ASARINA
PHARMA

ASARINA PHARMA AB (PUBL)

INTERIM REPORT

1 January – 31 March 2020

ASARINA PHARMA

INTERIM REPORT

CONTENTS

3. FINANCIAL HIGHLIGHTS AND THE QUARTER IN BRIEF
4. CEO STATEMENT
7. THE CASE FOR SEPRANOLONE
13. PMDD, FMRI AND PLACEBO: PROF. MARIE BIXO
16. MENSTRUAL MIGRAINE UPDATE
18. TOURETTE SYNDROME UPDATE
19. FIRST QUARTER INTERIM REPORT AND CONSOLIDATED FINANCIAL STATEMENTS OF ASARINA PHARMA AB

ABOUT ASARINA PHARMA

We are a Swedish biotech company developing Sepranolone for allopregnanolone-related stress, menstrual and neurological disorders. Our product pipeline is built on over 40 years of research into allopregnanolone-related neurological disorders. With our new family of GAMSA compounds ($GABA_A$ Modulating Steroid Antagonists) we aim to deliver a new generation of efficacious and safe drugs for still widely untreated neuroendocrinological conditions.

CONTACT

ASARINA PHARMA AB
Karolinska Institutet Science Park | Fogdevreten 2, SE 171 65 Solna, Sweden
Peter Nordkild, CEO | Phone +45 25 47 16 46

FIRST QUARTER 2020:

OVERVIEW

FINANCIAL HIGHLIGHTS

Significant increase in R&D costs

Financial gain due to change in SEK

Solid cash position on 31 March (110.0 MSEK)

THE QUARTER IN BRIEF

PMDD

In April 2020 we released inconclusive topline results from our phase IIb study in PMDD. Our active Sepranolone substance performed on a par with previous study results, however, a statistically significant difference from placebo could not be demonstrated due to an unusually high placebo response. Sepranolone achieved an excellent safety prolife during the study. We will no longer be developing Sepranolone for PMDD, as proving an effect against such a high placebo effect would require thousands of patients but we are continuing our fully-funded studies for menstrual migraine and Tourette syndrome.

MENSTRUAL MIGRAINE

80% of patients were recruited for our phase IIa menstrual migraine study by the end of Q1 2020. During the quarter we opened a new study site in Lund, southern Sweden. Due to the Covid-19 pandemic, three sites in Finland and one site in Sweden temporarily postponed further recruitment during the quarter, but all centers except the Stockholm center began recruiting again by the middle of May 2020. The study is scheduled to be completed during Spring 2021.

TOURETTE SYNDROME

Plans and funding remain in place for our phase IIa study in Tourette syndrome due to be initiated in Q2 2021. We had a positive, productive consultation with the Danish Medical Authorities in the beginning of March to discuss the necessary tox study and proposed clinical protocol. We are also in the process of submitting an application for orphan drug designation with both FDA and EMA that we hope will be approved in the fall of 2020.

BEYOND PMDD

Asarina Pharma was reasonably well-funded prior to our PMDD study outcome. We have now reorganized and revised all budgets to ensure that our clinical studies in both menstrual migraine and in Tourette can be completed without any additional funding being required. We were well underway to be phase III-ready in terms of production upscaling, development of a tailormade autoinjector for the sepranolone product and so on. Over the coming month we will mothball these activities, stopping them for now, but in a state where they can be quickly resumed when our menstrual migraine study hopefully yields positive results.

CEO STATEMENT

DEAR SHAREHOLDER

The impact of the top-line results of our phase IIB PMDD study has been dramatic for all of us. Yet drama has a way of obscuring the bigger picture. It is at times like these when we most need to keep a steady hand, a cool eye – and remember the science. No matter how disappointing the results of our study, they do not invalidate the voluminous, comprehensive research into PMDD of more than 40 years. The study results were inconclusive. The case for Sepranolone though, remains.

After working for more than a decade to develop Sepranolone in PMDD we performed a flawless phase IIb study with more than 200 subjects. Yet whilst the active Sepranolone substance performed on a par with previous study results, with a similar reduction of both primary and secondary endpoint symptoms by the active substance, it was still not possible to demonstrate that this was statistically different from a very high placebo effect. The study results were therefore inconclusive.

THE CASE FOR SEPRANOLONE REMAINS

Allopregnanolone (ALLO) remains a potent behavior-altering neurosteroid implicated in a wide range of stress-related and compulsion-related conditions. The high placebo effect of our phase IIb study in PMDD does not invalidate this.

A heightened sensitivity to ALLO is proven to exist in patients with PMDD, and elevated ALLO levels are also of importance for menstrual migraine, Tourette, catamenial epilepsy, OCD, PTSD, stress-related fatigue, compulsive gambling and addiction.

The decades-long research of our CSO has demonstrated that Sepranolone is the body's natural, endogenous compound that reduces the negative effects of ALLO. Again, this is not invalidated by the high placebo effect of our phase IIb study. Over the years we have performed studies in animal models as well as in women where symptoms from Tics to Saccadic Eye Movement, that are clearly produced by high or fluctuating ALLO concentrations, have been reduced by Sepranolone. Again – these pharmacokinetic data are not invalidated by the high placebo effect of our phase IIb PMDD study.

> *Sepranolone is a safe, powerful, endogenous compound that reduces the negative effects of ALLO significantly. It remains a driving scientific and commercial force for us.*

For us the science is loud and clear - the case for Sepranolone remains strong. Sepranolone is a safe, powerful, endogenous compound that reduces the negative effects of ALLO significantly. The presence of ALLO at elevated levels in a wide range of stress-related and compulsion-related neuroendocrinological and neurological conditions remains a driving scientific and commercial force for us.

Both menstrual migraine and Tourette have more robust, objective physical as well as emotional endpoints, and a lower history of a placebo effect than PMDD.

We remain focused firmly on producing the first commercial therapy – Sepranolone – of a new range of GAMSA treatments which could bring new treatments and understanding to a wide range of stress- and compulsion-related conditions—starting with menstrual migraine and Tourette.

PREMENSTRUAL DYSPHORIC DISORDER

We reported top-line results in our rigorously designed and executed phase IIb PMDD study on 21 April. A total of 206 subjects were randomized and completed the study in 14 centers in the UK, Sweden, Poland and Germany.

The top-line results show us that the lessons learned from the phase IIa study that were implemented in the phase IIb protocol worked - PMDD patients in the present study had a symptom reduction for both primary and secondary endpoints on a par with the results in the phase IIa study. The key problem however was the placebo effect, which in the present study was 33% higher than in the phase IIa study – meaning that no statistical difference between the treatment groups could be demonstrated.

With a placebo effect of this magnitude it could well take a study with thousands of patients to prove that Sepranolone works in PMDD. This is, sadly, beyond the scope of a company of our size. So, we are firmly giving up developing Sepranolone for PMDD. I realize that this is a profound disappointment not just for many of our investors, but also for numerous PMDD patients - many of whom passionately believe in the efficacy of Sepranolone and see it as their only hope. I offer my apologies and condolences to all. But let's remind ourselves that, as I have said, the case for Sepranolone beyond PMDD remains robust, that the present study confirms Sepranolone's excellent safety profile, which is of course of enormous importance as we move forward in the complex field of neuroendocrinology.

MENSTRUAL MIGRAINE TRIAL

80 % OF PATIENTS HAVE BEEN RECRUITED

80% of patients were recruited for our phase IIa menstrual migraine study by the end of Q1 2020. During the quarter we opened a new study site in Lund, southern Sweden. Due to the Covid-19 pandemic, three sites in Finland and one site in Sweden temporarily postponed further recruitment during the quarter, but all centers except the Stockholm center began recruiting again by the middle of May. Whilst this caused some delay the study is scheduled to be completed during Spring 2021.

I have been asked quite a few times over the past two weeks why Sepranolone should work in menstrual migraine if it didn´t work in PMDD. To that I would say again that I am convinced that Sepranolone works in PMDD. As mentioned above, we have performed studies in animal models as well as in women where symptoms are produced by high or fluctuating concentrations of allopregnanolone and we have in all of these models seen the dramatic ALLO-reducing effect of Sepranolone. The pathogenesis of menstrual migraine is different from PMDD, but again seems to be impacted by ALLO. The primary endpoint of number of days with migraine is also a more objective, quantitative measure that should be subject to a lower placebo effect.

TOURETTE SYNDROME

PREPARING FOR PHASE IIA STUDY IN THE SPRING OF 2021

In May 2019 we published exciting data on Tourette syndrome that indicates that Sepranolone, without inducing any side effects, reduces tics on par with Haldol, which is a highly efficacious treatment but used as a last resort due to extremely severe side effects. In October we managed to raise SEK 48 million to conduct a phase IIa proof-of-concept study in this large orphan indication.

We had a consultation with the Danish Medical Agency (Lægemiddelstyrelsen) in the beginning of March discussing the necessary tox study as well as the proposed clinical protocol. The authorities were very forthcoming, making constructive suggestions to the tox study in juvenile animals that has been initiated as well as to the clinical study.

We are also in the process of submitting an application for orphan drug designation with both FDA and EMA that we hope will be approved before the end of 2020.

We remain optimistic that we will be able to initiate the phase IIa study in the National Danish Tourette Center at the University hospital in Herlev in the second quarter of 2021, Corona restrictions permitting.

> *We remain focused firmly on producing the first commercial therapy, Sepranolone, of a new range of GAMSA treatments which could bring new treatments and understanding to a wide range of stress- and compulsion-related conditions—starting with menstrual migraine and Tourette.*

ASARINA PHARMA POST PMDD DATA

Asarina was well underway to be phase III-ready in terms of production upscaling, development of a tailormade autoinjector for the sepranolone product etc. All of these activities will over the coming month be brought to a standstill at a state where they quickly can be resumed when the menstrual migraine study hopefully yields positive results.

Asarina was reasonably well funded prior to the negative study outcome. All budgets have however been revised to ensure that both the clinical study in menstrual migraine and in Tourette can be completed without additional funding being required. Asarina is thus based on the revised budgets funded till summer 2022.

GABA, GAMSAs AND THE JOURNEY FORWARD

In conclusion I would like to stress again that for us the case for Sepranolone remains compelling and exciting. Sepranolone is a safe, powerful, endogenous compound that reduces the negative effects of ALLO significantly. The presence of ALLO at elevated levels in a wide range of stress-related and compulsion-related neuroendocrinological and neurological conditions is still a driving scientific and commercial force for us.

We know that the neurochemical GABA (gamma-aminobutyric acid) remains the brain's most powerful inhibitory neurotransmitter. It plays a crucial role in our behaviour, cognition and response to stress. At Asarina Pharma we are still firmly focused on producing the first commercial therapy – Sepranolone – of a new range of GAMSA treatments ($GABA_A$ Modulating Steroid Antagonists) that could bring new therapies and understanding to a wide range of stress- and compulsion-related conditions—starting with menstrual migraine and Tourette.

Thank you for your continued support,

Peter Nordkild,
CEO Asarina Pharma

THE CASE FOR SEPRANOLONE

Few people have heard of the potent neurosteroid Allopregnanolone (or ALLO), yet millions suffer from its effects. Elevated ALLO levels or an altered sensitivity to ALLO exist in patients with menstrual migraine, Tourette, epilepsy, OCD, PTSD, stress-related fatigue, compulsive gambling and addiction **– as well as PMDD.**

Preclinical and clinical pharmacodynamic data have proven that Sepranolone, the body's endogenous compound that modulates and inhibits the effects of ALLO, reduces ALLO-induced effects from Tics in a model of Tourette's to Saccadic Eye Velocity in women.

FOUR EXPERTS DISCUSS THE HIDDEN IMPACT AND RANGE OF ALLO, AND THE PROVEN EFFECTS OF SEPRANOLONE.

PROFESSOR TORBJÖRN BÄCKSTRÖM

Asarina Pharma Founder and CSO, Professor in Obstetrics and Gynecology University of Umeå, over 400 peer-reviewed papers

PROFESSOR MARIE BIXO

senior attending consultant physician and Professor in Obstetrics and Gynecology University of Umeå, over 70 peer-reviewed papers

ASSOCIATE PROFESSOR MARCO BORTOLATO

Dept. of Pharmacology and Toxicology, University of Utah, over 120 peer-reviewed publications

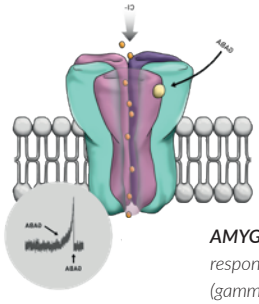
KARIN EKBERG PHD

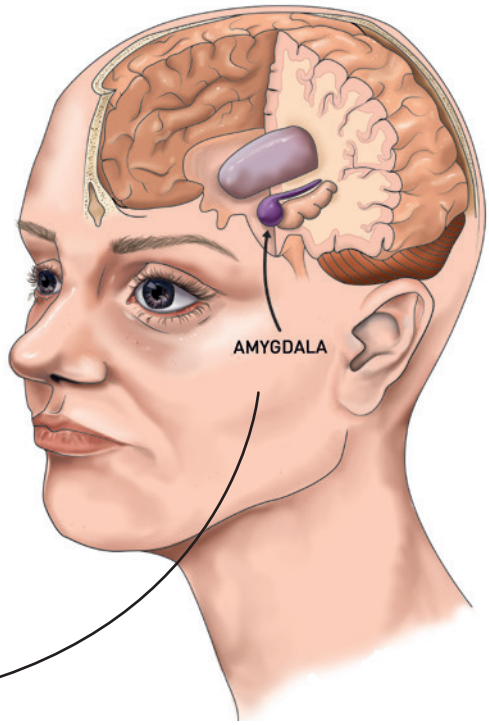
Asarina Pharma Chief Operating Officer PhD, co-authored over 70 publications within the area of physiology, endocrinology and metabolism

Allopregnanolone is one of the most potent modulators of the brain's powerful neurochemical GABA, acting on the brain's $GABA_A$ receptor. GABA itself is the Central Nervous System's major inhibitory neurotransmitter. As such a potent neurochemical substance, ALLO enhances the GABA effect and also directly impacts a range of neurological and menstrual cycle-related conditions.

Professor Torbjörn Bäckström is one of the world's preeminent pioneers in the relatively new arena of ALLO research. "Allopregnanolone is implicated in a wide range of neuroendocrinological, neuropsychiatric and neurological conditions" says Bäckström, "many stress-related and compulsion-related. Obviously, I first came to research ALLO through the study of premenstrual disorders, but it became clear to me quickly just how potent and extensive the effect of ALLO is. In the coming years I think we'll see new diagnostic and therapeutic links emerge between GABA-active neurosteroids and a range of conditions."

Professor Bäckström has published extensively on Allopregnanolone's effect on a number of Central Nervous System disorders, many with a highly physical symptomatology compared to PMDD. His research has included highly-cited, often pivotal work on ALLO's effects on epilepsy [1], overeating [2], balance [3], mood disorders [4] [5], and cognition [6].





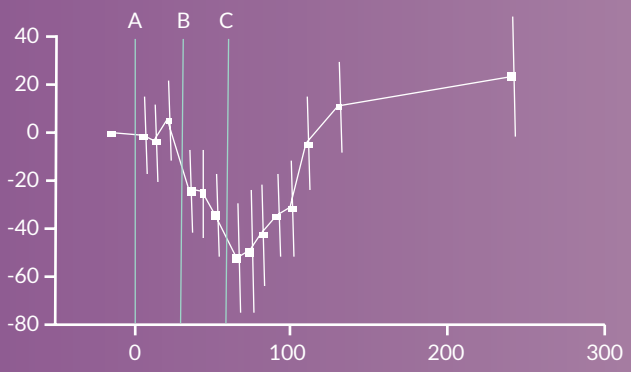
AMYGDALA. *The amygdala plays a crucial role in processing emotional responses. Inside the amygdala, neurons use the neurotransmitter GABA (gamma-aminobutyric acid) to modulate feelings such as fear, anxiety and agreession. The GABA system is the brain's primary inhibitory neurotransmitter.*

THE PHARMACODYNAMIC EFFECTS OF ALLO

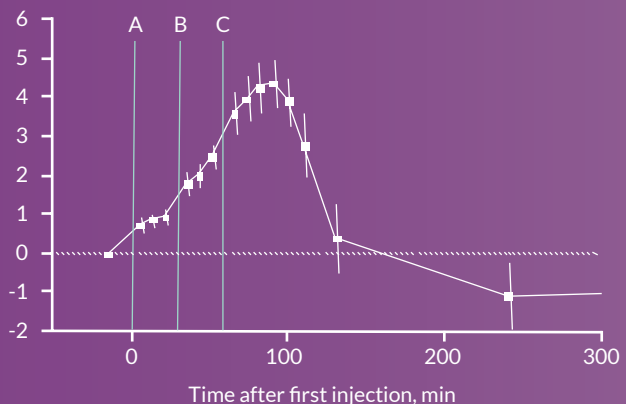
The physiological and neurological effects of ALLO are clear and well-known, with its potential as a pharmaceutical treatment long discussed.

In a 2006 study - *Pharmacokinetic and behavioral effects of allopregnanolone in healthy women* - ALLO-induced physical signals were demonstrated in women given three different doses of ALLO. ALLO-induced sedation and reduced Saccadic Eye Velocity (SEV), a recognized marker on the activation of the $GABA_A$ system, were observed [7].

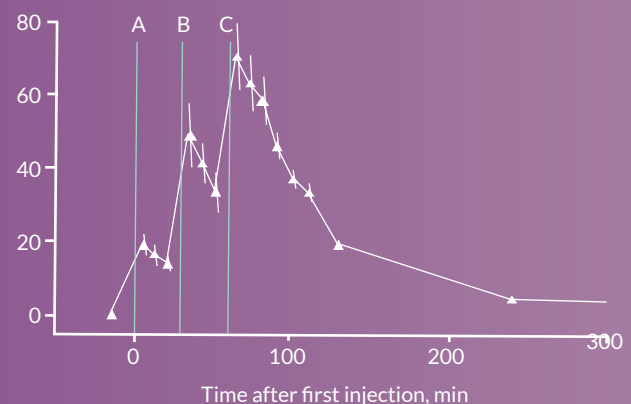
SACCAD VELOCITY (DEG/SEC)



SEDATION SCORE



ALLO (NMOL/L)



In a 2019 migraine study significantly elevated ALLO levels were observed in patients [8], clearly demonstrating that changes in circulating neurosteroid levels, and in particular ALLO, are associated with migraine, and that both migraine and cluster headaches show impaired neurosteroid patterns.

The study showed that the migraineurs who took part had elevated ALLO levels, irrespective of whether they had a migraine attack or not. The paper concluded: "large and disease-specific changes in circulating neurosteroid levels are associated with chronic headache disorders, raising the interesting possibility that fluctuations of neurosteroids at their site of action might shape the natural course of migraine and cluster headache."

SEPRANOLONE is the body's natural, endogenous, compound that modulates Allopregnanolone levels, so reducing the negative effects of ALLO. Asarina Pharma is the first company in the world to develop Sepranolone as a medication, patenting a pharmaceutical formulation of Sepranolone in 2010.

Asarina Pharma COO Karin Ekberg: "Sepranolone is the body's natural counterpart to ALLO, both having their roles in controlling the activity in the $GABA_A$ system. In some circumstances there is apparently a need for more Sepranolone to modulate the effect of ALLO."

THE PHARMACODYNAMIC EFFECTS OF SEPRANOLONE

In vivo studies show the effect of Sepranolone in reducing the physical and behavioral effects of ALLO. In preclinical rat models Sepranolone significantly ameliorated ALLO-induced anaesthesia [9] and ALLO-induced anxiety and oestrus-cycle dependent aggressivity [10]. University of Utah research showed Sepranolone reduced tics in a D1CT-7 mouse model of Tourette's syndrome without inducing any motor side effects [11].

Clinical pharmacodynamic effects of Sepranolone have been observed too. In the 2006 study cited above (Pharmacokinetic and behavioral effects of allopregnanolone in healthy women), ALLO-induced physical signals were demonstrated in women given three different doses of ALLO. These symptoms have also been successfully antagonized by using Sepranolone. Using the same model, a 2015 published study in Psychoneuroendocrinology [12] demonstrated that Sepranolone inhibited ALLO-induced SEV (Saccadic Eye Velocity) reduction and sedation in a group of healthy women.

SIGNIFICANTLY ELEVATED ALLO LEVELS DEMONSTRATED IN 2019 MIGRAINE STUDY

TABLE 2 PLASMA NEUROSTEROID LEVELS IN PATIENTS AFFECTED BY EPISODIC MIGRAINE PATIENTS AND HEALTHY CONTROLS

	Episodic migraine	Controls	P
AP (ng/ml)	1.3±0.5	0.6±0.3	<0.01
EAP (ng/ml)	0.7±0.2	0.4±0.1	<0.01
DHEA (ng/ml)	2.9±1.5	5.1±3.8	<0.05
DHEAS (µg/ml)	2.4±1.1	2.7±2.0	n.s.

Values are means ± S.D. Statistical analysis was performed by Student´s test

TABLE 3 PLASMA NEUROSTEROID LEVELS IN PATIENTS AFFECTED BY CHRONIC MIGRAINE PATIENTS AND HEALTHY CONTROLS

	Chronic migraine (overall population)	Controls	P
AP (ng/ml)	1.1±0.3	0.61±0.3	<0.01
EAP (ng/ml)	0.4±0.2	0.41±0.1	n.s.
DHEA (ng/ml)	1.6±1.1	5.1±3.8	<0.01
DHEAS (µg/ml)	1.2±0.9	2.76±2.0	<0.01

Values are means ± S.D. Statistical analysis was performed by Student´s test

TABLE 5 PLASMA NEUROSTEROID LEVELS IN OVERALL POPULATION OF PATIENTS AFFECTED BY CHRONIC MIGRAINE DURING THE HEADACHE ATTACK AND IN THE INTERICTAL PERIOD

	Chronic migraine during attack (n=27)	Chronic migraine no attack (n=24)	Controls
AP (ng/ml)	1.1±0.4*	1.1±0.2*	0.61±0.3
EAP (ng/ml)	0.5±0.1	0.4±0.2	0.41±0.1
DHEA (ng/ml)	1.4±0.9*	1.8±1.2*	5.1±3.8
DHEAS (µg/ml)	1.5±1.1*	1.0±0.6*	2.76±2.0

Values are means ± S.D. *p<0.05 vs. the respective control groups. No significant changes were found between values obtained during the attack and in the interictal period. statistical analysis was performed by One-way ANOVA + Fisher's LSD (AP, $F_{2,79}$ = 24.79; EAP, $F_{2,79}$ = 1.43; DHEA , $F_{2,79}$ = 18.06; DHEAS, $F_{2,79}$ = 10.66)

ASARINA PHARMA CHIEF OPERATING OFFICER KARIN EKBERG EXPLAINS.

SEPRANOLONE AND PMDD

For Asarina Pharma COO Karin Ekberg, who managed Asarina Pharma's recent phase IIb Study into PMDD, the evidence remains strong that ALLO plays a key role in triggering PMDD for many, and that Sepranolone inhibits the impacts of ALLO, despite the inconclusive results due to a pronounced placebo response, as shown in the top-line results.

ASARINA PHARMA CHIEF OPERATING OFFICER KARIN EKBERG

206 women were randomized in the double-blind placebo-controlled study which took place in clinics in Sweden, the UK, Germany and Poland. The top-line results of the study found that whilst the active Sepranolone substance performed on par with results from its previous phase IIa study, the placebo response was 33% higher in the recent study compared to the first study, and a statistically significant difference between placebo and active substance could not be demonstrated.

> *The experimental data we have on the pharmacodynamic effects of Sepranolone remain persuasive.*

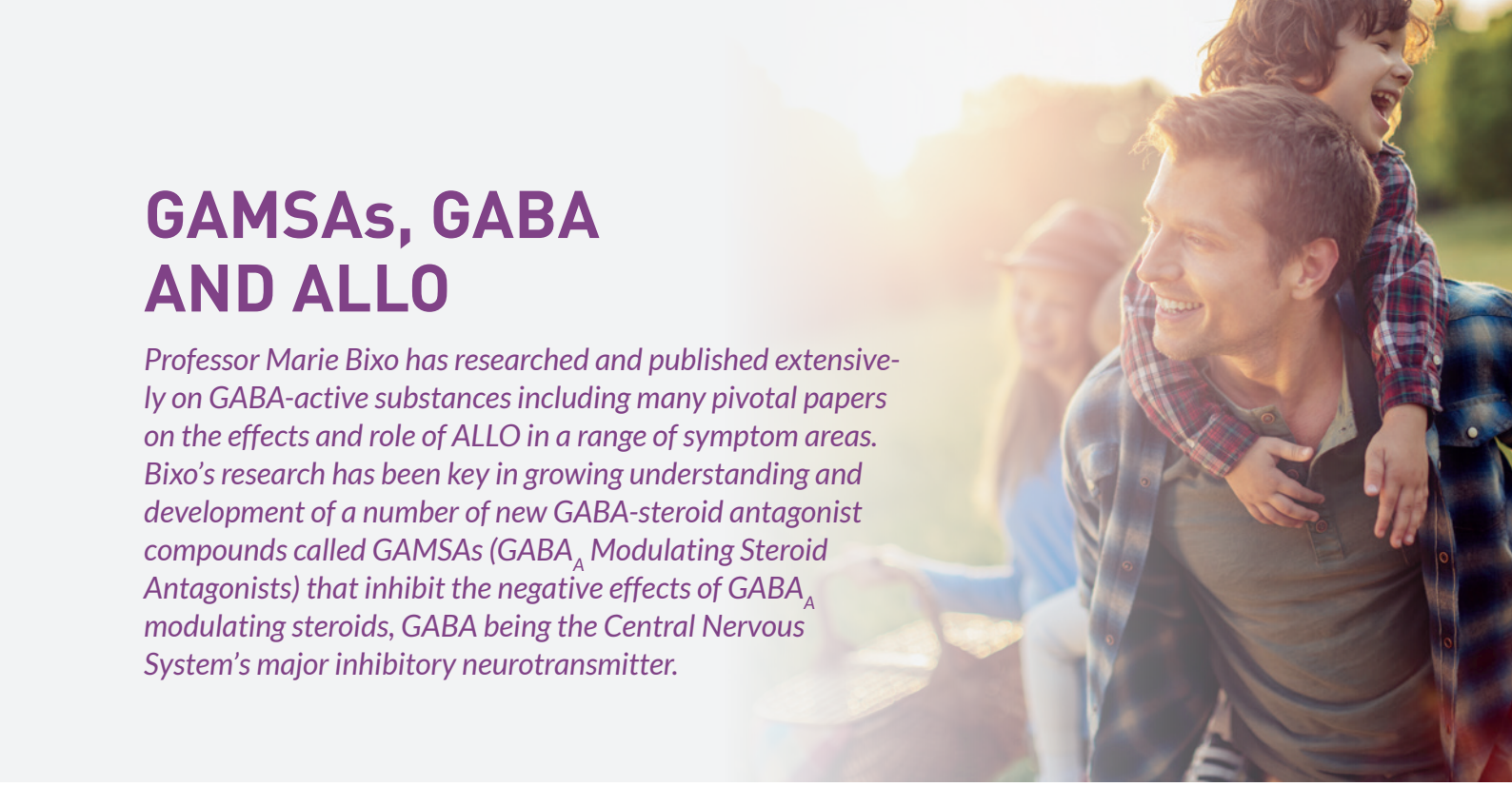
Karin Ekberg: "The high placebo response in the study is indisputable. A strong placebo response has also been observed in previous PMDD trials for SSRIs and for the Yaz oral contraceptive."

Ekberg points out that placebo is a complex, multi-faceted phenomenon. The placebo outcome in the study may only be better understood when the full data are delivered and analysed. A long list of factors may have played a role: the enormous expectations for a potential new treatment, after a long history of non-treatment and relative medical neglect. The presence of patients for whom diagnosis, treatment and care around the symptoms could have been their first. Patients taking part for whom other treatment options had failed. The use of an injectable substance, self-administered is also likely a contributing factor. The possible need for a longer treatment—all these, Ekberg believes, could have played a role in the high placebo effect. Whilst they do reflect the scale of unmet need for a PMDD treatment though, she says, they do not disprove that an altered sensitivity to fluctuating ALLO levels trigger PMDD symptoms for many, nor that Sepranolone modulates those fluctuations for many either.

EXAMPLE FROM A PATIENT'S DIARY, SHOWING DAILY RATINGS OF THE DEPRESSIVE SYMPTOMS DURING TWO CYCLES OF DIAGNOSTIC SCREENING

"The experimental data we have on the pharmacodynamic effects of Sepranolone remain persuasive" Ekberg says. "The data we have built up on the role of ALLO in the pathogenesis and symptomatology of PMDD stands. The top-line results and high placebo effect of the Phase IIb study do not disprove that many women are sensitive to elevated ALLO levels in the luteal phase, or that Sepranolone may be effective in treating PMDD. The results were inconclusive."

Senior consultant physician and Professor of Obstetrics and Gynecology Marie Bixo agrees: "This was just one study so we can't say it is conclusive. I really don't think this is the end of the story for Sepranolone."



GAMSAs, GABA AND ALLO

Professor Marie Bixo has researched and published extensively on GABA-active substances including many pivotal papers on the effects and role of ALLO in a range of symptom areas. Bixo's research has been key in growing understanding and development of a number of new GABA-steroid antagonist compounds called GAMSAs ($GABA_A$ Modulating Steroid Antagonists) that inhibit the negative effects of $GABA_A$ modulating steroids, GABA being the Central Nervous System's major inhibitory neurotransmitter.

One of the key advantages of the GAMSA Sepranolone is that it has good safety and is a highly specific targeted compound. Sepranolone's inhibitory effect is highly specific to ALLO, meaning that it does not interfere with GABA itself or other GABA agonists' effect on the receptor (e.g. benzodiazepines).[13]

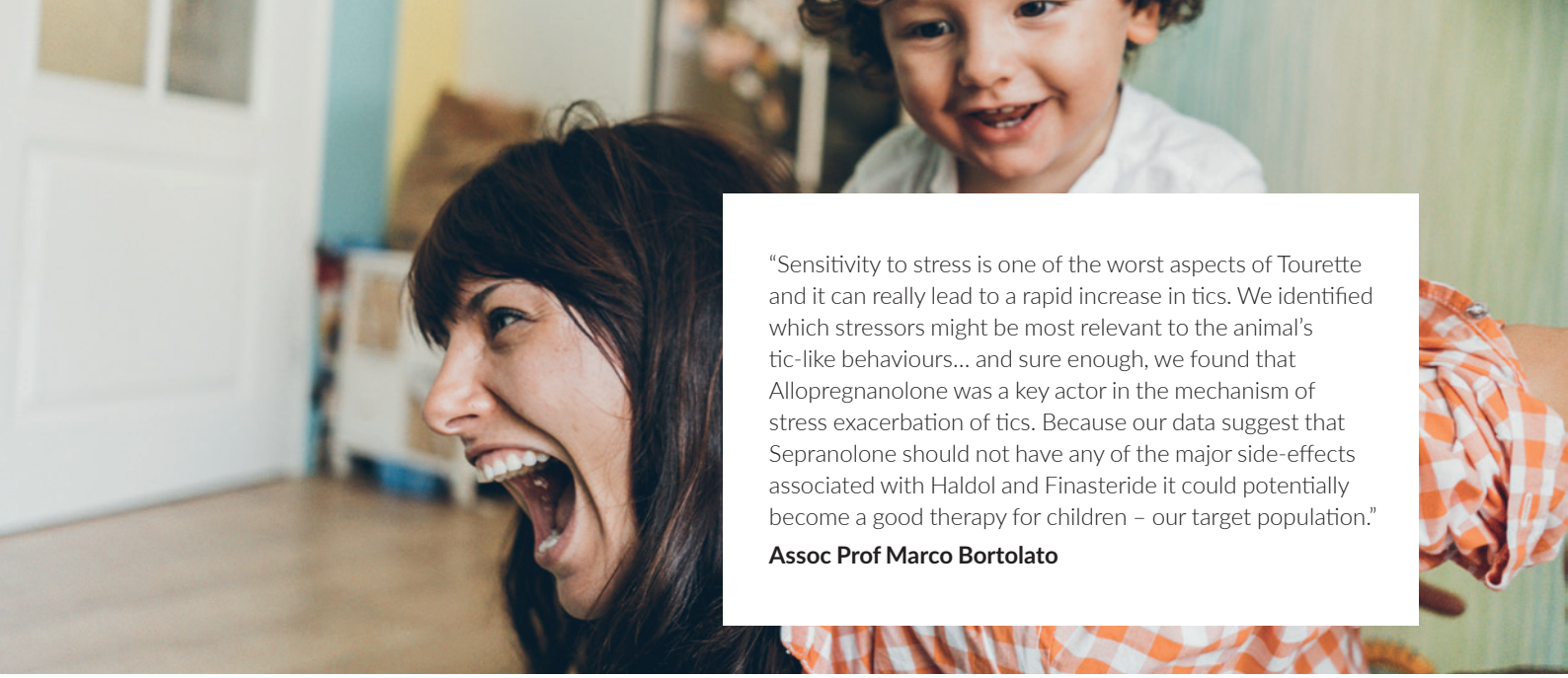
Early research into Sepranolone on mouse models of Tourette symptoms, for example, highlight the specificity of Sepranolone as an inhibitor of ALLO. It also offers the potential prospect of a treatment for Tourette with the same efficacy in reducing Tics as the most efficacious current therapies like Haldol—but none of the often serious side effects associated with Haldol. Whilst reducing Tics, Haldol's side effects range from blurred vision, nausea and diarrhoea to severe involuntary movement disorder, irregular heartbeat and even renal failure.

As ALLO is produced in the brain as part of the response to stressful situations, research into ALLO by Associate Professor Marco Bortolato at the University of Utah suggested that stress increases the severity of Tics in Tourette patients by promoting the production of ALLO in the brain. Building on this evidence, Prof Bortolato's team tested the efficacy of Sepranolone in suppressing tic-like responses in the D1CT-7 mouse model of Tourette´s Syndrome. An early experiment showed a dramatic, dose-dependent effect of Sepranolone ($p<0.0001$). A follow-up study found that Sepranolone countered the enhancement in tics induced by ALLO ($p=0.001$). A further experiment demonstrated that the tic-reducing effects of Sepranolone are on a par with Haldol, yet with no shown side effects.

No GABA-active substances had been tried in Tourette studies previously, despite Tourette being known to be acutely stress-related.

I believe we are on the crest of a new wave of understanding of just how broad the impact of Allopregnanolone really is. Compulsivity impacts on so many different conditions, from ADHD and OCD/B through to eating disorders and addiction.

Assoc Prof Marco Bortolato, University of Utah



"Sensitivity to stress is one of the worst aspects of Tourette and it can really lead to a rapid increase in tics. We identified which stressors might be most relevant to the animal's tic-like behaviours… and sure enough, we found that Allopregnanolone was a key actor in the mechanism of stress exacerbation of tics. Because our data suggest that Sepranolone should not have any of the major side-effects associated with Haldol and Finasteride it could potentially become a good therapy for children – our target population."

Assoc Prof Marco Bortolato

GABA-active substances have significant as yet unrealized therapeutic potential, Bortolato believes:
"I believe we are on the crest of a new wave of understanding of just how broad the impacts of Allopregnanolone really are. Compulsivity impacts on so many different conditions, from ADHD and OCD/B through to eating disorders and addiction. Our preliminary data lead us to believe that these processes are not limited just to Tourette, but point to a much broader biological mechanism that speaks directly to the relationship between obsession and compulsion. If we can prove that mechanism, then this therapy would be relevant to a far, far wider set of problems."

Professor Bixo too points out that these remain early days for $GABA_A$-active compounds, yet the potential is real: "I don't think this is the end of the story for Sepranolone. This whole area of GABA-active steroids is really new. It wasn't even there 20 years ago. Nobody knew about Allopregnanolone and its effect on $GABA_A$ receptor mediated actions in the brain, so a lot has happened. And today there are several different research groups working with these kinds of substances, so I'm hopeful more research will keep being carried out."

FOOTNOTES

1. Epileptic seizures in women related to plasma estrogen and progesterone during the menstrual cycle ion to epilepsy and anaesthesia. (1976, Bäckström et al.)
2. Allopregnanolone involvement in feeding regulation, overeating and obesity (Jan 2018, Bäckström et al.)
3. The influence of premenstrual symptoms on postural balance and kinesthesia during the menstrual cycle (Dec 2003, Bäckström et al.)
4. Allopregnanolone and mood disorders (Feb 2014, Bäckström et al.)
5. Sex steroid induced negative mood may be explained by the paradoxical effect mediated by $GABA_A$ modulators (Sept 2009 Bäckström et al.)
6. Pharmacokinetic and behavioral effects of allopregnanolone in healthy women (2006, Timby et al Psychopharmacology)
7. GABA-A receptor modulating steroids in acute and chronic stress; relevance for cognition and dementia? (2020, Bengtsson et al.)
8. Migraine and cluster headache show impaired neurosteroids patterns. May 2019 Koverech et al Journal Headache and Pain
9. Isoallopregnanolone; an antagonist to the anaesthetic effect of allopregnanolone in male rats (April 2005 Bäckström et al)
10. Internal Asarina Pharma research reports 2008, 2009, 2013
11. Allopregnanolone mediates the exacerbation of Tourette-like responses by acute stress in mouse models (June 2017, Bortolato et al.)
12. Isoallopregnanolone antagonize allopregnanolone-induced effects on saccadic eye velocity and self-reported sedation in humans. (Feb 2015, Bengtsson et al. Psychoneuroendocrinology)
13. Allopregnanolone-stimulated GABA-mediated chloride ion flux is inhibited by 3beta-hydroxy-5alpha-pregnan-20-one (isoallopregnanolone). (May 2003, Lundgren et al.)

PROFESSOR MARIE BIXO, UNIVERSITY OF UMEÅ

PMDD, FMRI AND PLACEBO

"This is just one study, we cannot say it is conclusive. ALLO is a very strong agonist of the $GABA_A$ receptor and there is far more to it than PMDD. I don't think this is the end of the story for Sepranolone."

PROFESSOR MARIE BIXO UNIVERSITY OF UMEÅ.

Professor Marie Bixo is the author of over 70 peer-reviewed influential papers, many on PMDD and Allopregnanolone. As Professor of Obstetrics and Gynecology at the University of Umeå she has played a leading role in the research and development of $GABA_A$-active compounds. As a senior consultant physician, she has decades of clinical experience and is a trusted public expert on women's health in Sweden, appearing on national TV and radio channels.

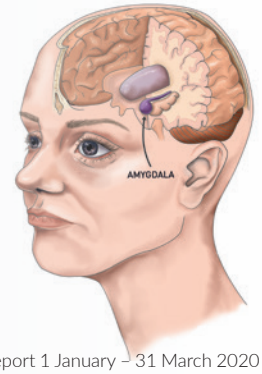
Can you see PMDD symptoms? Professor Maire Bixo and her group are currently using a new fMRI (functional Magnetic Resonance Imaging) paradigm in PMDD research – "We have also been measuring different compositions of subunits in the $GABA_A$ receptor in peripheral blood cells to see if we can correlate those to different responses using fMRI of the brain" Bixo says.

PMDD AND fMRI BRAIN SCANNING A 2018 paper [1] found that a group of women with PMDD do react differently to emotional stimuli, in contrast to a control group: "A consistent finding in PMDD patients is increased amygdala reactivity during the luteal phase" says Bixo. "The amygdala processes emotions such as anxiety and aggression. This is interesting because Allopregnanolone (ALLO) is detected at high concentrations within the region into which marked increases in blood flow are measured with fMRI following allopregnanolone administration. The study suggests to us that women with PMDD do not manage to develop a tolerance to ALLO during the luteal phase, whereas other women do."

The experimental study is one of many into PMDD, ALLO and Sepranolone carried out by Bixo and the team at the University of Umeå. Together these studies constitute a substantial body of data providing evidence that ALLO is the provoking factor behind the negative mood symptoms in PMDD—and that Sepranolone can ameliorate these symptoms as a result of its ability to antagonize the ALLO effect on the $GABA_A$ receptor. Whilst Asarina Pharma's recent phase IIb results were disappointing for Bixo they do not invalidate the data built up on ALLO:

"I believe that Sepranolone works" she says. "First because of the phase IIa study, which I was involved with and where I saw the active reduction of symptoms first-hand. But also because of the experimental studies we have carried out here in Umeå such as our recent fMRI study. In this we saw the difference between women with PMDD and our control group in their response, and when we challenged them with ALLO, and were then able to extinguish that effect by administering Sepranolone."

AMYGDALA. *The amygdala plays a crucial role in processing emotional responses. Inside the amygdala, neurons use the neurochemical GABA (gamma-aminobutyric acid) to modulate feelings such as fear, anxiety and aggression. GABA is the brain's major inhibitory neurotransmitter and plays a crucial role in behaviour, cognition and response to stress.*



PLACEBO IN PMDD

As an authority on PMDD Professor Bixo has extensive experience of the placebo effect. The top-line results of Asarina Pharma's phase IIa double-blind placebo-controlled study which took place in clinics in Sweden, the UK, Germany and Poland, found that whilst the active Sepranolone substance performed on a par with results from its previous phase IIa study, the placebo effect was 33% higher. A statistically significant difference between placebo and active substance could not be proven.

VARIATIONS IN PATIENT POPULATION

"In one way this was expected" says Bixo. "We saw a large placebo effect in the previous phase IIa study too. With PMDD the placebo effect is expected to be high, it's in the nature of the condition. We are dealing with subjective symptoms. In fact PMDD has a symptomatic, criteria-based diagnosis which is a challenge in itself, because all women don't have the same symptoms and there is probably a large variation in the patient population, and yet we don't have any means as yet to differentiate them. With the DSM-5 diagnosis as it is today it is impossible to differentiate subgroups."

> *I expect we will see a lower placebo effect in the mensural migraine study. With migraine you measure the number of attacks. And an attack is an attack. There is no judgment involved, it is very clear-cut to define.*

HIGH EXPECTATIONS

Professor Bixo is keen to see the full data from the phase IIb study to fully explore all the reasons for the placebo effect. She points to high expectations around the study as a potential factor.

DIAGNOSIS AND RECOGNITION

Bixo also points out that many participants in the study may have received both their first PMDD diagnosis and treatment as part of the trial: "My experience with this group of patients is that they have usually had severe symptoms and serious problems for many, many years, and they've never connected it to the menstrual cycle. Usually they have felt misunderstood by everybody, including doctors, who often don't even believe in PMDD and think these are "normal" PMS symptoms they should put up with. So once they get a diagnosis it is often a real revelation with great emotional impact. I would expect getting a diagnosis as part of the study could provoke a strong response in the central nervous system."

Injection too, Bixo says, is established as a high-placebo modality. "We know that injection can drive the placebo effect. Our brain tells us that the medicine is more effective because we're injecting it."

SUBGROUP PRESENCE IN PATIENT POPULATION

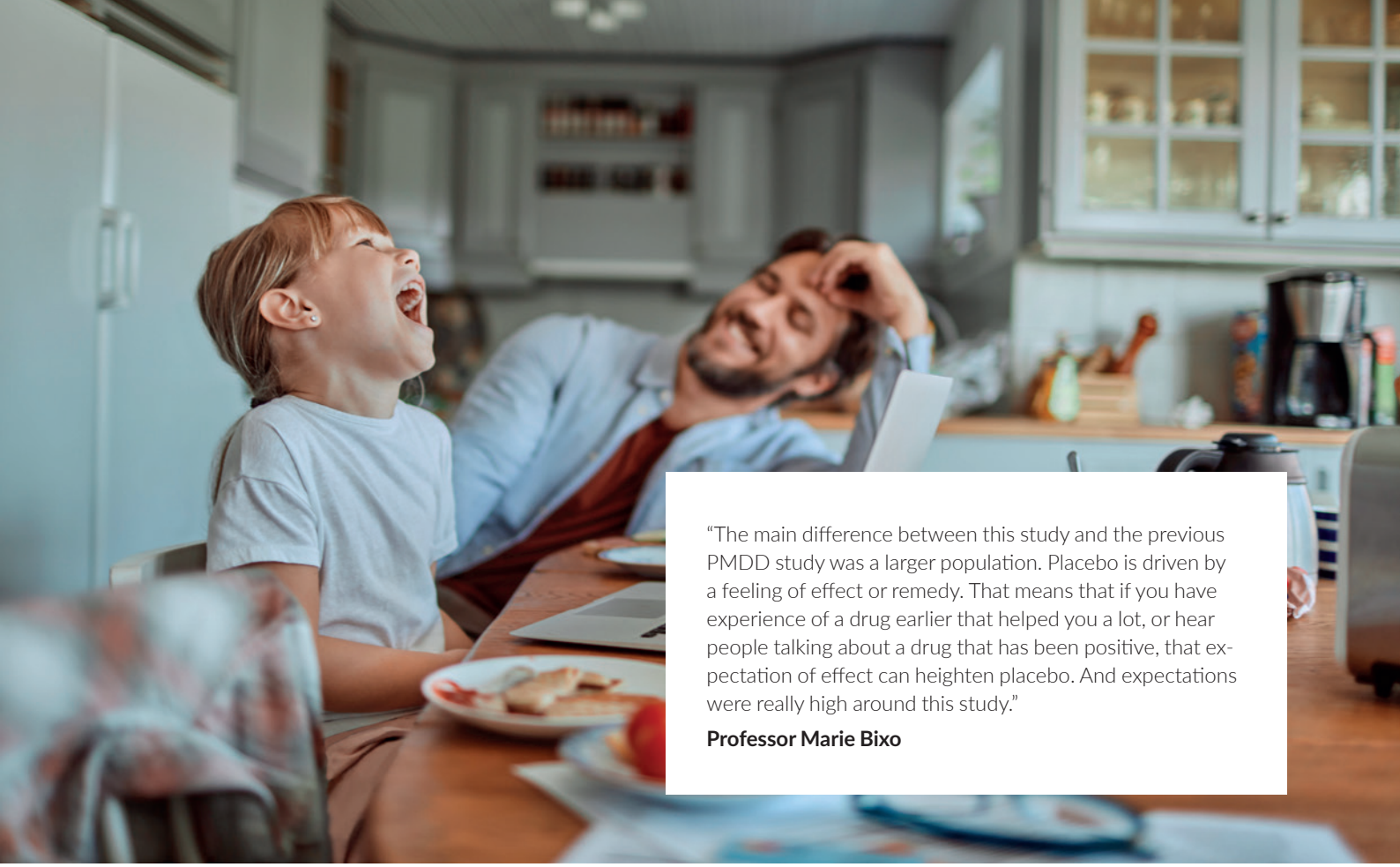
Bixo identifies possible subgroups as an important area to investigate in the full data from the study: "It will be interesting to find out if there is a subgroup of particularly strong responders" she says. "It would be easier to confirm the placebo if the subjects were more similar to each other and we found confirmed groups. I'll also be interested to see how responses were distributed across different countries."

PMDD REMAINS A NEUROENDOCRINOLOGICAL CONDITION

"I think the data on $GABA_A$ receptor neurosteroids, and in particular ALLO, plus the recent WHO IDC-11 diagnosis all underline that PMDD is a neuroendocrinological, not psychiatric condition or mental illness. No matter how influential placebo is, PMDD symptoms are severe, cyclical and only affect a small proportion of PMS sufferers. It is absurd to think you could have a psychiatric disease that only manifested symptoms for the same two weeks every month. We've proved so many times that in the two weeks following menstruation women with PMDD are symptom-free and fine. We should absolutely not lose sight of the cyclical facts."

> *I believe that Sepranolone will always attract interest from clinicians and patients whatever indication it is launched for.*

PROFESSOR MARIE BIXO, UNIVERSITY OF UMEÅ



"The main difference between this study and the previous PMDD study was a larger population. Placebo is driven by a feeling of effect or remedy. That means that if you have experience of a drug earlier that helped you a lot, or hear people talking about a drug that has been positive, that expectation of effect can heighten placebo. And expectations were really high around this study."

Professor Marie Bixo

REDUCED PLACEBO EFFECT IN MENSTRUAL MIGRAINE

Bixo believes that a positive result for Sepranolone in the present menstrual migraine study would play an important part in renewing and strengthening research into neuroendocrinology, ALLO and its sibling compound Sepranolone:

"I expect we will see a lower placebo effect in the menstrual migraine study. With migraine you measure the number of attacks. And an attack is an attack. It is a clear, set event. There is no judgment involved, it is very clear-cut to define. I think that will make the effect easier to distinguish. I believe that Sepranolone's safety profile—and I'm totally convinced it is safe and has no side effects—combined with the phase IIa results, the unmet need and the wealth of supporting data, means that Sepranolone will always attract interest from clinicians and patients whatever indication it is launched for."

HIGH $GABA_A$ COMPOUND POTENTIAL

Professor Bixo points out that these remain early days for $GABA_A$-active compounds, yet the potential is real: "ALLO is a very strong agonist of the $GABA_A$ receptor and there is far more to it than PMDD. I don't think this is the end of the story for Sepranolone. This is ultimately just one study. I realize that these results are disappointing, but the science around ALLO and the unmet need for a PMDD treatment for me make it unlikely that this will go away. Plus, remember, this whole area of GABA-active steroids is really new. It wasn't even there 20 years ago. Nobody knew about Allopregnanolone and its effect on $GABA_A$ receptor mediated actions in the brain, so a lot has happened. And today there are several different research groups working with these kinds of substances, so I'm hopeful more research will keep being carried out."

FOOTNOTES

1. Effects of GABA active steroids in the female brain with a focus on the premenstrual dysphoric disorder (Bixo et al. 2018)

MENSTRUAL MIGRAINE UPDATE

PHASE IIA STUDY

80% of patients were recruited for our phase IIa menstrual migraine study by the end of Q1 2020. During the quarter we opened a new study site in Lund, southern Sweden. Due to the Covid-19 pandemic three sites in Finland and one site in Sweden temporarily postponed further recruitment during the quarter, but all centers except the Stockholm center began recruiting again by the middle of May. Whilst this caused some delay the study is scheduled to be completed during Spring 2021.

"We've been very pleased with how resourceful and adaptable our test centers and study sites have been during the pandemic" says Asarina Pharma CMO and manager of the menstrual migraine study Märta Segerdahl, "they have adapted excellently to challenging circumstances."

During the pandemic many study sites have been successfully carrying out recruitment using video platforms, whilst others have kept their doors open depending on local restrictions. "The regulatory bodies in both countries, the MPA (Medical Products Agency) in Sweden and FIMEA (the Finnish Medicines Agency) have been flexible, adaptable and done an excellent job of working with us on finding adaptive solutions that follow the guidelines."

WHAT'S SO SPECIAL ABOUT MENSTRUAL MIGRAINE?

- **Highly** specific and disabling
- Predictable, prolonged, recurrent **attacks**
- **Attacks** start 2 days before to 3 days into menstruation
- Challenging to **treat**
- **Frequently** does not respond to standard migraine treatments
- More likely to go **unreported and undiagnosed**

ASARINA PHARMA PHASE IIA MENSTRUAL MIGRAINE STUDY

1. Randomized, double blind study
2. Two doses of Sepranolone compared to placebo
3. Women age 18-45
4. Estimated top line results: Spring 2021
5. Diagnostic baseline: three menstrual cycles, followed by three cycles of Sepranolone or placebo treatment
6. Women self-administer treatment every 48 hours of luteal phase of their cycle
7. Primary endpoint: reduction from baseline in number of migraine days
8. Recruitment on track, with more than 50% of patients enrolled

NEW STUDY SITE IN LUND, SWEDEN

A new study site opened in January 2020 in Lund, southern Sweden. "The center is doing really well and it is great to be able to include the most southern part of Sweden in the study as it is such a populous region with so many large urban centers" Segerdahl says "despite a slight slowing of recruitment the study has not so far been significantly delayed and we still expect it to close by Spring 2021."

MENSTRUAL MIGRAINE.
PHASE IIA STUDY Q1 2020

80% RECRUITMENT REACHED

1 NEW STUDY CENTER OPENED IN LUND

3 FINNISH TEST SITE CENTERS TEMPORARILY CLOSED DUE TO COVID-19, RESUMING RECRUITMENT IN MAY 2020.

3 SWEDISH SITES CONTINUE RECRUITING THROUGH CORONAVIRUS

PHASE IIA STUDY, SPRING 2021:

PREPARATIONS IN PLACE

Why is Tourette so important for Asarina Pharma, and its flagship compound Sepranolone? "With appalling symptoms exacerbated by stress, strong compulsivity and an urgent need for a safer treatment — Tourette remains a crucial indication for us, and an important new direction for Sepranolone". CEO Peter Nordkild.

Tourette's syndrome is a cruel condition. 32% of children with Tourette consider suicide or self-harm, yet today's most efficacious treatments like the anti-psychotic Haldol have serious side effects ranging from blurred vision, nausea and diarrhoea to severe involuntary movement disorder, irregular heartbeat and even renal failure.

So when Asarina Pharma published preclinical data[1] on Tourette indicating that Sepranolone could reduce Tourette tics on par with Haldol, without inducing any side effects, interest was high. In October 2020 the company raised 48 MSEK for a phase IIa proof-of-concept study due to begin in Spring 2021.

SEPRANOLONE FOR TOURETTE: THE ROLE OF STRESS AND ALLO

Why is Tourette so important for Asarina Pharma, and its flagship compound Sepranolone? "This study will add to our understanding of how Sepranolone might affect stress-related and compulsion-related disorders beyond the menstrual cycle," Nordkild says. "We know that Tourette tics are severely aggravated by stress, and we found in the study that ALLO was a key actor in the mechanism of stress exacerbation of tics. Sepranolone is the body's endogenous inhibitor of ALLO. 86% of patients with TS have at least one additional behavioral or developmental disorder[2] ranging from ADHD, OCD/B, inattention, hyperactivity, impulsivity and childhood conduct disorder— disorders that are likely impacted by ALLO. So a successful tic-reduction effect in this Study could potentially open up new research avenues and therapeutic possibilities."

Nordkild also points out how important Sepranolone's safety profile is to the Tourette case. "For Tourette patients, so many of whom are young boys , Sepranolone's safety profile is crucial. Sepranolone is a highly specific targeted compound. Its inhibitory effect is confined to ALLO. We've found it to have no major side effects, after hundreds of patients have administered thousands of doses."

University of Utah Assoc Prof Marco Bortolato, who lead the Study: "Because our data suggest that Sepranolone should not have any of the major side-effects associated with Haldol and Finasteride it could potentially become a good therapy for children – our target population."

No GABA-active substances had been tried in Tourette studies before Asarina's study, despite Tourette being known to be acutely stress-related. "These are very early days" says Nordkild, "but we do know that the neurochemical GABA is the brains' major inhibitory neurotransmitter, and ALLO is one of its most potent modulators. We know too that ALLO is implicated in a wide range of conditions from menstrual migraine and Tourette, to PMDD, OCD, PTSD, compulsive gambling and addiction. I believe the therapeutic potential of GAMSA compounds ($GABA_A$ Modulating Steroid Antagonists) deserves exploration and could ultimately represent a new direction in the treatment of a wide range of neuroendocrinological conditions."

FOOTNOTES

1. Isoallopregnanolone reduces tic-like behaviours in the D1CT-7 mouse model of Tourette syndrome. Bortolato et al. June 2019
2. US Center for Disease Control and Prevention https://www.cdc.gov/ncbddd/tourette/data.html

1ST QUARTER 2020

FINANCIAL OVERVIEW AND OTHER INFORMATION

KEY FINANCIALS

SEK '000	2020 JAN–MAR	2019 JAN–MAR	2019 FULL YEAR
Net sales (KSEK)	0	0	0
Operating profit (KSEK)	-21,118	-10,753	-81,034
Result after financial items (KSEK)	-18,369	-9,430	-78,877
Earnings per share, fully-diluted (SEK)	- 0.95	-0.57	-4.11
Total assets, end of period (KSEK)	122,641	139,894	122,641
Cash position, end of period (KSEK)	109,997	128,921	129,505
Equity ratio, end of period (%)	90.8	94.5	85.4
Return on equity (%)	-15.9	-7.0	-55.8
Return on total assets (%)	-13.9	-6.5	-54.3

REVENUE

Net sales amounted to 0 MSEK (0).

OPERATING EXPENSES

Total operating expenses for the 1st quarter 2020 increased to 21.8 MSEK from 10.8 MSEK in the same period in 2019. Research and development costs grew to 16.2 (6.8) MSEK, primarily driven by the clinical trial costs for PMDD and menstrual migraine as well as CMC related expenses. Staff costs were almost unchanged at 2.8 (2.7) MSEK. General and administration costs increased to 2.1 (1.2) MSEK comprising legal and audit fees, investor relation costs, board fees and other administration expenses.

FINANCIAL ITEMS AND TAX

Financial items generated a net positive result of 2.7 (1.3) MSEK reflecting exchange gains related to the value of the SEK. No tax was reported for the quarter.

RESULT AND FINANCIAL POSITION

The operating result for the 1st quarter was -21.8 (-10.8) MSEK and the result after taxes amounted to -18.4 (-9.4) MSEK. Cash flow for the period was -20.2 (-12.6) MSEK. The total cash balance on 31 March 2020 amounted to 110.0 (128.9) MSEK. The shareholders' equity on 31 March 2020 amounted to 111.3 (129.6) MSEK representing an equity ratio of 90.8% (94.5%).

STAFF

As of 31 March 2020, the Asarina team comprised 8 members (employees and permanent consultants), corresponding to 5½ FTEs.

NOTE: Amounts in brackets refer to the 1st quarter in 2019 unless otherwise stated.

THE ASARINA PHARMA SHARE

As of 28 April 2020, Asarina has issued a total of 18,744,524 shares, which are held by approx. 5,200 shareholders.
In February 2020, the Company issued 301,724 new shares in an in-kind issue under the CRO agreement with Ergomed (CRO for the PMDD study).

OWNERSHIP AS OF 28 APRIL 2020*

SHAREHOLDER	COUNTRY	NO. OF SHARES	%
Kurma Biofund	France	3,145,132	16.8
Östersjöstiftelsen (Baltic Foundation)	Sweden	2,667,092	14.2
Idinvest Patrimonie	France	1,639,824	8.7
AP4	Sweden	1,585,000	8.5
SE-Banken	Sweden	1,169,658	6.2
Swedbank	Sweden	804,948	4.3
Handelsbanken Fonder	Sweden	723,686	3.9
Avanza Bank	Sweden	307,899	1.6
Ergomed	UK	301,724	1.6
Länsförsäkringar	Sweden	229,892	1.2
Others		6,179,673	33.0
TOTAL		**18,744,524**	**100%**

**Source: Euroclear, company estimates*

Asarina Pharma has an incentive warrant program for independent directors and management members.
As of 31 March 2020, the program comprises warrants entitling the holders to subscribe for a total of 875,722 new shares at fixed subscription prices (between SEK 25.20 and SEK 28.73).

EVENTS AFTER THE END OF THE REPORT PERIOD

On 21 April 2020, the Company announced the outcome of the phase IIb study in PMDD. The results did not show a statistically significant effect of Sepranolone vs. placebo. As a consequence, the Company does not plan to continue the PMDD project and will focus on completing the two phase IIa studies in menstrual migraine respectively Tourette Syndrome.

On 5 May, the Company conducted its Annual General Meeting. Following the AGM, the board of directors comprises Paul de Potocki (chairman), Marianne Kock, Erin Gainer and Mathieu Simon.

STATEMENT BY THE BOARD OF DIRECTORS

The board of Directors and the CEO hereby certify that this report gives a true and fair presentation of the Group´s and parent company´s operations, financial position and result of operations and describes material risks and uncertainties facing the Group.

Stockholm, 26 May 2020

Asarina Pharma AB

Board of directors

FINANCIAL CALENDAR

19 August: Interim report for 2nd quarter 2020
25 November: Interim report for 3rd quarter 2020

PUBLICATION

The report was submitted for publication by the CEO at 08.00 CET on 26 May 2020.

This report has not been subject to review by the company's auditors.

CONSOLIDATED INCOME STATEMENT

SEK '000	2020 JAN– MAR	2019 JAN– MAR	2019 FULL YEAR
Net sales	0	0	0
Other income	0	0	0
Total sales	**0**	**0**	**0**
Research and development costs	-16 171	-6 840	-63 447
Other external costs	-2 144	-1 197	-5 696
Staff costs	-2 803	-2 716	-11 891
Total costs	**-21 118**	**-10 753**	**-81 034**
Operating profit	**-21 118**	**-10 753**	**-81 034**
Financial income	2 911	1 420	2 496
Financial cost	-162	-97	-339
Financial net	**2 749**	**1 323**	**2 157**
Result before taxes	**-18 369**	**-9 430**	**-78 877**
Taxes	-	-	7 801
Result for the period	**-18 369**	**-9 430**	**-71 076**

EARNINGS PER SHARE

	2020 JAN– MAR	2019 JAN– MAR	2019 FULL YEAR
Number of shares, average (non-diluted)	18 578 742	16 037 218	16 539 685
Number of shares, average (fully-diluted)	19 428 849	16 647 671	17 298 507
Earnings per share, non-diluted, SEK	- 0.99	-0.59	-4.30
Earnings per share, fully-diluted, SEK	-0.95	-0.57	-4.11
Number of shares, end of period (non-diluted)	18 744 524	16 796 040	18 442 800
Number of shares, end of period (fully-diluted)	19 620 346	16 647 671	19 201 622

CONSOLIDATED BALANCE SHEET

SEK '000	2020-03-31	2019-03-31	2019-12-31
ASSETS			
Non-current assets			
Equipment, tools and installations	1 879	0	1 768
Other long-term financial assets	1	1	1
Total non-current assets	**1 880**	**1**	**1 769**
Current assets			
Current tax asset	8 208	7 901	7 698
Other receivables	2 339	207	547
Prepaid expenses and accrued income	217	205	375
Total current receivables	**10 764**	**8 313**	**8 620**
Cash and cash equivalents	109 997	128 921	129 505
Total current assets	**120 761**	**137 234**	**138 125**
TOTAL ASSETS	**122 641**	**137 235**	**139 894**
EQUITY AND LIABILITIES			
Restricted equity			
Share capital	4 686	4 009	4 611
Total restricted equty	**4 686**	**4 009**	**4 611**
Unrestricted equity			
Share premium reserve	272 813	213 890	264 500
Accumulated losses, incl loss for the period	-166 153	-88 245	-149 641
Total unrestricted equity	**106 660**	**125 645**	**114 859**
Total equity	**111 346**	**129 654**	**119 470**
Current liabilties			
Accounts payable	8 832	5 289	16 608
Other current liabilities	86	592	147
Accrued expenses and prepaid income	2 377	1 700	3 669
Total current liabilities	**11 295**	**7 581**	**20 424**
TOTAL EQUITY AND LIABILITIES	**122 641**	**137 235**	**139 894**

STATEMENT OF CHANGES IN EQUITY FOR THE GROUP

SEK '000	SHARE CAPITAL	SHARE PREMIUM RESERVE	ACCUMULATED LOSSES INCL LOSS FOR THE PERIOD	TOTAL EQUITY
Opening balance 1 January 2019	4 009	213 890	-77 989	139 910
Share issue	602	53 679		54 281
Share issue costs		-3 069		-3 069
Translation difference			-576	-576
Result for the period			-71 076	-71 076
Closing balance 31 December 2019	**4 611**	**264 500**	**-149 641**	**119 470**
Opening balance 1 January 2020	**4 611**	**264 500**	**-149 641**	**119 470**
Share issue	75	8 313		8 388
Translation difference			1 857	1 857
Result for the period			-18 369	-18 369
Closing balance 31 March 2020	**4 686**	**272 813**	**-166 153**	**111 346**

CONSOLIDATED STATEMENT OF CASH FLOWS

SEK '000	2020 JAN-MAR	2019 JAN-MAR	2019 FULL YEAR
Operating activities			
Operating profit/loss	-21 118	-10 753	-81 034
Adjustment for non-cash flow affecting items			
Interest received	2 901	638	1 914
Interest paid	-162	-97	-339
Paid taxes	-30	-232	7 835
Cash flow for operating activities before changes in working capital	**-18 409**	**-10 444**	**-71 624**
Cash flow from changes in working capital			
Decrease(+)/Increase(-) in receivables	-1 037	-107	-629
Decrease(-)/Increase(+) in liabilities	-9 130	-2 087	10 754
Cash flow from operating activities	**-28 576**	**-12 638**	**-61 499**
Investing activities			
Acquisition of equipment, tools and installation	-	-	-1 768
Cash flow from investing activities	**0**	**0**	**-1 768**
Financing activities			
Share issue	8 388	-	54 281
Share issue costs	-	-	-3 069
Warrants	-	-	0
Cash flow from financing activities	**8 388**	**0**	**51 212**
Cash flow for the period	**-20 188**	**-12 638**	**-12 055**
Cash and cash equivalents at the beginning of the period	129 505	141 543	141 543
Translation difference	680	16	17
Cash and cash equivalents at the end of the period	**109 997**	**128 921**	**129 505**

PARENT COMPANY INCOME STATEMENT

SEK '000	2020 JAN–MAR	2019 JAN–MAR	2019 FULL YEAR
Net sales	0	0	0
Other income	599	599	2 280
Total sales	**599**	**599**	**2 280**
Research and development costs	-604	-298	-1 684
Other external costs	-1 532	-623	-3 753
Staff costs	-1 204	-1 240	-4 624
Total costs	**-3 340**	**-2 161**	**-10 061**
Operating profit	**-2 741**	**-1 562**	**-7 781**
Financial income	2 515	1 294	5 623
Financial cost	-39	-96	-252
Financial net	**2 476**	**1 198**	**5 371**
Result before taxes	**-265**	**-364**	**-2 410**
Taxes	0	0	0
Result for the period	**-265**	**-364**	**-2 410**

PARENT COMPANY BALANCE SHEET

SEK '000	2020-03-31	2019-03-31	2019-12-31
ASSETS			
Non-current assets			
Financial non-current assets			
Shares in subsidiaries	149 685	51	128 460
Other long-term financial assets	1	1	1
Total non-current assets	**149 686**	**52**	**128 461**
Current assets			
Receivables on group companies	11 018	71 512	2 231
Current tax asset	46	222	16
Other receivables	338	86	89
Prepaid expenses and accrued income	217	205	375
Total current receivables	**11 619**	**72 025**	**2 711**
Cash and cash equivalents	94 839	125 499	116 319
Total current assets	**106 458**	**197 524**	**119 030**
TOTAL ASSETS	**256 144**	**197 576**	**247 491**
EQUITY AND LIABILITIES			
Restricted equity			
Share capital	4 686	4 009	4 611
Total restricted equty	**4 686**	**4 009**	**4 611**
Unrestricted equity			
Share premium reserve	272 813	213 890	264 500
Accumulated losses	-24 518	-22 108	-22 108
Result for the period	-265	-364	-2 410
Total unrestricted equity	**248 030**	**191 418**	**239 982**
Total equity	**252 716**	**195 427**	**244 593**
Current liabilties			
Accounts payable	830	245	280
Liabilites to group companies	0	0	248
Other current liabilities	86	592	147
Accrued expenses and prepaid income	2 512	1 312	2 223
Total current liabilities	**3 428**	**2 149**	**2 898**
TOTAL EQUITY AND LIABILITIES	**256 144**	**197 576**	**247 491**

NOTES

1. GENERAL INFORMATION

This interim report covers the parent company Asarina Pharma AB (publ), Corp. Reg. No 556698-0750 and the subsidiaries Asarina Pharma ApS (Denmark) and Asarina Pharma Finans AB.

2. ACCOUNTING PRINCIPLES

This interim report has been prepared in accordance with the Swedish Annual Accounts Act and BFNAR 2012:1 (K3).

The accounting principles adopted in this interim report are consistent with those of the 2018 Annual Report and should be read in conjunction with that annual report.

3. RISKS AND UNCERTAINTIES

RISK MANAGEMENT

The Board of Directors of the company continuously and systematically assess risks in order to identify risks and to take action on them. The internal control environment is primarily comprised of the following five components: control environment, risk assessment, control activities, information and communication and review. Mitigating actions are developed for each identified material risk.

OPERATIONAL RISKS

At the current stage of development, Asarina's main operations consist of pre-clinical and clinical studies in order to demonstrate safety and clinical efficacy in its pharmaceutical candidates. There is no guarantee that a certain (pre-) clinical trial will generate the required data to enable Asarina to progress to the subsequent development phase of the pharmaceutical candidate. Consequently, Asarina's goal is to gradually generate a portfolio of different pharmaceutical candidates for other indications, thereby reducing risk.

Also, clinical trials may be delayed and costs for the trial may exceed budget. Prior to initiating a clinical trial, Asarina conducts a detailed assessment of the trial period and budget to ensure sufficient funding to conclude the trial, including delays and increased costs for the trial.

Asarina develops medical products and is dependent on assessments and decisions by relevant authorities such as the EMA in Europe and the FDA in the USA. Asarina cannot guarantee that it will obtain the regulatory approvals required to continue clinical studies and to obtain market approval. In order to mitigate this risk regarding regulatory risks, the Company retains leading experts concerning regulatory issues and preparation of protocol of clinical studies.

Asarina focuses on therapeutic areas in which few other companies are active. The company conducts extensive monitoring of potential competitive activity within the IP-area, in relevant publications and through participation in biotech conferences.

FINANCIAL RISKS

At present, Asarina does not generate any income from product sales or licensing of the Company's IP-assets and is therefore dependent upon raising new capital from investors. Asarina aims to have sufficient liquidity for its planned activities for the next 1-2 years. Therefore, Asarina may at any point have discussions with current and potential new investors, which may be interested in injecting new finance into the Ccompany.

Asarina incurs costs mainly in three currencies: Swedish kronor, Euro, and Danish kronor (which is closely linked to EUR). The company mitigates its exchange rate risk by allocating its financial reserves between EUR and SEK mirroring Asarina's future costs in the three currencies.

DEFINITION ALTERNATIVE KPIS

KPI	DEFINITION	OBJECTIVE
Solidity	Calculated on adjusted equity divided by total assets. Adjusted equity com-prises of equity including untaxed reserves deducted with deferred tax liabilities.	The company believes the KPI gives investors information regarding the relation between equity and external financing of the company. The company also believes that the KPS gives investors information about the financial stability and long-term ability.
Return on equity	Result for the period divided by average adjusted equity.	The KPI is included to show the return on the owners invested capital.
Return on total assets	Result before tax with re-versal of interest cost in relation to average total assets.	The KPI is included to show the return on the total assets in the company.

RECONCILIATION ALTERNATIVE KPIS

EQUITY RATIO

SEK '000	2020 JAN–MAR	2019 JAN–MARS	2019 FULL YEAR
Equity	111 346	129 654	119 470
+ Untaxed reserves	0	0	0
- Deferred tax liability	0	0	0
Adjusted equity	**111 346**	**129 654**	**119 470**
Adjusted eqity	111 346	129 654	119 470
Total assets	122 641	137 235	139 894
Equity ratio, %	**90,8**	**94,5**	**85,4**

RETURN ON EQUITY

SEK '000	2020 JAN–MAR	2019 JAN–MARS	2019 FULL YEAR
Result for the period	-18 369	-9 430	-71 076
Average adjusted equity	115 408	134 782	127 385
Return on equity, %	**-15,9**	**-7,0**	**-55,8**

RETURN ON TOTAL ASSETS, %

SEK '000	2020 JAN–MAR	2019 JAN–MARS	2019 FULL YEAR
Result before tax	-18 369	-9 430	-78 877
+ Interest costs	162	97	339
Average total assets	131 268	143 408	144 737
Return on total assets, %	**-13,9**	**-6,5**	**-54,3**

CERTIFIED ADVISER

The company´s certified adviser is Erik Penser Bank,
tel. +46 (08) 463 80 00

CONTACT PERSONS

Peter Nordkild, CEO, telephone: +45 25 47 16 46
peter.nordkild@asarinapharma.com

Jakob Dynnes Hansen, CFO, phone: +45 51 32 36 98
jakob.dynnes@asarinapharma.com

CONTACT INFORMATION

Asarina Pharma AB (Reg.no 556698-0750)
Fogdevreten 2
S-171 65 Solna
Telephone: +46 8 52 48 44 82
www.asarinapharma.com

ASARINA
PHARMA

www.asarinapharma.com

ASARINA PHARMA AB

Karolinska Institutet Science Park
Fogdevreten 2
SE 171 65 Solna, Sweden

ASARINA PHARMA ApS

Copenhagen Bio Science Park
Ole Maaløes Vej 3
2200, Kobenhavn N, Denmark