## **Supporting information**

## Pneumatically actuated cell-stretching array platform to engineer cell pattern *in vitro*

Harshad Kamble,<sup>a</sup> Raja Vadivelu,<sup>b</sup> Mathew Barton,<sup>c,d</sup> Muhammad J. A. Shiddiky,<sup>b</sup> Nam-Trung Nguyen<sup>a\*</sup>

<sup>a</sup>QLD Micro- and Nanotechnology Centre, Nathan Campus, Griffith University, 170 Kessels Road, Brisbane, QLD 4111, Australia. <sup>b</sup>School of Natural Sciences, Nathan Campus, Griffith University, 170 Kessels Road, Brisbane, QLD 4111, Australia. <sup>c</sup>HealthTech-X, Menzies Health Institute Queensland, Griffith University, Gold Coast, QLD, Australia. <sup>d</sup>Clem Jones Centre for Neurobiology and Stem Cell Research, Don Young Road Nathan Qld 4111

Email: <u>nam-trung.nguyen@griffith.edu.au</u>

List of Contents:

**Figure S1**. Comparison of the cellular alignment after 2 Hour cyclic stretching for the cells located on the central post and deformable membrane (Scale bar: 200µm).

**Figure S2**. (a) Hexagonal (b) Square shaped cell pattern observed after 2 Hour of cyclic stretching (Scale bar:  $200\mu m$ ).

**Figure S3**. Hexagonal cell pattern observed after 2 Hour of cyclic stretching (Scale bar: 200µm).

**Figure S4**. Square shaped cell pattern observed after 2 Hour of cyclic stretching (Scale bare: 200µm).



(b)

**Fig. S1**: Comparison of the cellular alignment after 2 Hour cyclic stretching for the cells located on the central post and deformable membrane (Scale bar: 200µm).



Deformable Membrane

Central Post



Fig. S2: (a) Hexagonal (b) Square shaped cell pattern observed after 2 Hour of cyclic stretching (Scale bar:  $200\mu m$ ).



Fig. S3: Hexagonal cell pattern observed after 2 Hour of cyclic stretching (Scale bar :  $200\mu m$ ).



Fig. S4: Square shaped cell pattern observed after 2 Hour of cyclic stretching (Scale bar:  $200\mu m$ ).