

## **Sequana Medical announces strong interim results from RED DESERT alfapump® DSR study and provides business update**

### **RED DESERT:**

- **Results from first five patients indicate repeated dose alfapump DSR therapy to be safe and effective**
- **Interim data support DSR hypothesis: kidneys eliminate free water to maintain patients' serum sodium levels**
- **No patients required loop diuretic therapy during the six-week alfapump DSR treatment period**
- **Following alfapump DSR treatment, loop diuretic responsiveness was restored to near normal levels; effect was durable for months post-treatment with majority of patients requiring little or no diuretic therapy**
- **Full RED DESERT data on track to report in H1 2021; first feasibility study (SAHARA DESERT) planned to start in H1 2021**

### **BUSINESS UPDATE:**

- **Early interim data from POSEIDON study in recurrent and refractory liver ascites expected in Q4 2020**
- **European commercial supply of the alfapump temporarily interrupted in Q4 2020; no impact on POSEIDON and RED DESERT studies**

*Conference call with [live webcast presentation](#) today at 15:30 CET / 09:30 am EDT*

**Ghent, BELGIUM – 22 October 2020 – Sequana Medical NV (Euronext Brussels: SEQUA)**, an innovator in the management of fluid overload in liver disease, malignant ascites and heart failure, today announces positive interim results from the first five patients enrolled in the RED DESERT study, evaluating repeated dose treatment of alfapump DSR (Direct Sodium Removal) in diuretic-resistant heart failure patients. Sequana Medical also provides a business update.

**Ian Crosbie, Chief Executive Officer at Sequana Medical, commented:** “We are hugely excited by these results from the first five RED DESERT patients and believe it is the first time ever that fluid balance in heart failure patients has been managed using repeated dose DSR therapy without the need for diuretics. These data support the underlying principle of DSR that after we remove sodium, the body will step in to quickly and accurately remove the free water necessary to restore the serum sodium concentration. Not only does these data suggest that by using alfapump DSR, we can manage the fluid and sodium balance of these patients, but also the restoration of diuretic response opens up further potential opportunities such as renal failure and haemodialysis. Following the allowance of our key patents in both the U.S. and Europe, we are confident that we will continue to lead the way in the use of alfapump DSR for the management of volume overload in a range of indications.”

Five heart failure patients (mean left ventricle ejection fraction in mid-20%'s and mean NT-proBNP of 2,500 – 3,000 pg/mL) on high dose diuretics (average furosemide equivalent dose of 150 – 200mg per day) underwent

up to six weeks of **alfapump** DSR treatment. The **alfapump** DSR implant procedure and repeated dosing of DSR therapy were well tolerated in all patients with few adverse events.

There were no clinically significant changes in serum sodium levels or progressive hyponatremia (low concentration of sodium in the blood) in these patients after repeated DSR dosing. The results also show that during the course of the six-week therapy, no loop diuretics were required, demonstrating the ability of the **alfapump** DSR system to effectively remove sodium and fluid from these patients. Moreover, in the majority of patients, reduced doses of DSR therapy could be utilised and / or some DSR doses could be omitted while maintaining stable to lower weight and natriuretic peptides compared to baseline.

Restoration of diuretic response is an exploratory endpoint of RED DESERT, which is determined by the six-hour excretion of fluid and sodium following intravenous administration of 40mg of furosemide, evaluated serially throughout the study. All patients had an objectively poor diuretic response at baseline. After the six-week study, the diuretic response was restored to near normal levels with the six-hour sodium excretion more than doubled versus baseline. Furthermore, there was a significant durability to the improvement in diuretic responsiveness; in the majority of patients there was a dramatic reduction in loop diuretic requirements lasting months following the completion of **alfapump** DSR therapy.

“Diuretic-resistance is a nearly ubiquitous problem in heart failure patients resulting in untreated volume overload and high rates of hospitalisation. The results from these first five patients in the RED DESERT study are very promising and point to the potential use of the **alfapump** DSR in this difficult to treat patient population that has a clear unmet need,” said **Dr. Jozef Bartunek, Interventional Cardiologist at Onze-Lieve-Vrouw Hospital in Aalst (Belgium) and Principal Investigator of the RED DESERT study.**

“The durable improvement in diuretic responsiveness is particularly interesting. With additional confirmation of these encouraging results through continued study, I believe **alfapump** DSR has the potential to become a new therapy for the management of volume overload and diuretic resistance,” added **Dr. Jeffrey Testani, Associate Professor at Yale University and Heart Failure Scientific Advisor of Sequana Medical.**

The RED DESERT study will enrol up to five additional patients, with top-line data expected in H1 2021.

Following the highly encouraging impact on diuretic responsiveness shown by the RED DESERT interim data, Sequana Medical plans to evaluate the dosing and frequency of **alfapump** DSR therapy in decompensated heart failure patients with residual congestion in a first feasibility study (SAHARA DESERT), expected to start in H1 2021. Based on the results of SAHARA DESERT, and other studies, Sequana Medical intends to commence a U.S. feasibility study in mid-2022 using a next generation proprietary DSR infusate comparing **alfapump** DSR therapy to standard of care.

#### Early interim data from POSEIDON study expected in Q4 2020

Since data on the first 13 roll-in patients will soon be available, Sequana Medical will provide an update with early interim data for POSEIDON later this quarter. Interim data of the full roll-in cohort are expected in H1 2021 and primary endpoint read-out of the study cohort is expected in Q1 2022.

#### Update on **alfapump** manufacturing

As a result of problems with supply of a sub-component of the **alfapump**, Sequana Medical prioritised the supply of **alfapump** systems for the clinical studies and as such encounters a temporarily delay in the supply of the **alfapump** to commercial markets in Europe during Q4 2020. This is only temporarily impacting European commercial availability and the **alfapump** continues to be available for the POSEIDON and RED DESERT clinical

studies. There is no impact on the quality of the **alfapump** system that has been supplied to the market and there is no regulatory impact. Normal supply is expected to return for Q1 2021.

**Conference Call and Webcast**

Sequana Medical will host a conference call with live webcast presentation today at 15:30 CET / 09:30 EDT.

- Registration webcast: please click [here](#)
- Registration conference call (only if you wish to participate in the Q&A): please click [here](#). Once registered, you will receive dial-in numbers and a confirmation code.

The webcast and conference call will be conducted in English and a replay will be available on Sequana Medical's [website](#) shortly after.

**For more information, please contact:**

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**About RED DESERT – Repeated dose alfapump DSR study for treatment of diuretic-resistant heart failure patients**

This study is a multi-centre, prospective, single-arm, first-in-human study to evaluate the safety and feasibility of **alfapump** DSR. Up to 10 patients diagnosed with stable chronic heart failure on high dose oral diuretics are implanted with the **alfapump** DSR system (**alfapump** and implanted surgical port) across two centres in Belgium (Dr Bartunek at Cardiovascular Center Aalst) and Georgia (Dr Shaburishvili at Heart and Vascular Clinic Tbilisi). Following **alfapump** DSR system implantation, patients undergo a diuretic challenge with timed biospecimen collection. On day 14 post-implant (day 0), the patient is admitted for a 14-day in-patient period in which diuretics are withheld and patients are put on a strict low-sodium diet. During the first 14 days, patients are treated with DSR D10% infusate on Monday, Wednesday and Friday, administered through the implanted surgical port into the peritoneal cavity. The DSR infusate remains in the peritoneal cavity for a two-hour dwell time, after which all fluid is eliminated from the peritoneal cavity through the bladder using the **alfapump** system. Following the 14-day in-patient period, patients undergo a second diuretic challenge. Thereafter, diuretics continue to be withheld and patients come into the clinic for their DSR therapy over the subsequent four weeks. After completion of the study period, patients undergo a third diuretic challenge to quantify their response to diuretics.

The primary safety endpoints include absence of device, procedure and/or therapy related serious adverse events through day 14 and the rate of device, procedure and/or therapy related serious adverse event through day 42. Secondary feasibility endpoints include the ability of **alfapump** DSR to maintain a neutral sodium balance in the absence of diuretic therapy and the sustained effect of DSR to maintain euvolemia through week

6. Additional exploratory endpoints evaluate the potential impact of DSR to restore response to diuretics following DSR therapy. For more information about the study, please visit [clinicaltrials.gov](https://clinicaltrials.gov) (NCT04116034).

#### **About alfapump DSR (Direct Sodium Removal)**

alfapump DSR is in clinical development as potential chronic therapy for patients with volume overload due to heart failure. Volume overload in heart failure is a major clinical problem and is the leading cause of hospitalisations for patients with heart failure. There are approximately one million hospitalisations for heart failure annually in the U.S. and 90% are due to symptoms of volume overload. The treatment options are severely limited in those patients for whom diuretic therapy is no longer effective. This limitation is evident from the 24% hospital re-admission rate at 30 days from discharge. The estimated cost of heart failure-related hospitalisations in the U.S. alone is \$13 billion per year.

DSR therapy is a breakthrough approach that involves removing sodium from the body using diffusion via the peritoneal cavity with the use of a sodium-free solution known as DSR infusate. Once the sodium has been removed, the body eliminates excess fluid naturally through urination. Studies have demonstrated that DSR therapy is capable of removing large quantities of sodium and fluid in a safe, tolerable and consistent manner and results were published in the high impact cardiovascular journal, [Circulation](#).

#### **About Sequana Medical**

Sequana Medical is a commercial stage medical device company developing the **alfapump** platform for the management of fluid overload in liver disease, malignant ascites and heart failure where diuretics are no longer effective. Fluid overload is a fast growing complication of advanced liver disease driven by NASH (non-alcoholic steatohepatitis) related cirrhosis and a common complication in heart failure. The U.S. market for the **alfapump** resulting from NASH-related cirrhosis is forecast to exceed €3 billion annually within the next 10-20 years. The heart failure market for the **alfapump** DSR (Direct Sodium Removal) is estimated to be over €5 billion annually in the U.S. and EU5 by 2026. Both indications leverage Sequana Medical's **alfapump**, a unique, fully implanted wireless device that automatically pumps fluid from the abdomen into the bladder, where it is naturally eliminated through urination.

In the U.S., the company's key growth market, the **alfapump** has been granted breakthrough device designation by the FDA. The North American pivotal study (POSEIDON) in recurrent and refractory ascites due to liver cirrhosis is currently underway, and is intended to support a commercial marketing application of the **alfapump** in the U.S. and Canada. In Europe, the **alfapump** is CE-marked for the management of refractory ascites due to liver cirrhosis and malignant ascites and is included in key clinical practice guidelines. Over 800 **alfapump** systems have been implanted to date. Building on its proven **alfapump** platform, Sequana Medical is developing the **alfapump** DSR, a breakthrough, proprietary approach to fluid overload due to heart failure. Clinical proof-of-concept was achieved in a first-in-human single dose DSR study and a repeated dose **alfapump** DSR study (RED DESERT) in heart failure patients is currently underway.

Sequana Medical is headquartered in Ghent, Belgium. For further information, please visit [www.sequanamedical.com](http://www.sequanamedical.com).

#### **Important Regulatory Disclaimers**

*The **alfapump**® system is not currently approved in the United States or Canada. In the United States and Canada, the **alfapump**® system is currently under clinical investigation (POSEIDON Study) and is being studied in adult patients with refractory or recurrent ascites due to cirrhosis. For more information regarding the POSEIDON clinical study see [www.poseidonstudy.com](http://www.poseidonstudy.com). The DSR therapy is still in development and it should be*

*noted that any statements regarding safety and efficacy arise from ongoing pre-clinical and clinical investigations which have yet to be completed. The DSR therapy is not currently approved for clinical research in the United States or Canada. There is no link between the DSR therapy and ongoing investigations with the **alfapump**<sup>®</sup> system in Europe.*

**Forward-looking statements**

*This press release may contain predictions, estimates or other information that might be considered forward-looking statements. Such forward-looking statements are not guarantees of future performance. These forward-looking statements represent the current judgment of Sequana Medical on what the future holds, and are subject to risks and uncertainties that could cause actual results to differ materially. Sequana Medical expressly disclaims any obligation or undertaking to release any updates or revisions to any forward-looking statements in this press release, except if specifically required to do so by law or regulation. You should not place undue reliance on forward-looking statements, which reflect the opinions of Sequana Medical only as of the date of this press release.*