

## **Promoting and orienting axon extension using scaffold-free dental pulp stem cell sheets**

Michelle D. Drewry<sup>1</sup>, Matthew T. Dailey<sup>2</sup>, Kristi Rothermund<sup>3</sup>, Charles Backman<sup>4</sup>, Kris N. Dahl<sup>4,5</sup>,  
Fatima N. Syed-Picard<sup>1,3,6</sup>

<sup>1</sup> Department of Bioengineering, Swanson School of Engineering, University of Pittsburgh,  
Pittsburgh, PA

<sup>2</sup> Department of Oral and Maxillofacial Surgery, School of Dental Medicine, University of  
Pittsburgh

<sup>3</sup> Department of Oral Biology and Center for Craniofacial Regeneration, School of Dental  
Medicine, University of Pittsburgh, Pittsburgh, PA

<sup>4</sup> Department of Chemical Engineering, College of Engineering, Carnegie Mellon University

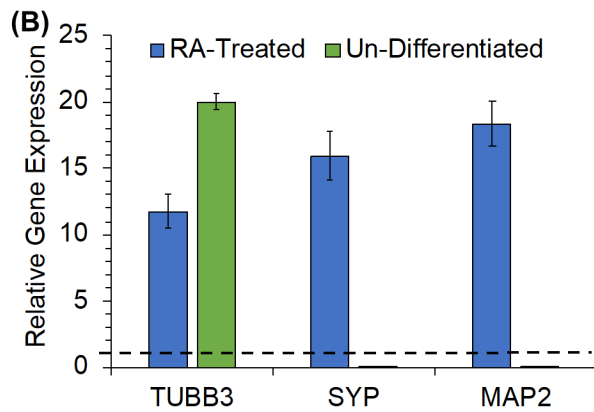
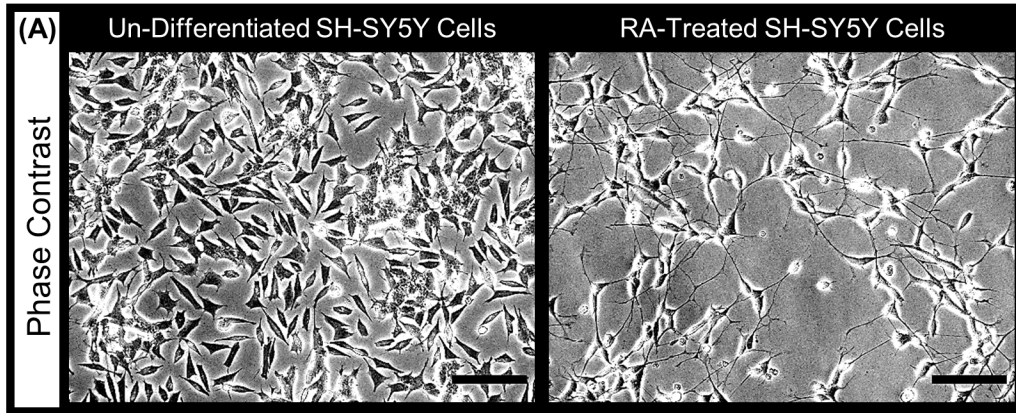
<sup>5</sup> Department of Biomedical Engineering, College of Engineering, Carnegie Mellon University

<sup>6</sup> McGowan Institute for Regenerative Medicine, Pittsburgh, PA

**Number of Pages: 2**

**Number of Figures: 1**

**Number of Tables: 0**



**Figure S1-Sn.** Validation of the differentiation of neuroblastoma SH-SY5Y cells into neuron-like cells using retinoic acid (RA). (A) Phase contrast imaging indicated that differentiation of the SH-SY5Y cells induced changes in cell morphology and the formation of neurites. (B) Differentiated SH-SY5Y cells expressed neural markers  $\beta$ -tubulin (TUBB3) synaptophysin (SYP), and microtubule associated protein 2 (MAP2), measured using quantitative real-time PCR. Scale bars: (A) 100  $\mu$ m.