



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

## De.mem Launches Extended Range of Hollow Fiber Membrane Products

### Highlights

- Extended range of hollow fiber membrane products launched to address an even wider application range and market with proprietary product offering
- New Ultrafiltration membrane now ready for deployment in commercial projects
- Based on the same core technology developed at Nanyang Technological University, Singapore

**23 May 2018: Water and waste water treatment company De.mem (ASX:DEM)** (“De.mem” or “the Company”) is pleased to report that it has significantly broadened its product range with the launch of different variations of its low pressure hollow fiber nanofiltration (“NF”) membrane technology.

A new Ultrafiltration (“UF”) membrane is being showcased to potential customers which is based on the Company’s core technology. UF is a physical separation process which generally removes particles with a size range from 0.005 to 0.1  $\mu\text{m}$  from a fluid (see Appendix for further details). UF membranes are often deployed for the removal of bacteria, viruses and other particles, and have applications in potable water, sewage as well as industrial waste water treatment – key target markets for De.mem. The separation technology is also used for the pre-filtration step in Reverse Osmosis (RO) water treatment plants or for domestic water filtration.

The new UF membrane by De.mem shows excellent characteristics such as a relatively small pore size for a UF membrane (as indicated by an average MWCO of 60,000 Dalton). It has been successfully tested by De.mem for highly efficient (“6-log”) bacteria reduction using E.coli.

While the UF membrane has a relatively large pore size, De.mem also presents two variations of its hollow fiber NF technology with very small or tight pore size – one version of the NF membrane optimised for maximum “flux” (volume of clean water produced), and another version with minimum pore size for highest reduction of contaminants. Both types of NF membranes operate well under low pressure of 1 to 2 bar feed pressure. NF is generally used to remove particles with a size in between 0.0008 and 0.01  $\mu\text{m}$  from a fluid (see Appendix).

The variations of the technology will be used by De.mem as a key component in its water and waste water treatment systems and allow the company to address a wide range of applications and a large addressable market. They are derived from the same base technology, which had been in-licensed from Nanyang Technological University, Singapore (NTU), in June 2016.



*Picture) De.mem 8-inch Ultrafiltration (UF) membrane module (cross section)*

De.mem's hollow fiber NF membrane technology allows for lower operating costs and reduced investment relative to other conventional water treatment technologies, at high filtration quality. It was successfully validated by De.mem (ASX release: 20 February 2018) and has received its first commercial orders for projects in Singapore and Vietnam (ASX release: 3 April 2018).

**De.mem CEO Andreas Kroell said:** "The introduction of the different membrane products confirms our strategy of developing a portfolio of membranes, and helps to strengthen our customer base and broaden our revenue streams.

The different types of membranes allow De.mem to use our proprietary technology in an even wider range of projects with a large addressable market. With the portfolio of UF and NF membranes, our company now has proprietary products for many applications in potable water, sewage and industrial waste water treatment as well as recycling.

While our business model is to sell turn-key water and waste water treatment systems to the end customer, this gives our company a strong competitive edge and advantage over our competitors. The underlying technology as the key component to our products is a major differentiator and it is positioning De.mem as a dependable technology leader in the water and wastewater treatment sector. The value of this cannot be underestimated."



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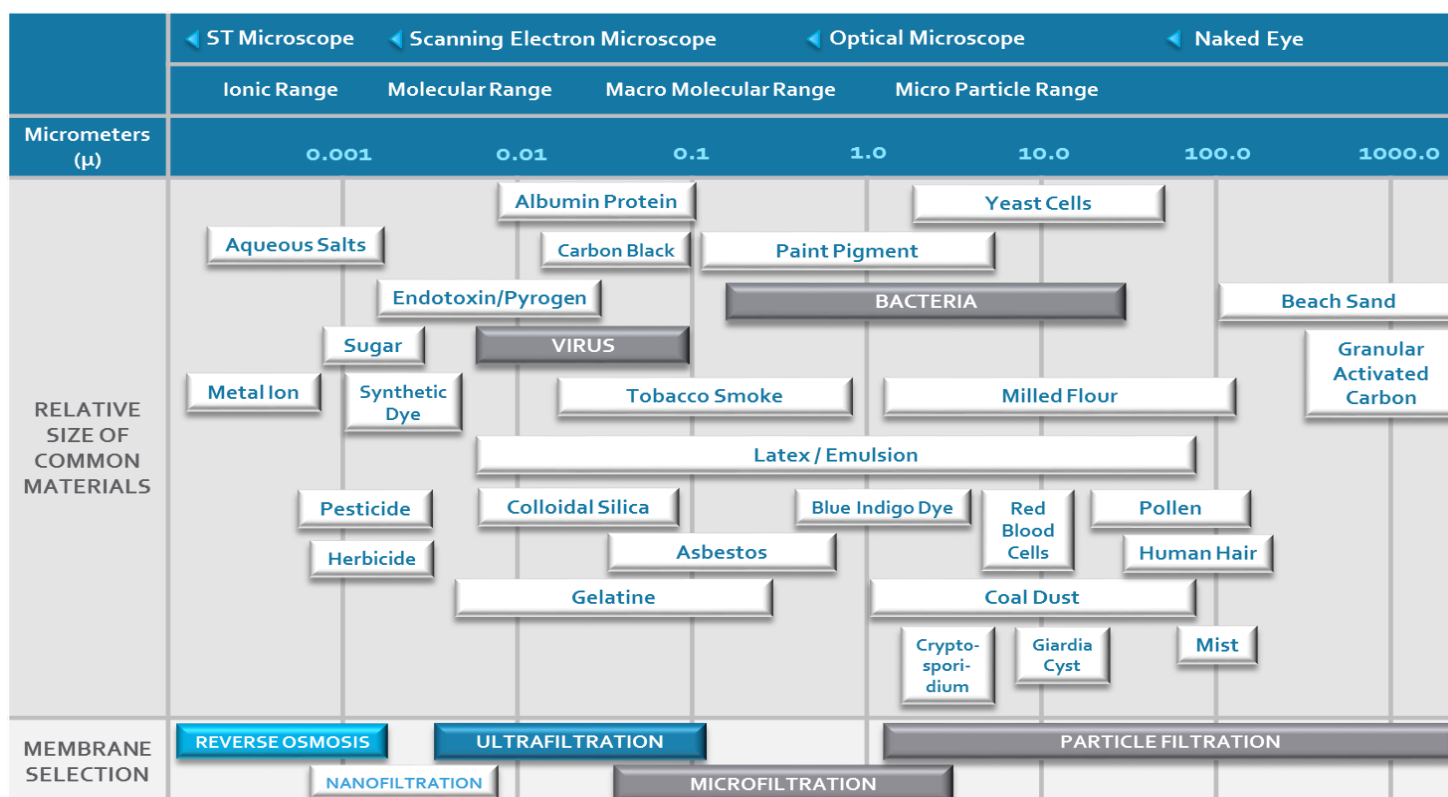
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**About De.mem Limited**

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)



**Appendix 1.** Membrane Separation Processes and Size of Particles to be Removed