

## Sequana Medical announces positive data from non-randomized cohort in US Phase 1/2a MOJAVE study of DSR<sup>®</sup> 2.0 for treatment of heart failure

- **Data from all three patients in non-randomized cohort treated with DSR 2.0 indicate**
  - **safe and effective maintenance of euvolemia without the need for loop diuretics,**
  - **considerable benefit in cardiorenal status and**
  - **dramatic improvement in diuretic response and loop diuretic requirements up to 11 weeks post DSR treatment**
- **DSMB<sup>i</sup> review planned for early Q1 2024 to approve start of randomized controlled cohort of up to 30 US patients**

Ghent, Belgium – 29 November 2023 – Sequana Medical NV (Euronext Brussels: SEQUA) (the "Company" or "Sequana Medical"), a pioneer in the treatment of fluid overload in liver disease, heart failure and cancer, today announces that all three patients from the non-randomized cohort of the MOJAVE study were successfully treated with DSR 2.0. Data from the third patient show similar beneficial effects of DSR therapy as reported previously in the first two patients<sup>ii</sup>.

*Dr. Oliver Gödje, Chief Medical Officer of Sequana Medical, commented: "We are delighted to see the timely execution of the non-randomized cohort and the encouraging outcomes of our DSR therapy in these first three US patients with diuretic-resistant heart failure. These data strengthen our confidence in a positive independent DSMB review scheduled for early Q1 2024, and we look forward to the commencement of the randomized cohort in up to 30 US patients. This critical next phase will facilitate a comparison between our innovative DSR therapy and conventional loop diuretics, reaffirming our commitment to providing transformative solutions for patients with high unmet medical need."*

### Positive data from non-randomized cohort of MOJAVE study

All three patients treated in the non-randomized cohort of the MOJAVE study had heart failure with preserved ejection fraction (HFpEF) and severe diuretic resistance at baseline (mean furosemide equivalent dose of 1,227 mg per day). At the start of the study treatment period, loop diuretics were withheld, and patients were treated with DSR 2.0 up to daily for four weeks.

During the four-week DSR treatment period, all three patients maintained euvolemia without the need of loop diuretics and showed improved cardiorenal status post-treatment. Their diuretic response<sup>iii</sup> nearly normalized with a mean increase of 324% in their six-hour urinary sodium excretion post-treatment vs baseline. These interim data also show a broad improvement in their kidney function with a mean improvement in eGFR<sup>iv</sup> of 47% and blood urea nitrogen<sup>v</sup> of 57% post-treatment vs baseline. Since patients had HFpEF, their NT-proBNP<sup>vi</sup>

levels were within normal ranges at baseline and were maintained post-treatment, indicating that their stable cardiovascular status was preserved.

The need for loop diuretics was dramatically reduced or even completely eliminated following completion of the four-week DSR treatment period (see table below), which the Company believes is a demonstration of the durable improvement in cardio-renal health of the patient and supports DSR’s mechanism of action as breaking the vicious cycle of cardiorenal syndrome. In addition, none of the patients needed to be hospitalized for congestion since the start of the study.

Patient	No. of weeks after last DSR therapy	Reduction in furosemide equivalent dose vs. baseline
<b>1</b>	11.4	<b>97%</b>
<b>2</b>	6.4	<b>100%</b>
<b>3</b>	1.4	<b>100%</b>

To date, no clinically relevant changes in serum sodium levels or progressive hyponatremia were observed and no serious adverse events occurred, indicating that DSR 2.0 was safe and well tolerated in these first three US patients.

All three patients are currently in the three-month safety follow-up period and their data will be reviewed by an independent Data and Safety Monitoring Board (DSMB) planned in early Q1 2024 to approve the start of the randomized controlled cohort of up to a further 30 patients.

**For more information, please contact:**

**Sequana Medical**

Lies Vanneste

Director Investor Relations

E: [IR@sequanamedical.com](mailto:IR@sequanamedical.com)

T: +32 (0)498 053579

**About the MOJAVE study**

MOJAVE is a randomized controlled multi-center Phase 1/2a study in the US to evaluate the safety and efficacy of DSR 2.0, Sequana Medical’s second-generation DSR product (administered via a peritoneal dialysis (PD) catheter), in diuretic-resistant chronic heart failure patients with persistent congestion. The objective is to validate the positive results from the RED DESERT and SAHARA studies in US patients using DSR 2.0.

The study has started with a non-randomized cohort of three patients treated with DSR 2.0 on top of optimized usual care for congestive heart failure for up to four weeks, followed by a three-month safety follow-up period

(with an initial review after 30 days). Following review and approval of the non-randomized cohort data by the independent Data and Safety Monitoring Board (DSMB) planned for early Q1 2024, up to a further 30 patients will be enrolled in the multi-center randomized cohort. The intention is for up to 20 patients to be treated with DSR 2.0 on top of optimized usual care for congestive heart failure for up to four weeks, and for up to ten patients treated with intravenous loop diuretics alone as part of maximized usual care for congestive heart failure.

Primary and secondary safety and efficacy endpoints include the rate of adverse and serious adverse events and the improvement in diuretic response (measured as a six-hour urine sodium output) from baseline through the end of the treatment period. Exploratory endpoints measured from baseline through the end of the treatment period include change in weight (volume status), creatinine (a marker of renal function), natriuretic peptides (a marker of heart failure) and New York Heart Association (NYHA) functional class; and the number of heart failure related rehospitalizations.

### **About DSR, a disease-modifying heart failure drug therapy tackling cardiorenal syndrome (CRS)**

Cardiorenal syndrome is a key clinical challenge in heart failure and results from the combined vicious cycle of dysfunction of the heart and kidney with hypothesised complex and interconnected mechanisms such as aberrations in hemodynamic, neurohormonal, inflammatory, and sodium handling pathways. Despite the complex multidimensional pathophysiology, the resultant clinical profile is thought to manifest as a self-reinforcing negative feedback cycle characterized by decreased glomerular filtration, increased renal sodium avidity, and congestion, despite escalating diuretic doses.

No current therapies have been shown to improve patient outcomes in this complex and poorly understood indication. Reducing congestion is a key element of therapy but loop diuretics exacerbate many of the core mechanisms thought to underly CRS, thus even worsening diuretic resistance and CRS. Through effective control of the volume status for an extended period of time and thereby avoiding the negative consequences of loop diuretics, DSR has the potential to break the negative feedback cycle of this important indication with clear unmet clinical needs.

Extensive analysis of validated biomarkers from patients in the RED DESERT and SAHARA studies shows the benefit from DSR therapy on i) volume status, ii) normalized diuretic response and dramatically reduced loop diuretic dosing, iii) improvement in kidney function, iv) neurohormonal status and signalling, as well as v) cardiovascular parameters. In these patients there were no congestion-related re-hospitalizations, a one class improvement in their NYHA<sup>vii</sup> status and a reduction of 75% in their predicated one-year mortality (based on the Seattle Heart Failure model).

Data from the RED DESERT and SAHARA proof-of-concept studies have been submitted for publication in a peer-reviewed journal.

### **About Sequana Medical**

Sequana Medical NV is a pioneer in treating fluid overload, a serious and frequent clinical complication in

patients with liver disease, heart failure and cancer. This causes major medical issues including increased mortality, repeated hospitalizations, severe pain, difficulty breathing and restricted mobility. Although diuretics are standard of care, they become ineffective, intolerable or exacerbate the problem in many patients. There are limited effective treatment options for these patients, resulting in poor clinical outcomes, high costs and a major impact on their quality of life. Sequana Medical is seeking to provide innovative treatment options for this large and growing “diuretic-resistant” patient population. **alfapump**<sup>®</sup> and **DSR**<sup>®</sup> are Sequana Medical's proprietary platforms that work with the body to treat diuretic-resistant fluid overload, delivering major clinical and quality of life benefits for patients and reducing costs for healthcare systems.

The Company has reported positive primary and secondary endpoint data from the North American pivotal POSEIDON trial of the **alfapump** in recurrent or refractory ascites due to liver cirrhosis and is on track to file a Pre-Market Approval (PMA) application with the FDA by year end.

Detailed biomarker analysis from the RED DESERT and SAHARA proof-of-concept studies in heart failure indicate DSR's mechanism of action as breaking the vicious cycle of cardiorenal syndrome. MOJAVE, a US randomized controlled multi-center Phase 1/2a clinical trial of DSR 2.0 is ongoing, seeking to confirm the strong efficacy seen in the RED DESERT and SAHARA studies. All three patients from the non-randomized cohort have been successfully treated with DSR 2.0, and the randomized cohort of up to a further 30 patients will start following DSMB approval, planned for Q1 2024.

Sequana Medical is listed on Euronext Brussels (Ticker: SEQUA.BR) and headquartered in Ghent, Belgium. For further information, please visit [www.sequanamedical.com](http://www.sequanamedical.com).

### ***Important Regulatory Disclaimers***

*The **alfapump**<sup>®</sup> system is currently not approved in the United States or Canada. In the United States and Canada, the **alfapump** system is currently under clinical investigation (POSEIDON Trial) and is being studied in adult patients with refractory or recurrent ascites due to liver cirrhosis. **DSR**<sup>®</sup> 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. There is no link between DSR therapy and ongoing investigations with the **alfapump** system in Europe, the United States or Canada.*

*Note: **alfapump**<sup>®</sup> and **DSR**<sup>®</sup> are registered trademarks.*

### ***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*

**PRESS RELEASE**  
**REGULATED INFORMATION – INSIDE INFORMATION**  
**29 November 2023, 07:00 am CET**



*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.*

---

<sup>i</sup> DSMB: Data Safety Monitoring Board

<sup>ii</sup> Initial data reported in Press release of [18 October 2023](#)

<sup>iii</sup> Diuretic response assessed by 6-hour excretion of sodium after IV administration of 40mg furosemide

<sup>iv</sup> eGFR: estimated Glomerular Filtration Rate, a measure of kidney function

<sup>v</sup> Blood urea nitrogen is a waste product normally cleared by the kidneys

<sup>vi</sup> NT-proBNP: N-terminal pro B-type natriuretic peptide, a key cardiac function parameter

<sup>vii</sup> NYHA: New York Heart Association classification (data collected outside study protocols of RED DESERT and SAHARA)