Supplementary Information

In depth quantification of extracellular matrix proteins from human pancreas for tissue engineering

Fengfei Ma¹, Daniel M. Tremmel², Zihui Li³, Christopher B. Lietz³, Sara Sackett², Jon Odorico², Lingjun Li^{1,3*}

¹School of Pharmacy, University of Wisconsin-Madison, Madison, WI, 53705, USA

²Division of Transplantation, Department of Surgery, School of Medicine and Public Health, University of Wisconsin-Madison, Madison, Wisconsin 53705, United States

³Department of Chemistry, University of Wisconsin-Madison, Madison, WI, 53706, USA

*Corresponding author

Tel.: +1 (608) 265-8491

Fax: +1 (608) 262-5345

E-mail: lingjun.li@wisc.edu

Table of Content

Figure S1. Venn diagram represents the overlap between ECM and ECM- associated proteins detected in technical replicates by SCAD (A), FASP (B), urea (C).

Figure S2. Scheme of different categories of proteins extracted from decellularized pancreas.

Figure S3. Scheme of different categories of proteins extracted from native pancreas and the rationale of applying novel correction factor.

Figure S4. Venn diagram represents the overlap between ECM and ECM- associated proteins detected in biological replicates in decellularized adult (A), native adult (B), decellularized fetal (C), native fetal (D).

Table S1. List of identified ECM proteins by each sample preparation method.

Table S2. Illustration of labeling strategy with 10-plex DiLeu. Deuterated tags are marked in yellow.

Table S3. Quantitative information of matrisome protein abundance in each of the subcategories

Table S4. List of identified ECM proteins by two developmental stages (adult, fetal) under native and decellularized conditions. The proteins were colored based on their subcategories. Collagens (Blue), ECM Glycoproteins (Purple), Proteoglycans (Teal), ECM-affiliated Proteins (Orange), ECM Regulators (Light Orange), Secreted Factors (Pink)



urea

Figure S1. Venn diagram represents the overlap between ECM and ECM- associated proteins detected in technical replicates by SCAD (A), FASP (B), urea (C).



Figure S2. Scheme of different categories of proteins extracted from decellularized pancreas.



Figure S3. Scheme of different categories of proteins extracted from native pancreas and the rationale of applying novel correction factor.



Figure S4. Venn diagram represents the overlap between ECM and ECM- associated proteins detected in biological replicates in decellularized adult (A), native adult (B), decellularized fetal (C), native fetal (D).