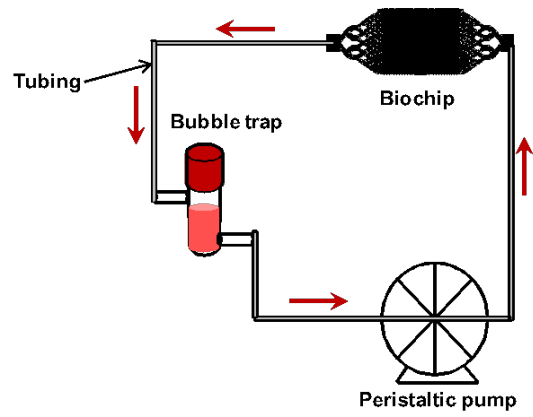
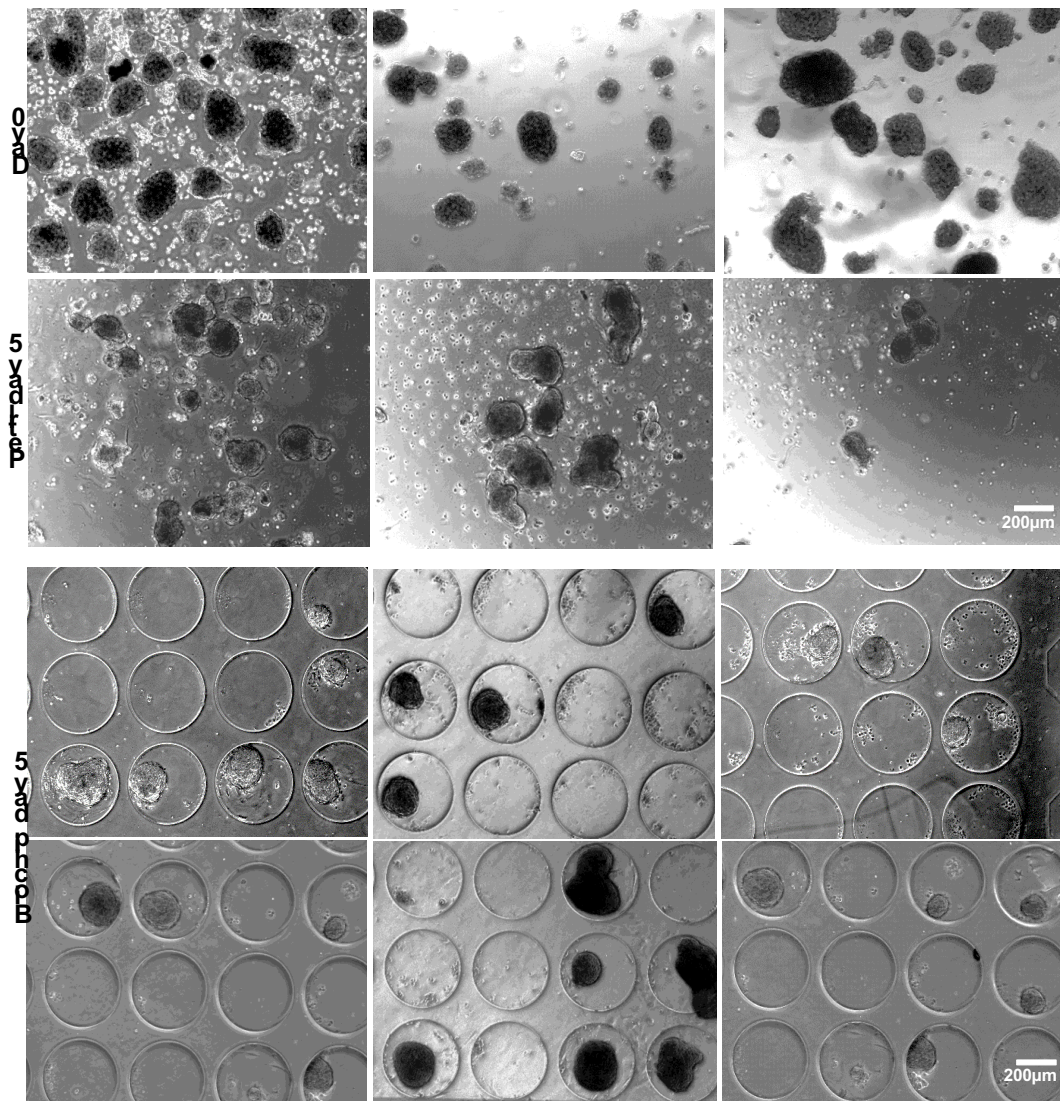


Table S1. Primers used in RTqPCR analysis

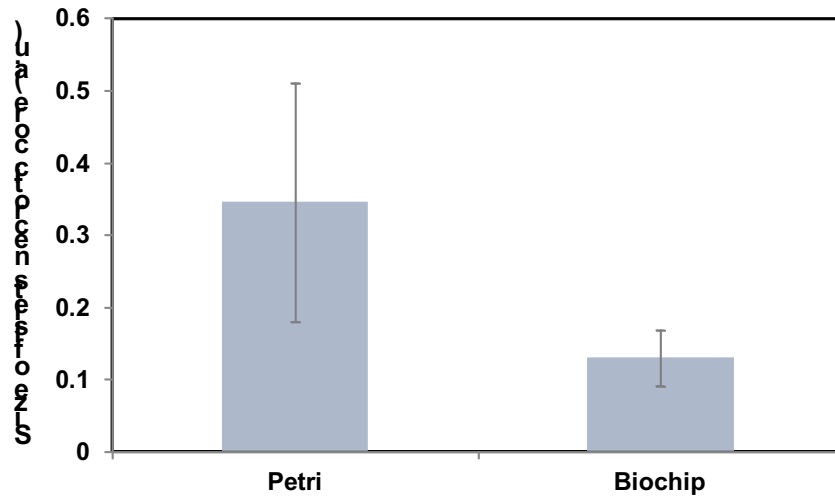
<b>Gene</b>	<b>Sequences</b>
<i>Ins1</i>	f_TCCCGTCGTGAAGTGGAG r_CAGTTGGTAGAGGGAGCAGAT
<i>Ins2</i>	f_GGCCCTGTGGATCCGCT r_GCCTAGTTGCAGTAGTTCTCCA
<i>Sst</i>	f_GTTTCTGCAGAAGTCTCTGGC r_AGTTCTTGCAGCCAGCTTTG
<i>Gcg</i>	f_ATCATTCCCAGCTTCCCAGAC r_CGGTTCCTCTTGGTGTTTCATC
<i>App</i>	f_GTCCTCCCACCAACCAATGT r_AGCACAGGCACGTTGTTGTA
<i>Glp1r</i>	f_GCATCGTGATAGCCAAGCTGA r_GCAGTACAAGACAGCCACCA
<i>Pdx1</i>	f_ACATCTCCCCATACGAAGTGC r_AGTTGAGCATCACTGCCAGC
<i>Reg3a</i>	f_ACGCTGCTCTACTACCTGTTCA r_TTGTTGTTCACTCTGCCTGTCA
<i>Neurod</i>	f_GGAGTAGGGATGCACCGG r_CTTGGCCAAGAAGTATATCTGGG
<i>Neurog3</i>	f_TGGCGCCTCATCCCTTG r_CAGTCACCTGCTTCTGCTTC
<i>Gapdh</i>	f_GCATCGTGGAAGGGCTCATG r_GCCAGTGAGCTTCCCGTTC
<i>Glut2</i>	f_CTCTGGTCTCTGTCTGTGTCC r_TGGAACCAGTCCTGAAATTAGCC
<i>Insr</i>	f_TGGCGCTGTGTAAACTTCAG r_TAGGACAGGGTCCCAGACAC
<i>Gcgr</i>	f_AGAAAGGGCCTCACAAGACA r_CATGGAACATGGCAACTC
<i>B_actine</i>	f_GTCGTACCACTGGCATTGTG r_TCTCAGCTGTGGTGGTGAAG



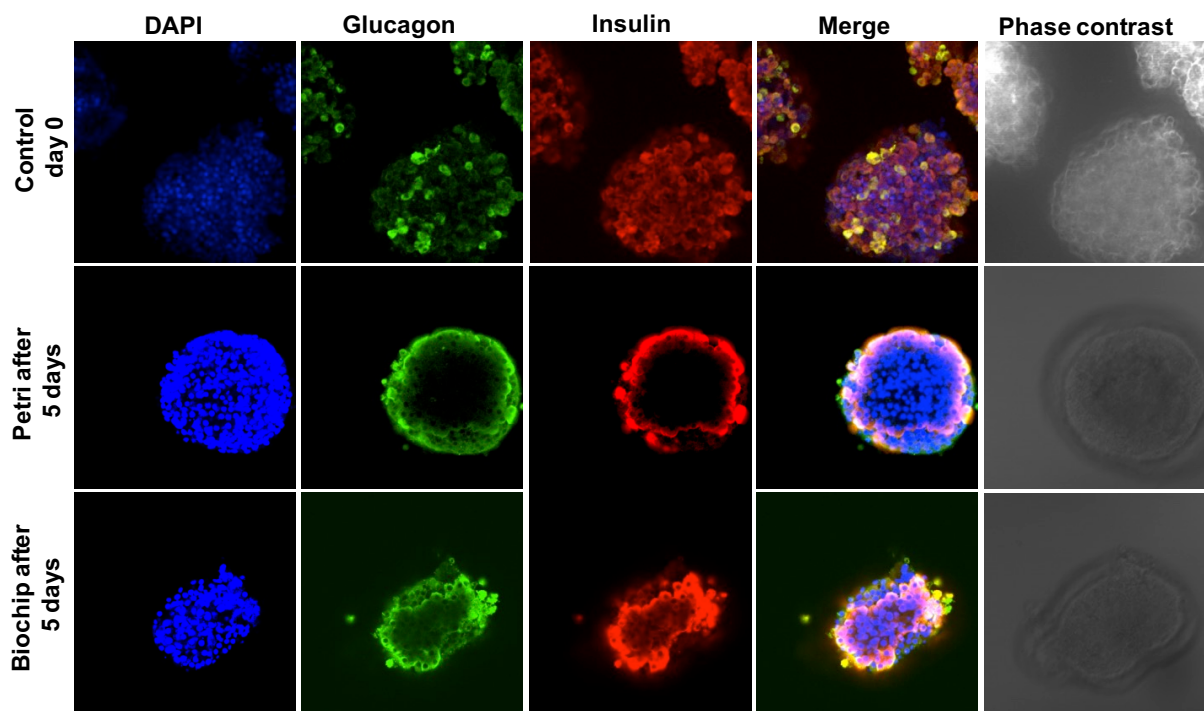
**Fig.S1.** Setup used for dynamic culture in biochip.



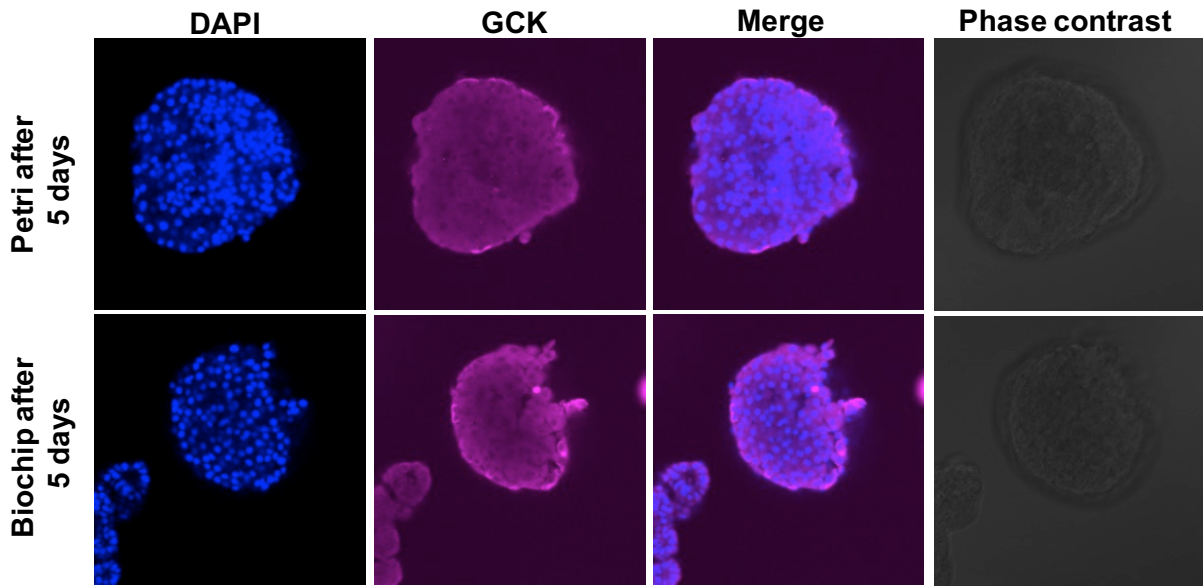
**Fig.S2.** Morphology of the islets before seeding (day 0) and after 5 days of culture in biochip and in Petri dish.



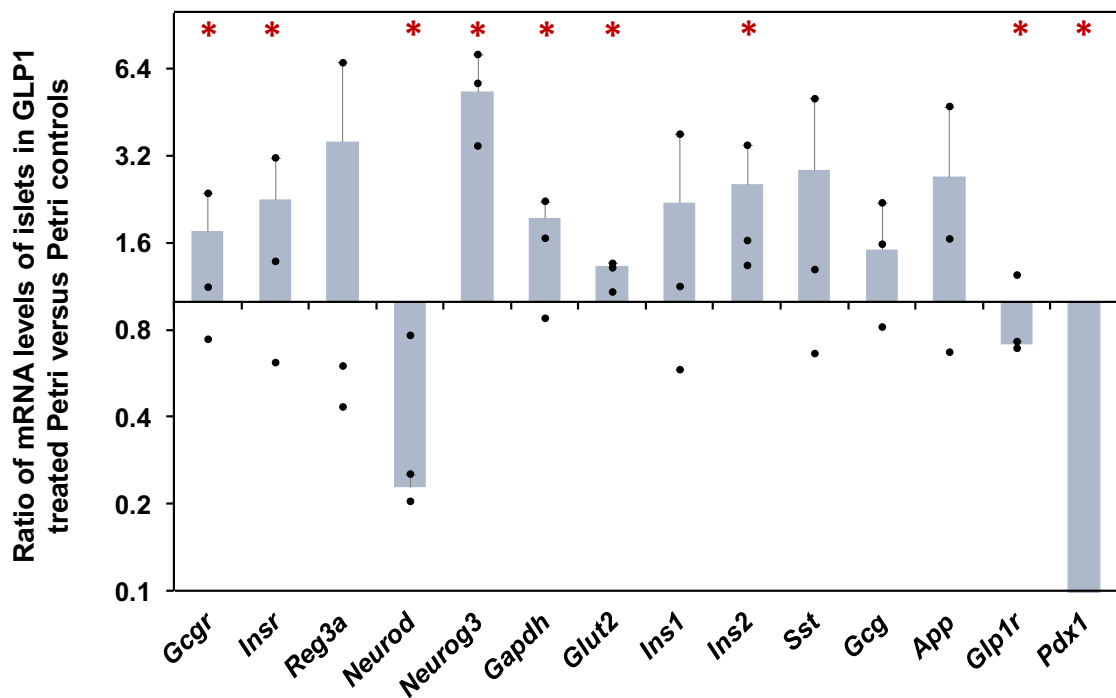
**Fig.S3.** Size of necrotic core of islets cultivated in Petri and in biochip after 5 days (quantification by ImageJ software using the fluorescent images of live/dead assay).



**Fig.S4.** Islets immunostainings (DAPI, glucagon, insulin, and merge) and phase contrast images of islets at day 0 and after 5 days of culture in biochip and Petri.



**Fig.S5.** Islets immunostainings (DAPI, GCK and merge) and phase contrast images of islets after 5 days of culture in biochip and Petri.



**Fig.S6.** Ratio of mRNA levels (GLP1 treated Petri/control Petri) of selected pancreatic genes after GLP1 stimulation. \* $P < 0.05$ , mRNA level significantly different between GLP1 treated Petri and control Petri.