

# CONTENTS

---

Supervisory Board and Board of Management .....	4
The Supervisory Board's report .....	7
Art or therapy .....	10
A step in the right direction .....	14
Natural considerations .....	16
Focus on Parkinson's disease .....	18
A product with potential .....	20
It's all about prevention .....	22
Lundbeck's products .....	24
Lundbeck worldwide .....	26
The Lundbeck Foundation Research Prize .....	28
Summary for the Group 1987-1996 .....	30
Comments on the accounts .....	32
Financial comments .....	36
Accounting policies .....	38
Profit & loss account .....	41
Balance sheet, assets .....	42
Balance sheet, liabilities .....	43
Statement of sources and application of funds .....	44
Signatures of the Supervisory Board and the Board of Management .....	45
Auditors' report .....	45
Notes .....	46
Integrated therapy .....	59

*Front cover:*

*Lundbeck sponsors several popular travelling exhibitions of art created by psychiatric patients. We have chosen to show some of these works in this year's annual report.*

*Concerning the connection between art and psychiatry, readers are referred to the article "Art or Therapy" on page 10.*

H. Lundbeck A/S's annual general meeting will be held at Valby Hallen at 3pm on 16.5.1997.

# SPECIALISTS IN PSYCHIATRY PIONEERS IN NEUROLOGY

As a specialist, one must constantly seek knowledge - deep, thorough and extensive knowledge. Lundbeck does that. We are specialists in psychiatry, with everything that implies in the way of advantages and obligations.

Lundbeck has long been internationally recognised for its work to improve the quality of psychiatric treatment in close collaboration with psychiatrists and other health-care professionals. We have developed more effective drugs with fewer side-effects; in cooperation with our partners in the health sector, we have introduced quality management concepts to promote individual therapies on the basis of integrated health, social and financial considerations; and we have tried to improve the situation of psychiatry by providing funding for a range of research and development projects. As a specialist in psychiatry, Lundbeck places the development of pharmaceuticals into a broader perspective - for the benefit of both patients and their families and employees in the health sector.

At the same time, Lundbeck is maintaining and developing the research on which its activities are founded. We must have the ability and the will to explore the complex biochemical reactions that take place in the central nervous system (CNS). That calls for both creativity and courage. We must also constantly add to our theoretical and practical ballast in order to be able to translate research results into effective pharmaceutical products.

In focusing on the central nervous system, Lundbeck has become not just a specialist in psychiatry, but also a pioneer in neurology. We believe that it is a combination of specialised knowledge and creative dynamism that leads to major breakthroughs in the treatment of psychiatric and neurological diseases.

Erik Sprunk-Jansen  
President



Anita Derksen, 96 x 72 cm.

# SUPERVISORY BOARD

---



Arne V. Jensen  
(Chairman)



Jørgen Fakstorp  
(Vice-Chairman)



Lars Bruhn



Henrik Hertz



Bent Jakobsen



Sven Dyrlov Madsen



Jan Gottliebsen  
(Elected by employees)



Birgit Bundgaard Rosenmeier  
(Elected by employees)

Torben Skarsfeldt  
(Elected by employees)





# BOARD OF MANAGEMENT

Erik Sprunk-Jansen  
President



Eva Steiness  
Executive Vice President  
Research and Development

## Senior Vice President:

Ole Antonsen  
Commercial Operations

## Vice Presidents:

Ib D. Christoffersen  
Corporate Finance

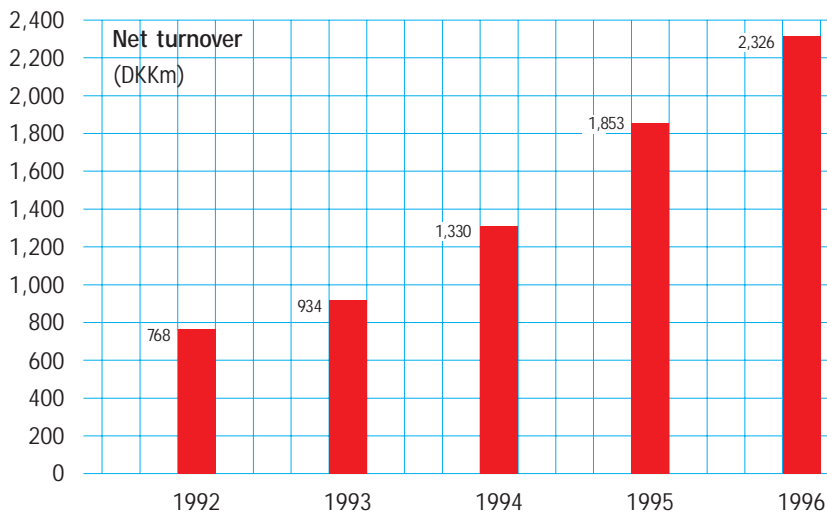
Harald Conradi-Larsen  
Subsidiaries

Jacques Mascaro  
Regulatory Affairs,  
Pharmacovigilance &  
Quality

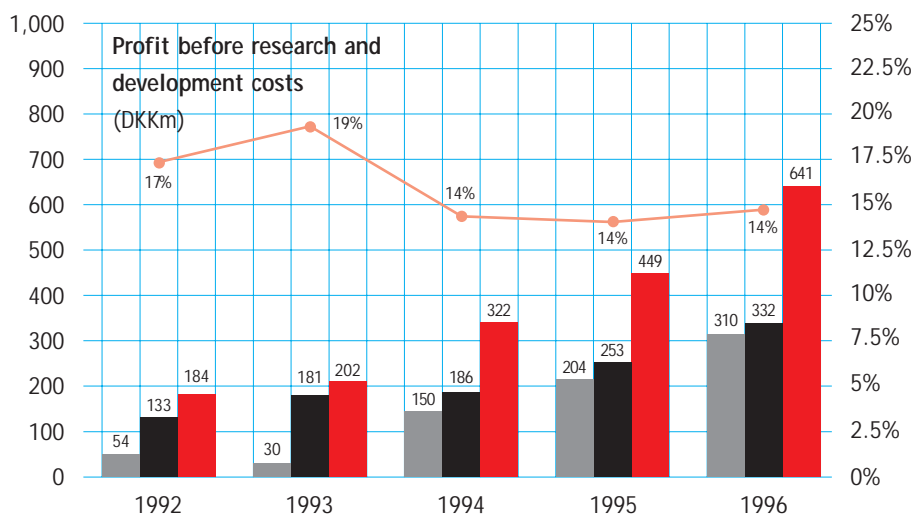
Ole Moestrup  
Strategic Marketing

Carl-Emil R. Sandberg  
Production & Logistics

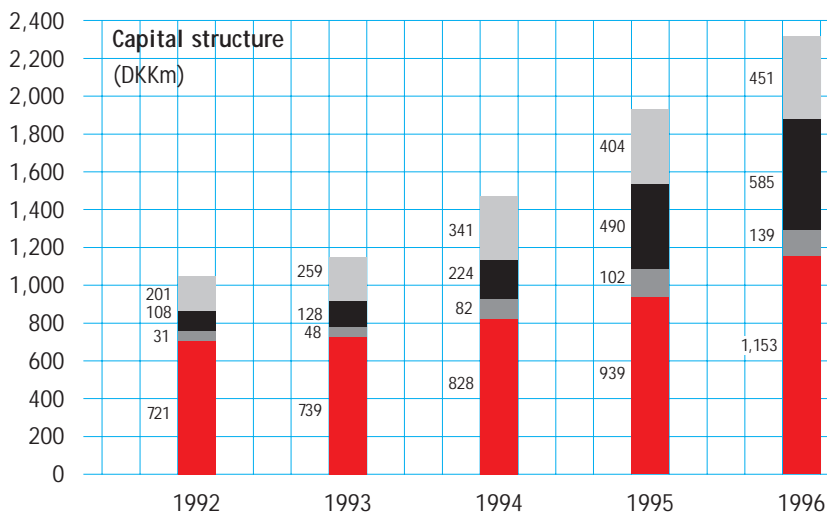
Søren H. Vogelsang  
Danish Operations



■ Net turnover



■ Profit before research and development costs  
 ■ Research and development costs  
 ■ Operating profit  
 —○— Research and development costs as % of turnover



■ Non-interest-bearing debt  
 ■ Interest-bearing debt  
 ■ Provisions  
 ■ Capital and reserves

# THE SUPERVISORY BOARD'S REPORT

## DEVELOPMENT OF STRATEGY

The rules of play for pharmaceutical companies have changed radically in the last few years. The sharper focus on health costs, the trend towards concentration, shorter product life cycles, and increased competition are realities to which every company has to adjust.

In those same years, Lundbeck has adjusted its business strategy to the new market situation with the aim of consolidating and developing its position as a leading European supplier of psychopharmacological drugs and of establishing a platform for positioning itself within neurology. With this, Lundbeck is seeking to strengthen its niche position and to broaden its focus on CNS to include psychiatry and the pioneering field of neurology.

## RESULT FOR THE YEAR

Lundbeck has achieved strong growth in the last few years, and 1996 was no exception. Turnover amounted to DKK 2,326 million, a 26% improvement on 1995. The pre-tax profit amounted to DKK 311 million, 36% up on 1995. The post-tax profit was DKK 219 million, against DKK 153 million in 1995, including a minority interest in the joint venture Promonta-Lundbeck.

The result is very satisfactory, particularly in view of Lundbeck's growth, which requires an enormous input of resources. The growth in the Group made great demands on all the employees in the past year and could not have been achieved without their committed input and willingness to adapt to change.

For these reasons, the Supervisory Board recommends to the General Meeting that DKK 5.7 million of H. Lundbeck A/S's profit for the year of DKK 217.6 million be paid to the employees in the parent company as profit sharing and that DKK 211.9 million be transferred to the reserves.

## SALES

The 26% improvement in turnover was due primarily to the continued success of Cipramil®/Seropram®, which has given Lundbeck a leading position in the market for antidepressants. This product is the Group's greatest success. Sales are still growing - compared with 1995 they have grown by more than 50% - and are expected to continue doing so because the product was only introduced in the big European markets, the U.K., France and Italy, in 1995.

In 1996, Cipramil®/Seropram® was marketed in six new countries, including Germany, Spain and Ireland. In all, it has now been registered in 49 countries.

1996 was also the year in which Serdolect®/Serlect® was approved for marketing in 13 EU countries after a record-breaking development time of only six years. Serdolect®/Serlect® belongs to the new generation of antipsychotic drugs, which have fewer side-effects than the classic antipsychotic drugs on the market. Serdolect®/Serlect® will be given a broad launch in 1997.

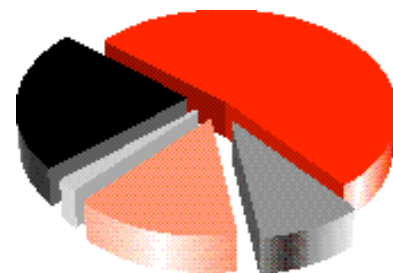
Lundbeck's established products are still doing well. That applies particularly to the antipsychotic products Fluanxol®/Depixol® and Cisordinol®/Clopixol® in depot form.

Lundbeck now has active sales subsidiaries throughout Western Europe with the exception of Portugal. In 1996, we established subsidiaries in Slovenia and Latvia. However, the rate of expansion was reduced in 1996 because we had achieved our aim of making Europe our home market. The challenge in the immediate future is to ensure continued progress in the big European markets and at the same time to expand our activities in Eastern Europe.

## ALLIANCES

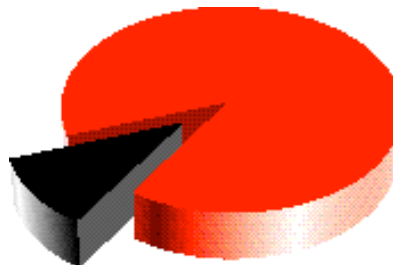
Recognising that critical mass is essential in the present competitive situation, Lundbeck attaches importance to strategic alliances. In the USA, we have established alliances that will mean rapid development and marketing of Cipramil®/Seropram® and in North and South America. The USA launch of Cipramil®/Seropram® is planned for mid-1998 through Forest Laboratories Inc.

Sales - breakdown by product

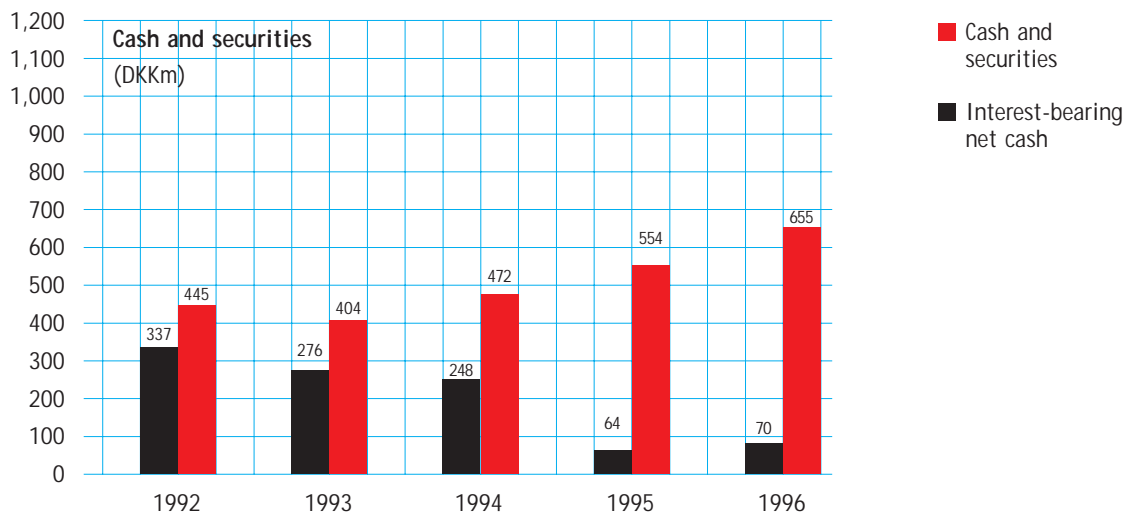
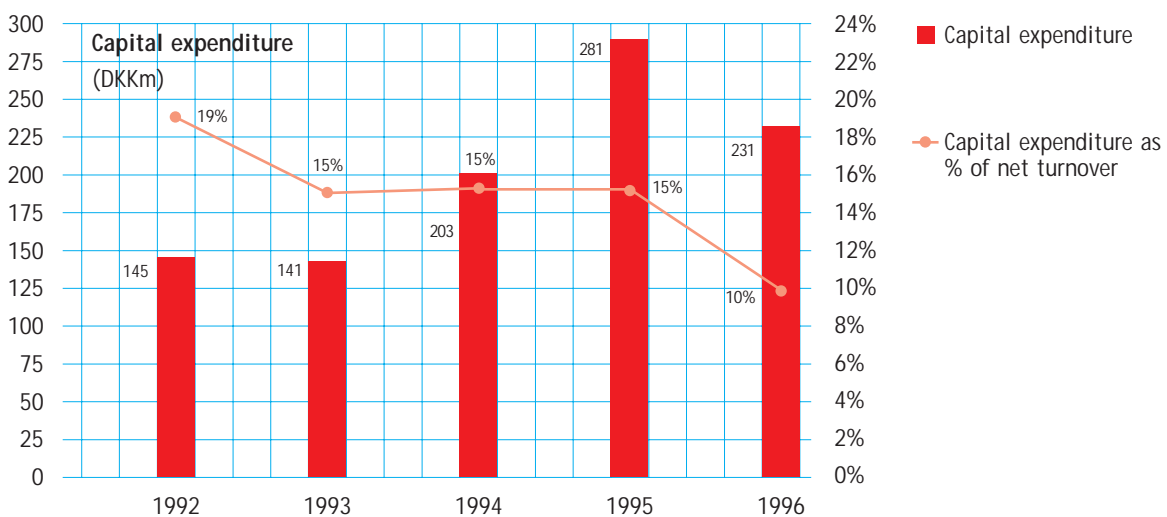
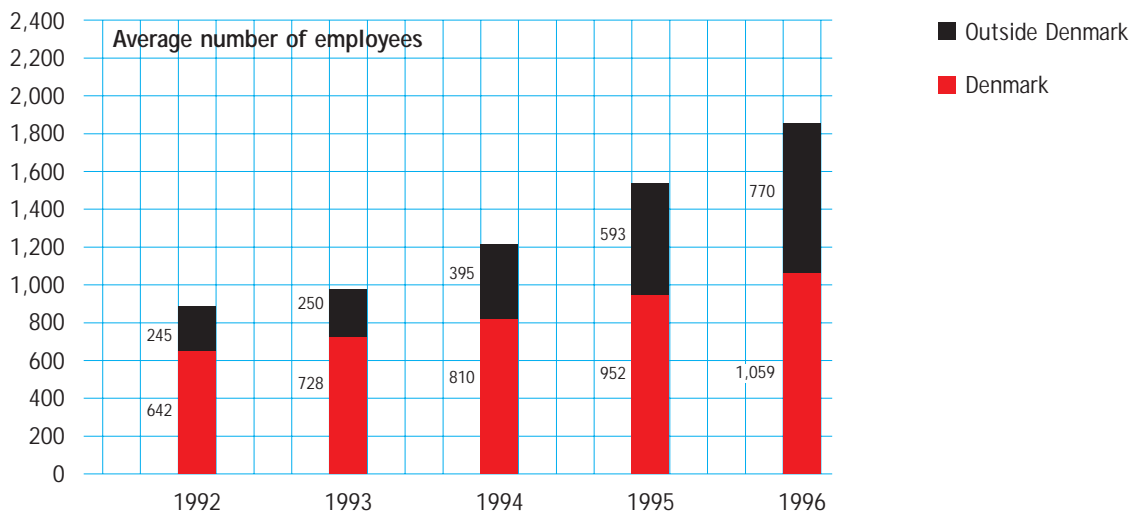


■ Cipramil®/Seropram®	53%
■ Other antidepressants	9%
■ Serdolect®/Serlect®	2%
■ Other antipsychotics	22%
■ Other turnover	14%

Sales - breakdown by market



■ Europe	90%
■ Outside Europe	10%



# THE SUPERVISORY BOARD'S REPORT

The development of Serdolect®/Serlect® for the American market has taken place in cooperation with Abbott Laboratories Inc., which has made a very significant contribution to the project. In Japan, the drug is being developed for the local market in cooperation with Shionogi & Co. Ltd.

In 1996, we established a promising collaboration with the American company Centaur Pharmaceuticals Inc., from whom we have obtained the right to use a product for treating patients with Parkinson's disease. The product is at present in phase 1 in the USA. We have acquired the right to market it primarily in Europe; through this partnership we are increasing our involvement in the neurological field in accordance with the Group's overall strategy.

## LUNDBECK INTERNATIONAL NEUROSCIENCE FOUNDATION

As a specialist in psychiatry, Lundbeck sees it as its task to contribute to the field in an innovative way. In 1996, the Lundbeck International Neuroscience Foundation was established with the aim of helping to increase knowledge and improve treatment within psychiatry. Actual activities will begin in 1997 in the form of seminars, training programmes, symposia and congresses. Leading psychiatrists will teach their colleagues and, in the longer term, other health sector employees as well. The activities will be gradually extended to include neurology.

## RESEARCH AND DEVELOPMENT

Like its pharmaceutical competitors, Lundbeck has increased its research and development activities. In 1996, we spent DKK 332 million in these areas, corresponding to 14% of turnover, to which must be added capital investments of DKK 90 million.

Our research and development activities are concentrated on depression, psychosis, dementia, epilepsy and Parkinson's disease. Further activities have been initiated with the aim of getting panic disorder included in the indications for Cipramil®/Seropram®. It was, in fact, included in a number of markets in the year under review. Research with dementia is proceeding according to plan and may result in an effective product for treating the symptoms of Alzheimer's disease.

## PRODUCTION

At both Chemical Production in Seal Sands (UK) and Lumsås and at Pharmaceutical Production in Valby, capacity has been increased substantially in the last few years to keep up with demand. In 1996, output, measured by number of packs, rose by 20% in relation to 1995. At the same time, the product range was optimised to improve productivity still further. Despite the increased capacity, contracts have been entered into with suppliers to ensure rapid adjustment to market needs. The Lumsås and Seal Sands facilities had a very busy year preparing the Cipramil®/Seropram® production for the US market. A new factory building in Lumsås was approved by the relevant authorities and is ready for production of Cipramil®/Seropram® and Serdolect®/Serlect® intermediates.

## INVESTMENTS

Improvement and development of the Group's infrastructure have required heavy investment in recent years. In 1996, investments in production equipment and facilities amounted to DKK 231 million. The synthesis factories in Lumsås and Seal Sands were enlarged and extensions were carried out at the pharmaceutical production facility in Valby.

## PROSPECTS FOR 1997

Lundbeck expects the Group's business activities to continue developing favourably in 1997. Growth will come mainly from increased sales of Cipramil®/Seropram® in both new and established markets. Continued penetration of the large European markets is a major challenge and offers great potential.

The marketing of Serdolect®/Serlect® commenced in 1996, and expectations are high for 1997, when the product will be launched in most of Lundbeck's markets.

Other major tasks in 1997 include identifying a business partner in the USA for Lundbeck's new dementia product and the introductory phase at Lundbeck International Neuroscience Foundation.

A considerable improvement in operating profit is expected in 1997, mainly as a result of increased sales and cost-conscious allocation of resources.

In April 1997, the company sold the rights to Ketogan® and Ketodur® to Searle Scandinavia (a division of Monsanto Sverige AB).



# ART OR THERAPY

In 1988 a group of Dutch psychiatrists formed the Art & Psychiatry Foundation arranging public exhibitions of art created by psychiatric patients. Since then four Lundbeck sponsored exhibitions have toured The Netherlands to general acclaim, which, according to Dr. de Groot and Prof. van den Hoofdakker both members of the Foundations executive board, demonstrates that untraditional initiatives may help to decrease the stigma surrounding psychiatric patients. At the same time, the project establishes a dialogue between patients and the surrounding community and questions the very nature of art.

## ROMANTIC MYTHS

Throughout history an intrinsic link between art and psychiatric diseases is suggested. A number of the world's most celebrated artists like Leonardo da Vinci, Van Gogh and Michelangelo have suffered from severe mental disorders, yet this has not diminished the value of their production. On the contrary, it has nourished the romantic myth of psychiatric diseases as a prerequisite for creativity.

This, however, is one of the prejudices that the Art & Psychiatry Foundation would like to avoid. Though some attempts have been made to demonstrate that there are more psychiatric problems in a group of artists than in a comparable population, the correlation cannot be seen as causation. So far, there is no scientific proof of the assumption that psychiatric patients are more gifted than other people.

"A work of art should be judged in its own right by the public regardless of the mental state of the artist," says Prof. Rutger van den Hoofdakker, who is himself an acknowledged writer of poetry.

Still, the Foundation finds it interesting to consider why some artists with psychiatric disorders end up in a mental hospital while others receive worldwide recognition. Most of the paintings collected from the creative departments of the hospitals can easily compete with what is seen in galleries, but the work does not seem to get the attention it deserves, because the patient or artist has not got the resources or the confidence to promote themselves properly. One of the purposes of the



Art & Psychiatry Foundation is therefore to question the concept "art" and serve as a mediator between the artist and the surrounding community.

## REFLECTIONS OF THE MIND

Another popular myth claims that a work of art reflects the mental state of the artist, indicating that paintings by psychiatric patients would somehow be marked by psychosis, but again this cannot be confirmed by experience.

"The best paintings share no common features which cannot be explained by

current trends, in the sense that they are products of a certain time and place. Artistic patients are just as varied and individual in their mode of expression and their choice of style, theme, motif and colour as their contemporaries, and most critics would not be able to distinguish, in a blindtest, these paintings from the work produced by a recognised modern artist. Naturally, you might recognise hallucinations or stereotypes in some of the less remarkable paintings at the hospitals, but that is a very subjective feeling, which doesn't prove anything. I do not believe in typical psychotic art," stresses Dr. de Groot.



*Peter A. de Groot, MD, PhD, (1946) is medical director and chairman of the board of Veldwijk, a general psychiatric hospital in Ermelo, The Netherlands, and founding member of the executive board of the Art & Psychiatry Foundation.*

Prof. van den Hoofdakker elaborates by drawing attention to the fact that the Art & Psychiatry Foundation only cups the cream of what is produced at the creative workshops. It is his impression that the best paintings are made by patients in a relatively healthy phase, because in acute depression or psychosis they are too ill to produce anything which might communicate in general terms. The message is simply undecipherable, there are no open structures, which allow the spectator to enter. In these cases, the canvasses do not represent art.

## NOT A DIAGNOSTIC TOOL

At the exhibitions in Holland, manic-depressive patients have been clearly over-represented, and the two members of the executive board suppose that patients with affective disorders or dependencies are more talented than their uni-polar counterparts. They do not think, however, that works of art can be used diagnostically or as an early warning sign of remittance. From a medical point of view, it is simply not possible to operationalise the criteria to the extent that creativity might be used as a validated measure of psychopathology.

As Prof. van den Hoofdakker puts it: "I can imagine that during treatment you might see changes in the work, but it has never been empirically tested, and I guess that by the time you notice these changes, the development has already been confirmed by other observations."



*Tokky Luyken, "Corpulent", 50 x 33 cm.*

## THE VALUE OF CREATIVE THERAPY

In spite of the lack of scientific studies of creative therapy, both psychiatrists are convinced of its therapeutic value. Even very ill patients can be physically fit, and the creative therapy keeps them going. Furthermore, some patients cannot be reached through verbal therapy, and in some of these cases the work might enable the psychiatrist to estab-



*Rutger H. van den Hoofdakker (1934) is retired professor of Biological Psychiatry from the University of Groningen and a member of the Art & Psychiatry Foundation's executive board. Under the pen name Rutger Kopland he is also a celebrated writer of poems and literary essays.*



*Roland Bruins, "Kindern", 45 x 58 cm.*

lish a connection. It is easier to talk about a painting, than to describe one's innermost feelings and emotions in words.

"Another positive aspect", adds Prof. van den Hoofdakker, "is that the patients experience that they can make something of value for themselves and for others. They get a chance to develop or discover a talent, which increases their self-esteem. Still, creative therapy can also be very harmful, because some patients are frightened by what they discover about themselves or demoralised by the gap between their ambitions and their lack of ability, so it has to be administered professionally and with great caution."

Yet creative therapy can never replace medication, and it is a delusion that psychotropics or anti-depressants inhibit the patient's creative power. On the contrary, the work of the Art & Psychiatry Foundation confirms the evidence from the literature that adequate treatment including pharmacotherapy improves the patient's performance both in general and as an artist. An untreated psychosis or depression is definitely not inspiring.

## DE-STIGMATISING

While the Art & Psychiatry Foundation has found no unequivocal answers to some of the eternal questions concerning art and psychiatry, the project has managed to bring about an increased awareness of the creative potential at psychiatric hospitals. The general response of the patients and the public has been positive, and some of the patients who have contributed to the exhibitions have even established themselves as professional artists.

"The main object of the Art & Psychiatry Foundation is to de-stigmatise psychiatric disorders by showing the public that the patients can produce something beautiful and valuable. They are not so dangerous and disturbing, as the media and public opinion seems to think. At the same time there is an aspect of rehabilitation in it. We want to help improve the patients' confidence and self-esteem through confirmation, so that they may eventually find it easier to integrate and interact with society. Finally, I think the project raises a number of interesting philosophical and scientific questions about the nature of art, the effects of therapy



and the methods we employ. For me it is important to keep wondering", says Dr. de Groot.

In this way, both Dr. de Groot and Prof. van den Hoofdakker find that they have been personally and professionally rewarded for the effort they have invested in the project, and they would strongly recommend and encourage similar initiatives in other countries.

### TOTAL DISEASE MANAGEMENT

For Lundbeck Holland, sponsoring the Art & Psychiatry Foundation is just one among several non-commercial efforts. Lundbeck supports a number of foundations for the education of psychiatrists and the dissemination of knowledge on psychiatric disorders along with various activities directed at the patients and their relatives.

"As a foundation-owned company, Lundbeck is obliged to see the treatment of psychiatric disorders in a broad perspective. We do not only market our products on a commercial basis, but try to improve the quality of treatment through a positive interaction with society, psychiatrists, patients and their relatives. Our partnership in total disease management goes beyond the choice of medication," says Stig Løkke Pedersen, managing director of Lundbeck Holland.



*Mariëtte Swagerman, "Missing", 47 x 61 cm.*

# A STEP IN THE RIGHT DIRECTION

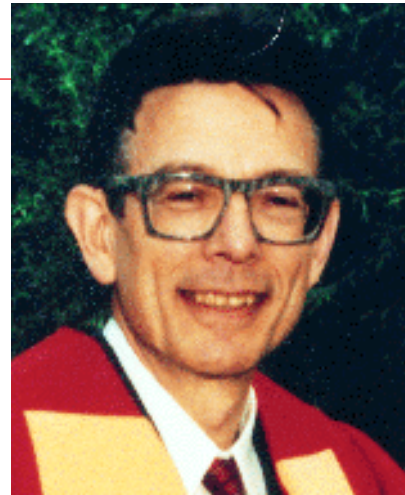
Professor Norman Sartorius, President of the World Psychiatric Association (WPA), takes a close interest in the situation of people in central and eastern Europe who suffer from mental illnesses. In spite of high professional standards in medicine, the treatment of psychiatric patients in these countries has lagged far behind treatment in the western world, largely as a result of limited financial resources.

"The difficult financial situation combined with inadequate physical facilities and a lack of all medical supplies, including medicaments, particularly those that have been developed recently, lead to great difficulties in the provision of mental health care", he says.

## GROWING OPTIMISM

One of the countries with major problems in providing modern treatment of psychiatric patients has been Romania. However, following the democratic election of Emil Constantinescu as the first non-Communist president in 50 years, there has been growing optimism throughout society. There is thus a widespread belief in the world of psychiatry in a brighter future. This was made clear to Lundbeck Overseas in December 1996, when the company acted as host in an event arranged for Romania's leading psychiatrists.

The event was held to celebrate the opening of the Lundbeck Ergotherapeutic Centre at the psychiatric hospital in Tirgu Ocna. The Norwegian humanitarian organisation Grenlandsaksjonen was the driving force behind the project.



*Norman Sartorius, Professor  
Chairman for World Psychiatric  
Association*

## AN UNUSUAL PARTNERSHIP

The story of Lundbeck Ergotherapeutic Centre began in the winter of 1989-90, when Romania was in the throes of violent revolution. At that point, television news all over the world gave massive coverage to the repressive actions of the army, the widespread destruction and the desperate plight of the civilian population. These events prompted a group of Norwegians to establish Grenlandsaksjonen to distribute food, medicine, hospital equipment and other basic necessities to the Romanian population.

As a result of these humanitarian activities Grenlandsaksjonen developed a wide network of contacts in Romania. One such contact was with the psychiatric hospital in Tirgu Ocna, a small town 200 kilometres north of Bucharest, close to the Moldavian border. One of the volunteers who visited the hospital was Kjell Elgen, who had just retired after 40 years with Lundbeck. He was so appalled by conditions at the hospital that he proposed that Lundbeck should sponsor the establishment there of an ergotherapeutic centre. This created the basis for an unusual partnership between Grenlandsaksjonen, Lundbeck and the Romanian authorities.

It was agreed that Grenlandsaksjonen should be responsible for the construction of a new building, to be sponsored by Lundbeck and handed over to the Romanian state. Thus, construction of the building is an element in the devel-



opment of a part of the national mental health programme in which Lundbeck and Grenlandsaksjonen will only be involved in the early phases.

### **ERGOTHERAPY AS AN INTEGRATED ELEMENT IN TREATMENT**

The hospital in Tirgu Ocna has 215 beds squeezed into a very small floor area. Until now, it has not been possible for its severely psychotic patients to be offered occupational therapy or recreational facilities of any kind. The new building is therefore to have a communal area and a number of workshops. The object is to establish an integrated care programme, including medical treatment, ergotherapy and rehabilitational support to acute and chronically mentally ill people.

Lundbeck Overseas has undertaken to support implementation of this concept. When the workshops have been equipped, courses will be arranged for staff and, for a period, the hospital will be supplied with Lundbeck's medicines at no cost. This is because it is not only ergotherapy that is lacking as a result of the country's straightened financial circumstances. Many leading international products are not available on the Romanian market. Even though Fluanxol® has already been registered and Cisordinol® and Cisordinol-Acutard® are to be introduced in the very near future, these preparations are relatively expensive by Romanian standards. As a consequence, most people with psychotic illnesses do not receive regular treatment, and doctors have to rely on medicaments which have unpleasant side-effects and are poorly standardised.

### **MODEST ADVANCE**

All things considered, the establishment of the Lundbeck Ergotherapeutic Centre is a modest advance. There is an urgent need for psychiatry to be given a higher priority in Romania and elsewhere in eastern Europe. Seen in that context, this single initiative will not make a great deal of difference.

Nevertheless, the Grenlandsaksjonen initiative has received an overwhelming reception. More than 20 professors of psychiatry came to the opening, which was also attended by representatives of the Norwegian and Danish embassies and the Romanian authorities. The national television organisation gave the event comprehensive coverage. The level of interest demonstrates that such efforts are worthwhile. All contributions are welcome, strengthening as they do people's faith in the future and providing new inspiration.

### **WPA SUPPORT FOR THE INITIATIVE**

Professor Norman Sartorius, who would have very much liked to have demonstrated his support for the project and his Romanian colleagues by attending the inauguration, was unfortunately unable to do so.

"It is rare for a pharmaceutical company to sponsor a project like the Lundbeck Ergotherapeutic Centre in Tirgu Ocna," he says, "but Lundbeck has demonstrated yet again that it lives up to its reputation as a foundation-owned company that supports research and development of services. For there to be a general improvement in conditions for psychiatric patients in eastern Europe, it is important to look beyond narrow commercial interests and make an effort for the benefit of all. The Lundbeck Ergotherapeutic Centre will not only help patients but also create training opportunities for mental health workers from other parts of Romania. This is a particularly positive development.



*Gerard Moulin, 53 x 73 cm.*

### **CONTINUAL IMPROVEMENT**

Lundbeck will be following the project's development with great interest. Currently, Lundbeck's products are marketed in Romania by Lundbeck Overseas, in close cooperation with local agents. However, in 1997, the plan is to open a sales office in Bucharest. This will open up the possibility of developing closer contact with Romanian doctors and providing them with permanent access to thoroughly tested medicinal products. Lundbeck is thus in no doubt that the situation for psychiatric patients in Romania will improve markedly in the years to come.

# NATURAL CONSIDERATIONS

We have a major responsibility for the internal and external environment in connection with the manufacture of pharmaceutical substances, partly because it is natural to take care of one's surroundings, and partly because good environmental performance is an integral part of sound business management.

For these reasons, Lundbeck goes further than simply complying with the letter of the law - the current environmental legislation. We are striving to reduce our resource consumption and process waste still further through continuous improvement of our production technology and working methods. Care for the environment is a natural element of daily life for all Lundbeck's employees.

## A BINDING UNDERTAKING

One expression of the high priority given to the environment at Lundbeck is an active environmental policy. We have formulated our policy in five clear commandments which guide all our activities:

- We must constantly assess the impact of our activities on the environment.
- We must seek to improve our environmental performance on the basis of technical and cost-benefit analyses
  - by using eco-friendly processes and cleaner technology
  - by making the best possible use of raw materials and energy
  - by reducing emissions from our production facilities.



*Spyros Loukides, "Bridge",  
watercolour/paper,  
50 x 35 cm.*

- Environmental requirements must be complied with before our production objectives can be regarded as met.
- We must be as open as possible about environmental matters in our cooperation with authorities and the surrounding community.
- We must provide our employees with the necessary training to ensure that they act in an environmentally responsible way and comply with in-house and external environmental rules.

## INCREASED AWARENESS

However, it is one thing to formulate a policy on the environment, but quite another to translate that policy into action. For Lundbeck, the task is to maintain a good development that gradually reduces the impact of a number of well-defined environmental indicators. Resource consumption and sources of pollution are monitored. On this basis, realistic targets are set for improvements, which are then implemented through concrete action plans. The effect of the measures taken is registered in a situation report, which forms the basis for new, higher targets. We have succeeded in reducing the relative environmental burden of our activities despite rapidly rising production.

Our environmental policy focus on individual responsibility and increases environmental awareness at all levels. Every employee knows that one cannot just increase production or make production

changes without taking the necessary precautions, and the knowledge that a defective filter or an overloaded wastewater treatment unit interrupts production acts as an added spur to vigilance. In this area, too, Lundbeck believes in prevention, so in reality, care of the environment and productivity go hand in hand.

### TECHNICAL IMPROVEMENTS

We have also made a number of technical improvements that are benefiting the environment. At our synthesis factory in Lumsås, we have built a new production unit based on a technology that considerably reduces atmospheric emissions. Waste water is collected in an advanced water treatment plant, and the ventilation system for all dust-generating processes is equipped with a pre-filter and an absolute filter. At our Valby facility, we are building a new cooling unit that reduces noise problems. We have thus significantly reduced atmospheric emissions, waste water, noise and waste.

We have no problems in obtaining official approval for our production. In 1988, despite the Danish authorities' very restrictive requirements, the Lumsås facility was granted total environmental approval. The Seal Sands production has also been approved, and we expect to obtain the stamp of approval for the pharmaceutical production in Valby in the first quarter of 1997.

### ENVIRONMENTAL MANAGEMENT

For Lundbeck, environmental protection is not just a technical matter, but a task for senior management in line with finance, development and marketing. Our aim is to introduce an environmental management system that can be certificated so that we can manage all aspects of our environmental work.

In the first instance, we have established a separate department for environmental management and compliance with Good Manufacturing Practice (GMP). This ensures that environmental considerations are taken into account throughout the development phase. It also means that all procedures are closely coordinated, making them easier to work with, and that our employees always know where to go with specific questions concerning the environment.

In addition, Lundbeck is participating in a sectorial project on coordination of environmental management with GMP in the production phase. The problem is that, in some situations, environmental considerations mean that changes have to be made quickly or that some other form of rapid action has to be taken, whereas quality management is based on fixed procedures with a longer reaction time. This problem will probably be solved by expanding GMP to include practice with respect to the environment. The larger Danish pharmaceutical companies are therefore working together for a better environment.



Nikos Lazaridis, "Shore", acrylic paint on paper, 36 x 50 cm.

# FOCUS ON PARKINSON'S DISEASE

Lundbeck works in two main areas. For this reason we describe ourselves as "Specialists in psychiatry, Pioneers in neurology". The neurology platform is based, in part, on cooperation with the American company Centaur Pharmaceuticals Inc. on the development of drugs for treating Parkinson's disease.

## WHEN ONE CAN NO LONGER COPE ON ONE'S OWN

Parkinson's disease is a progressive, chronic and seriously disabling disease that affects 0.1% of the world's population. The symptoms usually appear in later life - after the age of 60. The patient begins to feel slow or clumsy. The coffee does not always land in the cup, or it becomes difficult to hit the right keys on the computer. These first symptoms are simply small, insignificant irritations that are not perceived as anything to be alarmed about.

Later, the symptoms gradually become more pronounced, and if two of the three cardinal symptoms - shaking (tremor), decreased mobility (hypokinesia) and muscular rigidity are present, the diagnosis is parkinsonism or Parkinson's disease.

Many people connect Parkinson's disease with shaking, but far from all patients get this symptom. When it does occur, however, it can be very unpleasant for the sufferer. In serious cases, the shaking disturbs the hand's functions, making it difficult to perform such ordinary tasks as cutting up one's food and getting it into one's mouth. Most patients, however, are more affected by the decrease in mobility, which affects all movements, including facial movements. This makes many small, daily tasks extremely difficult. Simple actions like doing up buttons, tying laces and buttering bread take a long



*Lene Werdelin, senior neurologist  
at Frederiksberg Hospital.*

time. It becomes more difficult to get up from one's chair and to get dressed and brush one's teeth. In the end, even turning over in bed can be difficult. Muscular rigidity, on the other hand, is not something the patient notices very much at the start of the disease, but it still affects all the body's movements. One's gait becomes stiff and uncertain, and one's arms do not swing as one walks. In many cases, balance is also affected.

After some years, Parkinson's disease is both physically and socially disabling. The patient becomes dependent on help from other people, which may be difficult to accept - both for the patient and for his or her family, who often have the task of looking after the patient.

## THE IMPORTANT NEUROTRANSMITTER DOPAMINE

Parkinson patients have a distinct lack of dopamine, which acts as a neurotransmitter in the central nervous system. The shortage is due to loss of nerve cells containing dopamine.

Lene Werdelin, senior neurologist at Frederiksberg Hospital, says, "We all lose nerve cells containing dopamine as we get older, and if one gets below the critical limit of 20-30%, Parkinson symptoms start appearing. The question is, why some people lose dopamine faster than others."

"It is possible that some people are born with fewer neurones containing dopamine," says Lene Werdelin and



refers to various theories about heredity, environmental impacts, head trauma, side-effects of drugs and auto-immune processes.

## TREATING THE SYMPTOMS

The problems in finding a real causal relationship for Parkinson's disease makes it extremely difficult to prevent or cure the disease. All one can do is to reduce the symptoms so that the patient can live almost normally.

"We now have many drugs for treating Parkinson's disease," says Lene Werdelin, "but most of them have serious, long-term side-effects. That applies, for example, to levodopa preparations, which still play a central role in the treatment of the disease. Levodopa is a synthetic substance which is converted into dopamine in the brain. When it was introduced at the beginning of the 1970s, many people regarded it as a miracle cure because it did a good job of reducing the symptoms in the early phases of the disease. Unfortunately, the effect diminishes after 7-10 years and, in many cases, the therapeutic interval contracts, so the patient alternately experiences symptoms of overdosing and underdosing in the form of dyskinesia and hyperkinesia - in other words, involuntary and unpredictable movements that come and go as if a switch is turned on and off - the so-called on-off effect. To reduce the side-effects and postpone the time when tolerance to the drug falls, we therefore combine the levodopa treatment with other products, such as dopamine agonists, which, although not quite as effective, have the advantage of being absorbed directly into the brain without first having to be converted into dopamine. Similarly, we can combine the effective preparations with various 'inhibitors', which prevent levodopa from undesirable degradation. With this, more dopamine is forced into the central nervous system (CNS). Lastly, we have the very promising new dopamine-reuptake inhibitors, which prevent the reuptake of dopamine, so that the amount of the substance already in the brain is utilised better. The principle is thus the same as in the case of serotonin."

In all events, it is difficult and time-consuming to arrive at the optimum combination and dosage of drugs for the individual patient at a given point in time. The disease is progressive, so the treatment has to be constantly adjusted.

## KEEP YOUR BRAIN IN SHAPE

Although the ultimate therapy has not yet been found, Lene Werdelin urges patients and their families to keep making demands in order to gain better understanding of the problems of the disease. In her view, far too little is known about both neurological and psychiatric diseases, and people are not aware that much can be done to relieve the symptoms. Some CNS diseases can be controlled to an extent that the patient can function almost normally. In addition, new and better drugs that can help in the treatment of these diseases are being developed all the time.

To increase public awareness in Denmark of neurological and psychiatric diseases and the existing possibilities for prevention and treatment, Lene Werdelin is actively involved in "The Year of the Brain", a countrywide, interdisciplinary initiative to promote interest in the central nervous system and its functions. At the same time, she wants to get the message home: Keep your brain in shape throughout your life.

She says, "It is important to use one's brain and look for new challenges. That applies to older people as well. If one's brain falls into decay, one's body seems to become more infirm as well. One of the aims of The Year of the Brain is to get more people to take up cerebral gymnastics."

## PIONEERS IN NEUROLOGY

Lundbeck and Centaur are concentrating on their joint development project within parkinsonism. The aim is to find a preparation which, unlike the existing



Gerrit Sips, "Looking in the Sand",  
90 x 15 x 30 cm.

symptom-reducing drugs, will delay disease progression. If we succeed, we shall have achieved a decisive breakthrough in the treatment of Parkinson's disease. Lundbeck's pioneering work within neurology may thus blaze a new trail.



# A PRODUCT WITH POTENTIAL

There is broad agreement that the development of specific serotonin-reuptake inhibitors - the so-called SSRIs - has set a new standard for drug treatment of serious forms of depression. It has now been found that SSRIs also have a beneficial effect on patients suffering from panic disorder. In the last few years, the health authorities in Denmark, Sweden, Finland, Austria, the U.K. and France have included panic disorder in the indications for use of Cipramil/<sup>®</sup>Seropram<sup>®</sup>, and more countries will follow suit.

For people suffering from panic disorder, it must be hoped that the recognition of SSRIs for treatment of the disease will result in increased focus on the disease and better understanding of it. Panic disorder affects an estimated 1.5-2.5% of the population in the western world. It is often under-diagnosed or incorrectly diagnosed, which can result in major human and social costs. With the new drugs, more patients could be offered an effective treatment: the side-effects are few and often temporary and, in most cases, the panic disorder can be kept under control sufficiently for the patient to live a normal life.

## A DIFFICULT DIAGNOSIS

Panic disorder seems to be caused by a combination of psychological and biological factors. Patients suffering from the disorder have a low tolerance to the physical and psychological reactions that are produced during stress, in that the body's alarm system is activated for no real reason. The disorder could be due to a hereditary disposition, combined with some unpleasant experiences, making everyday events appear dangerous. The biological disturbance in connection with panic dis-

order consists of a biochemical change at neurotransmitter level, i.e. a disturbance in the transmission capacity of certain nerve paths.

The clinical picture of panic disorder includes frequent panic attacks, phobias and anticipatory anxiety. The panic attacks may occur spontaneously or be triggered by special situations. They are usually accompanied by at least four of the following symptoms: shortage of breath, palpitation, chest pain or discomfort, a choking sensation, vertigo, a feeling of unreality, pricking sensations in the hands and feet, feeling hot or cold, sweating, feeling faint, trembling or shaking, fear of death, fear of going mad and fear of losing control of oneself during an attack. The patient often focuses on one or two physical symptoms and fails to mention the psychological aspects. Panic disorder is therefore often mistaken for other diseases, and the patient repeatedly visits the doctor or the casualty ward in the hope of finding an explanation.

## A LIFE SPENT IN FEAR

In addition to the attacks, many patients have a number of phobias that are just as much of a strain as the actual attacks. The patients may be afraid of certain places or things, or have a social phobia that makes them avoid being together with other people. It is thus often a phobia that triggers the panic attacks.

In panic disorder, attacks and phobias are accompanied by a violent anticipatory anxiety. Patients are in constant fear of new attacks, and in many cases that makes them change their behaviour. They will do anything to avoid getting into a situation like the one that induces a panic attack, and one therefore often finds patients who are unable to carry out small, everyday actions like going on a bus, shopping or leaving the house. Patients isolate themselves more and more from the outside world, and that has a serious effect on both their capacity for work

and on their family and social relations. In fact, the quality of life of patients with phobias is just as impaired as in the case of depression.

## PANIC DISORDER CAN BE TREATED

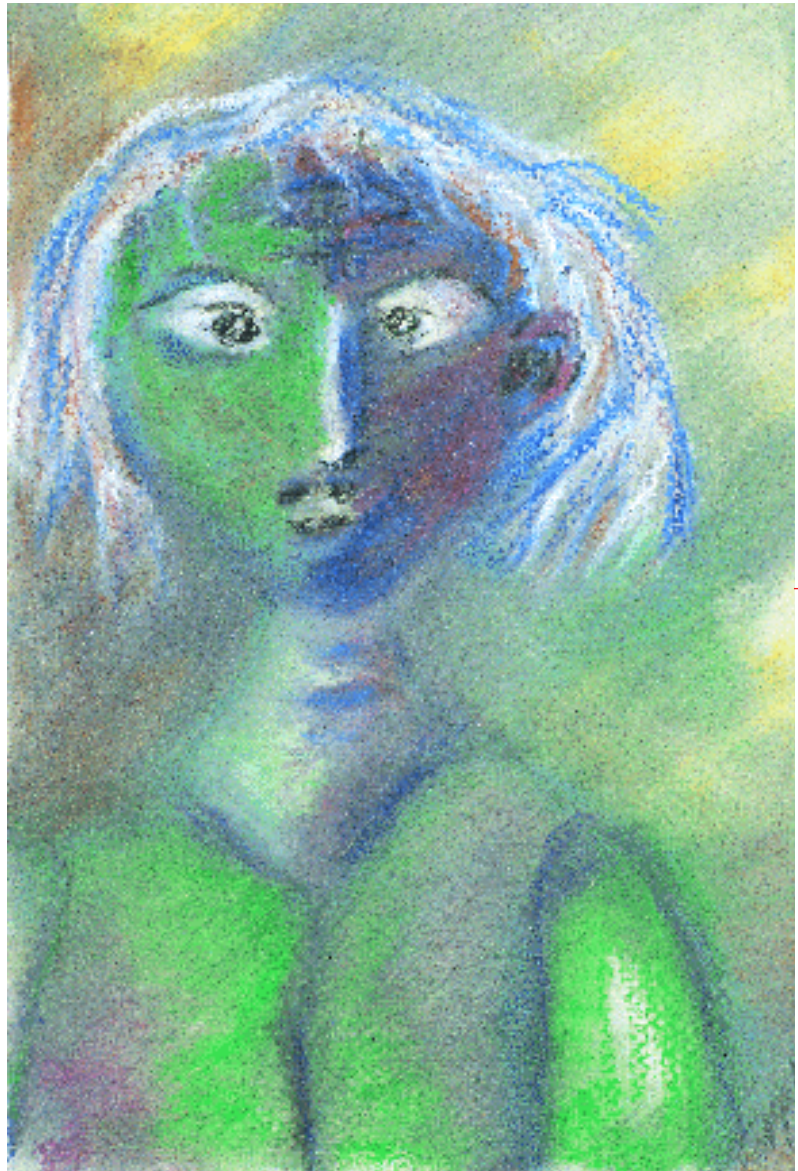
However, panic attacks can be prevented or reduced by a combination of psychotherapy and drug therapy. When patients are taught to foresee the situations and reactions they connect with the attacks, they become better at controlling them. At the same time, the medicine has a pronounced effect on the phobias, and the fear of new panic attacks slowly recedes.

The drug treatment has hitherto been based on the classic TriCyclic Antidepressants (TCAs) in comparatively large doses. In some cases, this has induced unacceptable side-effects and the treatment has therefore had to be discontinued. With the expansion of the area of indication for the specifically acting SSRIs, there is thus a hope that more people can get the disorder under control with fewer side-effects.

## DOCUMENTED EFFECT

A large European study, which is expected to be published in the well-respected British Journal of Psychiatry in the near future, has shown that 60% of the patients studied experienced a marked improvement when treated with 20 or 30 mg Cipramil®/Seropram®. The effect of this drug with the dosage in question thus exceeds that of 60-90 mg Clomipramine, which is traditionally used in the treatment of panic disorder. At the same time, it was documented that the effect of Cipramil®/Seropram® was distinctly better than placebo and that the difference already appeared after four weeks' treatment.

The study comprised 475 patients and the treatment time was 8 weeks. The patients did not quite reach the opti-



*Nynke Zuidervaart.*

imum effect within that period. A planned, voluntary continuation of the study has since shown that it takes 3 months for the optimum effect of Cipramil®/Seropram® and Clomipramine against panic disorder to be achieved.

The study has created new hope for the many patients who are living a more or less isolated life in constant fear of the next panic attack.

# IT'S ALL ABOUT PREVENTION

In 1993, Lundbeck, working in close cooperation with some of the world's leading psychiatrists, developed a complete therapy concept for schizophrenia. The concept, which was introduced under the name Prelapse®, is intended to prevent the relapses which are a common feature of schizophrenia despite good possibilities for preventing them. The high relapse rate is thus totally unacceptable, both from a human point of view, medically and financially.

## EDUCATION AND INFORMATION

With Prelapse®, the focus is firmly on preventive treatment of schizophrenia. One international and several national Advisory Boards have been set up to disseminate information on long-term treatment of schizophrenia through Prelapse® workshops at which leading psychiatrists teach colleagues about long-term treatment. Information material is regularly published, and Lundbeck makes a range of practical Prelapse® tools available to psychiatrists, general practitioners, patients and their families.

By giving precise guidelines for prevention of schizophrenia and for treatment of the disease in all its phases, Prelapse® helps to improve patients' quality of life and the quality of the treatment they receive, while at the same time reducing the overall spending within this part of the health-care sector.

## NON-COMPLIANCE

One of the main reasons for the high relapse rate for people suffering from schizophrenia is non-compliance. Many patients reject or discontinue the treatment because they think the traditional medicine has too many side-effects, because they believe they have been cured, because they do not notice any effect, or because they do not understand the importance of prophylaxis. Both physical and psychological factors thus determine the patients' willingness to cooperate in their treatment.

Prelapse® counteracts this by emphasising the importance of providing the patients and their families with full information about schizophrenia. They must understand the disease. They must learn to pay attention to symptoms and warning signs. They must know the possible side-effects of antipsychotics, and they must know the risk of stopping treatment too early.

If patients and their families know enough about schizophrenia, they will be more motivated to participate in the preventive therapy. In this connection, Prelapse® offers a range of tools, including information manuals for patients and their families and an introduction to different psychotherapeutic methods, together with various forms and check-lists that make it possible to follow the development of a patient's condition and understanding of the disease.

## FEWEST POSSIBLE SIDE-EFFECTS

Compliance can also be improved through the choice of drugs. Prelapse® used to recommend depot preparations in the prophylactic treatment on the grounds that they provided a preventive effect and ensured patients' full compliance with medication. However, antipsychotics of a new type, with far fewer side-effects, have now been developed.



Preclinical tests show that preparations like Serdolect®/Serlect® do not affect the part of the brain that controls muscular activity. For this reason, Serdolect®/Serlect® does not have the unpleasant, extrapyramidal side-effects that previously had to be accepted as a necessary consequence of medical therapy.

With the introduction of Serdolect®/Serlect® in 1997, it has become possible to offer patients effective medicinal prevention and treatment without appreciable side-effects. It is hoped that this will have a beneficial effect on compliance.

#### **AN ATTRACTIVE PACKAGE SOLUTION**

However, better drugs with fewer side-effects are far from enough to convince all patients of the necessity of preventive maintenance therapy. A great deal also needs to be done to improve the individual patient's understanding and acceptance of the disease.

Schizophrenia generally affects the patient's cognitive skills, making it difficult for the person in question to learn and understand new concepts. That may have something to do with the lack of insight which is reflected in non-compliance. Scientific studies have shown, for example, that seriously ill psychotic patients with pronounced negative symptoms are unreceptive to psychotherapy; which undoubtedly aggravates the problems of non-compliance and increases the risk of relapse.

However, there is every indication that Serdolect®/Serlect® has an extremely good effect on the primary negative symptoms. It is very much to be hoped that this means an improvement in the patient's cognitive skills, which in turn increases the patient's insight into the disease, so that he or she becomes more motivated to participate in psychotherapeutic activities.

The combination of Serdolect®/Serlect® and Prelapse® is therefore an extremely attractive package solution.



*Jan Van der Heijdt, "An uplifting experience", oil painting on canvas, 120 x 90 cm.*

# LUNDBECK'S PRODUCTS

Lundbeck specialises in the development of new and better drugs for the treatment of diseases of the central nervous system. Through many years' targeted research, we have succeeded in creating a number of recognised original products, and more are on the way.

## ANTIDEPRESSANTS

Lundbeck was one of the first pharmaceutical companies to introduce 'Selective Serotonine Reuptake Inhibitors' - also called SSRIs. With that, a whole new standard was created for the treatment of depression. Cipramil®/Seropram®\* has a more specific action than the classic antidepressants and far fewer side-effects. And there are no longer serious problems with interaction if a patient is taking other drugs at the same time. With the development of SSRIs, it has thus become possible to treat a large group of patients with serious psychiatric diseases who were previously untreatable.

Cipramil®/Seropram® is one of the absolutely leading SSRI antidepressants on the market and is registered in 49 countries around the world.

Lundbeck's experience in the development of antidepressants relates to the beginning of the 1960s, when Saroten® was introduced. This was one of the first preparations for treatment of depression, and it is still regarded as the benchmark product when new antidepressants are being tested. Noritren® and Tymelyt® are other original Lundbeck products which, together with Saroten®, constitute a complete range of TriCyclic Antidepressants - the so-called TCAs.

In Germany, Promonta-Lundbeck also markets Deprilept®, a TCA that is particularly suitable for patients with agitated depression because it has a beneficial effect on anxiety.

## ANTIPSYCHOTICS

In 1996, Lundbeck introduced a new antipsychotic drug for treating schizophrenia. Serolect®/Serlect®\*\* represents a departure from earlier action principles, in that it binds selectively to the receptors in the brain that are thought to affect the development of schizophrenia. The selective action means that Serolect®/Serlect® reduces the symptoms without the very unpleasant side-effects that previously had to be accepted. The new drug is therefore a major advance for patients with a serious - often chronic - psychiatric disease.

Lundbeck has been developing antipsychotic drugs since the end of the 1950s, and our broad range includes Cisordinol® and Fluanxol® in several different formulations. The same drug can thus be used throughout the course of treatment from the acute psychotic phase to maintenance therapy, which is aimed at preventing relapses. In this context, the sustained-action depot formulations are of great importance because it is not so easy for the patient to forget to take the medicine.

In Germany, Promonta-Lundbeck also markets three major antipsychotics: Buteridol®, Lyogen® and Taxilan®. Buteridol® is a standard antipsychotic. Lyogen® is a well-known product that is similar to Fluanxol®, while Taxilan® is an antipsychotic with a highly sedative effect and few side-effects.

## PAIN THERAPY

Ketogan® is the oldest, original Lundbeck product, but is still regarded as one of the best for alleviating severe pain. For treatment of chronic pain, Lundbeck has developed a slow-release variant, Ketodur®, which slowly releases the active substances into the body. Ketodur® has the advantage that the patients get a constant analgesic effect and that they do not have to take their medicine as frequently as they used to.



In April 1997, we sold the rights to Ketogan® and Ketodur® to Searle Scandinavia (a division of Monsanto Sverige AB) as an element of our strategy of concentrating on a single core area (CNS).

For mild pain, such as headache, menstrual pain, etc, we market Treo®, which contains acetylsalicylic acid and caffeine.

## ANTI-PARKINSON'S PRODUCTS

Lundbeck's core area includes products for treatment of neurological diseases.

The anti-Parkinson's drug Parkinsan® was registered in Germany in April 1997 and launched directly afterwards. Together with the other products mentioned on the German market, Parkinsan® has been transferred to Promonta-Lundbeck by Byk Gulden Lomberg Chemische Fabrik in connection with a joint venture agreement from 1994. We have great expectations concerning Parkinsan® because this product, besides having a product profile similar to brands already on the market, has a unique effect on the tremor that characterises Parkinson's disease.

In 1996, following the signing of a cooperation agreement with Centaur Pharmaceuticals Inc., USA, Lundbeck was granted the right to use a molecule with a view to developing it into a product against Parkinson's disease. The product is at present in phase 1 in the USA.

\* Cipramil®, Seropram® and Cipram® are registered trademarks for citalopram.  
 \*\* Serdolect®/Serlect® are registered trademarks for sertindole.

## LUNDBECK'S PRODUCTS FOR TREATMENT OF DISEASES OF THE CENTRAL NERVOUS SYSTEM

### Antidepressants

Buroniil® (melperone)  
 Cipramil®/Cipram®/Seropram® (citalopram)



Vicky, 17 x 17 cm.

Depilept® (maprotiline)

Noritren®/Noritrilen® Sensaval® (nortriptyline)

Saroten®/Sarotex® (amitriptyline)

Saroten® Retard Sarotex® Retard (amitriptyline)

Tymelyt® (lofepramine)

### Antipsychotics

Buteridol® (haloperidole)

Cisordinol®/Clopixol® (zuclopenthixol)

Cisordinol® Depot Clopixol® Depot Clopixol® Inj. (zuclopenthixol decanoate)

Cisordinol-Acutard® Clopixol-Acutard® Clopixol-Acuphase® (zuclopenthixol acetate)

Deanxit® (flupentixol+melitracene)

Fluanxol®/Depixol® (flupentixol)

Fluanxol® Depot/Depixol® Inj. (cis(Z)-flupentixol decanoate)

Lyogen® (fluphenazine)

Serdolect®/Serlect® (sertindole)

Taxilan® (perazine)

Truxal®/Truxaletten® (chlorprothixene)

### Pain Therapy

Ketodur® (ketobemidone)

Ketogan® (ketobemidone + 3-dimethyl-amino-1,1-diphenylbutane hydrochloride)

Treo® (acetylsalicylic acid + caffeine)

### Anti-Parkinson's products

Parkinsan® (budipine)

# LUNDBECK WORLDWIDE

Lundbeck's head office is situated in Valby, near the centre of Copenhagen. It houses the Group's administration, research and development activities, and pharmaceutical production.

Chemical production takes place at two facilities, one in Lumsås, 100 km north west of Copenhagen, and the other in Seal Sands, near Newcastle in the U.K. Future expansion of production will take place mainly in Seal Sands, which offers excellent possibilities.

Lundbeck has its own subsidiaries in 24 countries. The subsidiaries are responsible for marketing and selling the Group's products in their respective markets.

13 representative offices look after Lundbeck's interests in the growth markets in the Far East, the Middle East and Eastern Europe. Lundbeck also uses a number of local agents.

A/S Lundbeck Overseas is in charge of the marketing and sale of the Group's products in those parts of the world in which Lundbeck is not represented in other ways. The activities are managed from regional offices in the Far East, the Middle East, North Africa, South America and Eastern Europe.

## PARENT COMPANY:

H. Lundbeck A/S  
Ottiliavej 9  
DK-2500 Copenhagen - Valby  
Tel: +45 3630 1311  
Fax: +45 3630 1940  
e-mail: initials@lundbeck.com.

## SYNTHESIS FACTORIES:

**Denmark**  
H. Lundbeck A/S  
Oddenvej 182, Lumsås  
DK-4500 Nykøbing Sj.

**United Kingdom**  
Lundbeck Pharmaceuticals Ltd.  
Seal Sands, Middlesbrough  
GB-Cleveland TS2 1UB

## SUBSIDIARIES:

**Australia**  
Lundbeck Australia Pty. Ltd.  
Unit 4/10 Gladstone Road  
AU-Castle Hill NSW 2154  
Tel: +61 2 9894 2100  
Fax: +61 2 9894 2522  
Managing Director: Steve Maritz

**Austria**  
Lundbeck Arzneimittel Ges.m.b.H.  
Brigittagasse 22-24  
Postfach 61, A-1201 Vienna  
Tel: +43 133 1070  
Fax: +43 133 1079  
Managing Director: Ernst Kutrovatz

**Belgium**  
Lundbeck N.V.  
Luchthavenlaan 20, B-1800 Vilvoorde  
Tel: +32 2251 0891  
Fax: +32 2251 8068  
Managing Director: Jacques Bedoret

**Canada**  
Lundbeck Canada Inc.  
413 St-Jacques Street West  
Suite FB-230  
CA-Montreal (Quebec) H2Y 1N9  
Tel: +1 51 4844 8515  
Fax: +1 51 4844 5495  
Managing Director: Ole Chrintz

**Denmark**  
Lundbeck Pharma A/S  
Dalbergstrøget 5, DK-2630 Taastrup  
Tel: +45 4371 4270  
Fax: +45 4371 4274  
Managing Director: Jan H. Iversen

A/S Lundbeck Overseas  
Ottiliavej 9, DK-2500 Copenhagen-Valby  
Tel: +45 3630 1311  
Fax: +45 3630 1545  
Managing Director: Karsten Gronemann

**Estonia**  
Lundbeck Eesti AS  
Riia 132, EE-2400 Tartu  
Tel: +37 2739 0161  
Fax: +37 2739 0183  
Managing Director: Håkan Kotka  
Market Manager: Erik Allikmets

**Finland**  
OY H. Lundbeck AB  
Lemminkäisenkatu 14-18 B  
FIN-20520 Turku  
Tel: +35 8 2251 0270  
Fax: +35 8 2251 2770  
Managing Director: Håkan Kotka

**France**  
Lundbeck S.A.  
37 avenue Pierre 1er de Serbie  
F-75008 Paris  
Tel: +33 1 5367 4200  
Fax: +33 1 4723 4510  
Managing Director: Eric Felber

**Germany**  
Promonta Lundbeck  
Arzneimittel GmbH & Co  
Amsinckstrasse 57-61, D-20097 Hamburg  
Tel: +49 4023 6490  
Fax: +49 40 2364 9255  
Managing Director: Flemming Juul Jensen

**Greece**  
Lundbeck Hellas S.A.  
64, Kifisias Ave.  
GR-151 25 Marousi, Athens  
Tel: +30 1680 5036  
Fax: +30 1680 5039  
Managing Director: John Bo Jacobsen

**Ireland**  
Lundbeck Ireland Limited  
Unit 5, Leopardstown Office Park  
Sandyford Industrial Estate  
Foxrock, IE-Dublin 18  
Tel: +35 3 1294 1544  
Fax: +35 3 1294 1547  
Managing Director: Pascal King

**Italy**  
Lundbeck Italia S.p.A.  
Via G. Fara 35, I-20124 Milan  
Tel: +39 2677 4171  
Fax: +39 2677 41720  
Managing Director: Franz Schneller  
Market Manager: Ettore Marre

**Latvia**  
SIA Lundbeck Latvia  
Kleistu iela 24, LV-1067 Riga  
Tel: +37 1241 4826  
Fax: +37 1930 9119  
Managing Director: Håkan Kotka  
Manager: Pauls Brieze

**The Netherlands**  
Lundbeck B.V.  
Hettenheuvelweg 37-39  
NL-1101 BM Amsterdam  
Tel: +31 2 0697 1901  
Fax: +31 2 0691 0632  
Managing Director: Stig Løkke Pedersen

**New Zealand**  
Lundbeck New Zealand Limited  
C/- Zuellig Pharma Limited.  
54 Carbine Road, NZ-Mt. Wellington  
Tel: +64 9570 1080  
Fax: +64 9570 1081  
Managing Director: Steve Maritz

**Norway**

H. Lundbeck A/S  
P.O. Box 361  
Lysaker torg 10, N-1324 Lysaker  
Tel: +47 6753 5372  
Fax: +47 6753 7707  
Managing Director: Stig Eilert Paulsen

**Portugal**

Lundbeck Portugal  
Produtos Farmacêuticos, Lda  
c/o Mr M.P. Barrocas  
Av. Fontes Pereira de Melo, 15-7  
PT-1050 Lisbon  
Managing Director: Lars Bang

**The Republic of Slovakia**

Lundbeck - Pharma AS  
Svetovalno podjetje D.O.O.  
Trzaska 2, SLO-61000 Ljubljana  
Tlf/fax: +38 66 1125 7276  
Managing Director: Ernst Kutrovatz  
Market Manager: Valerija Bali-Babli

**Spain**

Lundbeck España S.A.  
Av. Diagonal, 605. 4º-6º  
E-08028 Barcelona  
Tel: +34 3439 9905  
Fax: +34 3439 8339  
Managing Director: Lars Bang

**Switzerland**

Lundbeck (Schweiz) AG  
Cherstrasse 4  
CH-8152 Opfikon-Glattbrugg  
Tel: +41 1874 3434  
Fax: +41 1874 3444  
Managing Director: Franz Schnellier

**South Africa**

Lundbeck South Africa (Pty.) Limited  
372 Oak Avenue, Ferndale  
ZA-2125 Randburg  
Tel: +27 1 1886 7810  
Fax: +27 1 1886 1081  
Managing Director: Ben Christen

**Sweden**

H. Lundbeck AB  
Rundgängen 30 B  
P.O. Box 23, S-250 53 Helsingborg  
Tel: +46 4225 4300  
Fax: +46 4220 1719  
Managing Director: Rolf Gisel-Ekdahl

**United Kingdom**

Lundbeck Limited  
Sunningdale House  
Caldecotte Lake Business Park, Caldecotte  
GB-Milton Keynes MK7 8LF  
Tel: +44 19 0864 9966  
Fax: +44 19 0864 7888  
Managing Director: Jarne Elleholm

**USA**

The Lundbeck Corporation  
Law Offices of Krusch & Modell  
Mr. David M. Brandes  
10 Rockefeller Plaza  
US-New York, N.Y. 10020

**REPRESENTATIVE OFFICES:****Bulgaria**

A/S Lundbeck Overseas  
Representative Office  
World Trade Center, Office 906  
36, Dragan Tzankov Blvd.  
BG-1040 Sofia  
Product Manager: Alben Petrova

**The Czech Republic**

H. Lundbeck A/S  
Mosnova 4  
CZ-150 00 Prague 5  
Manager: Martin Pospíšil

**Egypt**

Lundbeck Egypt Scientific Office  
c/o Copad Egypte  
11, Emad El Din Street  
EG-Cairo  
Managing Director:  
Mahmoud Hosney Abdel Kader

**Hong Kong**

A/S Lundbeck Overseas  
1409, 14F Harcourt House  
39 Gloucester Road  
HK-Wan Chai  
Manager: Lars Knudsen

**Hungary**

H. Lundbeck A/S  
Andrássy út 64  
HU-1062 Budapest  
Manager: Lajos Hári

**Israel**

Lundbeck Israel  
c/o A. Lapidot Pharmaceuticals Ltd.  
(Herzlia)  
2, El Al Street  
IL-Herzlia Pituach 46120  
Manager: Zipi Natan

**Japan**

H. Lundbeck A/S  
Japan Representative Office  
1-2-18 Naka-Kasai  
Ukita Homes, Room 1402  
JP-Edogawa-Ku, Tokyo 134  
Manager: Gido Shumitsu

**Pakistan**

Lundbeck Scientific Office  
c/o Pharmaceutical Management  
Services (Pvt) Ltd.  
C6-2B, 3rd Street  
Bath Island, Clifton  
PK-Karachi  
Country Manager: Syed Aqeel Abbas

**Poland**

H. Lundbeck A/S  
Warsaw Branch Office  
Kubickiego 9/6  
PL-02-954 Warszawa  
Acting Manager: Teresa Bugera-Piecuch

**Saudi Arabia**

H. Lundbeck A/S  
c/o Annahdah Medical Co. Ltd.  
P.O. Box 4683  
SA-Jeddah 21412  
Manager: Abdul Rhman A. Ali

**Singapore**

A/S Lundbeck Overseas  
Far East Representative Office  
10 Anson Road  
26-11 International Plaza  
SG-079903 Singapore  
Asst. Regional Manager: Raymond Lam

**The Republic of Slovakia**

H. Lundbeck A/S  
Zastúpenie pre Slovensko  
Bajkalská 18/A  
SK-82108 Bratislava 2  
Manager: Vladimír Marko

**United Arab Emirates**

Lundbeck Dubai  
c/o Modern Pharmaceutical Co.  
Airport Road, Port Saeed  
P.O. Box 1586  
AE-Dubai

**Gulf Countries:**

Medical Advisor: Wagih M. Fayed

**Indian Subcontinent:**

Area Manager: Mammen Mathew

**Lundbeck Foundation**

Ottilliavej 9  
DK-2500 Copenhagen - Valby  
Tel: +45 3630 1311  
Fax: +45 3630 4163

**Lundbeck International  
Neuroscience Foundation**

Dalbergstrøget 5  
DK-2630 Taastrup  
Tel: +45 4371 4373  
Fax: +45 4371 4273



# THE LUNDBECK FOUNDATION AWARD FOR OUTSTANDING RESEARCH

H. Lundbeck A/S is fully owned by the Lundbeck Foundation, which every year makes substantial donations to research projects at Danish universities and other institutes of higher education. Grete Lundbeck, widow of the company's founder, established the Lundbeck Foundation out of her own funds in the 1950s. This year, The Lundbeck Foundation Award for Outstanding Research, amounting to DKK 300,000, has been awarded to Research Professor Peter Eigil Nielsen, Dr.Sc., Center for Biomolecular Recognition at the University of Copenhagen's Panum Institute.

Professor Peter E. Nielsen has done outstanding research for many years in the interface between chemistry and molecular biology. Together with others, he has developed the PNA molecule, which is the subject of research going on at The Danish National Research Foundation's Center for Biomolecular Recognition. This new development within genetic research is attracting immense interest.

Chemically, PNA is a hybrid between DNA and an albumin, but its structure is entirely similar to that of the natural DNA molecule, which contains the genetic code for the development of every organism. PNA can thus not change the genetic material itself, but it can penetrate directly into the individual cell and influence the specific gene that causes a given disease. That opens up entirely new possibilities for effective diagnosis and treatment of a wide range of serious diseases, such as cancer and AIDS.

Researchers all over the world are therefore now working to identify the genes that must be influenced in order to intervene in specific diseases and are seeking a technique that will make it easier for the PNA molecule to penetrate into the cells. When that technique is found, PNA might really change the future prospects for millions of people with otherwise incurable diseases.

The award to Professor Peter E. Nielsen is the tenth award made by the Lundbeck Foundation. The prize was established in 1987 in memory of P.V. Petersen, who for many years headed Lundbeck's research and development. It has since been awarded to prominent researchers within scientific and medical fields of biochemistry, pharmacology, basic biomedicine and neurology.

In the past ten years, the research prize from the Lundbeck Foundation has been awarded to the following researchers:

**1987**

P.V. Petersen, M.Sc.  
Development of psychopharmacological and other medical drugs

**1988**

Professor Mogens Schou  
Psychopharmacology

**1989**

Professor Povl Krogsgaard-Larsen  
Pharmacology

**1990**

Professor Erik Strömgren  
Psychiatry

**1991**

Professor Lars-Inge Larsson  
Molecular cell biology

**1993**

Professor Carl-Gerhard Gottfries  
Psychiatry and neuropathology

**1994**

Professor Niels A. Lassen  
Neurophysiology

**1995**

Professor Arvid Carlsson  
Psychopharmacology

**1996**

Professor Per Andersen  
Neurophysiology

**1997**

Research Professor Peter E. Nielsen  
Molecular biology



*The recipient of The Lundbeck Foundation Award for Outstanding Research in 1997 is Research Professor Peter E. Nielsen, Dr.Sc.*

# ACCOUNTS



# SUMMARY FOR THE GROUP

## 1987-1996

Profit and loss account (DKKm)	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987
Net turnover	2,326	1,853	1,330	934	768	746	609	588	584	524
Profit before R&D costs	641	449	322	202	184	144	93	90	64	67
R&D costs	332	253	186	181	133	93	87	78	70	66
Operating profit	310	204	150	30	54	54	11	15	-1	0
Profit before tax	311	228	141	53	56	223	29	27	27	9
Profit after tax	219	153	103	38	40	213	20	45	30	2

Assets (DKKm)	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987
Fixed assets	926	777	593	457	365	260	269	245	234	194
Stocks	251	175	123	103	89	83	75	79	83	95
Receivables	496	429	287	210	162	155	142	122	105	102
Cash and securities	655	554	472	404	445	449	197	221	218	211
Total assets	2,328	1,935	1,475	1,174	1,061	947	683	667	640	602

Liabilities (DKKm)	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987
Capital and reserves	1,153	939	828	739	721	686	474	458	416	385
Provisions	139	102	82	48	31	45	60	60	87	97
Interest-bearing debt	585	490	224	128	108	40	35	29	30	22
Non-interest-bearing debt	451	404	341	259	201	176	114	120	107	98
Total liabilities	2,328	1,935	1,475	1,174	1,061	947	683	667	640	602

Cash flow analysis (DKKm)	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987
Cash flow from operations	282	100	191	66	74	289	35	41	65	16
Cash flow from investments	-224	-274	-203	-132	-141	-41	-52	-36	-62	-37
Cash flow from operations and investments	58	-174	-12	-66	-67	248	-17	5	3	-21
Cash flow from financing	44	257	79	24	68	4	-8	-1	8	1
Net change in cash	102	83	67	-42	1	252	-25	4	11	-20
Change in interest-bearing net cash	16	-185	-30	-66	-67	248	-17	5	3	-21
Interest-bearing net cash, year-end*	70	64	248	276	337	409	162	192	188	189

\* Interest-bearing net cash, year-end is stated excl. exchange rate adjustments of interest-bearing debt and cash in foreign currencies.

Key figures	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987
Average number of employees	1,829	1,545	1,205	978	887	862	949	953	980	973
Net profit ratio before R&D costs (%)	27.6	24.2	24.2	21.6	23.9	19.3	15.3	15.3	11.0	12.8
Net profit ratio (%)	13.3	11.0	11.3	3.2	7.1	7.2	1.8	2.5	-0.2	0.1
Return on assets (%)	13.3	10.5	10.2	2.6	5.1	5.7	1.6	2.2	-0.2	0.1
Capital turnover (%)	99.9	95.8	90.1	79.5	72.4	78.7	89.2	88.2	91.3	87.0
Solvency ratio (%)	49.5	48.5	56.1	62.9	67.9	72.4	69.4	68.6	65.1	64.0
Return on equity (%)	29.7	25.8	18.0	7.3	7.9	38.5	6.1	6.1	6.7	2.3
R&D costs as a percentage of turnover	14.3	13.7	14.0	19.4	17.4	12.4	14.3	13.3	12.0	12.7
Capital investments as a percentage of turnover	9.9	15.2	15.3	15.1	18.9	7.2	9.4	10.0	11.5	7.2

Note: The profit before tax and cash flow for the year 1991 includes extraordinary income of DKK 173 million derived from the disposal of business activities.

The comparative figures for the years 1987-1994 in the summary for the Group have not been restated completely accordingly.

#### Definitions

Interest-bearing net cash	Cash and securities less interest-bearing debt.
Net profit ratio before R&D costs	Profit before research and development costs as a percentage of net turnover.
Net profit ratio	Operating profit as a percentage of net turnover.
Return on assets	Operating profit as a percentage of total assets.
Capital turnover	Net turnover as a percentage of total assets.
Solvency ratio	Capital and reserves as a percentage of total liabilities.
Return on equity	Profit before tax as a percentage of the average calculated capital and reserves.
R&D costs as a percentage of turnover	R&D costs as a percentage of net turnover.
Capital investments as a percentage of turnover	Intangible and tangible gross investments as a percentage of net turnover.

# COMMENTS ON THE ACCOUNTS

## CHANGES IN ACCOUNTING POLICIES

With effect from the annual accounts for 1996 a change has been made in the policies for valuation of the Group's loan and bond portfolio and of the holding of forward exchange contracts. This change must be seen in the light of the fact that in 1995 Lundbeck decided to focus on interest-bearing net cash, which is an important key figure in Lundbeck's financial management. Balance sheet liabilities were thus divided into interest-bearing and non-interest-bearing debt according to a new principle.

The continuation of this division is the background for the change of principle for the 1996 accounts, under which the Group's loan and bond portfolio as well as the holding of forward exchange contracts are stated at the price ruling at the balance sheet date. The purpose of this change is to eliminate the asymmetry which has so far existed in connection with the valuation of the Group's interest-bearing assets and liabilities. This change in policy permits an accrual of the financial items in the individual financial years in accordance with a "mark to market" calculation, as unrealised gains on the bond portfolio are now included at the same time as the loan portfolio is adjusted to market value. In this area, the Lundbeck Group has thus started using a more objective valuation policy. Unrealised gains and, as previously, unrealised losses pertaining to the Group's financial instruments

under financial items are now included in the profit and loss account.

This policy - which is new for Danish non-financial undertakings - means that the result of the management of interest-bearing net cash is reflected in the profit and loss account. The comments on the statement of sources and application of funds include further details as to how interest-bearing net cash is included in the financial management.

The effect of the change in accounting policies on the profit and loss account is shown in the table below.

The effect on the profit and loss account for 1995 is taken directly to capital and reserves at the beginning of 1996. Another consequence of the changed accounting policies is that at the beginning of 1995 capital and reserves was increased by DKK 1.2 million, so that the accumulated net effect of the change in the accounting policies is a reduction in capital and reserves by DKK 4.8 million at the beginning of 1996.

## OTHER COMMENTS ON ACCOUNTING POLICIES

The profit and loss accounts for foreign subsidiaries are translated into Danish kroner at the rates of exchange ruling at the balance sheet date in accordance with the accounting policies applied so far. As it appears from note 6 to the annual accounts, the effect on the con-

solidated profit and loss account of using the prices ruling at the transaction date, cf. Accounting Standard No. 9, is without significance for the assessment of the individual items in the profit and loss account and of the profit and loss account as a whole.

The statement of sources and application of funds is modified in relation to Accounting Standard No. 11, as this statement focuses on key figures for "interest-bearing net cash", which is a central key figure in the Group's financial management. The year's change in interest-bearing net cash appears as a subtotal before change in interest-bearing debt.

## TURNOVER

In 1996, the Lundbeck Group achieved a turnover of DKK 2.326 billion, which corresponds to the expectations for the year. Seen in relation to 1995, this is an increase of 26%.

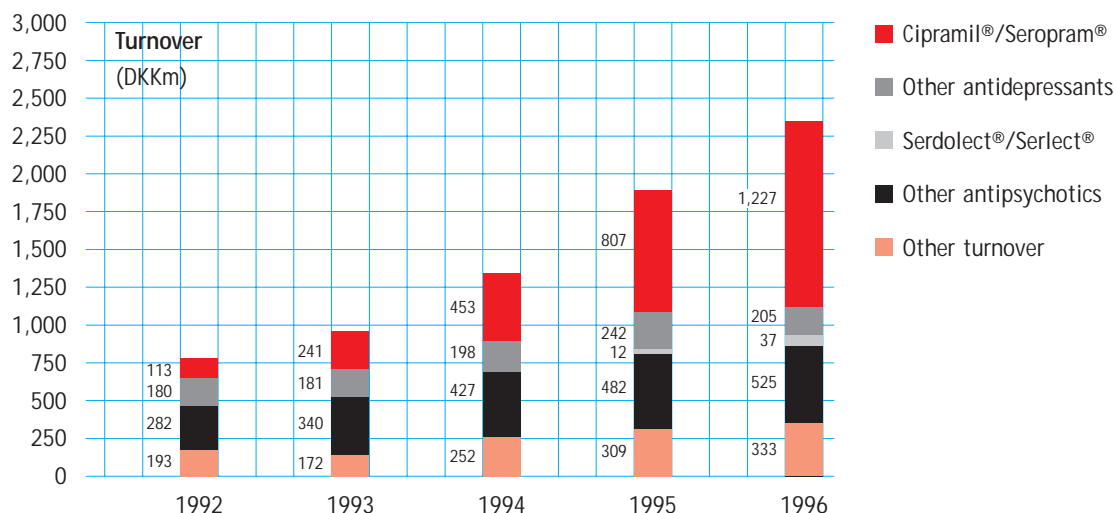
This increase is principally due to a continued positive development in sales of the Group's antidepressant Cipramil®/Seropram®, which increased by 52% in 1996. In all markets, sales have developed favourably. In the new markets, ie the UK, France, Spain, Germany, Italy and Norway, into which Cipramil®/Seropram® was introduced in the second half of 1995 and in 1996, sales have increased by more than DKK 200 million compared with the previous year. In the other markets, where the product has been marketed for some years, the positive development has continued with an increase in sales of 27% in relation to 1995.

At the end of 1996, Lundbeck's new antipsychotic Serdolect®/Serlect® was registered in 13 EU countries. In 1996, sales of Serdolect®/Serlect® amounted to DKK 38 million, the majority being sales to Abbott Laboratories Inc., Lundbeck's partner on the American market.

Sales of Lundbeck's established products have increased by 3% compared with 1995. The continued increase in the number of markets for the established products has thus set off the declines in price in some markets as well as competition from new products.

## Effect on the profit and loss account of the change in the accounting policies

Amounts in DKKm	1996	1995
Discontinued depreciation in connection with capitalised capital loss on mortgage loan	+0.5	+0.4
Unrealised profit on forward exchange contracts, charged to revenue	+0.3	+0.1
Effect of adjustment at market price in connection with mortgage debt	-0.8	-10.1
Effect of adjustment at market price in connection with securities	+2.9	+1.0
Effect on tax on the profit for the year	-0.9	+2.6
Effect on the profit and loss account after tax	+2.0	-6.0



## COSTS

Total production, distribution and administration costs increased by 20% from 1995 to 1996.

Production costs grew by 4% in 1996. This low growth rate is due to a change in the composition of sales, as there has been a shift towards products with a higher contribution ratio.

Distribution costs increased by 42% in 1996. This increase is primarily attributable to costs for preparation of the introduction of the new product Serdolect®/Serlect® into a number of European markets, to special marketing costs in connection with the introduction of Cipramil®/Seropram® into new markets as well as to the general market expansion.

Administration costs grew by 21% in 1996 and thus make up 19% of the turnover compared with 20% in 1995. Administration costs include costs for an extensive upgrading of the Group's IT application. This comprises a common technological application, an international communications network as well as comprehensive training of all the Group's employees. The objective is to strengthen Group efficiency and competitiveness through information technology. The increase in administration costs is also attributable to the continued development of the capacity in new and established sales subsidiaries.

## RESEARCH AND DEVELOPMENT COSTS

Total research and development costs grew by 31% to DKK 332 million. As in the two previous years, research and development costs make up 14% of the turnover. The costs pertain partly to the existing products, Cipramil®/Seropram® and Serdolect®/Serlect®, and partly to a number of new products within the Group's strategic core areas.

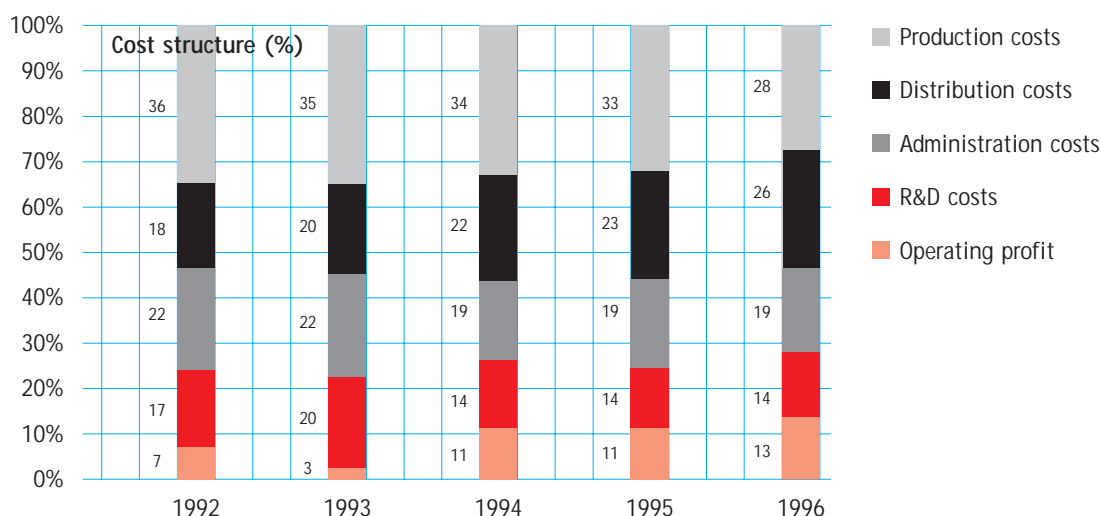
## OPERATING PROFIT

Profit before research and development costs grew by 43%, while operating profit improved by 52% from 1995 to 1996.

Thus the Group's expectations for the operating profit for 1996 were met despite the fact that in 1996 Lundbeck had a very high level of operating investments in connection with the introduction of new products into a number of markets as well as a continued increase in the number of markets. In 1996, Lundbeck realised the expected financial profits through a positive market development and a considerable financial adjustability supported by a tight and focused financial management of the Group's many activities and units. The positive development is reflected in the net profit ratio, which increased from 11% in both 1994 and 1995 to 13% in 1996.



# COMMENTS ON THE ACCOUNTS



## PROFIT FOR THE YEAR

Profit for the year before tax increased by 36% to DKK 311 million.

The year's tax amounts to DKK 92 million. The relative tax charge has been reduced from 33% in 1995 to 30% in 1996. The year's cash tax is DKK 61 million, corresponding to an effective tax rate of 20%, while the increase of deferred tax amounts to DKK 31 million.

Profit for the year is DKK 219 million, corresponding to an increase of 43%. Minority interests account for DKK 1 million of the profit. With this profit, Lundbeck's targets for 1996 were met.

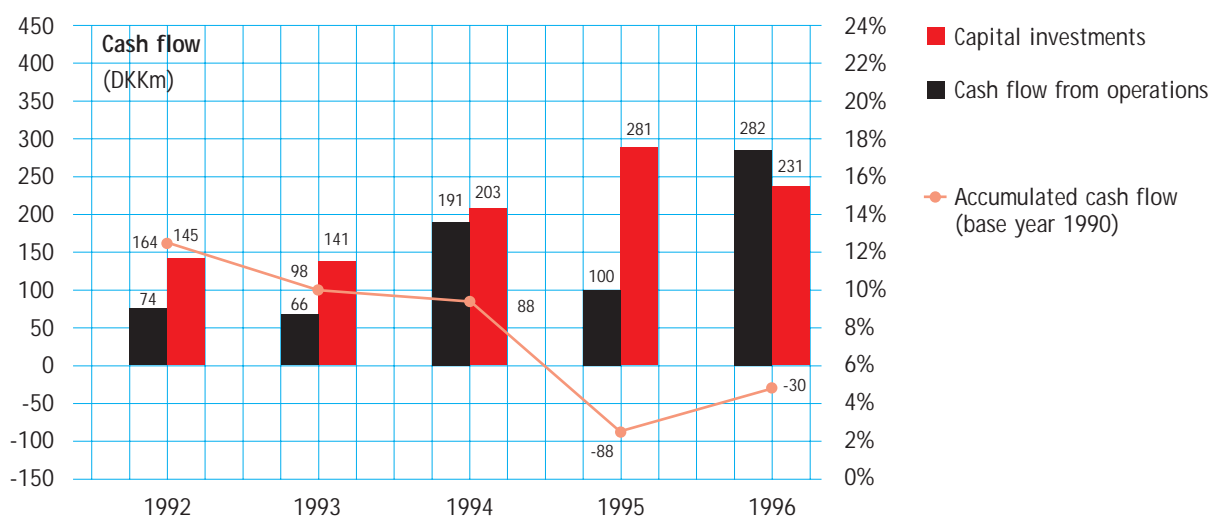
## STATEMENT OF SOURCES AND APPLICATION OF FUNDS

The Group's target for 1996 of a significant improvement of cash flow from operations and investments was met with a positive cash flow of DKK 58 million. Lundbeck's cash flow is thus positive for the first time since 1991. Compared with 1995, this is a marked improvement by DKK 232 million, as cash flow from operations and investments last year was negative by DKK 174 million.

The reason for this significant improvement is primarily that cash flow from operations was improved by DKK 182 million to DKK 282 million in 1996, as a consequence of the markedly improved 1996 profit as well as the fact that the year's financial commitments were reduced significantly compared with 1995.

Furthermore, the improvement is due to the fact that Lundbeck's capital investments in 1996 were reduced by DKK 50 million compared with 1995. The significant growth in capital investments over a number of years has thus been replaced by a stabilisation, which is expected to continue for the next couple of years. In 1996, the most important capital investments were in an extension of laboratories and office facilities for Research and Development. In the coming years, further investments in modernisation and development of the settings for Research and Development are expected to constitute the majority of the Group's capital investments.

It appears from the statement of sources and application of funds that Lundbeck's interest-bearing net cash at year-end 1996 was improved by DKK 16 million to DKK 70 million compared with 1995.



Thus, one of Lundbeck's important targets has been reached. The Group wishes to maintain financial flexibility and mobility, and therefore focuses on the development in interest-bearing net cash.

At the end of 1996, the Group's cash amounted to DKK 655 million. This amount does not include Lundbeck's full possibilities for a long-term mortgage of the Group's properties; nor does it include other credit facilities available through the Group's bankers.

The considerable shift between long-term and short-term interest-bearing debt is attributable to the fact that the majority of the Group's long-term debt has been terminated with effect from 1 January 1997. The mortgage credit loans terminated must thus be considered as short-term debt with repayment within one year. The terminated loans have been refinanced by means of short-term CIBOR loans, whereas the commitment remains long.

#### CAPITAL AND RESERVES

As at 31 December 1996, capital and reserves amounted to DKK 1,153 million after employee bonus amounting to DKK 6 million and writedown due to changed accounting policies as at 1 January 1996 amounting to DKK 5 million.

The return on capital and reserves was 29.7% in 1996 against 25.8% in 1995. The equity ratio was 49.5% at year-end 1996 compared with 48.5% at year-end 1995.

#### EMPLOYEES

In 1996, the average number of employees was 1,829. Compared with 1995, this is an increase of 284 persons. The Group's subsidiaries account for 60% of this increase.

Under a temporary bonus scheme for 1996, an employee bonus of DKK 6 million is payable to the parent company's employees. For each employee, the bonus amounts to 1.9% of the annual pay. This scheme will be replaced by a permanent scheme from 1997.

#### SHAREHOLDERS

With reference to Section 28A of the Danish Companies Act, it is disclosed that The Lundbeck Foundation, Ottiliavej 9, DK-2500 Copenhagen-Valby, owns 100% of the share capital.

# FINANCIAL COMMENTS

## GENERAL

The Lundbeck Group's financial income and expenses in 1996 were influenced by heavy fluctuations in the Danish interest rate level as well as by the political unrest in France, Spain, Italy and Sweden at the beginning of the year. In 1996, Lundbeck thus had a net interest expenditure due to the fact that the Group's loan portfolio was financed by long-term bonds with a high rate of interest, while the Group pursued a conservative investment strategy for the money market-like bonds in the portfolio until the autumn of 1996. However, the net interest expenditure was set off by capital gains on the bond portfolio in the second half of 1996.

## BOND PORTFOLIO MANAGEMENT

At year-end 1996, the market value of the Group's bond portfolio amounted to DKK 417.6 million. During the year, the portfolio strategy was revised currently due to the heavy fluctuations in the interest rate level, primarily in the first half of 1996. For the year in general, net capital gains were realised on the bond portfolio. Interest income reflects the conservative strategy, causing the yield for the year as a whole to finish just above money market level.

The modified duration (BPV - Basis Point Value), which expresses the bond portfolio's price sensitivity, was 6.0 at year-end 1996. The sensitivity of Lundbeck's bond portfolio can be illustrated thus: an increase in interest rates of 1/2 percentage point would lead to a

price loss of DKK 13.5 million, whereas an interest rate decline of 1/2 percentage point would lead to a capital gain of DKK 11.8 million on the bond portfolio. The Group's bond portfolio bore interest at an average rate of 7.65% in relation to the market value as at 31 December 1996.

## LOAN PORTFOLIO MANAGEMENT

In 1996, a refinancing and conversion of the Group's loan portfolio were carried out. The refinancing meant a reduction in the number of the Group's lenders providing loans on mortgage credit-like terms.

The Group's loans on mortgage credit-like terms were the following:

	Loan amount	Interest rate	Term to maturity
Mortgage credit loan (refinanced as at 1 January 1997)	DKKm 346.6	8.08%	0 years
Interest adjustment loan	DKKm 32.3	9.40%*	15 years

\*Interest adjustment as at 1 April 1998.

The average rate of interest in connection with the financing of the loan portfolio was 8.19% p.a. as at 31 December 1996. As at 1 January 1997, the majority of the Group's loans were converted into one short-term CIBOR (Copenhagen-Inter-Bank-Offered-Rate) based loan. Thus, the interest on the loan was reduced by approx. 4 percentage points to the level 4% p.a. This refinancing makes possible a flexible interest rate fixing as well as a quick matching of financial liabilities and

assets. Furthermore, the change to new accounting policies, under which both the loan and the bond portfolios are converted to market value, means that this effect is reflected in the financial profits for the individual years. This was not possible under the accounting policies previously applied.

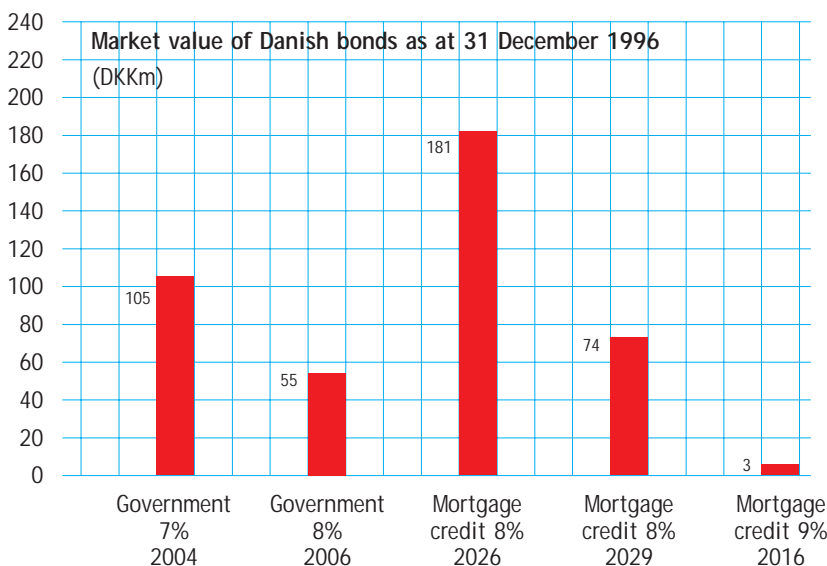
In addition to the provision of loans on mortgage credit-like terms, the Group uses its bankers for short-term financing and operating credits.

## CURRENCY MANAGEMENT

Lundbeck's currency management is governed by a policy approved by the Supervisory Board, which establishes a framework for the use of financial instruments, hedging horizons, bankers etc. The hedging horizon for the Group's currency hedging continues to be 12 months. As a principal rule, Lundbeck hedges net currency cash flows and not balance sheet items. Only commercial hedging is carried out by means of forward exchange contracts.

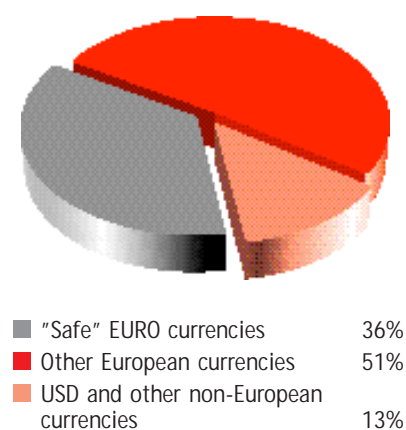
The Group's currency management is undertaken centrally by the Treasury & Tax department of H. Lundbeck A/S.

At year-end 1996, just below 13% of the Group's budgeted cash flows in foreign currencies for 1997 were hedged by means of forward contracts. This hedging concerns receivables payable in the following currencies: FRF, BEF, ATS, GBP and FIM. In 1997, a revision of the Group's currency management will be carried out.

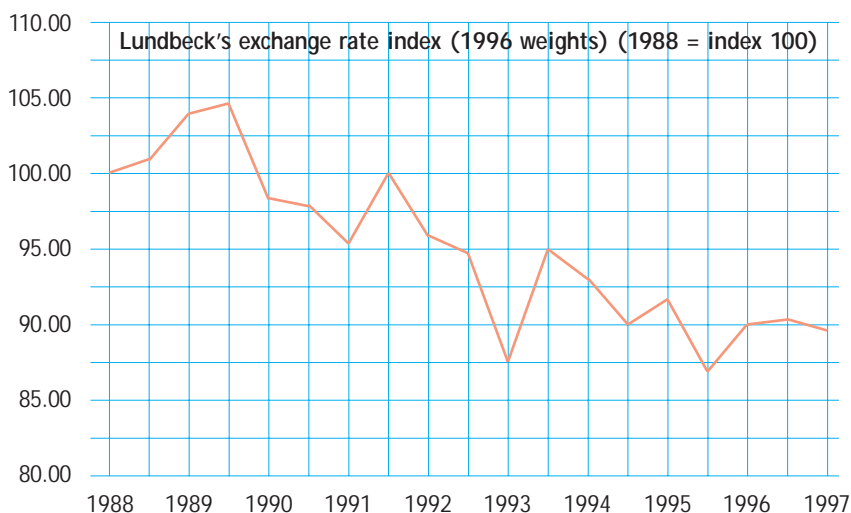
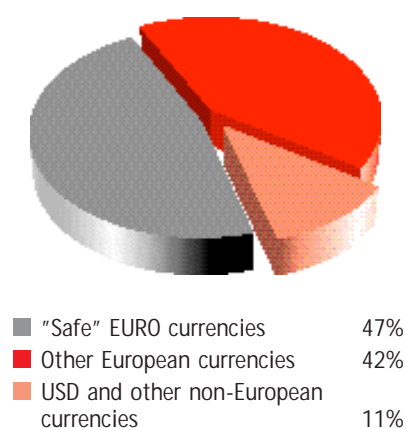


Lundbeck's cash flows in foreign currencies in 1996 were concentrated around SEK, FRF, FIM and DEM block currencies and are also expected to be so in 1997. In addition to this, the cash flow in GBP is expected to be on the increase. Of the Group's total cash flows in foreign currencies in 1996, 36% of the cash flow was in the - as at 1 January 1999 - so-called "safe" EURO currencies. This share is increasing to 47% in the budgeted foreign currency cash flows for 1997.

#### H. Lundbeck A/S and its Danish subsidiaries' incoming cash flow in foreign currencies: Realised 1996



#### H. Lundbeck A/S and its Danish subsidiaries' incoming cash flow in foreign currencies: Budget 1997



The classification of "safe" EURO currencies from 1999 includes the following currencies: ATS, BEF, DEM, FIM, FRF and NLG, which are expected to proceed to stage 3 of the EMU cooperation, entailing the establishment of a common currency, the EURO, from 1999.

With the exception of 1993, there was a slight improvement of the Lundbeck Group's exchange rate index for the first time since 1989. This is an indication of Lundbeck's competitiveness in the long term. Lundbeck's exchange rate index (the reciprocal krone rate index weighted with the shares of Lundbeck's trading partners) was thus improved by approx. 0.4% in 1996. This is mainly due to the strengthening of the Swedish krone in 1996.

Lundbeck's considerable growth in turnover in the period 1988-1996 was achieved despite an unfavourable exchange rate development for the Group in this period.

#### CASH MANAGEMENT

When proceeding to stage 3 of the EMU in 1999, a well-planned cash management structure will provide significant advantages. In this field, a number of measures have been adopted in 1996 with the purpose of strengthening the Group's cash management as well as creating a platform for cash pooling/ interest netting across borders. From 1996, the Treasury & Tax department of H. Lundbeck A/S functions as an internal bank for the Group's companies within the fields of deposits, lending and of management of currency exposure. Furthermore, in 1996 an analysis of specific matters concerning the cash management in the Group's companies was carried out. The results of this analysis form the basis of a new bank policy for the Group's companies as well as a revision of existing procedures in this area. Moreover, there will be a greater focus on the individual Group companies' abilities to generate cash flows from self-financing, cf. the statement of sources and application of funds. The establishment of a common external banking structure is expected to be commenced in 1997. This new, international banking structure is to fulfill the Group's future requirements and wishes.



# ACCOUNTING POLICIES

## GENERAL

The annual accounts and the consolidated accounts have been prepared in accordance with the Danish Company Accounts Act and good accounting practice as well as generally accepted Danish accounting standards. The profit and loss account items for foreign subsidiaries are translated at the exchange rates ruling at the balance sheet date in accordance with the policy of previous years; translation at the exchange rates ruling at the transaction date appears from note 6.

**The accounting policies for 1996 have been changed in the following areas:**

- Securities are stated at the price ruling at the balance sheet date.
- Outstanding forward exchange contracts are stated at the price ruling at the balance sheet date.
- Mortgage debt and other interest-bearing debt are stated at the price ruling at the balance sheet date; thus capital losses arising from the raising of mortgage loans are no longer capitalised.

All value adjustments are, therefore, included in the profit and loss account under financial items.

The accumulated effect of the changes is taken to capital and reserves and the comparative figures have been restated in accordance with this new policy. The significance of the changes to the accounting figures is described in further detail in the comments on the accounts.

Otherwise, the accounting policies applied are consistent with those of the previous year.

## CONSOLIDATION PRINCIPLES

The consolidated accounts comprise H. Lundbeck A/S (the parent company) and companies in which the parent company holds more than 50% of the voting rights or otherwise exercises a controlling influence. A Group overview is given in note 8.

Intercompany income and expenses, shareholdings, balances and dividends as well as unrealised intercompany profits on stocks are eliminated.

In the consolidated accounts, the book value of the parent company's shareholdings in the subsidiaries has been set off against the parent company's share of the subsidiaries' capital and reserves as calculated at the time when the Group relationship was established (past-equity method). In the consolidated accounts the difference arising from the set-off has been allocated to the assets and liabilities whose value, at the establishment of the Group relationship and in accordance with the Group's accounting policies, was higher or lower than the one at which they were recorded in the accounts of the subsidiaries. So far no other differences (goodwill) have been ascertained.

Newly acquired subsidiaries are included in the profit and loss account from the date of acquisition. Subsidiaries sold or wound up are included up to the time of sale or winding up.

## TRANSLATION OF FOREIGN CURRENCIES

Receivables and debt denominated in foreign currencies are translated into Danish kroner at the rates of exchange ruling at the balance sheet date. Both realised and unrealised exchange adjustments are included in the profit and loss account.

Forward contracts outstanding at the balance sheet date are stated at the forward rate ruling at the balance sheet date, and exchange adjustments in relation to the contracted forward rates are included in the profit and loss account.

The profit and loss accounts and balance sheets of foreign subsidiaries are translated into Danish kroner at the rates of exchange ruling at the balance sheet date. A translation of the main items of the profit and loss account to the rates of the transaction date is given in note 6. The exchange-rate difference relating to the net assets of these subsidiaries at the beginning of the financial year is taken directly to capital and reserves.

## STATEMENT OF SOURCES AND APPLICATION OF FUNDS

The statement of sources and application of funds is prepared according to the indirect method based on the profit for the year before tax. The statement of sources and application of funds shows the Group's cash flow with spe-

cial focus on the cash flow from operations and investments. Furthermore, the statement of sources and application of funds shows the year's change in interest-bearing net cash as well as the Group's liquidity position at year-end.

## PROFIT AND LOSS ACCOUNT

### NET TURNOVER

Net turnover comprises invoiced sales for the year less VAT, return goods and price reductions directly connected with sales.

Moreover, net turnover includes fees and licence income as well as non-refundable down payments received during the year. Large down payments received which represent an obligation to pay future costs are recorded on an accruals basis.

### RESEARCH AND DEVELOPMENT COSTS

Research and development costs comprise costs attributable to the Group's research and development activities. As a principal rule, the Group charges research and development costs to the profit and loss account as they are incurred.

Research and development costs linked to product-related development loans are capitalised.

### INCOME FROM SHAREHOLDINGS

The parent company's profit and loss account includes the parent company's proportional share of the subsidiaries' results after deduction of the year's change in unrealised intercompany profits. Shares of the net result recognised as income are transferred to the reserve for net revaluation according to the equity method to the extent that they exceed dividend received from the subsidiaries.

### TAX

Tax on the profit or loss for the year comprises current tax, the year's adjustment of deferred tax and tax relating to income from shareholdings in subsidiaries.

The provision for deferred tax is the computed tax effect of the accumulated timing differences between amounts as stated in the accounts and as computed for taxation purposes.

## THE BALANCE SHEET

### INTANGIBLE FIXED ASSETS

Intangible fixed assets are stated at cost less accumulated amortisation and writedowns.

Capitalised research and development costs are written off on a straight-line basis in line with earnings over a period corresponding to the unexpired period of the lives of the relevant patents with a maximum of 20 years.

Leasehold improvements are written off over the term of the lease, with a maximum of 10 years.

### TANGIBLE FIXED ASSETS

Tangible fixed assets are stated at cost plus any revaluations and less accumulated depreciation and writedowns.

Tangible fixed assets are depreciated on a straight-line basis over the expected lives of the assets as follows:

Buildings	30 years
Installations	10 years
Technical installations and machinery	3-10 years
Other fixtures and equipment	3-10 years

Improvements and acquisitions at a cost not exceeding DKK 50,000 are charged to the profit and loss account in the year of acquisition (DKK 30,000 in 1995).

### FINANCIAL FIXED ASSETS

Shares in subsidiaries are stated in the parent company's accounts according to the equity method, ie at the equity value according to the accounts less unrealised intercompany profits.

Other capital holdings are valued at cost.

### STOCKS

Raw materials, packaging and goods for resale are valued at the latest known cost at the balance sheet date, which corresponds essentially to cost computed according to the FIFO principle.

Work in progress and finished goods produced by the company are valued at cost, ie the cost of materials and direct production wages. Stocks do not include indirect production costs.



Carla Baruch, oil on cardboard, 73 x 54 cm.

Writedown to net realisable value is made if it is lower than the acquisition or cost price, respectively.

### SECURITIES

Securities are stated at the price ruling at the balance sheet date.

### PROVISIONS

Provision for pension liabilities not covered by insurance is made as a liability under provisions. The statement of this liability is based on actuary calculations.

### INTEREST-BEARING DEBT

Mortgage debt and other debt are listed at the price ruling at the balance sheet date. Other debt includes, among other things, loans from the Development Fund for the financing of research and development projects. For research projects in progress the loan will be written down if the company discontinues the development or fails to market the products concerned. Development loans relate to capitalised research and development costs.



*Win Van Niel, "Daoux Rex", bronze, 35 x 25 x 8 cm.*

# PROFIT AND LOSS ACCOUNT

PARENT COMPANY			GROUP	
1995 DKKm	1996 DKKm		1996 DKKm	1995 DKKm
1,042.8	1,413.7	Net turnover	2,326.4	1,852.6
469.1	534.2	Production costs	636.2	612.9
157.3	269.6	Distribution costs	608.7	426.5
160.8	202.5	Administration costs	440.1	364.0
255.6	407.4	<b>Profit before research and development costs</b>	641.4	449.2
221.2	331.0	Research and development costs	332.1	253.2
12.7	3.1	Other operating income	6.7	16.6
5.9	2.1	Other operating expenses	5.6	8.0
41.2	77.4	<b>OPERATING PROFIT</b>	310.4	204.6
155.3	234.8	Income from interests in subsidiaries, before tax		
21.3	-2.6	Financial items, net	0.4	23.6
217.8	309.6	<b>PROFIT BEFORE TAXES</b>	310.8	228.2
75.2	92.0	Tax on the profit for the year	92.0	75.2
142.6	217.6	<b>PROFIT FOR THE YEAR</b>	218.8	153.0
		<b>THE GROUP PROFIT FOR THE YEAR IS DISTRIBUTED AS FOLLOWS:</b>		
		Minority interests' share of the profit	1.2	10.4
		H. Lundbeck A/S' share of the Group profit for the year	217.6	142.6
		<b>TOTAL GROUP PROFIT FOR THE YEAR</b>	218.8	153.0
		<b>THE PROFIT FOR THE YEAR OF H. LUNDBECK A/S IS PROPOSED TO BE DISTRIBUTED AS FOLLOWS:</b>		
22.0	0.0	Distribution of dividend		
9.6	5.7	Employees' share of the profit for the financial year		
11.4	30.4	Transfer to reserve for net revaluation according to the equity method		
99.6	181.5	Transfer to profits carried forward		
142.6	217.6			



# BALANCE SHEET AT 31 DECEMBER

## ASSETS

PARENT COMPANY			GROUP	
1995 DKKm	1996 DKKm	Notes	1996 DKKm	1995 DKKm
21.0	37.9	Research and development costs	37.9	21.0
11.0	9.6	Leasehold improvements	15.2	15.8
<u>32.0</u>	<u>47.5</u>	<b>INTANGIBLE FIXED ASSETS</b>	<u>53.1</u>	<u>36.8</u>
312.3	373.0	Land and buildings	385.1	323.1
97.2	140.4	Technical installations and machinery	186.3	137.0
112.2	101.5	Other installations, operating equipment and fixtures	139.8	153.5
114.0	146.6	Assets in course of construction	148.3	115.5
<u>635.7</u>	<u>761.5</u>	<b>TANGIBLE FIXED ASSETS</b>	<u>859.5</u>	<u>729.1</u>
49.0	92.9	Shares in subsidiaries		
4.5	5.4	Other shareholdings	5.5	4.5
4.1	4.6	Other receivables	7.7	6.8
31.6	14.6	Accounts receivable from subsidiaries		
<u>89.2</u>	<u>117.5</u>	<b>FINANCIAL FIXED ASSETS</b>	<u>13.2</u>	<u>11.3</u>
<u>756.9</u>	<u>926.5</u>	<b>TOTAL FIXED ASSETS</b>	<u>925.8</u>	<u>777.2</u>
54.2	73.1	Raw materials and consumables	75.2	56.8
68.0	91.0	Work in progress	102.2	69.4
28.0	38.8	Finished goods and commercial goods	73.8	48.9
<u>150.2</u>	<u>202.9</u>	<b>STOCKS</b>	<u>251.2</u>	<u>175.1</u>
31.2	26.9	Trade debtors	426.8	346.8
235.6	336.6	Accounts receivable from subsidiaries		
104.4	118.6	Dividend receivable		
2.3	4.4	Corporation tax receivable	12.3	0.0
45.8	17.2	Other receivables	43.4	70.9
3.5	2.2	Prepayments and accrued expenses	12.9	11.7
<u>422.8</u>	<u>505.9</u>	<b>TOTAL RECEIVABLES</b>	<u>495.4</u>	<u>429.4</u>
<u>431.9</u>	<u>417.6</u>	<b>SECURITIES</b>	<u>417.6</u>	<u>432.0</u>
<u>29.6</u>	<u>120.6</u>	<b>CASH</b>	<u>237.7</u>	<u>121.7</u>
<u>1,034.5</u>	<u>1,247.0</u>	<b>TOTAL CURRENT ASSETS</b>	<u>1,401.9</u>	<u>1,158.2</u>
<u>1,791.4</u>	<u>2,173.5</u>	<b>TOTAL ASSETS</b>	<u>2,327.7</u>	<u>1,935.4</u>

# BALANCE SHEET AT 31 DECEMBER

## LIABILITIES

PARENT COMPANY			GROUP	
1995 DKKm	1996 DKKm		1996 DKKm	1995 DKKm
110.0	110.0	Share capital	110.0	110.0
14.7	14.7	Revaluation reserves	14.7	14.7
25.5	56.2	Reserve for net revaluation according to the equity method		
785.1	966.5	Profit carried forward	1,022.7	810.6
<u>935.3</u>	<u>1,147.4</u>	<b>H. LUNDBECK A/S' SHARE OF CAPITAL AND RESERVES</b>	<u>1,147.4</u>	<u>935.3</u>
		Minority interests' share of capital and reserves	5.2	4.0
		<b>THE GROUP'S TOTAL CAPITAL AND RESERVES</b>	<u>1,152.6</u>	<u>939.3</u>
0.0	0.0	Provisions for pensions	31.2	26.6
69.2	93.6	Provisions for deferred tax	107.5	75.7
<u>69.2</u>	<u>93.6</u>	<b>TOTAL PROVISIONS</b>	<u>138.7</u>	<u>102.3</u>
389.9	378.2	Mortgage debt	378.3	389.9
27.7	45.6	Other debt	53.2	40.9
10.3	94.4	Bank debt	153.5	59.5
141.7	184.8	Debt to subsidiaries		
<u>569.6</u>	<u>703.0</u>	<b>INTEREST-BEARING DEBT</b>	<u>585.0</u>	<u>490.3</u>
18.2	8.9	Debt to subsidiaries		
84.5	94.6	Trade creditors	146.3	137.3
0.0	0.0	Corporation tax	41.6	39.2
50.1	95.2	VAT, taxes and holiday pay commitments	136.6	92.7
31.6	25.1	Other debts	121.2	91.0
1.3	0.0	Accruals and deferred income	0.0	1.3
31.6	5.7	Dividend to minority interests	10 0.0	10.4
<u>217.3</u>	<u>229.5</u>	Dividend and employees' share of the profit	10 5.7	31.6
		<b>NON-INTEREST-BEARING DEBT</b>	<u>451.4</u>	<u>403.5</u>
<u>786.9</u>	<u>932.5</u>	<b>TOTAL DEBT</b>	<u>1,036.4</u>	<u>893.8</u>
<u>1,791.4</u>	<u>2,173.5</u>	<b>TOTAL LIABILITIES</b>	<u>2,327.7</u>	<u>1,935.4</u>
		<b>CONTRACTUAL OBLIGATIONS</b>	16	

# STATEMENT OF SOURCES AND APPLICATION OF FUNDS

		GROUP	
	Notes	1996 DKKm	1995 DKKm
Profit for the year		310.8	228.2
Provisions		5.0	1.2
Depreciation		84.3	77.7
<b>CASH FLOW FROM OPERATIONS BEFORE CHANGE IN WORKING CAPITAL</b>		<b>400.1</b>	<b>307.1</b>
Receivables		-47.2	-143.0
Stocks		-78.4	-54.0
Short-term non-interest-bearing debt		78.0	27.0
<b>CHANGE IN WORKING CAPITAL</b>		<b>-47.6</b>	<b>-170.0</b>
<b>CASH FLOW FROM ORDINARY ACTIVITIES</b>		<b>352.5</b>	<b>137.1</b>
Corporation tax paid		-71.2	-36.7
<b>CASH FLOW FROM OPERATIONS</b>		<b>281.3</b>	<b>100.4</b>
Capital expenditure		-231.4	-281.2
Proceeds from sales of assets		9.6	9.3
Other financial investments		-1.9	-2.2
<b>CASH FLOW FROM INVESTMENTS</b>		<b>-223.7</b>	<b>-274.1</b>
<b>CASH FLOW FROM OPERATIONS AND INVESTMENTS</b>		<b>57.6</b>	<b>-173.7</b>
Dividend paid to minority interests		-10.3	-3.8
Dividend paid for the year		-22.0	0.0
Employees' share of the profit paid		-9.6	-7.4
<b>CASH FLOW FROM FINANCING BEFORE CHANGES IN INTEREST-BEARING DEBT*</b>		<b>-41.9</b>	<b>-11.2</b>
<b>CHANGE IN INTEREST-BEARING NET CASH</b>		<b>15.7</b>	<b>-184.9</b>
Change in interest-bearing debt*	14	86.3	268.7
<b>NET CHANGE IN CASH</b>		<b>102.0</b>	<b>83.8</b>
Cash at 1 January		553.7	471.2
The year's changes		102.0	83.8
Currency translation at 1 January		-0.4	-1.3
<b>CASH AT 31 DECEMBER</b>	15	<b>655.3</b>	<b>553.7</b>
<b>The interest-bearing net cash at 31 December is composed as follows:</b>			
Cash and securities		655.3	553.7
Interest-bearing debt		585.0	490.3
Currency translation, interest-bearing net cash		0.0	8.8
<b>Interest-bearing net cash at 31 December</b>		<b>70.3</b>	<b>54.6</b>
*Total cash flow from financing amounts to		<b>44.4</b>	<b>257.5</b>

# SIGNATURES

---

Copenhagen, 24 April 1997

## THE BOARD OF MANAGEMENT

Erik Sprunk-Jansen  
President

Eva Steiness  
Executive Vice President

Ib D. Christoffersen  
VP Finance

## THE SUPERVISORY BOARD

Arne V. Jensen  
Chairman

Jørgen Fakstorp  
Vice-Chairman

Lars Bruhn

Henrik Hertz

Bent Jakobsen

Sven Dyrlov Madsen

Jan Gottliebsen  
Elected by employees

Birgit Bundgaard Rosenmeier  
Elected by employees

Torben Skarsfeldt  
Elected by employees

# AUDITORS' REPORT

---

We have audited the accounts and the consolidated accounts of H. Lundbeck A/S for 1996 presented by the management.

### **BASIS OF OPINION**

We have planned and conducted our audit in accordance with generally accepted audit standards to obtain reasonable assurance about whether the accounts are free of material mis-

statement. Based on an evaluation of materiality and risk our audit has included an examination of evidence supporting the amounts and disclosures in the accounts. We have assessed the accounting policies applied and the estimates made by the management as well as evaluated the overall accounts presentation.

Our audit has not given rise to qualifications.

### **OPINION**

In our opinion, the financial statements and the consolidated accounts have been presented in accordance with the accounting provisions of Danish legislation and give a true and fair view of the company's assets and liabilities, financial position and result.

Copenhagen, 24 April 1997

### **DELOITTE & TOUCHE**

Statsautoriseret Revisionsaktieselskab

**Stig Enevoldsen**  
State-Authorised Public Accountant  
(Denmark)

**Carsten Vaarby**  
State-Authorised Public Accountant  
(Denmark)



# NOTES

## 1 NET TURNOVER

PARENT COMPANY			GROUP	
1995 DKKm	1996 DKKm		1996 DKKm	1995 DKKm
282.2	263.0	Denmark	182.2	196.1
760.6	1,150.7	Exports	2,144.2	1,656.5
<u>1,042.8</u>	<u>1,413.7</u>	Total	<u>2,326.4</u>	<u>1,852.6</u>

## 2 PRODUCTION, DISTRIBUTION, ADMINISTRATION, RESEARCH AND DEVELOPMENT COSTS

Production, distribution, administration, and research and development costs include wages and salaries etc. as follows:

### Employees:

PARENT COMPANY			GROUP	
1995 DKKm	1996 DKKm		1996 DKKm	1995 DKKm
267.4	322.8	Wages and salaries	556.6	449.2
19.4	23.8	Contributions to pension schemes	37.6	29.1
2.6	4.7	Other social security costs	55.3	38.5
<u>289.4</u>	<u>351.3</u>	Total	<u>649.5</u>	<u>516.8</u>

### Supervisory Board and Board of Management:

Total fees for the parent company's Supervisory Board for the financial year 1996 amount to DKK 1.3 million. Fees for the Supervisory Board for 1995 amounted to DKK 1.0 million.

Total salaries for the Group' Board of Management for the financial year 1996 amount to DKK 4.2 million. Salaries for the Group Board of Management for 1995 amounted to DKK 3.8 million.

### Employees:

PARENT COMPANY			GROUP	
1995 DKKm	1996 DKKm		1996 DKKm	1995 DKKm
<u>892</u>	<u>1,007</u>	Average number of persons employed in the financial year	<u>1,829</u>	<u>1,545</u>

Production, distribution, administration, and research and development costs include depreciation etc. and appear as follows:

PARENT COMPANY			GROUP	
1995 DKKm	1996 DKKm		1996 DKKm	1995 DKKm
1.1	1.4	Intangible fixed assets	2.5	1.6
12.5	15.8	Land and buildings	16.3	12.6
13.7	14.0	Technical installations and machinery	19.7	16.9
33.4	29.9	Other installations, operating equipment and fixtures	47.1	47.5
<u>60.7</u>	<u>61.1</u>	Depreciation	<u>85.6</u>	<u>78.6</u>
0.4	0.0	Loss and gain on scrapping	-1.3	-0.9
<u>61.1</u>	<u>61.1</u>	Total	<u>84.3</u>	<u>77.7</u>

distributed as follows:

PARENT COMPANY			GROUP	
1995 DKKm	1996 DKKm		1996 DKKm	1995 DKKm
35.4	36.0	Production	42.6	39.2
0.0	0.0	Distribution	4.0	2.7
14.5	13.8	Administration	25.7	23.9
11.2	11.3	Research and development	12.0	11.9
<u>61.1</u>	<u>61.1</u>	Total	<u>84.3</u>	<u>77.7</u>

### 3 AUDIT FEES

PARENT COMPANY			GROUP	
1995 DKKm	1996 DKKm		1996 DKKm	1995 DKKm
0.7	0.7	Audit	2.6	2.1
0.4	0.6	Services other than audit	0.9	0.8
<u>1.1</u>	<u>1.3</u>	Total	<u>3.5</u>	<u>2.9</u>

# NOTES

## 4 FINANCIAL ITEMS, NET

PARENT COMPANY			GROUP	
1995 DKKm	1996 DKKm		1996 DKKm	1995 DKKm
44.4	33.7	Bank interest and securities, etc.	38.7	49.6
1.4	2.0	Interest income from subsidiaries		
30.4	16.1	Realised capital gains	16.1	30.4
2.8	5.5	Price adjustment, securities etc.	5.5	2.8
<u>79.0</u>	<u>57.3</u>	Total financial income	<u>60.3</u>	<u>82.8</u>
43.4	43.1	Bank interest and mortgage interest etc.	50.1	50.4
5.5	7.1	Interest expenses from subsidiaries		
8.8	9.7	Realised capital losses	9.8	8.8
<u>57.7</u>	<u>59.9</u>	Total financial expenses	<u>59.9</u>	<u>59.2</u>
<u>21.3</u>	<u>-2.6</u>	Financial items, net	<u>0.4</u>	<u>23.6</u>

## 5 TAX ON THE PROFIT FOR THE YEAR

PARENT COMPANY			GROUP	
1995 DKKm	1996 DKKm		1996 DKKm	1995 DKKm
1.2	1.3	Tax due on the year's income	61.7	54.1
0.7	0.8	Adjustments relating to previous years	-0.3	0.7
		Corporation tax paid between jointly taxed subsidiaries and parent company		
-2.3	-2.7	Tax in subsidiaries		
59.5	68.2			
16.1	24.4	Provision for deferred tax	30.6	20.4
<u>75.2</u>	<u>92.0</u>	Total	<u>92.0</u>	<u>75.2</u>

Taxes paid in the parent company for 1996 amount to DKK 3.7 million.

## 6 FOREIGN CURRENCY TRANSLATION OF SUBSIDIARIES' PROFIT AND LOSS ACCOUNTS AT THE EXCHANGE RATE RULING AT THE TRANSACTION DATE

Translation of subsidiaries' profit and loss accounts at the exchange rate ruling at the transaction date has the following effect on the key figures in the consolidated profit and loss account for 1996:

	Exchange rate ruling at the balance sheet date	Exchange rate ruling at the transaction date	Difference	Difference %
Turnover	<u>2,326.4</u>	<u>2,315.4</u>	<u>-11.0</u>	<u>-0.5%</u>
Operating profit	<u>310.4</u>	<u>312.5</u>	<u>2.1</u>	<u>0.7%</u>
Profit for the year	<u>218.8</u>	<u>220.7</u>	<u>1.9</u>	<u>0.9%</u>

# NOTES

## 7 INTANGIBLE AND TANGIBLE FIXED ASSETS

<b>GROUP:</b>	Research and development costs	Leasehold improvements	INTANGIBLE FIXED ASSETS TOTAL	Land and buildings	Technical installations and machinery	Other installations, operating equipment and fixtures	Investments in progress	TANGIBLE FIXED ASSETS TOTAL	TOTAL
Purchase prices:									
Balance at 1.1.1996	21.0	20.6	41.6	415.3	224.7	301.7	115.5	1,057.2	1,098.8
Adjustment relating to changed accounting policies				-3.7		-4.0		-7.7	-7.7
Foreign currency translation	0.0	0.2	0.2	1.8	8.1	-0.2	0.3	10.0	10.2
Reclassification		1.7	1.7			-1.7		-1.7	0.0
Additions	16.9	0.6	17.5	75.5	62.1	43.8	134.2	315.6	333.1
Disposals	0.0	0.0	0.0	4.0	1.6	23.2	101.7	130.5	130.5
<b>Purchase prices at 31.12.1996:</b>	<b>37.9</b>	<b>23.1</b>	<b>61.0</b>	<b>484.9</b>	<b>293.3</b>	<b>316.4</b>	<b>148.3</b>	<b>1,242.9</b>	<b>1,303.9</b>
Revaluations	0.0	0.0	0.0	14.7	0.0	0.0	0.0	14.7	14.7
<b>BALANCE AT 31.12.1996</b>	<b>37.9</b>	<b>23.1</b>	<b>61.0</b>	<b>499.6</b>	<b>293.3</b>	<b>316.4</b>	<b>148.3</b>	<b>1,257.6</b>	<b>1,318.6</b>
Depreciation:									
Balance at 1.1.1996	0.0	4.7	4.7	99.2	87.7	148.2	0.0	335.1	339.8
Adjustment relating to changed accounting policies									
Foreign currency translation	0.0	0.0	0.0	0.1	1.1	-0.1	0.0	1.1	1.1
Reclassification		0.7	0.7			-0.7		-0.7	0.0
Additions	0.0	2.5	2.5	16.3	19.7	47.1	0.0	83.1	85.6
Disposals	0.0	0.0	0.0	1.1	1.5	17.9	0.0	20.5	20.5
Depreciation for the year	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>BALANCE AT 31.12.1996</b>	<b>0.0</b>	<b>7.9</b>	<b>7.9</b>	<b>114.5</b>	<b>107.0</b>	<b>176.6</b>	<b>0.0</b>	<b>398.1</b>	<b>406.0</b>
<b>BOOK VALUE AT 31.12.1996</b>	<b>37.9</b>	<b>15.2</b>	<b>53.1</b>	<b>385.1</b>	<b>186.3</b>	<b>139.8</b>	<b>148.3</b>	<b>859.5</b>	<b>912.6</b>



## 7 INTANGIBLE AND TANGIBLE FIXED ASSETS - CONTINUED

<b>PARENT COMPANY:</b>	Research and development costs	Leasehold improvements	INTANGIBLE FIXED ASSETS TOTAL	Land and buildings	Technical installations and machinery	Other installations, operating equipment and fixtures	Investments in progress	TANGIBLE FIXED ASSETS TOTAL	TOTAL
Purchase prices:									
Balance at 1.1.1996	21.0	14.9	35.9	404.2	178.8	225.9	114.0	922.9	958.8
Adjustment relating to changed accounting policies				-3.7		-4.0		-7.7	-7.7
Additions	16.9	0.0	16.9	75.3	57.5	24.7	129.4	286.9	303.8
Disposals	0.0	0.0	0.0	4.0	1.7	6.3	96.8	108.8	108.8
<b>Purchase prices at 31.12.1996:</b>	<b>37.9</b>	<b>14.9</b>	<b>52.8</b>	<b>471.8</b>	<b>234.6</b>	<b>240.3</b>	<b>146.6</b>	<b>1,093.3</b>	<b>1,146.1</b>
Revaluations	0.0	0.0	0.0	14.7	0.0	0.0	0.0	14.7	14.7
<b>BALANCE AT 31.12.1996</b>	<b>37.9</b>	<b>14.9</b>	<b>52.8</b>	<b>486.5</b>	<b>234.6</b>	<b>240.3</b>	<b>146.6</b>	<b>1,108.0</b>	<b>1,160.8</b>
Depreciation:									
Balance at 1.1.1996	0.0	3.9	3.9	98.9	81.6	113.8	0.0	294.3	298.2
Adjustment relating to changed accounting policies									
Additions	0.0	1.4	1.4	15.8	14.0	29.9	0.0	59.7	61.1
Disposals	0.0	0.0	0.0	1.2	1.4	4.9	0.0	7.5	7.5
Depreciation for the year	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>BALANCE AT 31.12.1996</b>	<b>0.0</b>	<b>5.3</b>	<b>5.3</b>	<b>113.5</b>	<b>94.2</b>	<b>138.8</b>	<b>0.0</b>	<b>346.5</b>	<b>351.8</b>
<b>BOOK VALUE AT 31.12.1996</b>	<b>37.9</b>	<b>9.6</b>	<b>47.5</b>	<b>373.0</b>	<b>140.4</b>	<b>101.5</b>	<b>146.6</b>	<b>761.5</b>	<b>809.0</b>

The official cash property value of the Danish recorded properties at 1 January 1996 or later is DKK 283.6 million. The book value of mortgaged fixed assets in the parent company and the Group is DKK 305.5 million.

# NOTES

## 8 SHARES IN SUBSIDIARIES

	Total	Purchase price	Acc. revaluations	Acc. writedowns
Book value at 1.1.1996	25.2	84.8	25.4	-85.0
Foreign currency translation at 1.1.1996	0.3		0.4	-0.1
Capital contribution	4.1	4.1		
Dividend paid by subsidiaries	-118.7		-115.5	-3.2
Profits in subsidiaries	185.3		145.8	39.5
Losses in subsidiaries	-18.7			-18.7
Total	<u>77.5</u>	<u>88.9</u>	<u>56.1</u>	<u>-67.5</u>
Of which is transferred for set-off against accounts receivable from subsidiaries	15.4			
Total	<u>92.9</u>			

## 8 SHARES IN SUBSIDIARIES - CONTINUED

Specified as follows:	Equity value at 31.12.1996 DKKm	Profit/loss for 1996 DKKm	Ownership	Equity value at 31.12.1995 DKKm	Profit/loss for 1995 DKKm
H. Lundbeck A/S, Norway	1.6	5.1	100%	-2.2	0.1
H. Lundbeck AB, Sweden	57.0	80.0	100%	33.7	68.1
OY H. Lundbeck AB, Finland	1.5	10.8	100%	1.5	10.2
Lundbeck EESTI AS, Estonia	0.5	0.5	100%	0.0	0.2
Lundbeck Pharma A/S, Denmark	0.7	3.6	100%	0.6	3.8
Lundbeck Medimerc A/S, Denmark			100%		-0.5
A/S Lundbeck Overseas, Denmark	10.8	2.2	100%	8.6	-0.3
Lundbeck Holding GmbH, Germany, including:	4.1	0.0	100%		
- Lundbeck Beteiligungs GmbH, Germany			100%		
- Promonta Lundbeck Arzneimittel Beteiligungs GmbH, Germany			50%		
- Promonta Lundbeck Arzneimittel GmbH & Co., Germany			50%		
LB Arzneimittel Produktrechte GmbH, Germany	0.1	0.0	51%	0.1	0.0
Lundbeck Group Limited, U.K., including:	1.1	-2.4	100%	3.0	-7.3
- Lundbeck Limited, U.K.			100%		
- Lundbeck Pharmaceuticals Limited, U.K.			100%		
Lundbeck Ireland Limited, Ireland	0.0	0.0	100%	0.0	0.0
Lundbeck B.V., the Netherlands	3.0	0.0	100%	3.1	3.0
Lundbeck N.V., Belgium	4.2	8.0	100%	2.9	8.5
Lundbeck S.A., France	2.3	6.6	100%	-4.3	-6.0
Lundbeck España S.A., Spain	3.5	3.9	100%	2.9	0.3
Lundbeck (Schweiz) AG, Switzerland	3.0	24.5	100%	3.3	21.4
Lundbeck Italia S.p.A., Italy	2.2	-0.6	100%	2.5	0.2
Lundbeck Arzneimittel Ges.m.b.H., Austria	2.4	11.0	100%	2.3	6.7
Lundbeck Hellas S.A., Greece	-13.9	-9.2	100%	-4.6	-5.5
Lundbeck South Africa (PTY) Limited, South Africa	0.4	0.0	100%	0.5	-0.2
Lundbeck Management (Canada) Inc., Canada, including:	2.3	4.3	100%	-1.9	-3.9
- Lundbeck Canada Inc., Canada			100%		
Lundbeck Australia (PTY) Limited, Australia	-5.3	-5.1	100%	-0.2	-0.8
<b>Total</b>	<b>81.5</b>	<b>143.2</b>		<b>51.8</b>	<b>98.0</b>
<b>Total Group eliminations</b>	<b>-4.0</b>	<b>23.4</b>		<b>-26.5</b>	<b>-2.2</b>
<b>Book value year-end/Profit for the year</b>	<b>77.5</b>	<b>166.6</b>		<b>25.3</b>	<b>95.8</b>

Group eliminations primarily constitute eliminations in respect of capitalised rights, unrealised intercompany profit on stocks and tax.

Furthermore, at year-end 1996, subsidiaries are being established in the following countries: Slovenia, Hungary, Poland, Russia, Latvia, New Zealand and Portugal.

# NOTES

## 9 OTHER SHAREHOLDINGS AND OTHER RECEIVABLES

PARENT COMPANY				GROUP	
Other share-holdings	Receivables from subsidiaries	Other receivables		Share-holdings	Receivables
4.5	31.6	4.1	Accumulated historical cost at 1.1.1996	4.5	6.8
1.6	3.6	0.5	Additions during the year	1.7	1.0
-0.7	-20.6	0.0	Disposals during the year	-0.7	-0.1
<u>5.4</u>	<u>14.6</u>	<u>4.6</u>	Accumulated historical cost at 31.12.1996	<u>5.5</u>	<u>7.7</u>

## 10 CAPITAL AND RESERVES

	Share capital	Revaluation reserve	Reserves for net revaluation according to the equity method	Profits carried forward	PARENT COMPANY TOTAL	Minority interests' share	GROUP TOTAL	GROUP 1995
Capital and reserves 1.1.1996	110.0	14.7	25.5	789.9	940.1	4.0	944.1	835.6
Adjustment in connection with changed accounting policies				-4.8	-4.8		-4.8	-6.3
Adjusted capital and reserves 1.1.1996	<u>110.0</u>	<u>14.7</u>	<u>25.5</u>	<u>785.1</u>	<u>935.3</u>	<u>4.0</u>	<u>939.3</u>	<u>829.3</u>
Foreign currency translation			0.4	-0.2	0.2	-0.0	0.2	-1.0
Dividends from subsidiaries			-115.5	115.5	0.0		0.0	0.0
Profit for the year			145.8	71.8	217.6	1.2	218.8	153.0
Employees' share of the profit				-5.7	-5.7		-5.7	-9.6
Dividend for the financial year				0.0	0.0	0.0	0.0	-32.4
Capital and reserves 31.12.1996	<u>110.0</u>	<u>14.7</u>	<u>56.2</u>	<u>966.5</u>	<u>1,147.4</u>	<u>5.2</u>	<u>1,152.6</u>	<u>939.3</u>

The company capital of DKK 110.0 million is composed as follows:

A-shares, 187	100.0
B-shares, 1	10.0
	<u>110.0</u>

## 11 PROVISIONS FOR DEFERRED TAX

Timing differences between amounts as stated in the accounts and as computed for taxation purposes.

GROUP:	Balance at 1.1.1996	Adjustment in connection with changed accounting policies	Foreign currency translation	The year's movement	Balance at 31.12.1996
Intangible and tangible fixed assets	260.9	-7.7	3.6	13.5	270.3
Stocks	-19.6		-0.1	13.0	-6.7
Other untaxed reserves	-2.7	0.4		67.0	64.7
Total timing differences	<u>238.6</u>	<u>-7.3</u>	<u>3.5</u>	<u>93.5</u>	<u>328.3</u>
Provisions for deferred tax	<u>78.2</u>	<u>-2.5</u>	<u>1.2</u>	<u>30.6</u>	<u>107.5</u>

The year's movement includes provisions for deferred tax on the computed tax effect of differences between the year's computations for accounting purposes and for taxation purposes. Timing differences have been calculated as a net difference because deferred tax has been capitalised in respect of foreign subsidiaries.

PARENT COMPANY:	Balance at 1.1.1996	Adjustment in connection with changed accounting policies	The year's movement	Balance at 31.12.1996
Intangible and tangible fixed assets	216.5	-7.7	35.5	244.3
Stocks	-4.5		1.8	-2.7
Other untaxed reserves	-1.1	0.4	34.5	33.8
Total timing differences	<u>210.9</u>	<u>-7.3</u>	<u>71.8</u>	<u>275.4</u>
Provisions for deferred tax	<u>71.7</u>	<u>-2.5</u>	<u>24.4</u>	<u>93.6</u>

The year's movement includes provision for deferred tax on the computed tax effect of differences between the year's computations for accounting purposes.

## 12 LONG-TERM INTEREST-BEARING DEBT

Of the Group's total long-term interest-bearing debt of DKK 84.0 million, DKK 22.3 million falls due after 5 years.



# NOTES

## 13 DEBT

PARENT COMPANY			GROUP	
1995 DKKm	1996 DKKm		1996 DKKm	1995 DKKm
378.2	30.8	Mortgage debt, long-term	30.8	378.2
27.7	45.6	Other debt	53.2	40.8
141.7	184.8	Debt to subsidiaries	0.0	0.0
<u>547.6</u>	<u>261.2</u>	Long-term interest-bearing debt	<u>84.0</u>	<u>419.0</u>
10.3	94.4	Bank debt	153.5	59.5
11.7	347.4	Mortgage debt, short-term	347.5	11.8
22.0	441.8	Short-term interest-bearing debt	501.0	71.3
<u>569.6</u>	<u>703.0</u>	Total interest-bearing debt	<u>585.0</u>	<u>490.3</u>
18.2	8.9	Debt to subsidiaries		
84.5	94.6	Trade creditors	146.3	137.3
0.0	0.0	Corporation tax	41.6	39.2
50.1	95.2	VAT, taxes and holiday pay	136.6	92.7
31.6	25.1	Other debt	121.2	91.0
1.3	0.0	Accruals and deferred income	0.0	1.3
		Dividend to minority interests	0.0	10.4
31.6	5.7	Dividend and employees' share of the profit	5.7	31.6
<u>217.3</u>	<u>229.5</u>	Short-term non-interest-bearing debt	<u>451.4</u>	<u>403.5</u>
<u>786.9</u>	<u>932.5</u>	Total debt	<u>1,036.4</u>	<u>893.8</u>
547.6	261.2	Long-term debt	84.0	419.0
239.3	671.3	Short-term debt	952.4	474.8
<u>786.9</u>	<u>932.5</u>	Total debt	<u>1,036.4</u>	<u>893.8</u>

## 14 CHANGE IN INTEREST-BEARING DEBT

	GROUP	
	1996 DKKm	1995 DKKm
Proceeds in connection with the raising of interest-bearing loans	346.1	563.3
Repayment of interest-bearing loans	-259.8	-294.6
Changes in interest-bearing debt, excl. exchange rate adjustments	<u>86.3</u>	<u>268.7</u>

## 15 CASH, YEAR-END

	GROUP	
	1996 DKKm	1995 DKKm
Securities, term to maturity less than 3 months	0.0	0.0
Securities, term to maturity more than 3 months	417.6	432.0
Securities entered as cash	417.6	432.0
Cash	237.7	121.7
Cash, year-end	<u>655.3</u>	<u>553.7</u>

## 16 CONTRACTUAL OBLIGATIONS

The parent company has assumed obligations amounting to DKK 142.5 million in the form of leases subject to special notice, commitments in connection with leasing of operating equipment, guarantee commitments and surety commitments and declarations of intent in relation to subsidiaries. Furthermore, the parent company is under an obligation to make capital contributions amounting to DKK 5.9 million, expected to be effected in 1997.

Subsidiaries have assumed liabilities totalling DKK 93.3 million in connection with leases and leasing of operat-

ing equipment. Furthermore, subsidiaries have assumed pension liabilities amounting to DKK 2.2 million. The Group has assumed no other obligations except such obligations to deliver as are usual in the industry and obligations ensuing from current joint research projects.

In 1994, H. Lundbeck A/S entered into a joint venture agreement with BYK Gulden Lomberg Chemische Fabrik GmbH about the foundation of the joint company Promonta Lundbeck Arzneimittel GmbH & Co. The agreement was made with a view to H. Lundbeck A/S taking over the partner's share when

specified conditions have been fulfilled, however, not later than in the year 2009. At the same time and as part of the agreement, H. Lundbeck A/S has undertaken an obligation to purchase the share of the partner in the year 2009. A purchase price as at 31 December 1996 would be within the current financial scope of the Group. The purchase price is to be calculated on the basis of the agreement stipulating, among other things, that the purchase price will depend on the sales in Promonta-Lundbeck in the purchase year. Any excess price over the book values of assets and liabilities will be treated as goodwill.



*Marjanne Voolstra, "Eerste berg", acrylic paint on paper, 100 x 70 cm.*

# INTEGRATED THERAPY

When disease strikes, it is not just a case of a "fault in the works" that has to be repaired in the best possible way. The disease affects not only the individual sufferer but also his or her immediate surroundings and society. For this reason, a holistic approach and integrated forms of therapy are needed.

Lundbeck's research is focused on diseases of the central nervous system (CNS). We are specialists in psychiatry and pioneers in neurology in the sense that we are constantly seeking to learn and understand more about the processes that take place in the CNS. By this means, we have developed new, effective preparations against depression and schizophrenia with a greatly improved side-effect profile, thereby substantially improving the treatment of these diseases.

However, better drugs with fewer side-effects will not suffice on their own. Patients with serious psychiatric or neurological diseases must be provided with supplementary therapy to help them achieve a better life. The patients' families need support and information, and the employees in the health sector should be equipped with the best therapeutic tools.

When all these needs are covered, there is hope that the patient may again be able to function normally in relation to his or her family, workplace and surroundings. Total public expenditure on the treatment will thus be reduced and everyone affected by the disease will have a better quality of life.

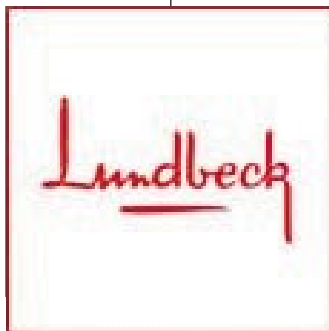
That is the result which Lundbeck seeks to achieve, in close cooperation with doctors, patients and patients' families. We shall therefore continue to work for closer integration in the treatment of psychiatric and neurological diseases.

Eva Steiness  
Executive Vice President

The story of Lundbeck's logo is rather unusual. It goes back to the 1930s and Paris, where Grete Lundbeck, who was married to H. Lundbeck, quite by chance met an unknown artist, Victor Vasarely (1908-1997).

Grete Lundbeck recognised the young Hungarian's talent immediately and asked him to design a distinctive logo for Lundbeck. Vasarely was delighted with the commission and went to work with a will. The result was the red signature that we still use today - more than fifty years after its creation.

Since then, Lundbeck has become a world leader in the development and production of drugs for treating diseases of the central nervous system, while Vasarely achieved international fame as a pioneer within optic art. Today, Victor Vasarely's works are a permanent feature of the art collections that set international trends. Until his death, the artist had his own museum with paintings and graphic art in the South of France.



H. Lundbeck A/S  
Ottiliavej 9  
DK-2500 Copenhagen - Valby  
Tel.: +45 36 30 13 11  
Fax: +45 36 30 19 40  
e-mail: initials@lundbeck.com.  
Reg. No. 22.472



# Lundbeck

# 96

Table of Contents

Overview

Summary 1996

Key figures

Report of the Board of Directors

Income Statement

Balance Sheet

Cash Flow Analysis

Notes

Shareholders Policy

ANNUAL REPORT 1996

# 96

