

## Supplementary Information for

# Induction of $\beta$ Cell Replication by Small Molecule-Mediated Menin Inhibition and Combined PKC Activation and TGF- $\beta$ Inhibition as Revealed by A Refined Primary Culture Screening

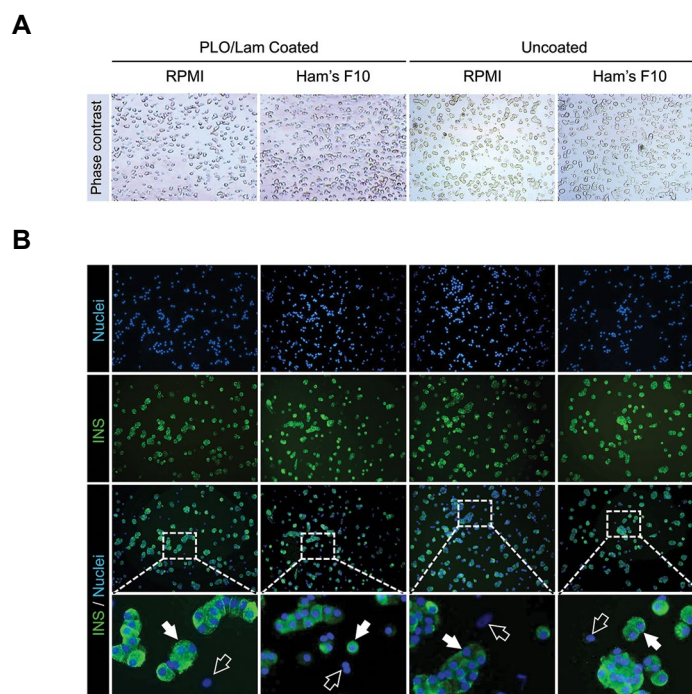
Saghar Pahlavanneshan, Ph.D.<sup>1</sup>, Mehrdad Behmanesh, Ph.D.<sup>1\*</sup>, Yaser Tahamtani, Ph.D.<sup>2</sup>, Ensiyeh Hajizadeh-Saffar, Ph.D.<sup>3</sup>, Mohsen Basiri, Ph.D.<sup>2</sup>, Hossein Baharvand, Ph.D.<sup>2, 4\*</sup>

1. Department of Genetics, Faculty of Biological Sciences, Tarbiat Modares University, Tehran, Iran
2. Department of Stem Cells and Developmental Biology, Cell Science Research Centre, Royan Institute for Stem Cell Biology and Technology, ACECR, Tehran, Iran
3. Department of Regenerative Medicine, Cell Science Research Centre, Royan Institute for Stem Cell Biology and Technology, ACECR, Tehran, Iran
4. Department of Developmental Biology, University of Science and Culture, Tehran, Iran

\*Corresponding Addresses: P.O.Box: 14115-154, Department of Genetics, Faculty of Biological Sciences, Tarbiat Modares University, Tehran, Iran

P.O.Box: 16635-148, Department of Stem Cells and Developmental Biology, Cell Science Research Centre, Royan Institute for Stem Cell Biology and Technology, ACECR, , Tehran, Iran

Emails: behmanesh@modares.ac.ir, baharvand@royaninstitute.org



**Fig.S1:** Pancreatic islet cells after 24 hours (day 1) of culture in either RPMI or Ham's F10 media in the presence or absence of PLO/Lam. **A.** Phase contrast micrograph and **B.** Immunostaining of insulin show that all cultures have a scattered monolayer of insulin positive cells (white arrows) with few insulin negative cells (black arrows) on day 1. PLO/Lam; Poly-L-ornitine and laminin coating.

**Table S1:** Cell numbers in different culture conditions on day 1 and day 14

Coating	Media	Day	INS expression	Experimental replicates			Summary statistics	
				Rep. 1	Rep. 2	Rep. 3	Mean	SD
PLO/Lam Coated	RPMI	1	INS+	19967	18592	21074	19877.67	1243.41
			INS-	823	781	1350	984.67	317.08
		14	INS+*	N/A	N/A	N/A	N/A	N/A
			INS-	8231	7903	8401	8178.33	253.14
	Ham's F10	1	INS+	20051	21052	19755	20286.00	679.68
			INS-	900	836	1429	1055.00	325.47
		14	INS+	14765	13289	14301	14118.33	754.76
			INS-	3253	3525	4582	3786.67	702.08
Uncoated	RPMI	1	INS+	20702	19551	20791	20348.00	691.66
			INS-	871	837	1279	995.67	245.96
		14	INS+*	N/A	N/A	N/A	N/A	N/A
			INS-	7320	6271	8152	7247.67	942.58
	Ham's F10	1	INS+	20151	20912	18937	20000.00	996.12
			INS-	879	904	1334	1039.00	255.78
		14	INS+	15482	15203	14820	15168.33	332.36
			INS-	1824	2105	1728	1885.67	195.92

\*; INS+ cells in RPMI conditions at day 14 could not be quantified as a result of aggregation formation and INS; Insulin-expressing.