



ASX RELEASE | De.mem Limited (ASX:DEM)

## De.mem enters lucrative food & beverage market

### Highlights

- De.mem takes strategic stake in Aromatec, a Singaporean company targeting the food & beverage industry
- Significant opportunity – the use of membrane technologies in the food and beverage industry is estimated to be a market worth ~US\$5.8 billion per year by 2020
- Aromatec offers innovative membrane based products for the de-watering of flavours, fruit juice, dairy and other products
- Offering based on innovative hollow fiber Forward Osmosis membrane technology developed at NTU, Singapore
- De.mem to provide systems as manufacturing partner – strong pipeline of opportunities building

**8 May 2018: Water and waste water treatment company De.mem (ASX:DEM)** (“De.mem” or “the Company”) is pleased to advise that it has taken a strategic stake in Aromatec Pte Ltd (“Aromatec”), a Singapore-based company to target the food & beverage sector.

Under the agreement, De.mem has provided a capital investment of SGD\$100,000 to Aromatec and has also been awarded free shares. Following the transaction, De.mem initially holds 32 per cent of Aromatec. De.mem will also work with Aromatec as a strategic partner to the business, assisting in the manufacturing of systems as it progresses.

Aromatec is focused on the commercialisation of an innovative hollow fiber Forward Osmosis (“FO”) technology, developed by Nanyang Technological University, Singapore (“NTU”). The FO technology will be utilised by Aromatec for the de-watering or cold concentration of products in the food & beverage manufacturing process, such as flavourings, fruit juices, as well as dairy and whey. The FO technology is developed and ready to be deployed in the first commercial projects in the coming months.

FO is an osmotic process that uses a semi-permeable membrane to effect separation of water from dissolved solutes. The hollow fiber FO membrane developed by NTU, Singapore, delivers high flux (high concentration of feed), low salt back flux (low draw solution leakage) and is easily manufactured and scaled up.

This new technology has a strong value proposition for both Aromatec and De.mem. It is seen to be more competitive than current market offerings as it runs without the use of external pressure or high temperatures, is very mild and conserves key ingredients such as nutrients and aromas. Through the commercialisation, Aromatec will aim to replace traditional technologies such as evaporation. The use of membranes for manufacturing processes in the food & beverage industry provides a significant opportunity for both companies as it is estimated to be a market worth US\$5.8 billion per year (source: BCC Research), with the Asia-Pacific region alone accounting for US\$3 billion out of the total.



For De.mem, the partnership implies an expansion of the company's business scope and product offering directly into food & beverage production processes through a specialized entity. The initiative is complementary to the existing product offering of De.mem which has a stronger focus on water and waste water treatment.

As announced on 8 March 2018, Aromatec sublicensed the said FO technology to De.mem for certain applications in industrial waste water treatment. Furthermore, as announced on 6 March 2018, De.mem had already received an order for the delivery of a membrane based water treatment system from Aromatec.

**De.mem CEO Andreas Kroell said:** "The Company is pleased to be entering into what is an exciting, new initiative with Aromatec. This opportunity provides De.mem with access to a significant opportunity in the food & beverage segment, a market valued at US\$5.8 billion per year.

"This is not only highly complementary to our existing customer base in this market segment, but also leverages our capability to build water treatment systems into process water treatment applications. Further, the initiative underlines the importance of our partnership with NTU, Singapore.

"The strategic stake in Aromatec not only provides us with a valuable asset, but also with the opportunity to generate additional revenues by selling systems and equipment to our partner company specializing on food & beverage manufacturing.

"De.mem continues to witness a strong pipeline of orders build across Asia and Australia and looks forward to updating the market on its progress in the near term."

**-Ends-**

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#### **About De.mem Limited**

De.mem Limited (ASX:DEM) is a Singaporean-Australian decentralised water and waste-water treatment business that designs, builds, owns and operates water and waste water treatment systems for its clients. De.mem operates in the industrial segment providing systems and solutions to customers from the mining, electronics, chemicals, oil & gas and the food & beverage industries and in the municipal and residential segments. De.mem has licensed proprietary technologies from its partner in research & development Singapore's Nanyang Technological University (NTU), including an exclusive worldwide license for a revolutionary low-pressure hollow fibre nanofiltration membrane. Through its wholly owned water and waste



water treatment original equipment manufacturing (OEM) subsidiary Akwa-Worx Pty Ltd, De.mem has a strong presence in Australia. Akwa-Worx has a market reputation for building high quality Australian designed and manufactured products and has long-term customers in the Australian mining industry. To learn more please visit: [www.demembranes.com](http://www.demembranes.com)

#### **About Aromatec**

Aromatec is a company incorporated in Singapore in 2018 which commercialises a new hollow fiber Forward Osmosis (“FO”) membrane technology, originally developed at Nanyang Technological University, Singapore (“NTU”). The commercial focus of Aromatec is on improving manufacturing processes in the food & beverage industry, by deploying its FO membranes for “cold” or taste- and nutrients-preserving concentration during food & beverage manufacturing. The company’s shareholders include the inventors of the technology, NTU and De.mem, a Singaporean-Australian water treatment provider.