently being used increase cure rates above 90%, which we could only have dreamed about in 2006 when I started my research in Denmark. One of the major factors is of course that the number of patients who complete the shorter, less harmful and more effective treatments increases. This is another reason why more patients are cured."

There are, however, still important obstacles in hepatitis C virus treatment that need to be studied experimentally. The new drugs are very expensive, which means that only patients with the most advanced liver disease can be treated. And they have a lower cure rate.

### THE NEED FOR A VACCINE

Although Jens Bukh and his team have made important progress in achieving their goals, Jens Bukh is aware that the victory against hepatitis C virus may be only temporary.

"We know that when a huge number of patients are treated worldwide, the antiviral drugs can lose their effect over time, because the viruses develop resistance to the drugs. So we have to study this carefully in the laboratory and here our culture systems position us to carry out this task. And we need to be ready with the new tools. Therefore, the ultimate tool to be developed is a vaccine against hepatitis C virus."

He does not dare to predict the time range for developing the vaccine. The ability to cultivate all genotypes of hepatitis C virus in the laboratory does, however, make the prospects much brighter than before. Several vaccines are already in the process of being tested in human clinical trials. Even so, however, Jens Bukh says that it is too early to celebrate.

"The problem in the treatment of hepatitis C virus has always been the great variation in genotypes. Therefore, one must also expect that a future vaccine works better on some subtypes than others. In addition, we have observed that people, who have developed natural immunity against hepatitis C virus, have nevertheless been attacked by hepatitis C virus later in life. So an efficient vaccine may not be around the corner," Jens Bukh states, "but it will remain a major focus of my future research."

# **EXTERNAL RECOGNITION IS FANTASTIC**

Although only the future will tell when a vaccine is ready, the recognition of Jens Bukh's work is already a fact. And this recognition is of great importance to him both professionally and personally.

"It's always fantastic with large grants to support your research, but the unique thing about getting an award such as this prize from the Novo Nordisk Foundation is that it has been given by people outside your own academic field. These highly esteemed researchers have looked at your work and thought that this person has made a difference in his scientific field and has influenced the possibility of controlling an important disease and thus improved other people's lives. This is the greatest reward of all."

He is also well aware that, although he is the one who is receiving the award, he would never have received this prize, had he not been blessed by first-class colleagues around the world and a team of great researchers at Copenhagen University Hospital, Hvidovre. He therefore focuses his work every day on building an international team with different skills but the same spirit about the science as his.

"For me, the key to scientific success is to dare to believe in your own ideas. The difficult thing is to stick with your ideas. My results are based on a belief in our ideas, a systematic study of them and a persistent belief that they can be realized."

#### **REVOLUTIONIZING VIROLOGY**

Jens Bukh personally believes that he has been successful in research by focusing on specific goals rather than taking all possible detours in his career. And even when the goals have been reached, there is always a new goal around the corner.

"Much research remains to be done to achieve the ultimate goal of being able to grow patient isolates directly in cell culture. My goal is that each person's virus can be cultured in the laboratory so that we can tailor future treatment to the individual patient."

The ambitions, however, extend beyond hepatitis C virus research. Jens Bukh hopes that other virologists worldwide will benefit from the hard struggle and success scientists have achieved in the fight against hepatitis C virus.

"As a researcher, you always rest on the shoulders of the research giants of the past. I hope that our new tissue-culturing platform will be copied and used in the fight against other viruses. This will increase the efficiency in the development of vaccines and treatments for other viruses that attack the human race at intervals, such as Ebola is doing right now."





# THE NOVO NORDISK PRIZE COMMITTEE

The Novo Nordisk Prize, which was first conferred in 1963, is awarded to recognize unique medical research or other research contributions that benefit medical science. The Prize is awarded for a predominantly Danish contribution.

The Prize is awarded annually and is of DKK 3 million – of which DKK 500,000 is a personal award, with the remaining amount as an allowance for research purposes within the Prize recipient's field of expertise. The Prize may not be awarded to members of the Board of the Novo Nordisk Foundation or members of committees or to members of boards, directors or employees of the Novo Group. The Novo Nordisk Prize Committee awards the Prize based on suggestions from past Prize winners or members of the Prize Committee.

The members of the Novo Nordisk Prize Committee are appointed by the Novo Nordisk Foundation Board of Directors, and presently the committee consists of 7 members:

- Professor Jan Fahrenkrug (Chair)
- Professor Bo Ahrén
- Professor Lars Fugger
- Professor Marja Jäättelä
- Professor Mads Melbye
- Professor Thue W Schwartz
- CEO Birgitte Nauntofte

At the committee meetings the nominated candidates are thoroughly discussed with regard to their research contribution and impact, and a comprehensive bibliometric report is produced. A limited number of candidates are then selected for a thorough international peer review. On the basis of the international peer reviews the committee reaches a decision about the year's prize winner.



The Foundation's collaborating partners and the winner's guests attend the award ceremony in the spring, where the prize winner introduces his or her research for 15–20 minutes. In addition, in celebration of the award, the winner gives a 1-hour lecture at his or her workplace. Before the end of the year, the recipient and the Foundation arrange an international symposium within the scientific field of the prize winner.

1963	Professor, dr.med. Erik Warburg
1964	Chief physician, dr.med. Claus Brun
1965	Professor, dr.med. J. C. Skou
1966	Professor, dr.med. Jørn Hess Thaysen
1967	Professor, dr.med. Knud Lundbæk
1968	Chief physician, dr.med. Niels A. Lassen
1969	Professor, dr.phil. Erik Zeuthen
1970	Professor, dr.med. Poul Astrup
1971	Professor, dr.med. Mogens Schou
1972	Chief Physician, dr.med. J. Chr. Siim
1973	Professor, mag.scient. K. A. Marcker
1974	Professor, dr.med. Michael Schwartz
1975	Director, dr.phil. Georg Mandahl-Barth
1976	Professor, dr.med. Niels Tygstrup
1977	Professor, dr.med. Erik Amdrup
1978	Chief physician, dr.med. Margareta Mikkelsen and Professor, dr.med. Villy Posborg Petersen
1979	Chief physician, dr.med. Gerhard Salomon
1980	Professor, dr.med. Bent FriisHansen
1981	Professor, dr.med. Flemming Kissmeyer-Nielsen and chief physician, dr.med. Arne Svejgaard
1982	Professor, dr.med. Jens F. Rehfeld
1983	Professor, dr.med. Christian Crone
1984	Head of Department, med.dr. Staffan Magnusson
1985	Professor, dr.phil. Hans Klenow
1986	Chief Physician, dr.med. Hans Henrik Holm
1987	Professor, dr.phil. Hans H. Ussing
1988	Professor, dr.med. Gunnar Bendixen
1989	Associate professor, med.dr. Ove B. Norén and Associate professor, med.dr. Hans G. Sjöström
1990	Professor, dr.med. Morten Simonsen
1991	Professor, dr.med. Peter Leth Jørgensen and
	Professor, med.dr. Arvid Maunsbach
1992	Chief physician, dr.med. Jan Fahrenkrug and Professor, dr.med. Jens Juul Holst
1993	Professor, dr.med. Niels E. Skakkebæk
1994	Professor, dr.med. Hans Jørgen G. Gundersen
1995	Research professor, dr.med. Niels Borregaard
1996	Professor, chief physician, dr.med. Henrik Kehlet
1997	Research professor, dr.scient. Peter E. Nielsen
1998	Professor, dr.med. Michael J. Mulvany and Professor, dr.med. Christian Aalkjær
1999	Professor, med.dr. Bengt Saltin
2000	Research professor, dr.med. Peter Aaby
2001	Professor, dr.med. Thue W. Schwartz
2002	Professor, dr.med. Jørgen Gliemann
2003	Professor, PhD Jiri Bartek and Senior researcher Jiri Lukas
2004	Professor, PhD Matthias Mann and Professor Peter Roepstorff
2005	Professor, dr.med. Mads Melbye
2006	Professor, dr.med. Henning Beck-Nielsen
2007	Professor, med.dr. Marja Jäättelä
2008	Professor, director, PhD Kristian Helin
2009	Managing director, professor, dr.med. Søren Nielsen
2010	Professor, dr.odont. Henrik Clausen Professor, dr.med Peter Lawætz Andersen
2011	Professor, dr.med Peter Lawætz Andersen Professor, dr.med. Erik A. Richter
2012 2013	Professor, dr.med. Søren Kragh Moestrup
2013 2014	Professor, PhD Søren Molin
2014	Trolessol, Prio Sølett Mollit

