Sequana Medical announces first patient enrolled in RED DESERT – REpeated Dose alfapump® DSR study for Treatment of diuretic-resistant heart failure patients

The study aims to:

- **Evaluate the safety of alfa**pump **DSR in patients with heart failure**
- **Assess the feasibility of alfa**pump **DSR to remove excess sodium and fluid from the body**
- **Explore the potential impact of DSR therapy to restore response to diuretics**

Ghent, BELGIUM – 7 January 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 that the first patient has been enrolled in the first-in-human repeated dose study of **alfa**pump DSR (Direct Sodium Removal) for the treatment of diuretic-resistant heart failure patients.

The prospective, single-arm, repeated dose study named RED DESERT is expected to include up to 10 heart failure patients, who are on high dose diuretics, across two centres in Belgium and Georgia. The primary safety endpoints include the rate of device, procedure and/or therapy-related serious adverse events after two and six weeks. The secondary endpoints include the feasibility of **alfa**pump DSR to remove excess sodium and fluid from the body, thereby eliminating the need for daily high dose diuretics during the six-week treatment period. Additional exploratory endpoints to measure the potential impact of DSR therapy to restore response to diuretics will be evaluated through week six. Results are expected to be reported in Q2 and Q3 2020.

Volume overload is the driver of more than 90% of the one million heart failure hospitalisations in the U.S. each year (which in total account for $13 billion in costs). Rehospitalisation is common and approximately 24% of these patients are re-admitted within 30 days of discharge. Sequana Medical's innovative DSR therapy removes sodium from the body which in turn eliminates the associated fluid to restore sodium concentration, resulting in sustained fluid removal. Positive results from a first-in-human single dose DSR proof-of-concept study demonstrating that DSR therapy can result in the removal of large quantities of sodium and fluid in a safe and tolerable manner were presented at Heart Failure 2019 in Athens and TCT 2019 in San Francisco. **alfa**pump DSR leverages the proven **alfa**pump platform to deliver a fully implanted and automatic system for chronic outpatient DSR therapy.

"The start of RED DESERT is an important step in the development of **alfa**pump DSR as a potential novel therapy for patients suffering from volume overload due to heart failure," **commented Ian Crosbie, CEO of Sequana Medical**. "This study will provide us further insights regarding the safety and dosing of our breakthrough DSR therapy and the feasibility of **alfa**pump DSR to provide a novel treatment alternative to this large and poorly served patient group. We look forward to reporting initial interim results in Q2 2020 and presenting the final results in Q3 2020."

"A large percentage of heart failure patients are poorly controlled with conventional diuretics and there remains an urgent need for effective therapies for these patients," **added Dr. Jeffrey Testani, Associate professor at Yale University.** "Sequana Medical's **alfa**pump DSR system has the potential to deliver a convenient and effective non-diuretic treatment option in patients with heart failure. We have previously reported promising signals from a single dose study with DSR. I look forward to the results of this repeated dose study which will inform on the potential value of DSR in chronic heart failure patients."

"I am excited about the first patient enrolment in RED DESERT," **added Dr. Jozef Bartunek, Cardiologist at Cardiovascular Center, OLV Hospital Aalst, Belgium and Principal Investigator of the study.** "I look forward to

reporting on the clinical potential of **alfa**pump DSR in vulnerable heart failure patients who are not well controlled on standard diuretic regimen."

For more information, please contact:

Sequana Medical
Lies Vanneste, Director IR
Tel: +32 498 05 35 79
Email: IR@sequanamedical.com

Consilium Strategic Communications
Amber Fennell, Sukaina Virji, Melissa Gardiner
Tel: +44 203 709 5000
Email: sequanamedical@consilium-comms.com

LifeSci Advisors
Chris Maggos
Tel: +41 79 367 6254
Email: chris@lifesciadvisors.com

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 **alfa**pump DSR. Up to 10 patients diagnosed with stable chronic heart failure on high dose oral diuretics will be implanted with the **alfa**pump DSR system (**alfa**pump and implanted surgical port) across two centres in Belgium (Dr Bartunek at Cardiovascular Center Aalst) and Georgia (Dr Shaburishvili at Heart and Vascular Centre Tbilisi). Following **alfa**pump DSR system implantation, patients will undergo a diuretic challenge with timed biospecimen collection. On day 14 post-implant (day 0), the patient will be admitted for a 14-day in-patient period in which diuretics will be withheld and patients will be put on a strict low-sodium diet. During the first seven days (day 0 to day 6), patients will be treated with DSR infusate on Monday, Wednesday and Friday, administered through the implanted surgical port into the peritoneal cavity. The DSR infusate will remain in the peritoneal cavity for a two-hour dwell time, after which all fluid will be eliminated from the peritoneal cavity through the bladder using the **alfa**pump system. During the following seven days (day 7 to day 13), the optimal DSR therapy (frequency of administration and volume of DSR infusate) will be evaluated for each patient. Following the 14-day in-patient period, patients will undergo a second diuretic challenge. Thereafter, diuretics will continue to be withheld and patients will come into clinic for their DSR infusate administration over the subsequent four weeks. After completion of the study period, patients will 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 **alfa**pump 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 will evaluate the potential impact of DSR to restore response to diuretics following DSR therapy. For more information about the study, please visit 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 presented at Heart Failure 2019 in Athens and TCT 2019 in San Francisco. The **alfa**pump DSR study started in H2 2019 and will evaluate the safety and feasibility of repeated dose DSR therapy in combination with the **alfa**pump system in heart failure patients who are resistant to diuretics.

About Sequana Medical

Sequana Medical is a commercial stage medical device company developing the **alfa**pump platform for the management of fluid overload in liver disease, malignant ascites and heart failure. 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 **alfa**pump resulting from NASH-related cirrhosis is forecast to exceed €3 billion within the next 10-20 years. The heart failure market for the **alfa**pump DSR (Direct Sodium Removal) is estimated to be over €5 billon in the U.S. and EU5 by 2026. Both indications leverage Sequana Medical's **alfa**pump, 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 **alfa**pump has been granted breakthrough device designation by the FDA. The North American pivotal study (POSEIDON) in recurrent and refractory ascites due to liver cirrhosis started in H2 2019 and a commercial launch in the U.S. is planned for H1 2022. In Europe, the **alfa**pump 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 700 **alfa**pump systems have been implanted to date.

Building on its proven **alfa**pump platform, Sequana Medical is developing **alfa**pump 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 **alfa**pump DSR study in heart failure patients has started with results expected in Q2 and Q3 2020.

Sequana Medical is headquartered in Ghent, Belgium. For further information, please visit www.sequanamedical.com.

Important Regulatory Disclaimers

*The **alfa**pump has not yet received regulatory approval in the U.S. and Canada. Any statement in this press release about safety and efficacy of the **alfa**pump does not apply to the U.S. and Canada because the device is currently undergoing clinical investigation in these territories.*

*DSR therapy and **alfa**pump DSR are still in development and it should be noted that any statements in this press release regarding safety and efficacy arise from pre-clinical studies and ongoing clinical investigations which have yet to be completed. There is no link between DSR therapy, **alfa**pump DSR and ongoing investigations with the **alfa**pump system in Europe, the U.S. and Canada.*

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.