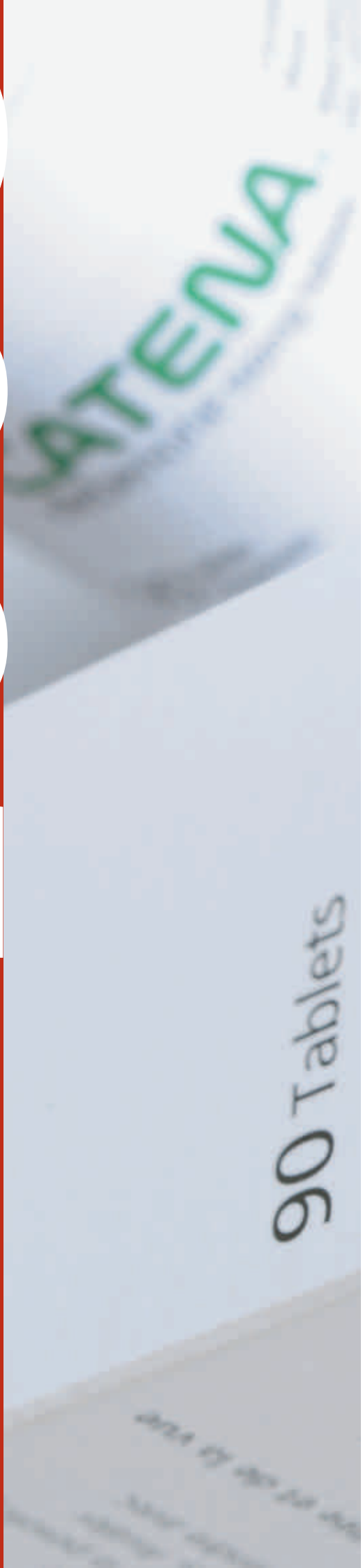
2008

Profile



santhera
Pharmaceuticals

Contents

Company Profile

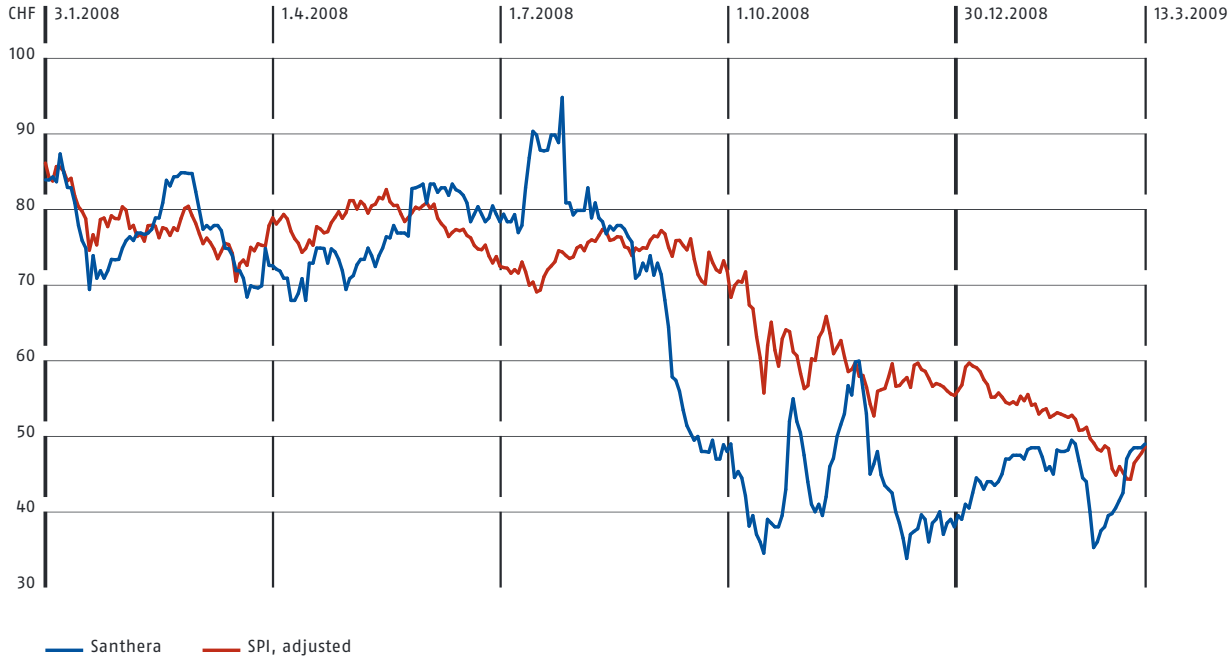
Santhera is an emerging specialty pharmaceutical company. A company that believes the development of small-molecule therapies for orphan indications has a big future. At Santhera, we are driven by the need to provide new solutions for unmet medical needs with a particular focus on rare neuromuscular diseases, where there are few or no current treatment alternatives. Because orphan diseases affect just a few thousand people, they have traditionally lacked focus regarding research, market interest or public health policy. No wonder most of us have not heard of Friedreich's Ataxia, Duchenne Muscular Dystrophy or Dyskinesia in Parkinson's Disease until they strike a member of our families or circle of friends. Advances in science and new insights into the progression of these degenerative conditions help us better understand their manifestation as well as underlying causes. And this inspires us at Santhera to strive towards novel solutions to improve the lives of patients with these severely debilitating diseases.

Key Figures and Share Price Development

IFRS, consolidated, in CHF thousands	2008	2007
Cash and cash equivalents	75,006	106,618
Net change in cash and cash equivalents	−31,612	−19,044
Net sales	48	0
Gross profit	25	9,226
Other operating income	26	2,439
Total operating expenses	−45,642	−42,792
whereof R&D	−31,467	−23,335
whereof noncash-relevant share-based payments	−1,680	−10,154
Net loss	−44,656	−27,871

Share trading information 2008	
Listing	SIX Swiss Exchange
Valor symbol/number	SANN/002714864
ISIN	CH0027148649
Ticker symbols Reuters/Bloomberg	SANN.S/SANN:SW
Current number of issued and outstanding shares (nominal value CHF 1.00)	3,513,899
Free float	100%
Share price at year-end	CHF 39.00
Share price high/low	CHF 95.00/33.80
Market capitalization at year-end	CHF 136.1 million
Average trading volume (shares/day)	2,989

Share Price


CHF
3.1.2008
1.4.2008
1.7.2008
1.10.2008
30.12.2008
13.3.2009
100
90
80
70
60
50
40
30
Santhera
SPI, adjusted

Letter to the Shareholders

Dear Shareholders

2008 was a landmark year for Santhera as it became a product company. The launch of Catena® in Canada marked the Company's transition from a development to an integrated specialty pharmaceutical firm. When Santhera was founded in the summer of 2004, its goal was to develop new therapies for rare neuromuscular diseases. Now this vision has been realized as, for the first time, Friedreich's Ataxia patients are using our drug to treat the symptoms of their disorder. Four and a half years from a concept to a marketed drug is a tremendous accomplishment. It is the result of hard work, persistence and, most of all, dedication by those who have invested their expertise, time and money to bring Catena® through the clinic to the market, and, by doing so, deliver improved quality of life to sufferers from Friedreich's Ataxia and their families.

With a commercial product in hand, we have laid the foundation for creating a sustainable business that will deliver novel neuromuscular therapeutics to orphan patient populations. The approval of Catena® by Health Canada is the most important achievement in Santhera's short history. A few months after launch, almost 20% of the expected patient population in Canada have already received a prescription from their physician. We believe that the experience to date in Canada validates our business model in three respects: first, that addressing an unmet medical need of an orphan patient population will translate into a rapid acceptance among the relevant medical and patient communities; second, that the majority of patients can be reached in a few centers via a small, specialized medical and marketing team; and third, that payors will accept a pricing regimen for Catena® that rewards innovation where the unmet medical need is high.

The contrasting decisions from the Canadian and European health authorities represent the high and low points, respectively, of last year. The European Medicines Agency's decision not to permit an early approval of Sovrima® was a disappointment – not only for us but for the European Friedreich's Ataxia community. However, we were able to move forward and complete recruitment of our two respective pivotal Phase III trials in the United States and Europe and we expect the initial top-line data this summer. The program remains on track for submission of the filings for marketing authorization with the US Food and Drug Administration and the European Medicines Agency before the end of the year.

Michael Lytton

Klaus Schollmeier

In fall, we raised additional equity capital in a private placement with Ares Life Sciences, a Swiss-based global biotech investor. The transaction was executed in a very difficult financial market environment and was done in order to secure cash reserves to finance the Company through the planned launch of Catena® in the United States. Together with expected revenues from product sales and partnering income, we are confident that we can independently finance our operations well into 2011. We continue to move forward as a lean organization with resources allocated carefully among our key value drivers as well as the establishment of our commercial operations in North America.

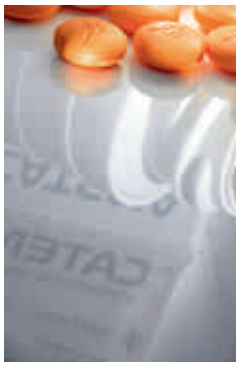
We expect that Santhera will have a busy year framed with important news flow. We will report clinical data from two of our core programs: the pivotal IONIA trial of Catena® for Friedreich's Ataxia in the United States, opening the path for regulatory submissions on both sides of the Atlantic; and the Phase IIb FJORD study of JP-1730/fipamezole for Dyskinesia in Parkinson's Disease. Subject to a positive outcome in the latter trial, we will then acquire Juvantia Pharma, the compound's originator, before partnering the program for Phase III development and commercialization. Another highlight of this year will be the initiation of our pivotal Phase III program of Catena®/Sovrima® for Duchenne Muscular Dystrophy. The outcome of these clinical trials will significantly shape the future of our Company.

In view of our landmark year in 2008 and the exciting news expected in 2009, we give our sincere thanks to our shareholders, our employees and our business partners for their continued support of Santhera.

Sincerely

Michael Lytton
Chairman

Klaus Schollmeier
Chief Executive Officer



Making Catena® Available for Friedreich's Ataxia Sufferers in Canada

Following Health Canada's market authorization, Santhera launched Catena® for the symptomatic treatment of Friedreich's Ataxia in late 2008. For the first time, Canadians now have an approved treatment option for this rare neurodegenerative disease. Currently, Santhera's efforts are focused on securing access and reimbursement of the drug.

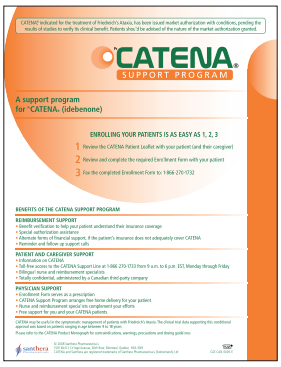
"For the Friedreich's Ataxia community, the world changed last July", says Jean Phénix, who is the secretary for the Canadian Association for Familial Ataxias – Claude St-Jean Foundation (www.lacaf.org). "We hadn't heard much about the Swiss company Santhera before. Of course, the positive news about their clinical results spread quickly via the Internet and we read about their filing with Health Canada. Still, none of us dared to hope that the first drug to treat the symptoms of Friedreich's Ataxia would be available in the near future." Named after its founder, the Montréal-based association was established in 1972 by the late Claude St-Jean, a sufferer from Friedreich's Ataxia himself, to secure funding for research into this disease. "Claude encouraged us to remain positive because he believed that one day scientists would find a treatment. With the arrival of Catena®, we finally see the first fruits being borne from that research." Sadly, Claude St-Jean was not able to witness that day himself due to his death three years ago.

Based on published epidemiology data, the Friedreich's Ataxia patient population is expected to consist of approximately 300 individuals in Canada. Significant patient cohorts are reported to live in the province of Québec, where prevalence ranks among the highest in North America, as well as in Ontario, British Columbia and Alberta. The majority of these sufferers are treated in one of a handful of specialized centers in Canada's major metropolitan areas. In Québec City, Dr Nicolas Dupré, a specialist in neurogenetic and neuromuscular disorders and Assistant Professor of the Faculty of Medicine at Laval University, regularly sees Friedreich's Ataxia patients. Dr Dupré has waited a long time for the first approved treatment. "With great relief, I am finally able to prescribe patients a product for their progressive neurological disorder."

Working on several fronts to secure reimbursement for Catena®

Santhera's Catena® has been granted market authorization under the Notice of Compliance with Conditions policy, which allows the Canadian health authority to provide earlier market access for promising new drugs intended for the treatment of serious diseases. Catena® is indicated for the treatment of symptoms of Friedreich's Ataxia and is available in two dose therapies: a starting dose of 450 mg/day for patients weighing 45 kg or under and 900 mg/day for patients weighing over 45 kg. Based on clinical judgment, treating physicians can use the higher dose therapy, i.e. 1,350 mg/day and 2,250 mg/day, respectively.

Catena® is distributed through a specialty pharmacy model that allows the product to be shipped directly to patients' homes. Four months after launch, approximately 20% of the expected patient population received a prescription from their treating physician and were enrolled into the Catena®



D. Ptalis

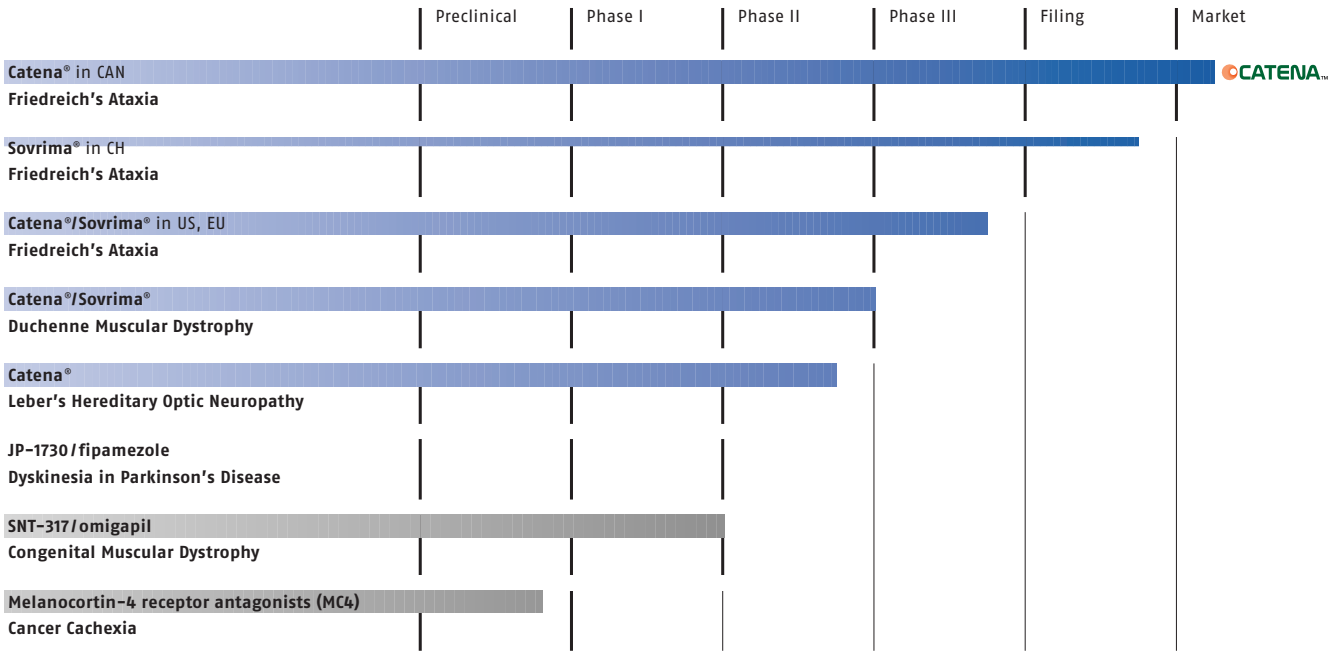
Support Program. Roughly 40% of them have secured reimbursement through their insurer. MJ Roach, Santhera's General Manager North America, explains: "Our goal is to make sure that every eligible Friedreich's Ataxia sufferer in Canada has access to Catena®. So far, the majority of large commercial insurers have informed us that our drug is being reimbursed by their plans." Santhera continues to apply for reimbursement at a number of private payors. This process can take between a few weeks and several months, depending on the insurers' internal review procedure.

Simultaneously, Santhera is working with Friedreich's Ataxia patients and physicians on provincial levels to assist sufferers who rely on public insurance coverage for reimbursement of their medications. Publicly insured patients are hopeful while waiting for their province's decision. For example, the Conseil du Médicament in Québec is currently reviewing the submission of the Catena® dossier for its inclusion onto the list of medication that is covered by the province's public health insurance. Several patient organizations including Jean Phénix' association recently engaged in a letter writing campaign in support of Santhera's submission as they extend their mission from research into patient access for much needed therapies.

Santhera's Clinical Pipeline

Santhera's first product, Catena® has received a marketing approval in Canada for symptomatic treatment of Friedreich's Ataxia. The drug is also being investigated in two Phase III trials in the same indication in the United States and in Europe. A pivotal study with Catena®/Sovrima® will be initiated mid-year in Duchenne Muscular Dystrophy. In addition, the compound is being clinically tested in a third indication, Leber's Hereditary Optic Neuropathy. JP-1730/fipamezole is in a Phase IIb clinical trial for Dyskinesia in Parkinson's Disease. Two other development programs encompass SNT-317/omigapil in Congenital Muscular Dystrophy and MC4-receptor antagonists in Cancer Cachexia (in late preclinical stage).

Focus on Orphan Neuromuscular Diseases



Santhera uses its expertise in disease-specific pharmacology to advance a broad and balanced pipeline of drug candidates from within its own research and from external sources. The Company intends to maximize the medical and commercial potential of its pipeline by developing its compounds in various indications, thereby reducing costs and limiting development risks. Santhera's current portfolio encompasses four different molecules in five clinical and one late preclinical development programs.

Santhera's strategy in research and development is built around three pillars: 1) identify compounds, 2) develop them in neuromuscular diseases, and 3) leverage them into multiple indications. Existing compounds are routinely reprofiled for therapeutic use in additional neuromuscular indications. Santhera is also looking at in-licensing opportunities involving promising new treatment strategies. Alternatively, new indications for clinical-stage or marketed compounds are considered if they are supported by scientific rationale and/or by evidence from disease-relevant models.

For the development and commercialization of treatments for orphan diseases, Santhera makes use of special regulatory guidelines and orphan drug legislation issued by health authorities such as centralized procedures, scientific advice and market exclusivity granted after marketing authorization.

Catena® is the First and Only Licensed Treatment for Friedreich's Ataxia

Friedreich's Ataxia is an inherited disease that leads to the degeneration of nervous tissue. The disorder is caused by mutations in the gene that encodes for the protein frataxin. Lack of this protein impairs mitochondrial energy production and damages nervous and cardiac tissue. In summer 2008, Catena® was approved in Canada for the symptomatic treatment of Friedreich's Ataxia patients. Two pivotal Phase III clinical trials in the United States and in Europe are well advanced. Data from the US IONIA trial are anticipated by mid-2009 with subsequent filing for marketing authorization in both territories before the end of 2009. Data from the European MICONOS trial are expected early 2010.

Friedreich's Ataxia is a rare but devastating disease associated with progressive neurodegeneration. Gait ataxia usually appears first, spreading to the arms and the trunk. Speech is almost always affected and senses can deteriorate making communication for patients increasingly difficult. Symptoms typically appear from around 5 to 15 years of age. Patients become wheelchair-bound and require continuous care. Hypertrophic cardiomyopathy is a common complication of Friedreich's Ataxia and while it may be asymptomatic early on, it remains a leading cause of death.

Catena® makes a notable difference to patients' lives

In clinical trials, Catena® has proven to significantly improve neurological function and cardiac morphology and function. The drug led to a four-point improvement on the International Cooperative Ataxia Rating Scale (ICARS) score in six months. A separate quantitative disease-progression study demonstrated that patients worsen by five points on the ICARS scale in one year without appropriate treatment. Catena® also improves the ability to perform daily tasks as reported by patients and caregivers and assessed by the Activities of Daily Living scale.

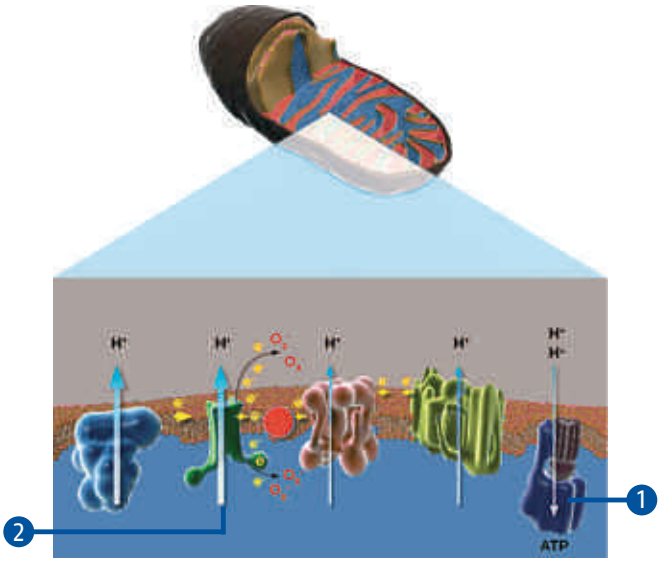
Catena® significantly reduces anatomical and functional pathology associated with left ventricular hypertrophy after six months' treatment. Catena® has been clinically proven to prevent progression of cardiomyopathy. The drug significantly reduces the signs of ventricular hypertrophy after six months' treatment versus placebo. Catena® is generally well tolerated in both pediatric and adult patients with no treatment discontinuations due to adverse reactions.

Santhera's two pivotal Phase III trials, the six-month IONIA study (Idebenone effects On Neurological ICARS Assessments) in the United States and the twelve-month MICONOS study (Mitochondrial protection with Idebenone in Cardiac Or Neurological Outcome Study) in Europe, are designed to confirm the efficacy demonstrated in previous trials.

Catena® has a dual mode of action

Catena® addresses the underlying pathophysiology of Friedreich's Ataxia. Homozygous GAA expansions in intron one of the frataxin gene lead to reduced levels of frataxin protein expression in the mitochondria, the energy production centers in each cell. Catena® is believed to enhance production of the cellular energy (ATP) and reduce oxidative stress.

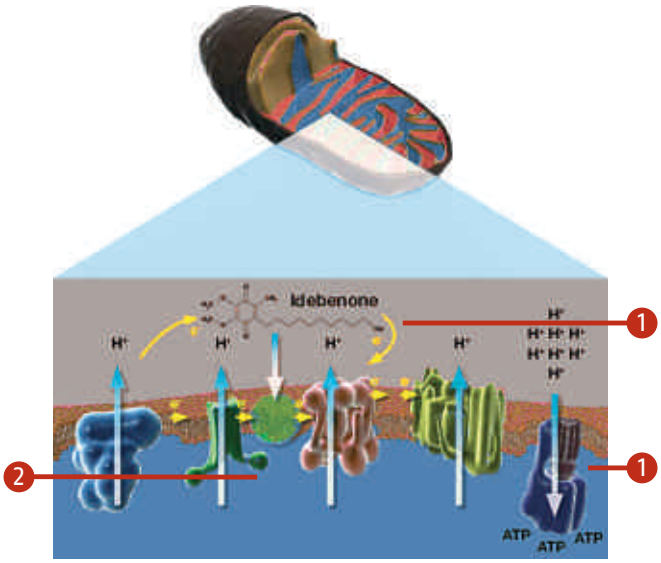
Friedreich's Ataxia impairs production of ATP



Frataxin reduction is thought to have dual consequences.

1. Deficiency in assembly of electron chain components leading to reduced ATP production. Frataxin is involved in assembling the iron-sulphur clusters of the electron transport chain complexes, required for ATP production.
2. Oxidative stress is caused by malfunction of the electron transport chain complexes. There is a leakage of electrons between complexes of the electron transport chain.

Catena® has a dual mode of action and acts as ATP production modulator



Addition of Catena® may lead to an increase in mitochondrial function and ATP production.

1. Catena® also acts as an antioxidant by scavenging free radicals and decreasing lipid peroxidation.
2. Catena® acts as an electron carrier, facilitating the flow of electrons which enhances ATP production.

Second Potential Indication of Catena®/Sovrima® in Duchenne Muscular Dystrophy

Duchenne Muscular Dystrophy is one of the most common and devastating types of muscular degeneration. The disease affects boys of all ethnicities with an onset of symptoms as early as three to five years of age. Based on positive results from its Phase II trial that show improvements in cardiac and respiratory functions, Santhera is preparing to initiate a single pivotal Phase III trial with Catena®/Sovrima®. Study centers will be located in Europe and North America with first enrollments anticipated for summer 2009.

Males affected by Duchenne Muscular Dystrophy suffer from an X-linked recessive inherited disease, caused by mutations in the gene that encodes dystrophin. In healthy individuals, this protein stabilizes the muscle cells during cycles of contraction and relaxation. Dystrophin acts as a mechanical linker between the contracting elements and cell surface proteins in each muscle cell. Loss of this protein results in a characteristic form of progressive muscle weakness and wasting throughout the body. Disease symptoms initially start in the legs and pelvis and spread to shoulders, neck and arm muscles. Other complications include skeletal deformation, respiratory distress and cardiac failure. As the disease progresses, sufferers become confined to a wheelchair during their teenage years. The average life expectancy for Duchenne Muscular Dystrophy patients is 30 to 35 years.

An estimated 30,000 males in Europe and North America suffer from Duchenne Muscular Dystrophy. With no effective medication available for chronic use, treatment focuses on supportive aids aimed at delaying or alleviating the symptoms. In a Phase II trial, Catena®/Sovrima® improved functional cardiac and respiratory parameters during the twelve-month treatment period. These positive results prepared the ground for Santhera's Phase III program. The Company currently plans for one single, placebo-controlled pivotal trial with study centers in Europe, the United States and Canada. Subject to finalization, the study protocol calls for a twelve-month treatment period with approximately 200 patients. Start of patient recruitment is anticipated for summer of 2009.

Leveraging Catena® in Leber's Hereditary Optic Neuropathy

Leber's Hereditary Optic Neuropathy is a genetically determined eye disease that leads to rapid loss of central vision and ultimately to blindness. This ophthalmic disorder affects predominantly young adult males. While symptoms initially develop in one eye, the second eye is usually involved within a few months as well. Santhera is currently testing the efficacy of Catena® in the potential treatment and prevention of Leber's Hereditary Optic Neuropathy in a Phase II clinical trial. Top-line data are expected in the second half of 2009.

Patients suffering from Leber's Hereditary Optic Neuropathy typically have one of three different point mutations of the genetic code within the mitochondria, the energy-producing centers in each cell. These mutations lead to the reduction of cellular energy production which results in cell damage and death of optic nerve cells. The factor determining why only optic nerve cells become affected is unclear. Blurring of central vision and color desaturation usually mark the beginning of the symptomatic phase of Leber's Hereditary Optic Neuropathy. The effects of the disease are rapid and severe, with damage to certain nerve cells in the retina leading to blindness within a few months after the onset of first symptoms. Within approximately twelve months of visual loss in one eye, over 97% of patients experience vision loss in the second eye, subsequently resulting in legal blindness.

Worldwide an estimated 35,000 patients, predominantly otherwise healthy young adult males, suffer from Leber's Hereditary Optic Neuropathy. There is no effective treatment available to prevent the rapid loss of vision, representing a high unmet medical need. Santhera is currently assessing the efficacy of one dose of Catena® against placebo in the treatment and prevention of vision loss in a Phase II clinical trial named RHODOS (Rescue of Hereditary Optic Disease Outpatient Study). Three centers in Germany, the United Kingdom and Canada are enrolling patients into this six-month study. Since the disease runs in families with well-known pathology, the drug could potentially be used as preventive therapy if it shows efficacy.

JP-1730/Fipamezole as Promising Therapy for Dyskinesia in Parkinson's Disease

Dyskinesia is a severe side effect of chronic levodopa therapy used for treatment of Parkinson's Disease. Dyskinesia are jerky and uncontrollable movements that affect a patient's mood, behavior, thinking and sensation. Approximately 400,000 Parkinson patients in Europe and North America develop a so-called troublesome dyskinesia within five years of levodopa treatment. Santhera is investigating the efficacy of JP-1730/fipamezole in reducing levodopa-induced dyskinesia in a Phase IIb clinical trial. Top-line data from this study are expected for early second half of 2009.

Parkinson's Disease is the second most common neurodegenerative disease. Doctors prescribe levodopa and other dopaminergic compounds as standard therapy. Over time, as the disease progresses, the beneficial effects of this medication diminish and additional movement disorders appear, which become gradually very severe. In advanced stages, movement disorders include dyskinesia which can be described as sudden uncontrollable, often chaotic movements of limbs, face, tongue and body. These complications derive principally from long-term levodopa use, but there is currently no alternative to using levodopa or dopamine agonists.

It is estimated that approximately 400,000 patients in Europe and North America are affected by troublesome dyskinesia. In 2006, Santhera signed a collaboration agreement with Juvantia Pharma for the development of JP-1730/fipamezole. A Phase IIb trial named FJORD (Fipamezole from Juvantia fOR treatment of Dyskinesia) is currently evaluating the potential of the compound to reduce dyskinetic movements. The safety and efficacy of three escalating doses are compared to placebo over a treatment period of 28 days. The FJORD study is Santhera's largest so far with 26 centers in the United States and seven in India and a target enrollment number of 170 patients. Santhera has initiated partnering activities for Phase III development and commercialization.

SNT-317/Omigapil, a Potential Treatment for Congenital Muscular Dystrophy

Congenital Muscular Dystrophy refers to a group of devastating neuromuscular disorders which frequently affect newborn babies or infants with life-threatening progressive muscle weakness. The inherited condition is characterized by progressive loss of muscle tissue or hypotonia. No pharmacological therapy is currently available or in advanced clinical development for treatment of Congenital Muscular Dystrophy. In vivo studies have shown that Santhera's SNT-317/omigapil reduces key symptoms and complications in a disease-relevant model. The Company is continuing its internal preclinical work to prepare the program for Phase II/III development.

Congenital Muscular Dystrophy frequently affects infants or young children with a progressive, life-threatening muscle weakness which in severe forms can already affect newborns with a "floppy infant syndrome". Other symptoms include loss of body weight, skeletal deformations and respiratory distress. Complications associated with the disorder cause immobility at young age and early mortality. In milder and genetically distinct forms, a stabilization of the condition after a few years has been observed and patients might live through adulthood. The most common subtypes in the Western world, Ullrich Congenital Muscular Dystrophy and Bethlem Myopathy are due to mutations in one of the three collagen VI genes, while MDC1A is caused by mutations in the gene encoding laminin-alpha 2, a protein in the extracellular matrix of muscle cells.

The best epidemiological estimate approximates one patient in every 20,000 to 50,000 newborn children. Treatment options are confined to ventilatory support and orthopedic surgery for scoliosis. Another important aspect of disease management is supplementary nutrition to avoid malnutrition. Studies in a disease-relevant model have shown that Santhera's SNT-317/omigapil reduces apoptosis and preserves muscle histology resulting in increased body weight, mitigated skeletal deformation, improved locomotion and increased life span. The compound was licensed from Novartis in 2007. The current focus is on preclinical work in preparation for a Phase II/III development.

MC4-Receptor Antagonists for Treatment of Cancer Cachexia

Cancer Cachexia is a life-threatening metabolic condition that contributes to the morbidity and mortality of cancer patients. The syndrome affects about one million sufferers in North America and Europe. Still, current treatment options are very limited. Cancer Cachexia, therefore, represents an area of high unmet medical need. Santhera is developing a new treatment strategy for this severe form of muscle wasting. In vivo data of its melanocortin-4 (MC4)-receptor antagonists show a significant increase in food intake and prevention of body weight loss.

Cachexia (Greek for "poor condition") is one of the most debilitating aspects of cancer and other chronic illnesses. The syndrome is associated with a lack of appetite (anorexia), fat and muscle tissue wasting, psychological distress and a progressive decrease in quality of life. Sufferers from cachexia show major metabolic abnormalities and maladaptations. Their food and energy intake is reduced, while their resting energy expenditure is increased. Simultaneously, their excessive energy spending is accelerated. Typically, the involuntary weight loss in excess of 5% within twelve months cannot be compensated for by a higher food intake. The result is a wasting of adipose and skeletal muscle tissue which leads to poor physical performance.

Up to 80% of cancer patients suffer from the syndrome, which accounts for approximately 20% of cancer deaths. Despite this high medical need, no effective therapies are available to treat the condition. Currently used pharmacological interventions have limited utility or produce severe side effects. Santhera's novel generation of MC4-receptor antagonists significantly increase food intake in healthy animals and prevent tumor-induced weight loss in disease-relevant models. The compounds are orally available, were shown to be highly selective and have crossed the blood/brain barrier. Preclinical work is expected to be completed by the end of 2009 with an anticipated entry into the clinic in 2010. Santhera is seeking a strategic partner for the clinical development and commercialization of the program.

A Day in the Life of

Our series "A day in the life of" is intended to convey an insight into the everyday lives of very special people. They all suffer from a rare neuromuscular or neurodegenerative disorder. This year we present three remarkable personalities who are affected by Dyskinesia in Parkinson's Disease, a troublesome outcome related to chronic levodopa therapy, the gold standard in the treatment of Parkinson's Disease. The associated chaotic movements can become very disabling and may considerably influence the quality of life of a patient suffering from dyskinesia. Furthermore, dyskinesia prevents Parkinson's Disease patients from taking full advantage of the available medication. Normal activities of daily living such as holding a cup of coffee or a knife can pose a serious and, sometimes, dangerous challenge as an affected patient might be hurt by his/her own jerky movements. In a Phase IIb clinical trial, Santhera is currently evaluating the efficacy and safety of JP-1730/fipamezole in reducing levodopa-induced dyskinetic movements. The drug holds the potential to help patients such as Anna Patera from Vienna/Austria, Américo Ribeiro from Lisbon/Portugal and Peter Schüpbach from Eglisau/Switzerland in managing their movement disorders.

In our 2006 and 2007 Annual Report, we portrayed three sufferers from Friedreich's Ataxia and Duchenne Muscular Dystrophy, respectively. We recently revisited them for an update of how they experienced the past year 2008.

Anna Patera, 69

"A day is a good day if I get some relief. Relief from the shakes. If I can knit for an hour, it's a good day. But I'm afraid I get fewer and fewer days like that. The shakes rule my life. Some days more, some days less. But when it's constantly windy, like it has been for the last two weeks, then it's awful. Medicines don't help. When it's windy outside, my whole body gets the shudders.

There are days when I'd like to stay lying down and never get up again. On those days I need all my strength to fight against myself. If you give up, you've lost. I've never given up. Not even when I was suddenly left alone with my four children. They were eight, ten, eleven and thirteen. I met my present husband a year later. He's a good-hearted man. We get on wonderfully well.

I've always worked, even when the children were small. I worked at home, knitting for a company. With a knitting machine. Later, I worked on staff welfare for a big company. When that went bust, I was idle for exactly three days. Like I said, I'm a fighter. All right, I suppose I had a bit of luck to find another job so quickly. With a big insurance company. I was with this company for ten years. I took early retirement at 58. I was looking forward to having more time for myself. For us. For Ernst and me. To do a bit of travelling, to countries where there's no wind. I've never liked the wind.

Two years before I retired, my husband fell ill. He's the same age as me. He got cancer of the larynx. After the operation he had radiotherapy. It was a bad time. A lot of pain, a lot of worry, a lot of hope, a lot of setbacks – and finally the day came when the cancer was clearly beaten.

One day not long after that, shortly after I'd taken early retirement, I started falling over. Not once. Not twice. Over and over again. At the hospital they found my blood pressure was sky-high. The doctors asked whether anything unusual had happened before I started falling over. All I could say was that just beforehand I'd felt really edgy, incredibly nervous, a sort of inner agitation. I'd never felt like that before.

Shortly after these falls, my face was paralyzed for a while and my left hand began to shake. My neurologist said my age was to blame. I was speechless. I wasn't even 60!

I didn't believe him. I thought it was something else. I thought it was Parkinson's Disease. I'd read a lot about it, I don't know why. I wasn't afraid of getting it, and I didn't know anyone who had it. I simply found it interesting. Whenever I saw an article about it, I'd always read it.

So I told the neurologist I didn't believe it was my age that gave me the shakes, I thought it was Parkinson's Disease. He made a face and said: 'What on earth do you know about it?' He gave me some drugs and made another appointment. When he saw that what he'd prescribed for me had made no difference to the shakes, he asked me to make certain movements with my hands, then hold them quite still. I only had the shakes when my hands were still, not when they were in motion. That was the first indication. He did some more tests and eventually admitted I was right. He even apologized.

Ever since then, the illness has taken its course. I've had the shakes ever since. It's been getting worse all the time. Sometimes my hands move completely of their own accord. There's nothing to be done about it. I can't do anything about it. There don't seem to be any drugs that could do something about it. I have good days, when the shakes aren't as bad, and there are bad days – windy days, that is – when my body simply shudders uncontrollably. And the more it does that, the more my muscles tense up and the worse the pain gets. In my back, my shoulders, all over.

But I have my four children, ten grandchildren and one great-grandson. And I have this inner strength that means I can fight, that means I can keep active. And I have my husband, who says: 'You looked after me when I was ill, now I'm looking after you.' Is there any nicer way to say I love you?"

Américo Ribeiro, 63

"How can I explain it? The fact that this illness is so much in control of me that I'm just like a fidgety child? The reality that my body simply won't do what I want it to do, it does whatever it wants to do? The gargantuan effort that every step I take costs me. The huge exertion that confronts me every morning. It's like climbing Mount Everest. Sit up, take a shower, brush your teeth, get dressed. The trouble I have in just getting a fork into my mouth? The humiliation of not even being able to write a letter any more. How? How can I explain it? I've spent ages thinking about it. I escape – into my thoughts – when my body behaves as if it were attached to wires being pulled not by one person, but by hundreds. Sometimes thousands. Totally out of control. And I found there's only one word that describes it: puppet.

I don't want pity! Sympathy I accept, but not pity! You can pity me once I've given up. I'm not giving up yet. I didn't give up when the illness made me leave my office job. I didn't give up two years ago when my wife died of a brain tumor, and there's absolutely no way I'm giving up now – our only daughter is due to have her first baby in a few days.

But before that I'm going into hospital. They're going to open up my skull and plant a chip in my brain. The operation could bring relief. But I don't really want to talk about that now. What I'd like to do is shake people up a bit with my contribution. That's why, when they asked me whether I wanted to take part in this report, my answer ended with an exclamation mark, not a question mark.

Forty thousand people in Portugal suffer from Parkinson's Disease. That's four, zero, zero, zero, zero. Hardly anybody knows the symptoms. The ignorance is enormous. Not even Mohammed Ali, strong as he was, managed to do anything about that. He was only forty when he was diagnosed. That was in 1982.

With me it started when I was 52. The first signs were when I was driving. One leg suddenly began to shake, then an arm. A year later I knew I had Parkinson's Disease. First the diagnosis, then the drugs. Some of them worked, others not at all, one gave me hallucinations – I suddenly saw people in our apartment. Strangers! There were side-effects. There still are. The worst thing about it for me is that the tablets turn me into a puppet. The specialist term is Dyskinesia.

I've thought about not taking them, but that's not really an option. Without the drugs I'd become totally motionless and frozen up. I don't know which is better. Or rather I do know, because I've tried it. I stood in the street and just couldn't put one foot in front of the other. I couldn't move an inch. People didn't laugh at me in this paralyzed state, like they laughed at me when I shuffled down the street like a marionette – but at the time that was no comfort. I'm using the past tense because I never leave my apartment any more. I haven't done for ages. Once a week a lady brings me food and other stuff that I need. She cooks and cleans as well. Everything else I manage on my own. It's a full-time job.

Hope. There's another word I've spent a lot of time thinking about. It's hope that keeps me alive. Hope that one day I'll feel a little better. Hope that I'll be calmer. Calm enough to hold my grandchild in my arms. It's a boy. They're going to call him Santiago."

Postscript: Mr. Ribeiro came through his operation well. He spent nine hours in the operating theatre, and he was fully conscious throughout. He says it was torture. He says he also has bad memories of the first few nights afterwards, when his head was still totally wired up. But then, day by day, he was reborn. Today, ten days after the operation, he seems to be back in control of his body. He's sleeping much better. He can have a quiet meal. His thoughts are clearer, and so is his speech. And one thing is incredibly important to him: he can imagine one day being able to take up his passion again, which is fishing. Spending a nice quiet day fishing. "Following the operation, I now have the courage to go out of the house again." Santiago, his grandson, was born two days after the operation, and ten days thereafter Mr. Ribeiro went to see him. He hasn't actually held the baby in his arms yet – he thought the new arrival was too fragile for that. But: "With a little more courage, I could have done it!" Mr. Ribeiro has tears in his eyes as he says this. And a happy smile on his face.

Peter Schüpbach, 66

"Just imagine: You wake up. You don't know where you are. You don't really know who you are. You don't know whether you're married, or whether you have children. People in white coats tell you you're in hospital. When a visitor comes, you don't know who it is who's standing by your bed, though the person standing by your bed seems to know you very well.

Couldn't get any worse, could it? Oh yes, it could. I couldn't speak, I couldn't walk. I sensed that I could think, but I didn't know what I was supposed to think. This all happened to me in August 2000. My brain hasn't been able to reconstruct the eight months preceeding my awakening. They are nothing but a hole. A very black hole.

I was a doctor. No, I am a doctor. Internal medicine. But I haven't practised since it happened. I was found lying unconscious in a wood and taken to the Zurich University hospital.

This is how it all started. I was constantly tired. Drained. Listless. 'You're working too hard', I thought to myself. At some stage I realized that I needed help. The psychiatrist diagnosed depression and sent me to the University psychiatric clinic as an outpatient. The drugs they gave me took effect quickly. Things began to get better. Then they found me lying in the wood, and after that came the black hole. One test after another, one terrifying diagnosis after another. I won't bore you with the details. I'll just mention three. I had cerebral atrophy. Shrinkage of the brain that was clearly visible on the MRI scan. I was suffering from Lewy body dementia, the second most common form of neurodegenerative dementia in the elderly – and from Parkinson's Disease. Nobody knew then – nobody knows now, come to that – which came first, Parkinson's Disease or Lewy body dementia. Was it the chicken or the egg? Either way, I was just 57 years old.

The next nine years were indescribably difficult. Disorientation, total forgetfulness, hallucinations. I had uncontrollable salivation. I'd burst into tears if anybody said as much as good morning to me. My wife and I separated. We have no children. She left in 2004. It wasn't hard to understand. I'd have preferred not to live with me in that state. There were countless other problems at that time – I had to stop taking a dopamine preparation, which initially worked very well, because of its side effects. In the course of time I started to suffer from intense central neuropathic pain in my back and left leg. The antidepressant that I took caused twitching in my face. Medical jargon refers to this condition as perioral dyskinesia. My facial muscles did what they wanted, my mouth froze in an askew position, my facial features contorted to a grimace. Anyone who saw me immediately knew that 'something was very wrong with him'. These dyskinesias are not painful, but really annoying. The worst thing is that you begin to isolate yourself. Life became less and less of a pleasure. I couldn't concentrate on anything any more. I ... stop! I don't want to go on about the problems. There were things in life that mattered to me, and I created more of them.

Let's talk about those things that mattered to me: The first was music. Making music is the best training for the brain. When I was young I taught myself to play the double bass. Now I'm having lessons. The second was reading. I'm a bookworm. It was hideous not to understand the letters any more. But I read anyway. I read and read. First German, then – to put myself under a little pressure – English. The third thing was sport. I exercised. This not only helped me physically, but mentally as well.

And when I realized that I was becoming more and more isolated, I found a fourth thing that mattered. I went and worked for a family in the mountains as a volunteer goatherd. Talking to the people there was a blessing.

I had another MRI scan, and the doctors couldn't see any shrinkage. At first they thought they were looking at the wrong images. Apparently the brain did restore itself. What's most important to me is that I can see the birds again. And hear them! For me they symbolize the light at the end of the tunnel."

Friederike Giotas

Nadine Langenberg

Nicholas A Johnson

Staying in Touch

In the last two Annual Reports, we conveyed an insight into the everyday lives of six patients – in 2007 Friederike Giotas, Nicholas A Johnson and Nadine Langenberg – suffering from Friedreich's Ataxia, a rare form of a degenerative neuromuscular disease that leads to impairment of movements and immobility. In 2008, we portrayed Robin Vanlommel, Reto Schwarz and Gordon McClurg, who are afflicted with Duchenne Muscular Dystrophy, one of the most common and devastating types of muscular degeneration that affects males of all ethnicities. What has become of them?

Friederike Giotas, 53

"2008 was a good year", says **Friederike.** "In October I spent a full month in Greece. The climate there is just wonderful; it gives me so much energy." She is already planning her next trip to Greece, with her husband Apostolos and son Athanassios, to attend her daughter's wedding in June. Katharina and her fiancé Leo live on the Greek island of Chios in the Aegean Sea. "I need the sun – like a flower. I flourish in a warm and sunny climate."

Nadine Langenberg, 27

Nadine's physical condition has remained stable over the last year, and she has improved her computer and talking skills. "I very much appreciate the ongoing care and attention I get from my boyfriend Danny, my parents and last but not least my shih tzu dog Lizy. She is a bundle of energy." Nadine and Danny are thinking about moving to a bigger home. "I need to do a regular workout. Currently my exercise machines are in the living room and space is becoming too tight here for the two of us".

Nicholas A Johnson, 45

Nicholas still actively supports the Muscular Dystrophy Association and the Friedreich's Ataxia Research Alliance, even though his disease continues to progress. "Recently, I spoke to an audience of approximately 400 people in Boston", he says. "I will actively help raise awareness and raise funds for research until my last breath! Pain throughout my body has constantly increased extensively, and I know that I am losing my ability to move, with the continuous loss of energy, every moment of every day." The time he needs for recovery is growing, but he enjoys the priceless support of his wife Susan. Sometimes, when Nicholas feels strong enough, the two of them like to go out for dinner and a movie. "One of my favorite meals is a nice steak", he says.


Robin Vanlommel


Reto Schwarz


Gordon McClurg

Robin Vanlommel, 28

"We won the 2008 wheelchair hockey championship", says **Robin,** "and we will try hard to win the title again in 2009." Robin's health has remained more or less steady over the last twelve months. He had pneumonia last fall but recovered well. Robin continues to make himself available to help others though. He cofounded "de bootsman", a support group for adult Duchenne patients, and designed their Web site (www.duchenne.be). "The health care system in Belgium is not set up for adult patients suffering from Duchenne Muscular Dystrophy," he says, "it is our goal to help and support those patients."

Reto Schwarz, 29

Reto is already involved in preparation for the 2009 summer camp for Duchenne patients, which will take place in the Bernese Oberland. The summer camp is a two-week vacation where volunteers look after the patients. Reto has been a member of the organizing team for three years now and it usually takes him up to six months to do the preparatory work. He says, his health has remained stable, so he still is involved in the Swiss wheelchair hockey tournament. "I like the sport and I am currently working on the redesign of the Web site for our hockey team."

Gordon McClurg, 29

"I've had a good year," says **Gordon.** "In July, I spent two weeks in Prague and Dresden. Both cities, with their historical background and architecture, impressed me very much. And I managed to drive over the Charles Bridge in my electric wheelchair. On my own!" Gordon, along with his caregivers, enjoyed travelling by ferry and car across the northern part of Europe. In December, Gordon organized a fund raising event. With a smile he recalls how he went dressed as Al Capone and his caregivers like members of the Mafia gang. True to his motto "The sky's the limit!" Gordon is planning his next, big trip: "I am trying to arrange a trip to New York to celebrate my 30th birthday next summer!"

Ronald J. Bartek

Patricia Furlong

Expert Roundtable

Santhera is developing therapies for patients suffering from rare neuromuscular indications. Given the small size of their patient populations, so-called orphan diseases have traditionally been neglected by pharmaceutical companies. In recent years, the number of studies in these areas of high unmet medical needs has been rising. However, planning of a clinical trial remains a challenge as industry and regulatory authorities lack the experience when it comes to determining appropriate end points and to interpreting what are clinically relevant results.

Participants of this year's expert roundtable:

Ronald "Ron" J. Bartek is President, Director and Cofounder of the Friedreich's Ataxia Research Alliance (FARA; www.curefa.org).

Patricia "Pat" Furlong is Founding President and CEO of Parent Project Muscular Dystrophy (PPMD; www.parentprojectmd.org).

Durhane Wong-Rieger is President of the Canadian Organization for Rare Disorders (CORD; www.raredisorders.ca).

Durhane Wong-Rieger

Thomas Meier

MJ Roach

Patient Organizations Want Industry, Regulators and Insurers to Better Reflect the Needs of Patients with Rare Diseases

Santhera invited three representatives from patient advocacy organizations to an expert round-table on the development of orphan drugs for neuromuscular diseases held at the Company's offices in Boston in December 2008. The discussion was hosted by Thomas Meier, Chief Scientific Officer of Santhera, and MJ Roach, General Manager North America and Senior Vice President Marketing & Sales of Santhera.

Meier: Patient organizations are powerful organizations, particularly in orphan drugs. Both the Friedreich's Ataxia Research Alliance and the Parent Project Muscular Dystrophy started as self-help groups but rapidly evolved into professional institutions. Can you share how you started and what vision you had for your organizations?

Bartek: When my wife and I received the diagnosis of our son, we sat down in tears at our computer that night and googled Friedreich's Ataxia. We found out that firstly, it was a horrific prognosis, secondly, there was no organization devoted to supporting research into this rare disease and, thirdly, that the gene causing the condition had been identified a year earlier. So we said, if they have got the gene and if we are able to assemble sufficient support, there could be some real progress made.

> "Acting alone there is precious little we can accomplish, while acting together there is precious little we will not accomplish." Ronald J. Bartek

Furlong: In 1984, when my two boys were diagnosed for Duchenne, we received what was a typical standard diagnosis along with the words "no hope and no help." So, I developed a list of questions and found lots of nos in that. We started PPMD with a business plan to look at what we know and what we need to know. We knew that we had to invest in academic science. Obviously we always tried to attract industry interest, too. So, we look at ourselves as catalysts.

Bartek: The catalyst word rings very true to FARA. We are catalyzing by funding research and assembling scientists from around the globe, because we felt that acting alone there is precious little we can accomplish, while acting together there is precious little we will not accomplish. In April 1999, we organized the world's first international scientific conference on Friedreich's Ataxia with 80 specialists attending. When in 2006, we assembled this community for the third time, we had a team of 150 scientists and six drug companies including Santhera joining.

Meier: What about the Canadian Organization for Rare Disorders? Am I right that you represent rather a national network of smaller patient communities in Canada?

Wong-Rieger: Yes, we are basically an umbrella organization for patient groups that deal directly with specific rare disorders. We are helping them to better serve their individual constituents and jointly work on general health policy topics. The biggest issue in Canada is the absence of a coherent orphan drug policy and a lack of equal access to diagnosis and treatment. So CORD is more involved in advocacy, and pretty emphatically, I would say.

> "We want to see a continuous effort, we want to accelerate opportunities and see that the best drugs are approved. And we are very willing to do whatever it takes to help facilitate approvals." Patricia Furlong

Furlong: Lobbying is very powerful and has the best leverage for our activities. We have been working with professional lobbyists in Washington DC since 2000 and have been very successful in inserting our language into several legislations. One of them was for the National Institutes of Health to grant muscular dystrophy specific translation awards.

Roach: Industry and patient organizations are partners in many aspects. In general, how would you describe your relationship with drug companies? What are the factors you value?

Bartek: First of all, good drugs! The expectation is that a company stays focused on our disease – we want to see a maximum effort in Friedreich's Ataxia. We expect that the industry works with us and our clinical network in the design and performance of trials. Eventually we are hopeful that the drug companies will be very successful and that their products become available for our patients.

Furlong: We are looking for honest brokers and good partners. We want to see a continuous effort, we want to accelerate opportunities and see that the best drugs are approved. We certainly will help in terms of anything we are asked for. I have to say that we are very willing to do whatever it takes to help facilitate approvals.

Meier: Scientific advances and the first successes in orphan diseases are attracting more interest resulting in more clinical trials. We see your wish to broaden the pipeline of drug candidates as much as possible. On the other hand, there are a limited number of patients available to enroll in these trials at any given time. How do patient organizations prioritize?

Furlong: At PPMD, we have a scientific advisory board that triages some of the opportunities that come our way. They prioritize the drugs that have the greatest near-term impact. For instance, a stem cell application might not rank as highly as a well-characterized compound that is far enough in development to look like a clinical candidate.

Bartek: We have never taken a single scientific action or decision that was not subject to rigorous peer review. Both our organizations began in a scientifically impoverished environment. Now our scientists say, we will get a treatment pretty soon. That's why we love having this new challenge of doing multiple clinical trials. We can't afford to let an important drug trial fail because of insufficient participation, so we motivate our patient community to sign up. And we did very successfully with the Phase III IONIA trial, right?

Wong-Rieger: We find it really important to educate the rare disease community who have not experienced clinical trials about what is evidence-based medicine, why placebo control is needed and what is causing the difficulties in terms of rare disorders. We hold workshops for our patient groups to enable them to educate their members about clinical trials.

Roach: As Santhera experienced in Europe, there are no regulatory shortcuts in the clinical development and approval process for rare diseases. Regulators want to see the same level of evidence despite the rarity of condition. The same demands are being placed on us: regulators want longitudinal data sets, they want sufficiently powered and controlled trials and they want health economic data. So, we need the support of patient advocacy groups in helping the regulators to understand how inadequate this can be for evaluating drugs in very small patient populations.

"The message is very clear: Regulators and insurers ask for evidence-based medicine and evidence-based medicine costs money." Durhane Wong-Rieger

Wong-Rieger: Regulators are adapting to this. We see early reviews and acceptance. They begin to value surrogate outcomes in addition to "hard" clinical outcome measures. Pharmaceutical companies, on the other hand, must continue to collect post-marketing data so the approval is not just based on the clinical trial population but on all patients to give regulators more comfort.

Furlong: We also have to convince the regulators that steadystate is improvement, and that no change from baseline is a win. We must also recognize that small changes in function such as rolling over in bed may actually benefit the caregivers, and overall improve quality of life. The patient community can teach EMEA and FDA and explain how much risk we are willing to take and what progress or lack of progress in the disease state we are willing to accept.

Wong-Rieger: None of the existing quality of life scales addresses any of the measures that are meaningful to patients with life-threatening conditions because they were made up with a view of healthy people. How can the regulators hold up the same yardstick for a drug that will serve millions of people as opposed to a couple of thousand with a progressive disorder?

Meier: Another big gap is natural history data that show the natural rate of decline. I encourage patient organizations to fund professional efforts to collect and publish these data. We need them to demonstrate a drug's efficacy against natural progression. Also, standard-of-care documents are missing in most orphan diseases.

> "What is urgently needed are reliable data on the natural rate of decline and standard-of-care recommendations for almost all of these orphan diseases." Thomas Meier

Bartek: The patient community has bought into the concept of clinical trials. As the first drugs now come to the market, we have to educate them on reimbursement. Patients will need such education on the whole insurance process because they haven't had the benefit of a prescription product specific for their disease before. The reimbursement is not transparent to them so they are frightened when they see the pre-insurance costs. We need to explain how the insurer plans treat-costly drugs and that patients have to contribute only a small percentage of the total.

> "We will have a co-pay assistance program that will help defray out-of-pocket costs for patients who meet certain financial requirements." MJ Roach

Wong-Rieger: And you have to tell them the rationale why orphan drugs are more expensive. The message is very clear: You asked for evidence-based medicine and evidence-based medicine costs money. Patients, prescribers and regulators, they all want safety and efficacy. Getting a fair reimbursement price is another thing. In the beginning it was fairly easy for drug plans to absorb the handful of orphan drugs. Now we see some insurers trying to pull back, stating the cumulative effect.

Roach: At Santhera we want to make our products available to as many patients as possible. In the US, we will have a co-pay assistance program as we have developed in Canada. This program will help defray out-of-pocket costs for patients who meet certain financial requirements, such as household income.

Management Discussion and Analysis

Major events of 2008 include:

Catena® successfully launched in Canada as first approved treatment for Friedreich's Ataxia.

Early approval in Europe refused by EMEA due to potential additional near-term clinical data from ongoing Phase III program in Friedreich's Ataxia.

Recruitment of pivotal trials in Friedreich's Ataxia in the United States and Europe completed.

Additional funds of CHF 15.9 million raised in equity private placement.

Commercial operations in North America set up with subsidiaries in Boston and Montréal.

Financial Results 2008 Reflect Transition into Product Company with First Sales

Santhera's financial and operational results for the year 2008 reflect the significant progress in clinical development and the transition to a product company with a first marketed drug. During the period, expenses for research and development (R&D) amounted to CHF 31.5 million, an increase of 35% over 2007, reflecting the advancements in its clinical pipeline. Net cash burn in 2008 was CHF 31.6 million compared to CHF 19.0 million in 2007. For the 2008 year-end, Santhera reported cash and cash equivalents of CHF 75.0 million.

Solid balance sheet with cash reserves of CHF 75.0 million at year-end 2008
As of December 31, 2008, Santhera had cash and cash equivalents of CHF 75.0 million. Net cash burn in 2008 was CHF 31.6 million compared to CHF 19.0 million in the preceding year. Total equity at year-end 2008 amounted to CHF 104.5 million compared to CHF 135.5 million as of December 31, 2007. The Company is targeting the spending of its funds primarily at the expansion of the pipeline and the specialty sales organization in North America.

Santhera targets the spending of its funds primarily at the expansion of the pipeline and the commercial operations in North America.

Santhera's share capital was increased by 395,038 shares through a private placement with Ares Life Sciences and the exercise of employee stock options as well as warrants held by the investors of Juvantia Pharma. As of December 31, 2008, the share capital consisted of 3,513,899 registered shares with a nominal value of CHF 1.00 each. With the recent capital increase, the Company remains financed through equity only.

Continued efficient cash management, expenses focused on clinical development
In 2008, Santhera generated cash income of CHF 0.1 million compared to CHF 11.7 million in 2007, representing up-front and milestone payments from Takeda and the sale of noncore intellectual property rights.

Operating expenses in 2008 amounted to CHF 45.6 million, a 7% increase from CHF 42.8 million in 2007. This increase was in line with expectations and is mainly due to the advancement of the clinical development programs.

R&D expenses, mainly driven by the advanced clinical and regulatory status of the pipeline, amounted to CHF 31.5 million (2007: CHF 23.3 million) representing 69% of total operating expenses. Marketing and sales (M&S) amounted to CHF 3.5 million (2007: CHF 1.2 million) reflecting the build-up of the North American commercial organization and expenses for the launch of Catena®

in Canada. General & Administration (G&A) expenses decreased to CHF 10.6 million (2007: CHF 18.2 million) due to less share-based payments.

R&D expenses, mainly driven by the advanced clinical and regulatory status of the pipeline, represent 69% of total operating expenses.

For the year 2008, Santhera reported a net loss of CHF 44.7 million (2007: CHF 27.9 million), in line with expectations. The gross operating and investing cash flow amounted to CHF –46.5 million (2007: CHF –29.6 million). As a result, the monthly gross cash burn from operating and investing activities amounted to CHF 3.9 million (2007: CHF 2.5 million), reflecting costs associated with the late-stage clinical trials and related extension studies.

Continued focus on core activities and outlook for 2009

Santhera continues to focus all resources on its key value drivers namely on Catena®/Sovrima® in three indications as well as JP-1730/fipamezole. Simultaneously, the Company is planning to strengthen its commercial operations in North America in anticipation of prelaunch activities in the United States to be initiated in the second half of 2009. Company-wide additional costs and new hirings are tied to the achievement of development and regulatory milestones of the pivotal Phase III trial in Friedreich's Ataxia in the United States.

According to the current financial planning, Santhera is financed well into the year 2011.

According to its current financial planning, Santhera is financed well into the year 2011. The Company expects its average monthly gross cash burn to remain fairly stable. Taking into account estimated product sales in Canada as well as the United States from mid-2010 onwards and potential revenues from partnering activities, the average monthly net cash burn is expected to amount to approximately CHF 2.5 to 3.0 million.


Klaus Schollmeier


Barbara Heller


Helmut Kessmann


Thomas Meier

Corporate Management

Executive Management

Klaus Schollmeier has been Chief Executive Officer since Santhera's inception in 2004. Before joining the Company, he served for 16 years in senior business and scientific management positions in the pharmaceutical industry. Mr Schollmeier holds a PhD in biology from the University of Dusseldorf.

Barbara Heller has been Chief Financial Officer since 2005. Previously she worked for 15 years in senior management positions in investment and corporate banking. Mrs Heller holds an MA in economics from the University of Zurich.

Helmut Kessmann has been Chief Business Officer since 2004. Before joining Santhera, he served for 14 years in senior scientific, business development and management positions of biotech and life science companies. Mr Kessmann holds a PhD in biochemistry from the University of Munster.

Thomas Meier has been Chief Scientific Officer since 2004. He was founder and Chief Executive Officer of MyoContract, one of Santhera's predecessor companies. Mr Meier holds a PhD in biology from the University of Basel and is a distinguished scientist in the field of neuromuscular diseases.

Board of Directors

Michael Lytton is Chairman of the Board, its Nomination & Compensation Committee and its Financial Strategy & Transactions Committee. He is executive vice president, Business and Corporate Development, of Biogen Idec. Mr Lytton holds a JD from Harvard Law School and an MSc in epidemiology and medical statistics from the London School of Hygiene and Tropical Medicine.

Hans Peter Hasler is Vice Chairman. He is chief operating officer at Biogen Idec. Mr Hasler holds a federal commercial diploma and a marketing manager certificate.

Martin Gertsch is Chairman of the Audit Committee. He is chief financial officer of ESBATech and former chief financial officer of the Straumann Group. Mr Gertsch is a certified fiduciary and public accountant.

Rudolf Gygax is venture partner of Nextech Venture and retired managing director of Novartis Venture Fund. He holds a PhD in physical chemistry from the University of Basel.

Timothy Rink was formerly chairman and chief executive officer of Aurora Biosciences. He holds an MA, an MD and an ScD, all from the University of Cambridge.

Klaus Schollmeier is Chief Executive Officer of Santhera.

Bernd Seizinger is president and chief executive officer of GPC Biotech. He holds an MD from the Ludwig Maximilians University and a PhD from the Max Planck Institute of Psychiatry, both Munich.

Forward-looking statements
This Annual Report is not and under no circumstances to be construed as a solicitation, offer or recommendation to buy or sell securities issued by Santhera Pharmaceuticals Holding AG. Santhera Pharmaceuticals Holding AG makes no representation (either express or implied) that the information and opinions expressed in this Annual Report are accurate, complete or up to date. Santhera Pharmaceuticals Holding AG disclaims, without limitation, all liability for any loss or damage of any kind, including any direct, indirect or consequential damages, which might be incurred in connection with the information contained in this Annual Report.

This Annual Report expressly or implicitly contains certain forward-looking statements concerning Santhera Pharmaceuticals Holding AG and its business. Certain of these forward-looking statements can be identified by the use of forward-looking terminology such as "believe", "expect", "may", "are expected to", "will", "will continue", "should", "would be", "seek" or "anticipate" or by discussions of strategy, plans or intentions. Such statements involve certain known and unknown risks, uncertainties and other factors, which could cause the actual results, financial condition, performance or achievements of Santhera Pharmaceuticals Holding AG to be materially different from any expected results, performance or achievements expressed or implied by such forward-looking statements. There can be no guarantee that any of the research and/or development projects described will succeed or that any new products or indications will be brought to market. Similarly, there can be no guarantee that Santhera Pharmaceuticals Holding AG or any future product or indication will achieve any particular level of revenue. In particular, management's expectations could be affected by, among other things, uncertainties involved in the development of new pharmaceutical products, including unexpected preclinical and clinical trial results; unexpected regulatory actions or delays or government regulation generally; the ability of Santhera Pharmaceuticals Holding AG to obtain or maintain patent or other proprietary intellectual property protection; competition in general; government, industry and general public pricing and other political pressures. Santhera Pharmaceuticals Holding AG is providing the information in this Annual Report as of the date of the publication, and does not undertake any obligation to update any forward-looking statements contained herein as a result of new information, future events or otherwise.

Catena® is a trademark of Santhera Pharmaceuticals. Sovrima® is a trademark of Takeda Pharmaceutical.

Imprint
Publisher: Santhera Pharmaceuticals Holding AG, Liestal
Concept/Project management: apr AG für Public Relations, Zurich
Design: WBG, Zurich
Prepress and press: Linkgroup, Zurich
Portraits of patients: Gabriella Baumann-von Arx, Gockhausen (text),
Photography: Anja Gross, Zurich (patients); Pino Covino, Basel (management); Len Rubenstein, Scituate, MA (expert roundtable)

Materials used
Cover and Content: Novatech Satin, chlorine-free bleached (ECF)

Santhera Pharmaceuticals Holding AG
Hammerstrasse 47
CH-4410 Liestal
Switzerland
Phone +41 (0)61 906 89 50
Fax +41 (0)61 906 89 51
www.santhera.com