## **Supporting Information**

## Nanoscale $\beta$ -TCP-laden GelMA/PCL composite membrane for guided bone regeneration

Abdel H. Mahmoud<sup>a,\*</sup>, Yuanyuan Han<sup>a,b,\*</sup>, Renan Dal-Fabbro<sup>a,\*</sup>, Arwa Daghrery<sup>a,c</sup>, Jinping Xu<sup>a</sup>, Darnell Kaigler<sup>d,j</sup>, Sarit B. Bhaduri<sup>e,f</sup>, Jos Malda<sup>g,h,i</sup>, and Marco C. Bottino<sup>a,j\*</sup>

<sup>a</sup> Department of Cariology, Restorative Sciences, and Endodontics, School of Dentistry, University of Michigan, Ann Arbor, Michigan, United States.

<sup>b</sup> Applied Oral Sciences and Community Dental Care, Faculty of Dentistry, The University of Hong Kong, Hong Kong, China.

<sup>c</sup> Department of Restorative Dental Sciences, School of Dentistry, Jazan University, Jazan, Kingdom of Saudi Arabia.

<sup>d</sup> Department of Periodontics and Oral Medicine, School of Dentistry, University of Michigan, Ann Arbor, MI, USA.

<sup>e</sup> Department of Mechanical, Industrial and Manufacturing Engineering, University of Toledo, Toledo, Ohio, United States.

<sup>f</sup> EEC Division, Directorate of Engineering, The National Science Foundation, Alexandria, Virginia, United States.

<sup>g</sup> Regenerative Medicine Center Utrecht, Utrecht, The Netherlands.

<sup>h</sup> Department of Clinical Sciences, Faculty of Veterinary Medicine, Utrecht University, Utrecht, the Netherlands.

<sup>i</sup> Department of Orthopedics, University Medical Center Utrecht, Utrecht, The Netherlands.

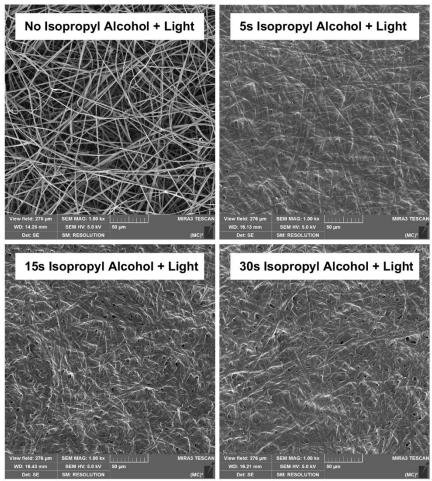
<sup>j</sup> Department of Biomedical Engineering, College of Engineering, University of Michigan, Ann Arbor, Michigan, United States.

\* These authors contributed equally as first authors of this article.

## \*Corresponding author:

## Marco C. Bottino, DDS, MSc, PhD, FADM

Associate Professor and Director, Regenerative Dentistry University of Michigan School of Dentistry Department of Cariology, Restorative Sciences, and Endodontics 1011 N. University (Room 2303), Ann Arbor, MI - 48109, USA Department of Biomedical Engineering, College of Engineering, University of Michigan Tel: +1-734.763.2206 Fax: +1-734.936.1597. E-mail address: <u>mbottino@umich.edu</u> (Dr. Marco C. Bottino)



**Figure S1.** Exemplary SEM images of methacrylated gelatin (GeIMA, 150 mg/mL) electrospun fibers following the proposed crosslinking protocol (*i.e.*, 85% isopropyl alcohol immersion plus light-emitting diode [LED] light exposure). Generally speaking, the crosslinked fibers, regardless of the incubation time in isopropyl alcohol, led to a significant increase in fiber diameter compared to their uncrosslinked (Light only) counterpart, due to considerable water absorption (fiber swelling) from the alcohol solution.