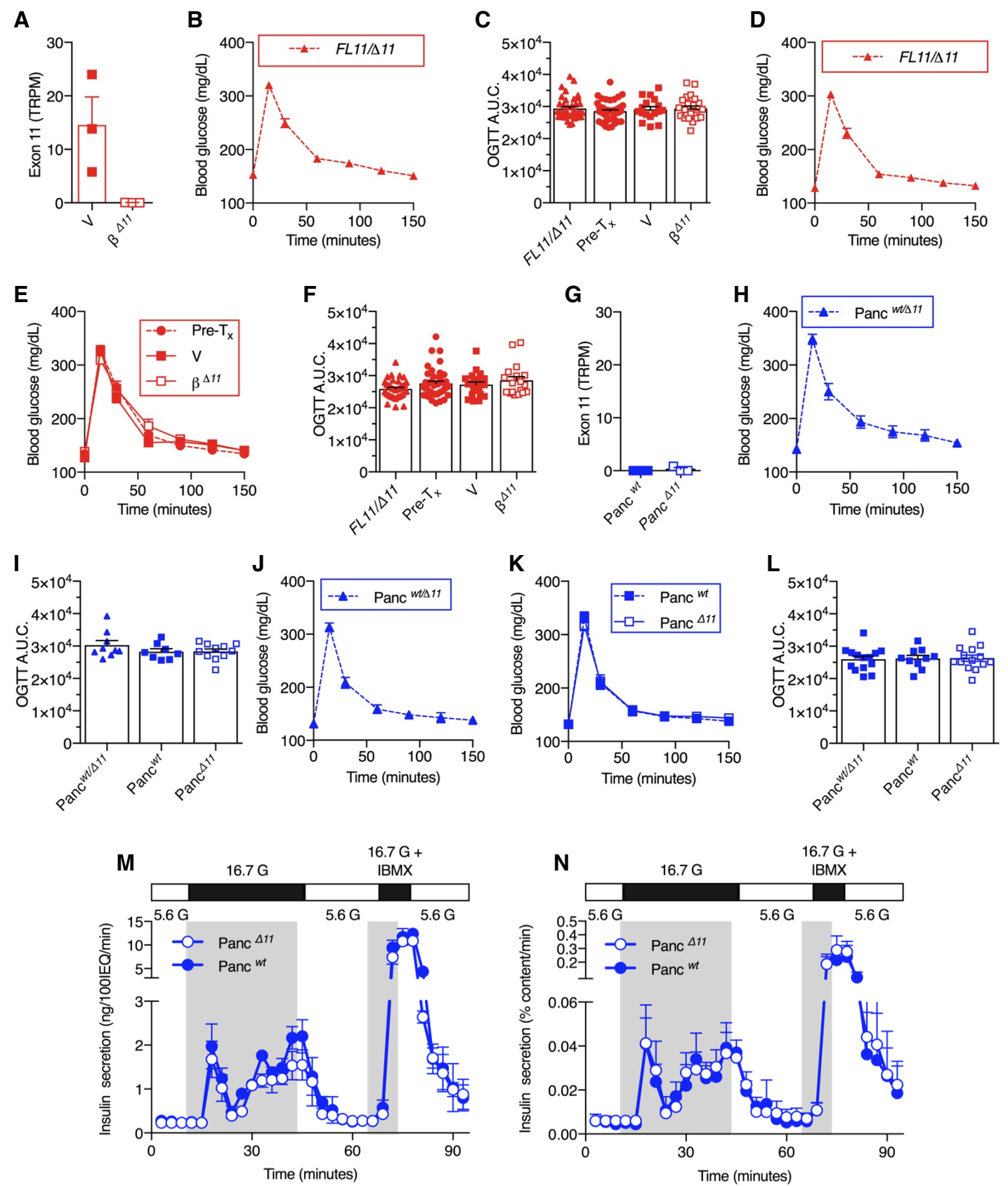
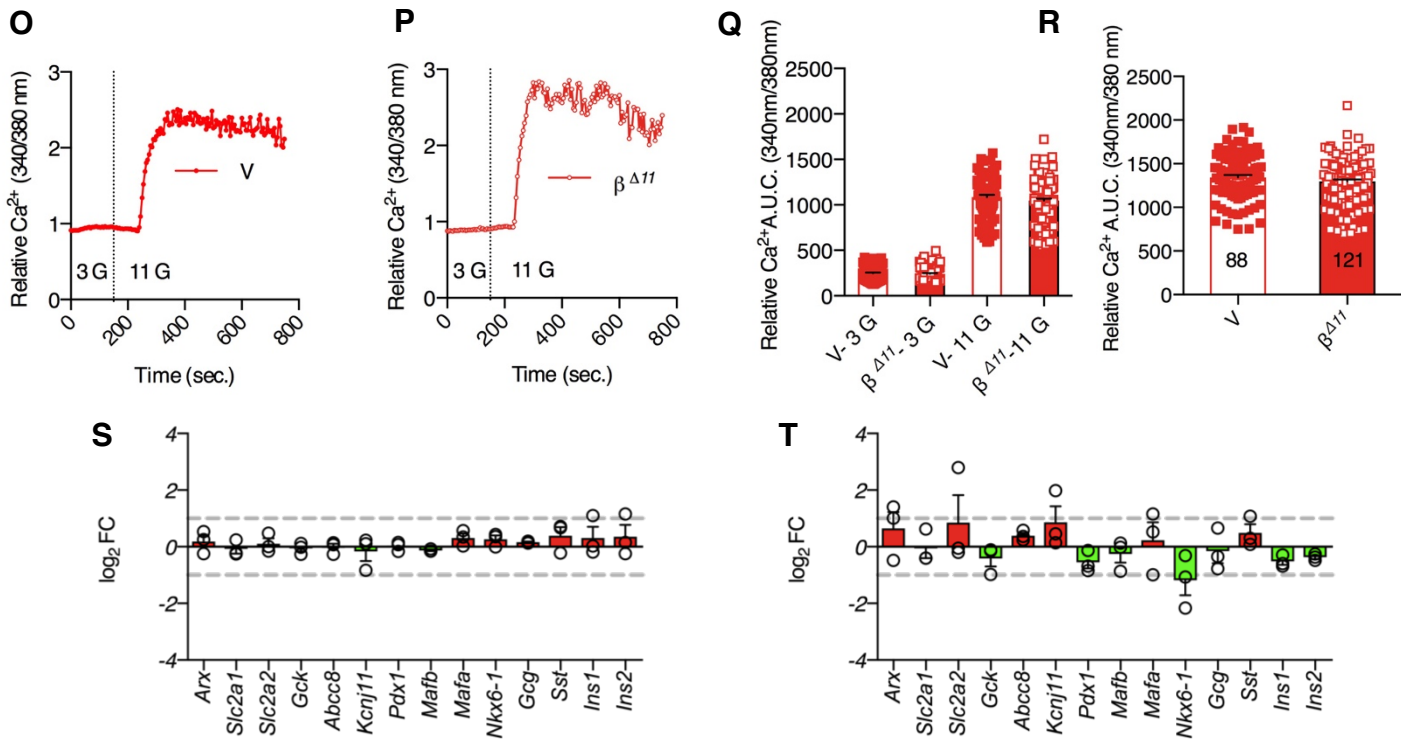
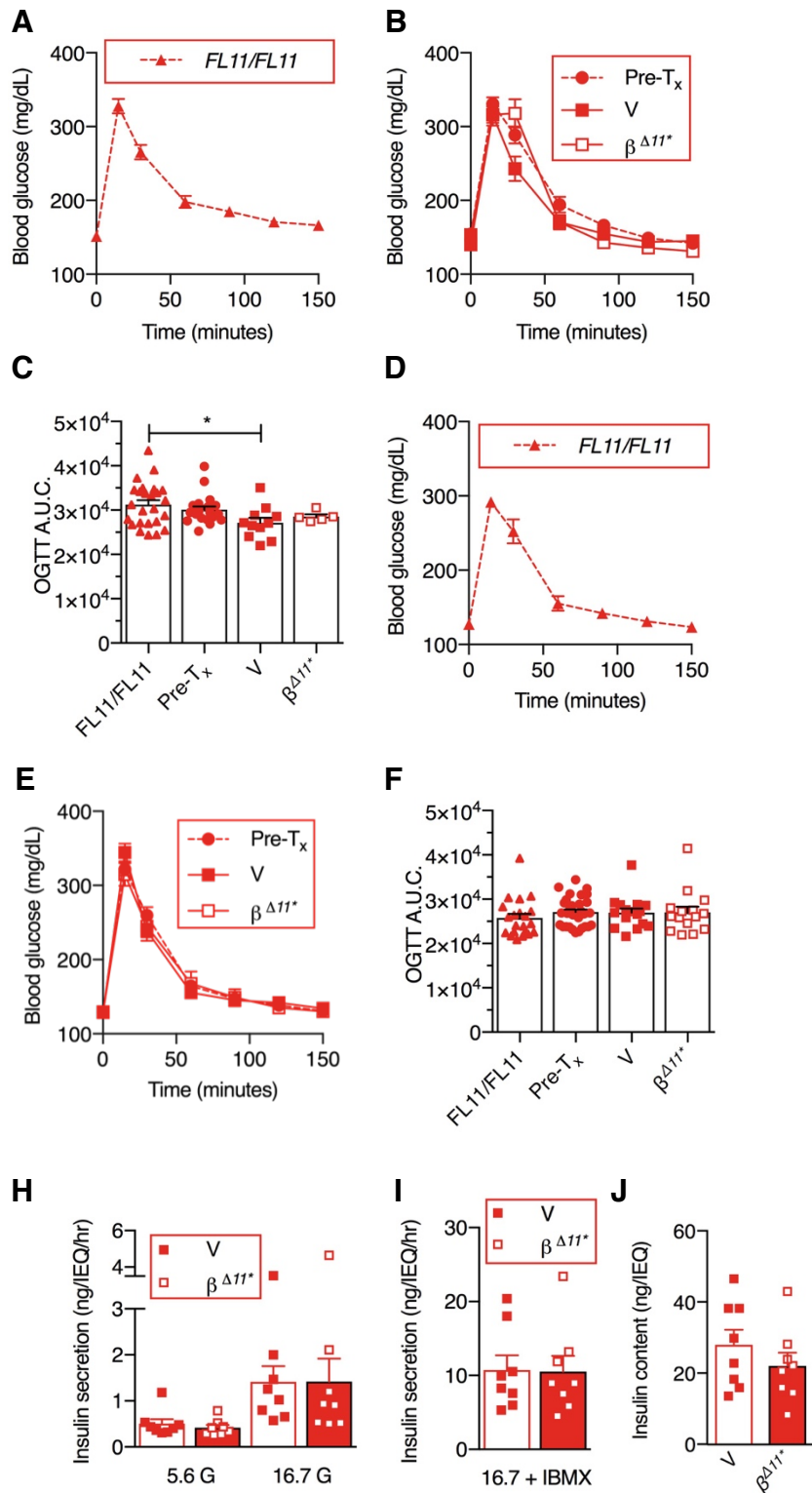


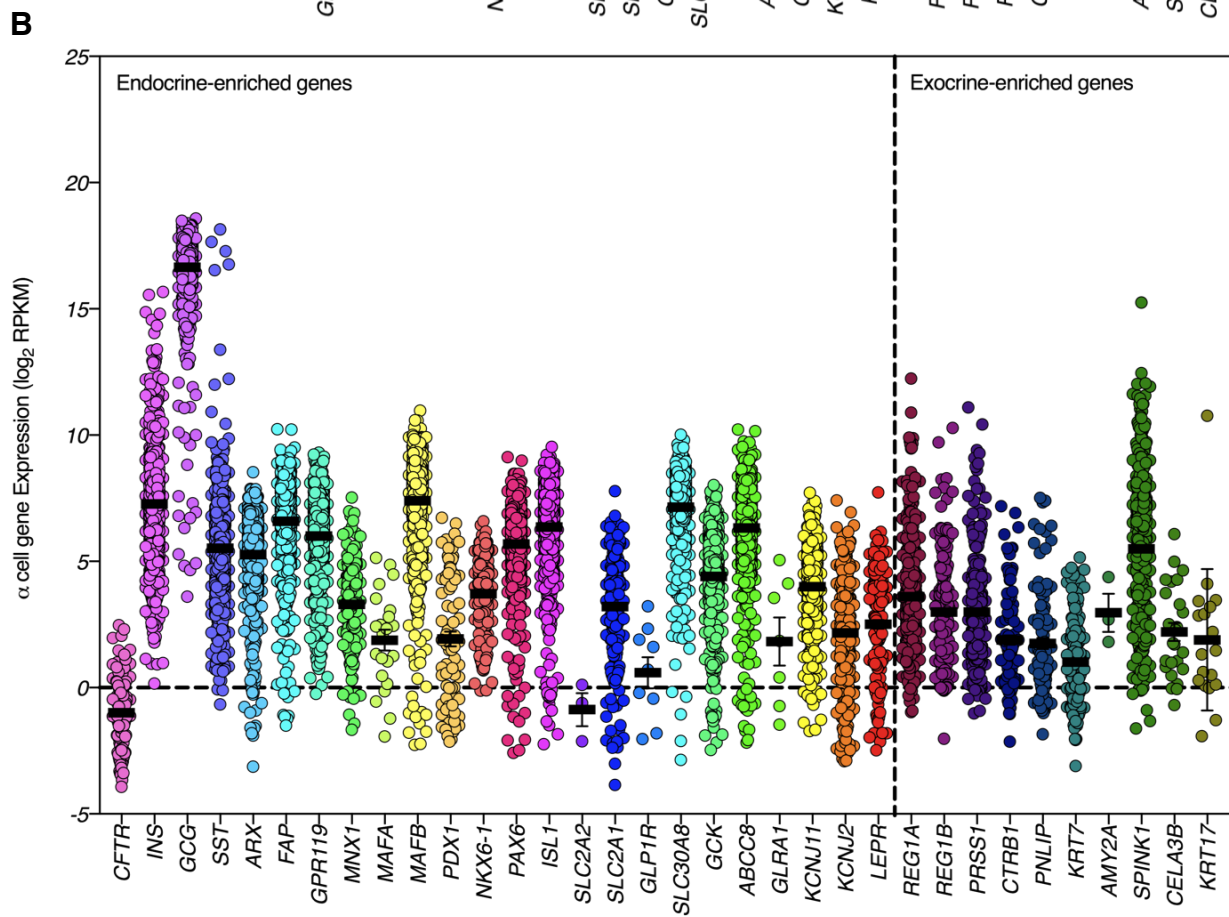
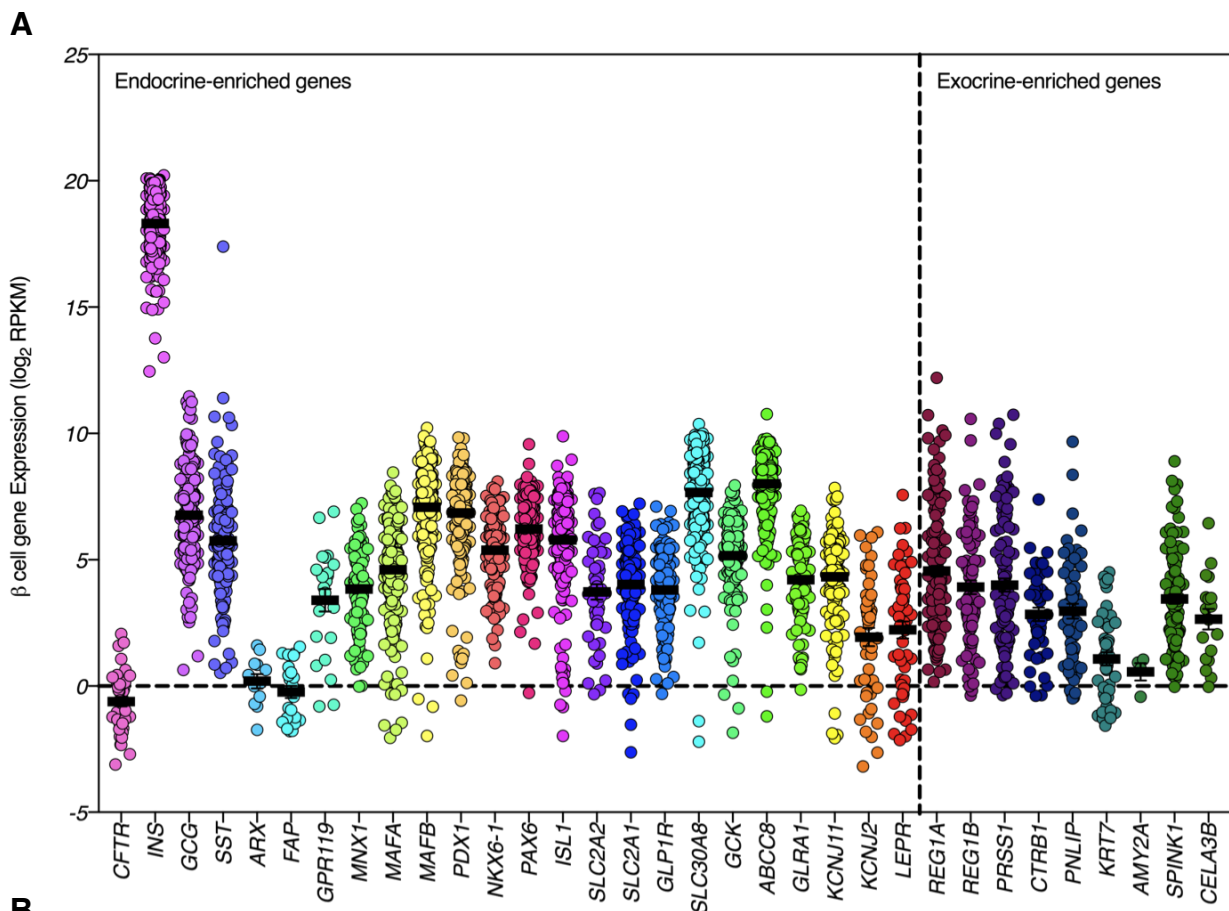




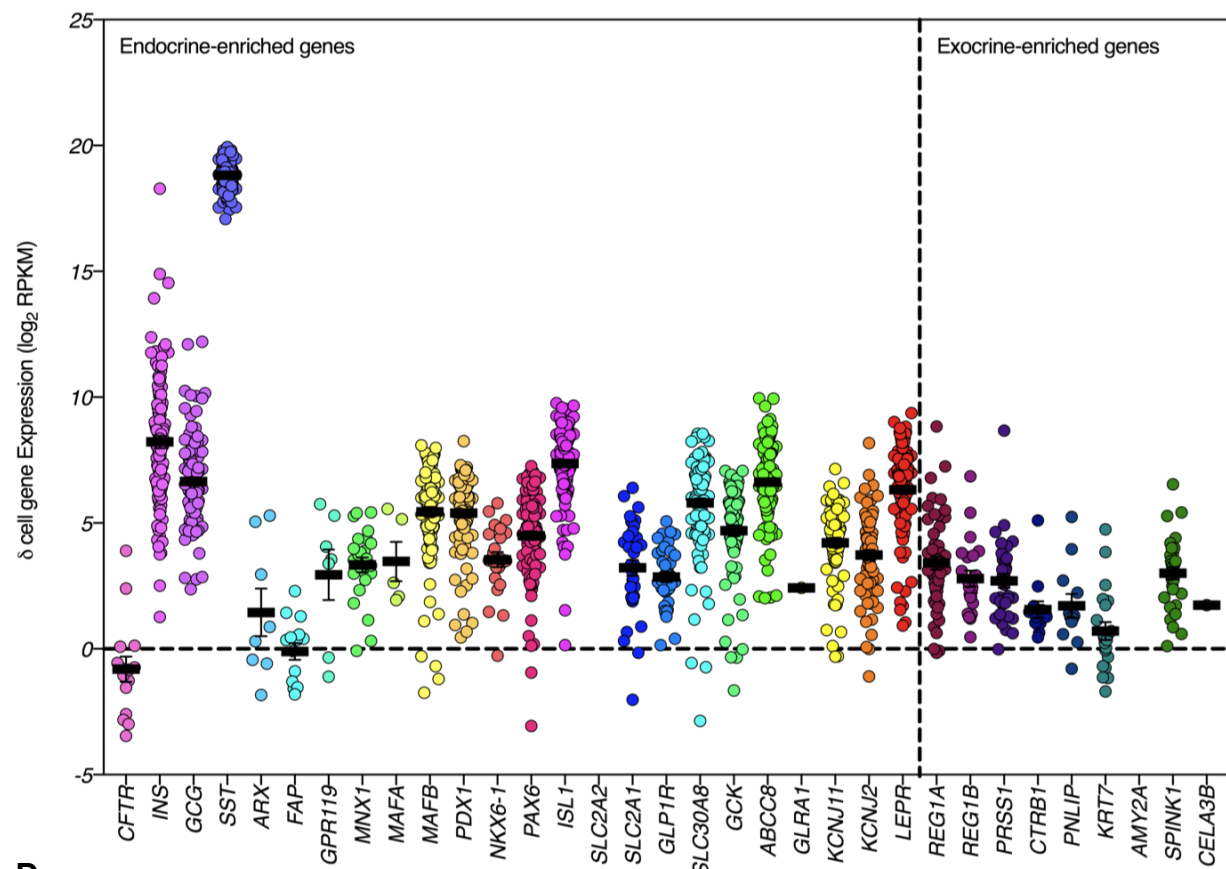
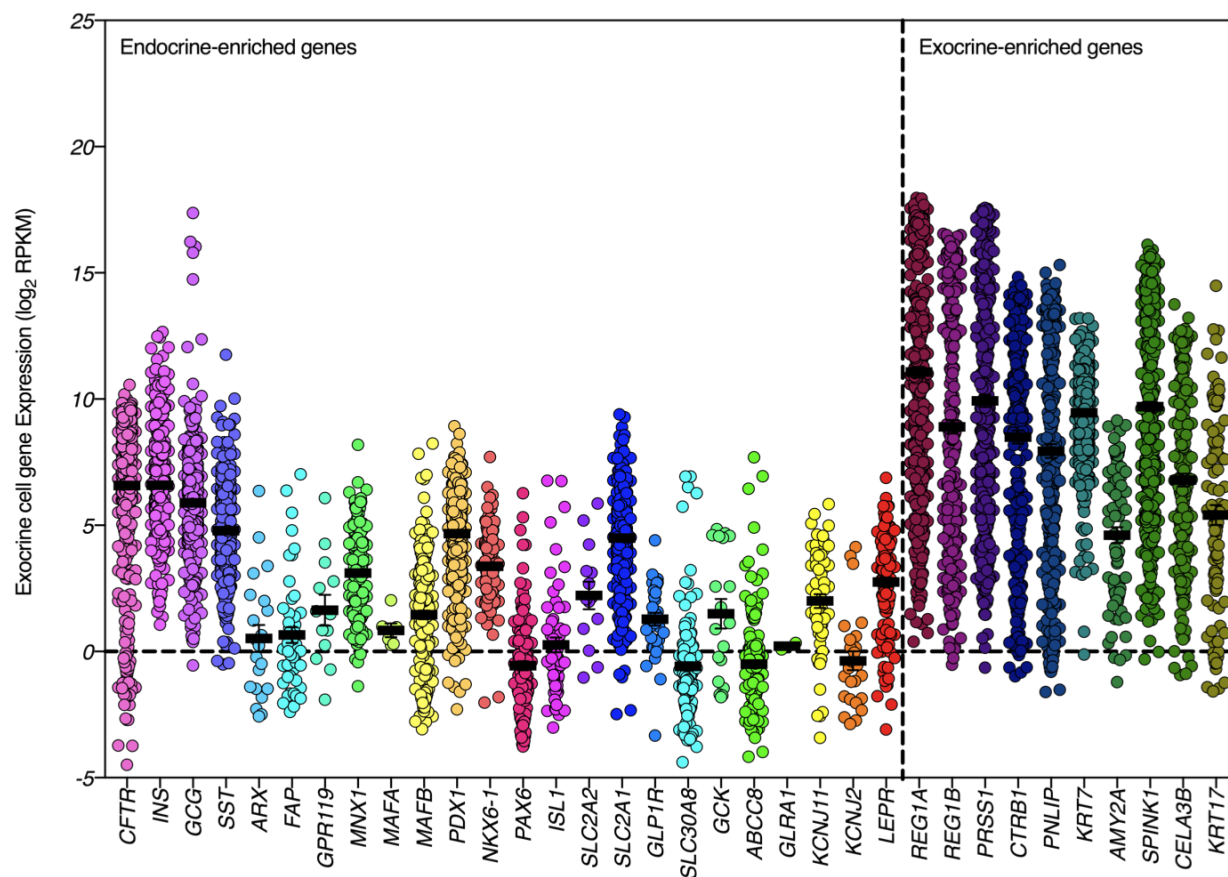
Supplemental Figure 1: Additional analyses of glucose tolerance, insulin secretion, glucose-stimulated calcium influx, *CFTR* exon 11 transcript deletion efficiency and transcriptomic signatures of whole-islets from murine models. (A) β cell specific/inducible exon 11 mRNA excision efficiency from islet transcriptome as assessed by RNA-sequencing (n=3/group). OGTT from (B) male (n=40) *Cftr*^{FL11/ Δ 11} Pre-T_x Cre^{ERT} negative animals (FL11/ Δ 11) animals and (C) OGTT A.U.C. values from all male β cell specific/inducible animals. OGTT from (D) female (n=36) FL11/ Δ 11 animals and (E) female β cell specific/inducible Pre-T_x (n=41), V (n=20) and $\beta^{\Delta11}$ (n=18) mice. (F) OGTT A.U.C. values from all female β cell specific/inducible animals. (G) Pancreatic/constitutive exon 11 mRNA excision efficiency from islet transcriptome (n=3/group). OGTT traces from (H) male (n=9) heterozygous *Cftr*^{wt/FL11} PDXCre^{uv} positive animals (*Panc*^{wt/ Δ 11}) and (I) OGTT A.U.C. values from all male pancreatic/constitutive animals. OGTT traces from (J) female *Panc*^{wt/ Δ 11} (n=14) animals and (K) female *Panc*^{wt} (n=10) and *Panc* ^{Δ 11} (n=14) mice. (L) OGTT A.U.C. values from all female pancreatic/constitutive mice. Perfusion traces of *Panc* ^{Δ 11} (n=3; 2 male, 1 female) and *Panc*^{wt} (n=3; 2 male, 1 female) islets normalized to (M) IEQ and (N) islet insulin content. Representative traces of calcium influx in single β cells in response to glucose from (O) V and (P) $\beta^{\Delta11}$ animals. (Q) A.U.C. of single β cell calcium during exposure to 3mM glucose (3 G) and 11mM glucose (11 G). (R) Total A.U.C. of calcium experiments (V-n=2, $\beta^{\Delta11}$ -n=3; number of single β cells measured in bars). Fold-change (red-increase; green-decrease) of select islet regulatory genes from whole-islet RNA-Sequencing between (S) V and $\beta^{\Delta11}$ and (T) *Panc*^{wt} and *Panc* ^{Δ 11} mice (n=3/group). Data represent mean $\pm$ S.E.M. No significance was observed (p<0.05) in OGTT or calcium A.U.C. One-way ANOVA or unpaired 2-tailed Student's *t* test was used for statistical analysis.

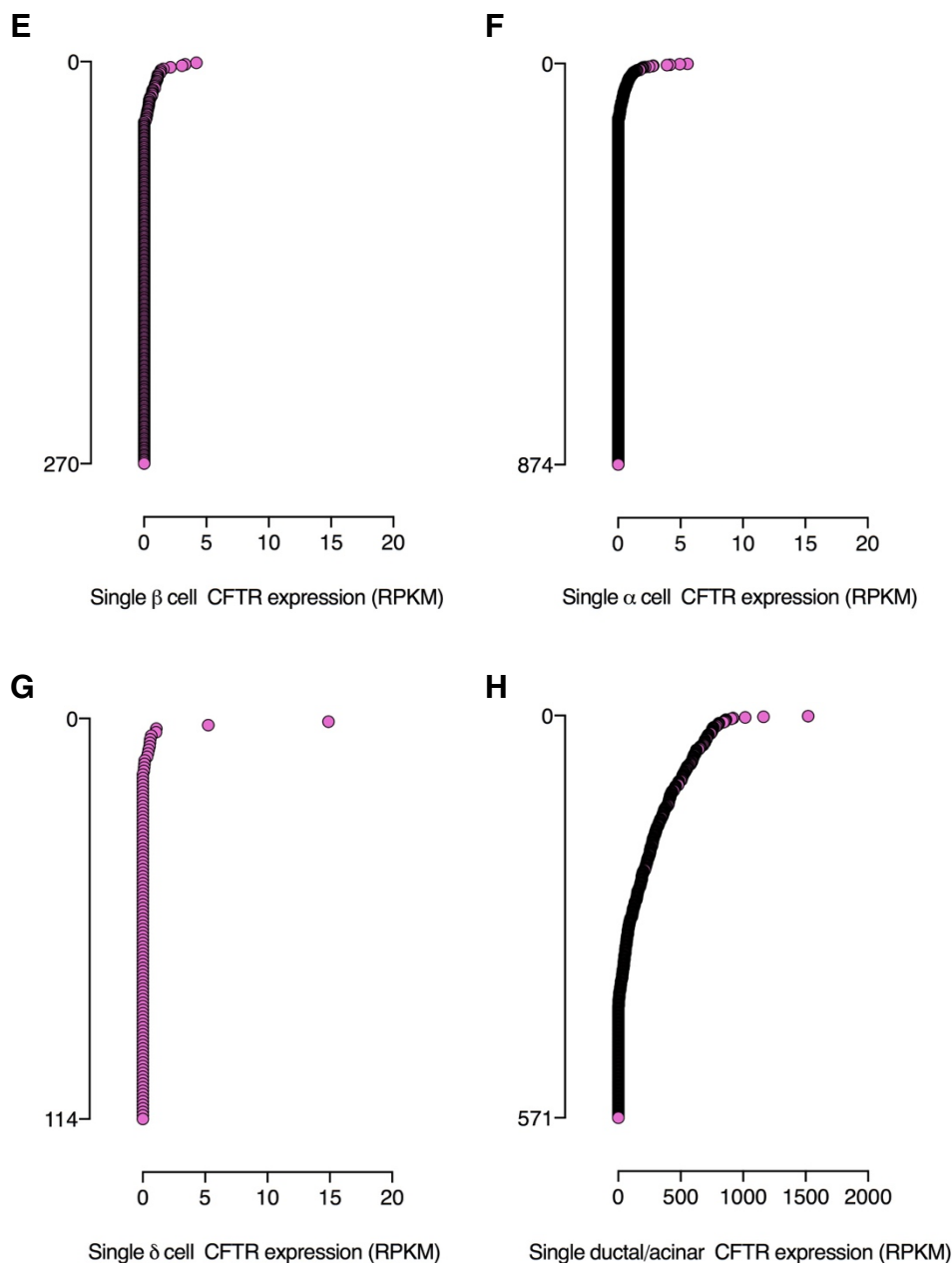


Supplemental Figure 2: OGTT and islet insulin secretion from homozygous *FL11* β cell specific/inducible mice. OGTT traces from male (A) homozygous *FL11* and Cre^{ERT} negative (*FL11/FL11*, n=25) and (B) male homozygous *FL11* β cell specific/inducible mice prior to (Pre- T_x) and after treatment with V or Tm ($\beta^{\Delta11*}$) (n=5-20/group). OGTT A.U.C. values from all (C) male (*p=0.04, *FL11/FL11* vs. V) mice. OGTT traces from female (D) homozygous *FL11/FL11* (n=21) and (E) female Pre- T_x , V and $\beta^{\Delta11*}$ mice (n=15-30/group). OGTT A.U.C. values from all (F) female mice. Insulin secretion from isolated islets incubated in medium containing (H) 5.6 G, 16.7 G and (I) 16.7 G + IBMX. (V, n=8 (4 male, 4 female); $\beta^{\Delta11*}$, n=7 (4 male, 4 female) and (J) Islet insulin content. No significance (p<0.05) was observed in OGTT A.U.C or insulin secretion unless noted. Data represent mean ± S.E.M. One-way ANOVA or unpaired 2-tailed Student's t test was used for statistical analysis.

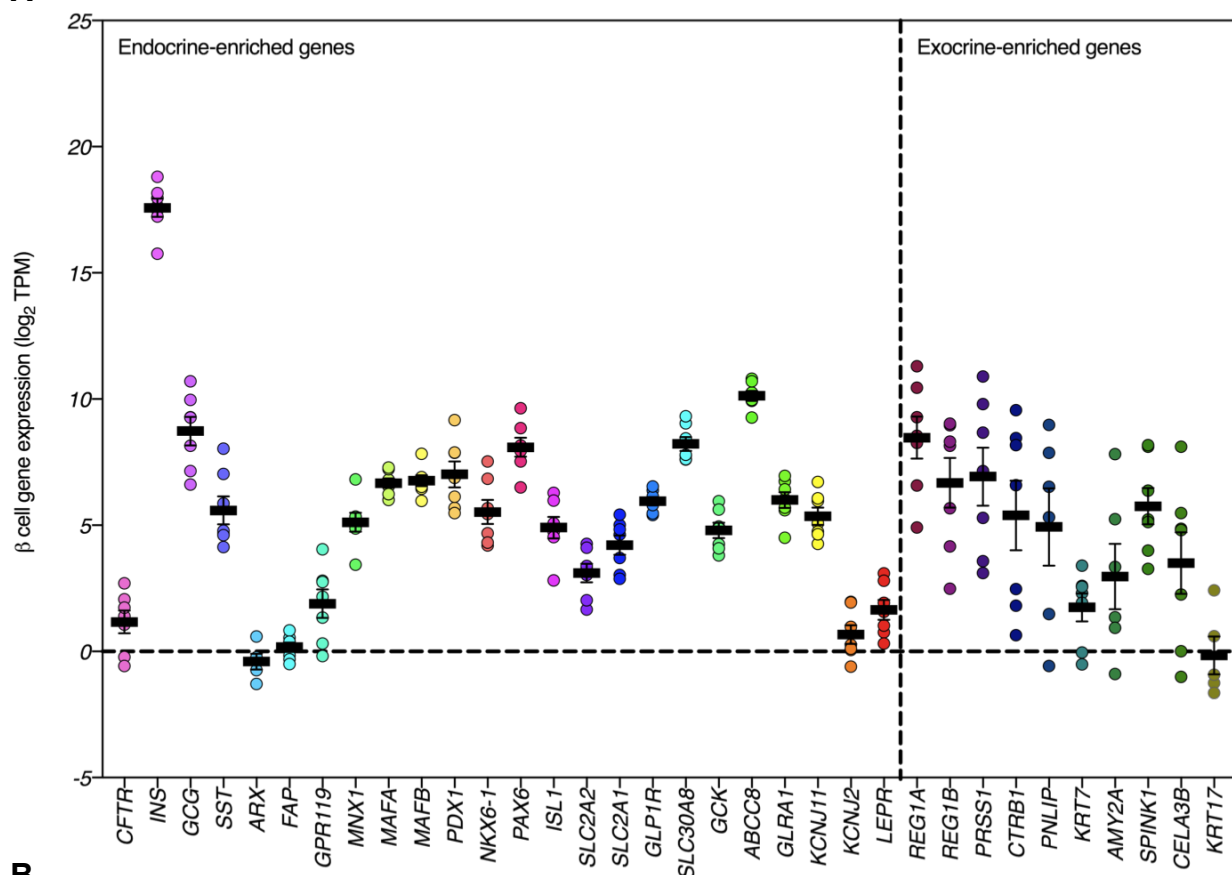
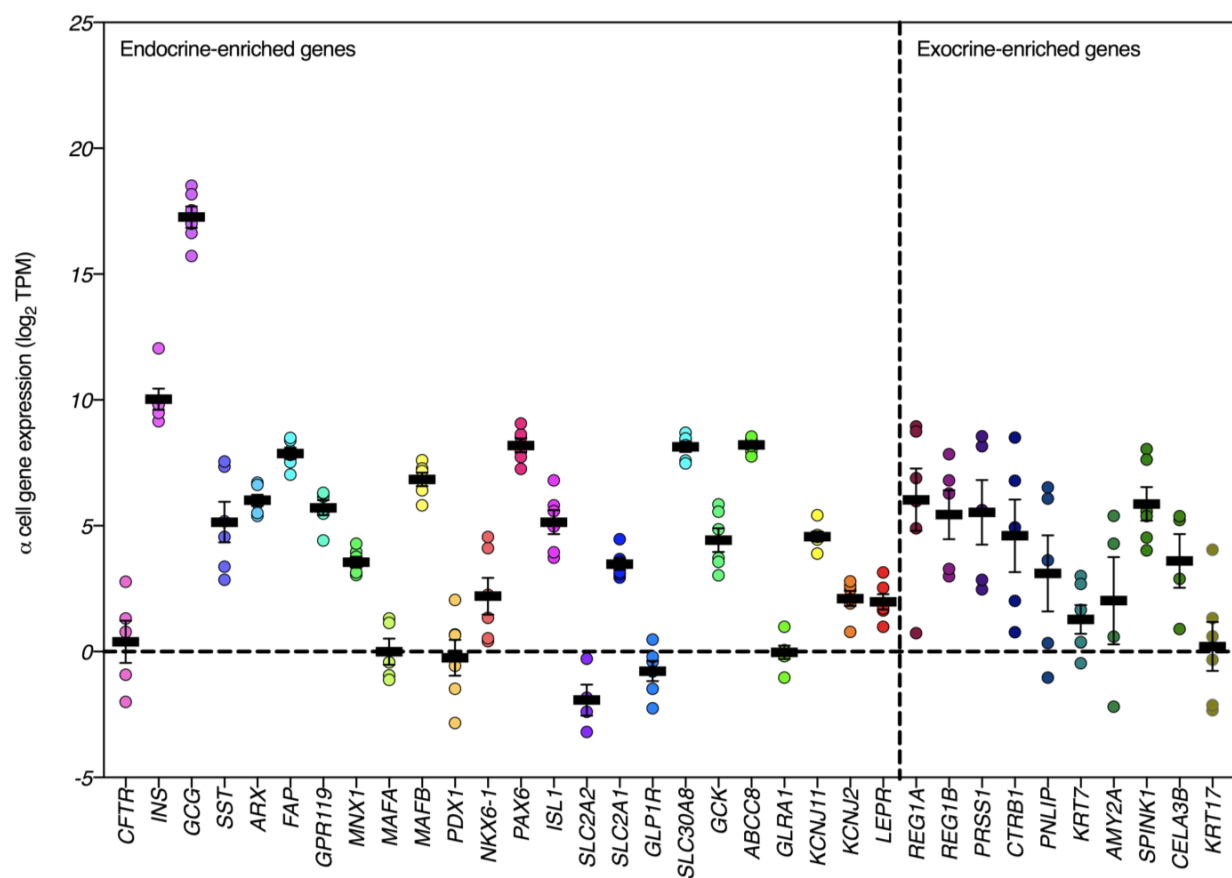


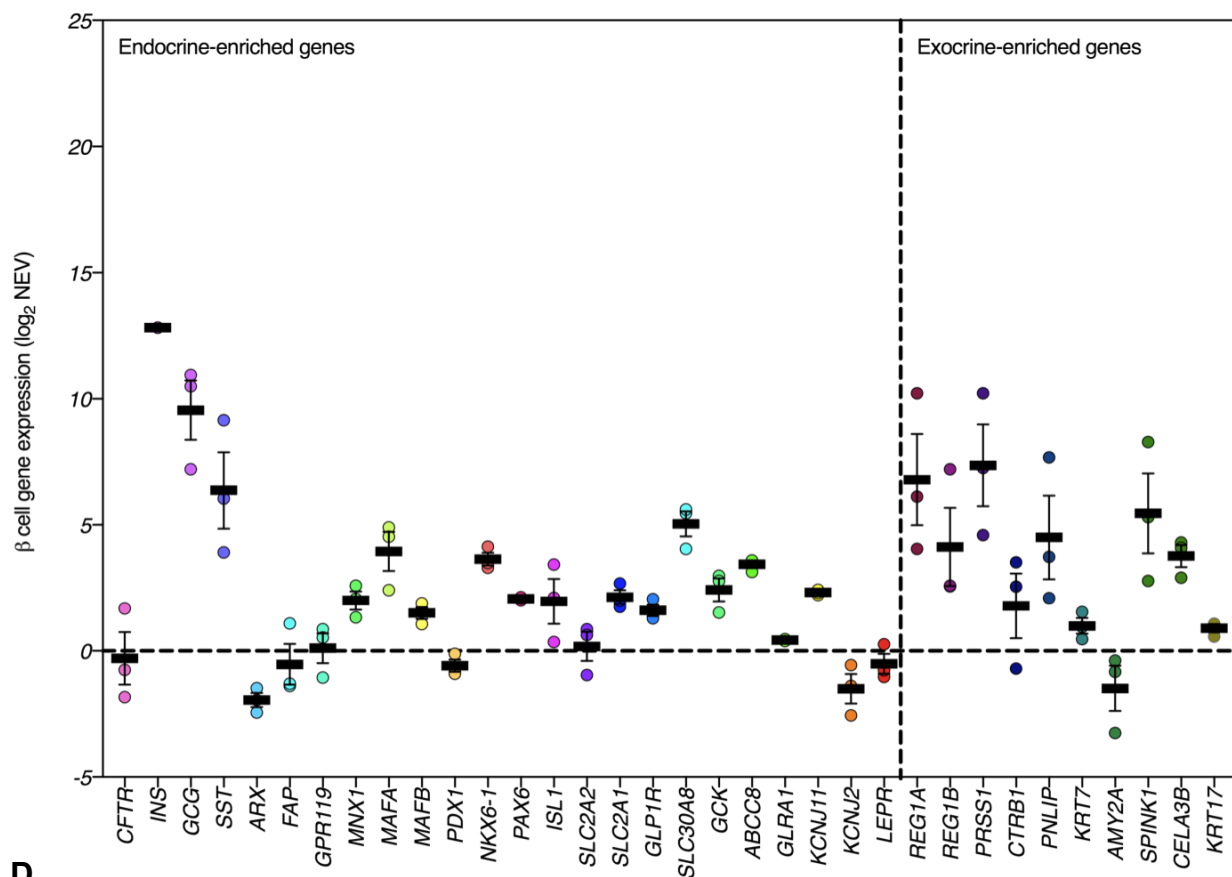
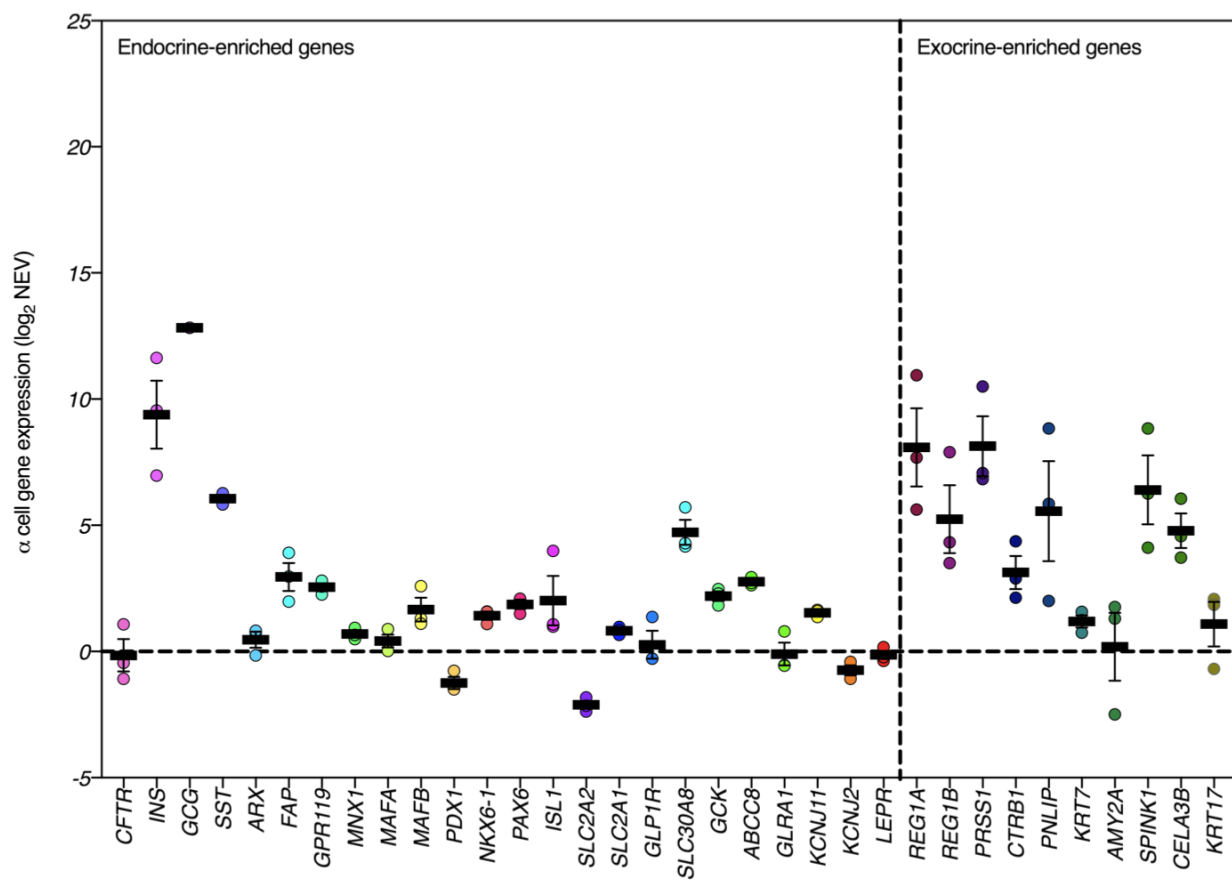
Supplemental Figure 3

C**D**

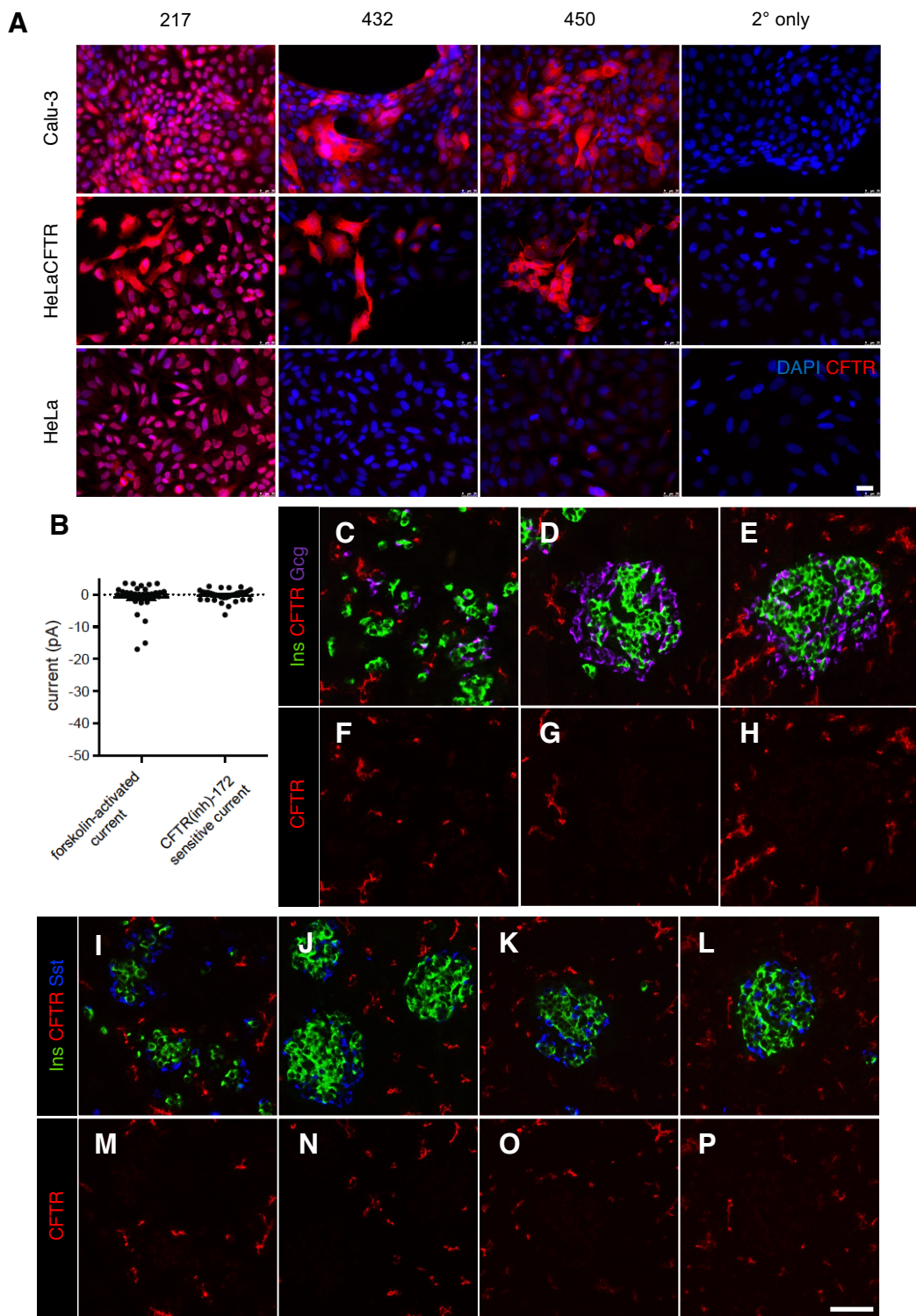


Supplemental Figure 3: *CFTR* mRNA expression in single human β , α and δ cells was rare and minimal compared to regulatory islet endocrine cell genes and exocrine related genes. Select islet cell-related and exocrine related genes were chosen as *CFTR* expression comparators. Transcript expression (RPKM) of *CFTR*, select islet endocrine (left box) and exocrine related transcripts (right box) from single human (A) β cells, (B) α cells, (C) δ cells and (D) ductal and acinar cells. (A-D) Each data point represents a single cell with expression > 0 RPKM. *CFTR* mRNA expression from all (E) 270 single human β cells, (F) 874 α cells, (G) 114 δ cells and (H) 571 ductal and acinar cells from 6 healthy and 4 diabetic donors from Segerstolpe and Palasantza et al. (38) Note: most islet endocrine cells express no *CFTR* transcript, and (H) has a different X-axis value range.

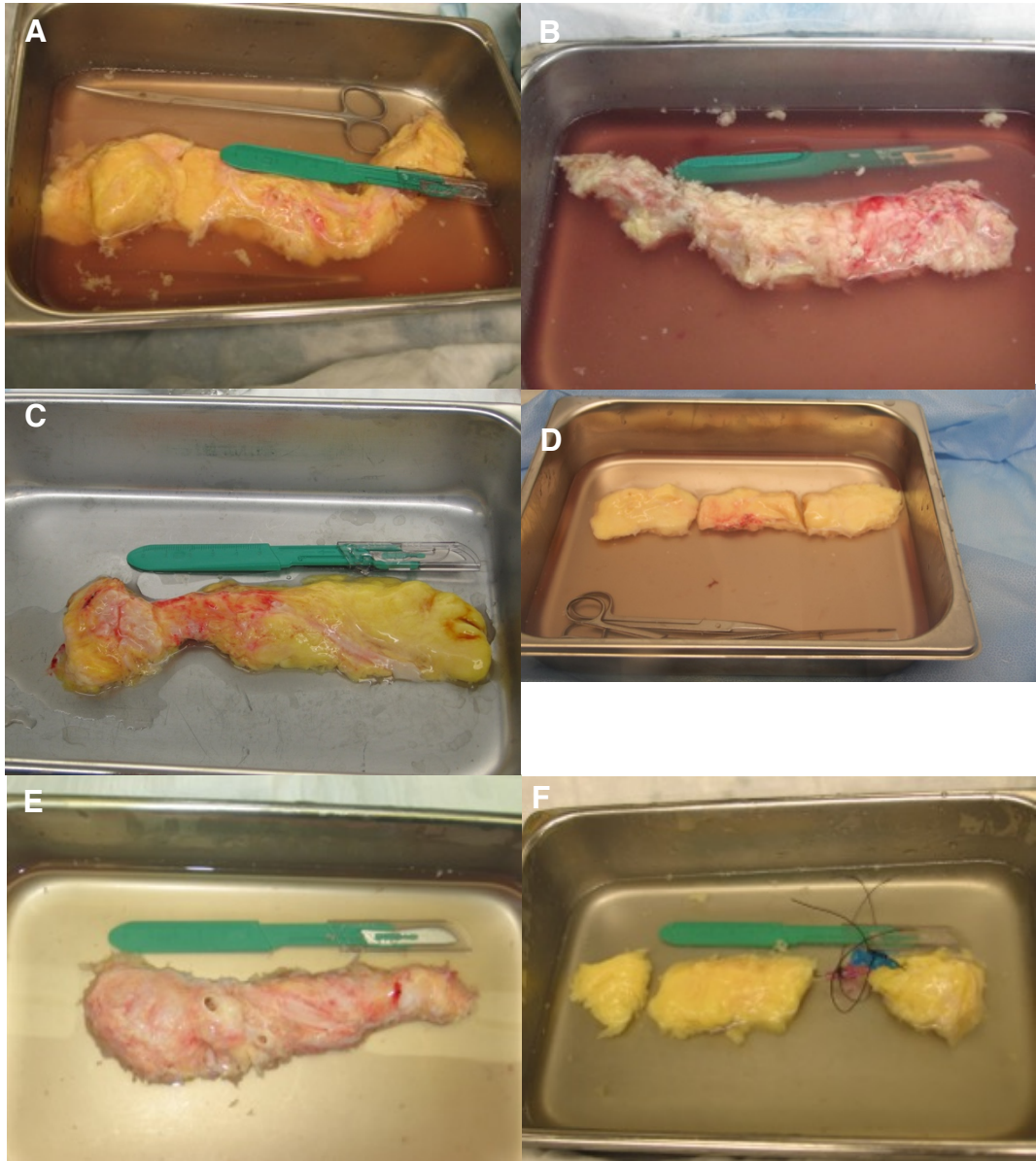
A**B**

C**D**

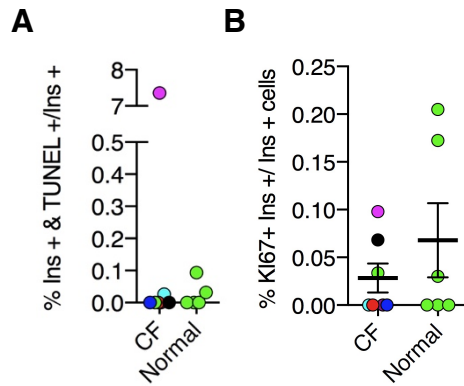
Supplemental Figure 4: CFTR mRNA expression in sorted human β and α cells was minimal compared to regulatory islet endocrine cell genes and exocrine related genes. Expression of select islet endocrine (left box) and exocrine related transcripts (right box) and *CFTR* from sorted (**A,C**) β cells and (**B,D**) α cells from 7 healthy human adult donors using an intracellular labeling method (**A,B**) from Blodgett et al. (39) (TPM) and 3 healthy human donors using an extracellular labeling method (**C,D**) from Bramswig et al. (40) (NEV)



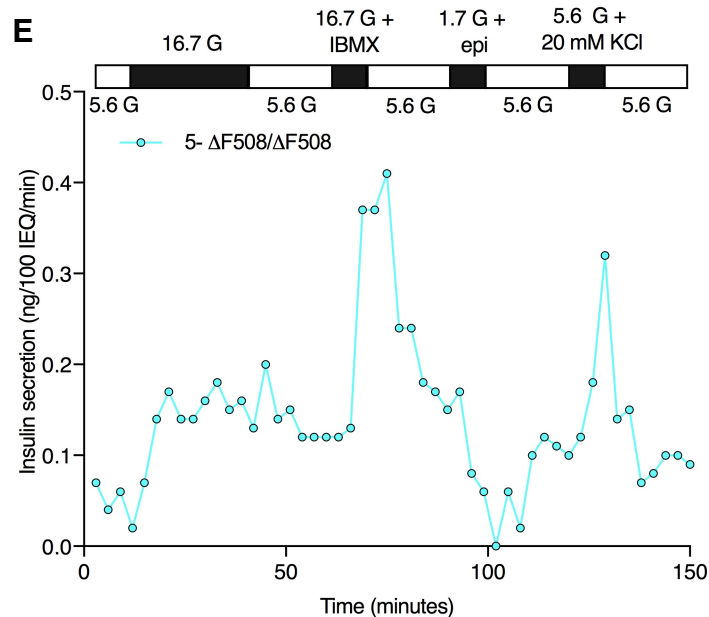
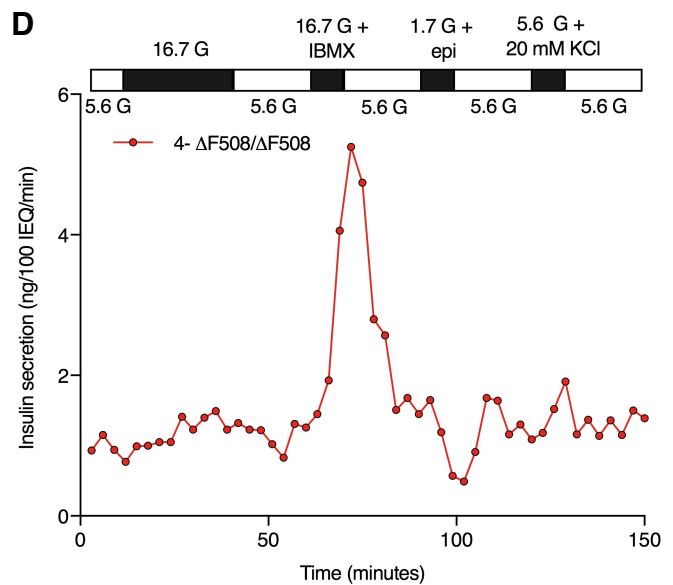
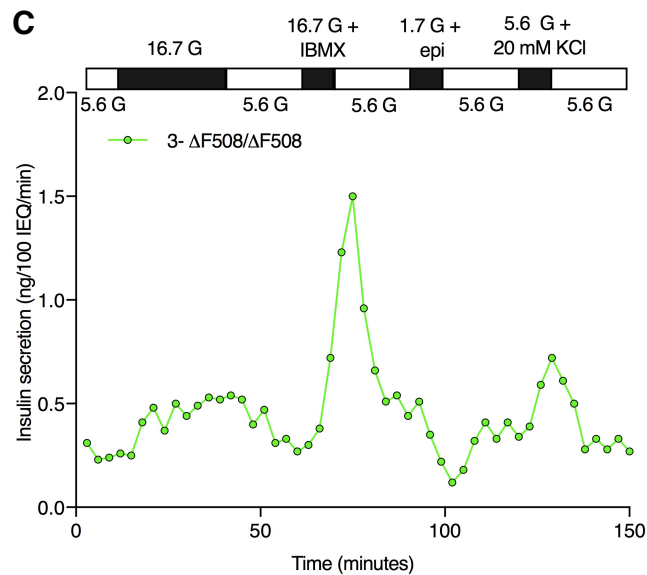
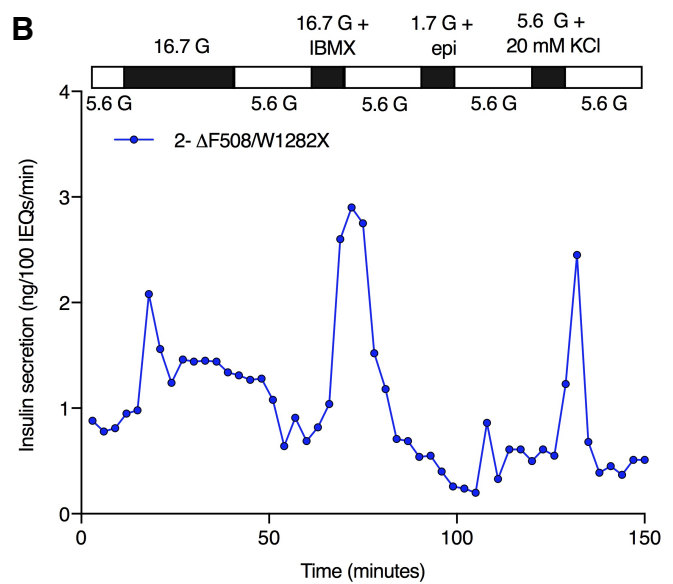
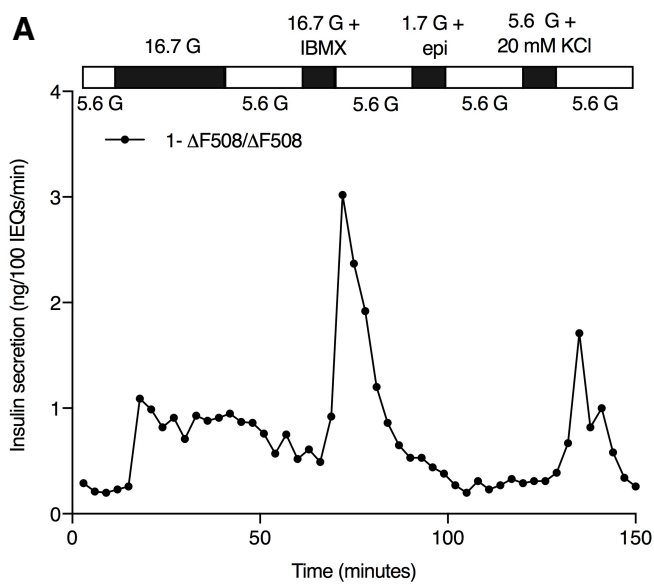
Supplemental Figure 5: CFTR antibody verification, immunohistochemical labeling of additional human pancreata and current quantification. Anti-CFTR antibodies 217, 432, 450 obtained from the Cystic Fibrosis Foundation (CFF) were screened against (A) 3 cell lines: Calu-3 cells (obtained from American Type Culture Collection (ATCC), Manassas, VA), which endogenously express CFTR protein, HeLaCFTR cells (obtained from CFF), transduced with human CFTR and HeLa cells (obtained from ATCC), which do not express CFTR. Scale bar= 25 μ m. (B) Forskolin and CFTRinh-172 sensitive currents from human β cells (n= 5 donors, 35 β cells) (representative trace in Figure 2D). Immunohistochemical labeling of human pancreatic sections for insulin (green), glucagon (purple) and CFTR (red) (C-H). (C,F) Gestational week 34 + 4days, (D,G) 10 months and (E,H) 4 years. Immunohistochemical labeling of human pancreatic sections for insulin (green), somatostatin (blue) and CFTR (red) (I-P). (I,M) gestational week 34 + 4days, (J,N) 3 months, (K,O) 10 months and (L,P) 4 years. Scale bar= 50 μ m



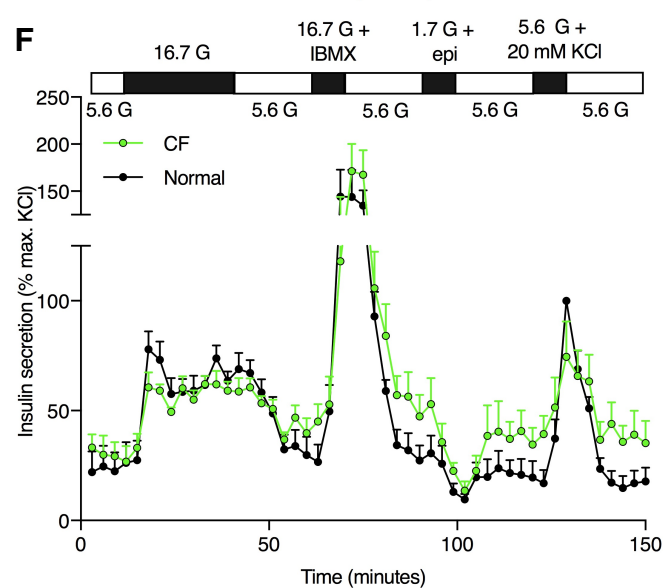
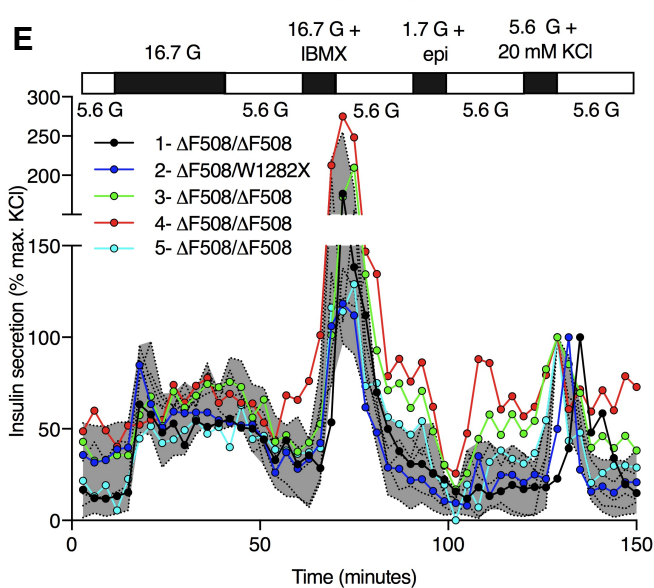
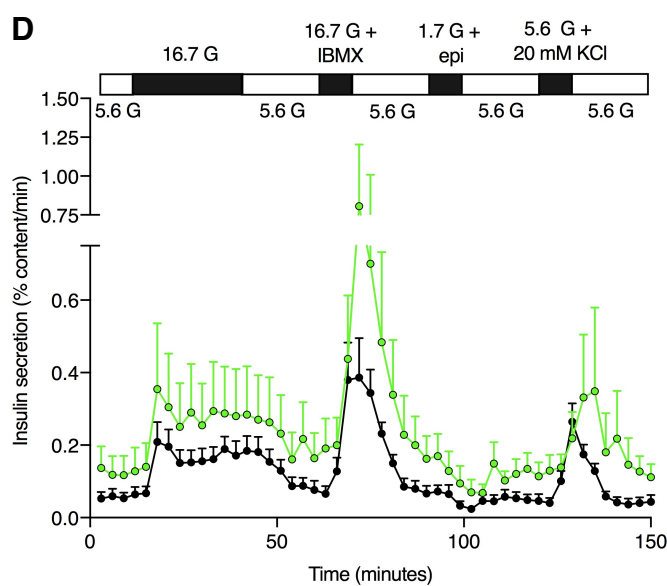
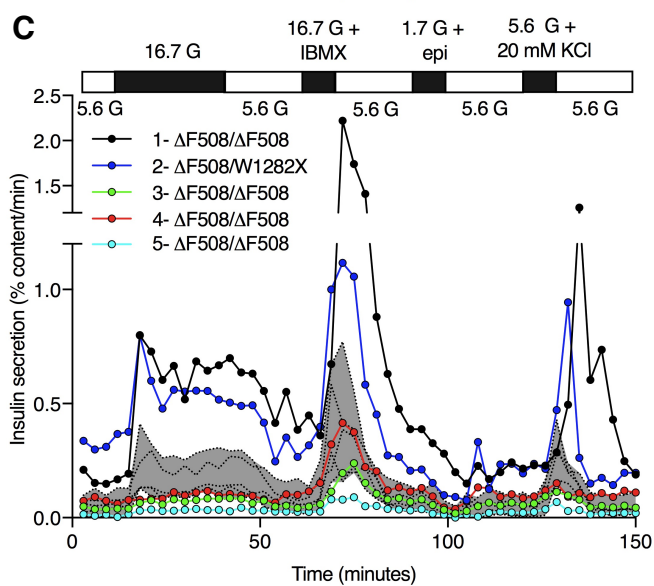
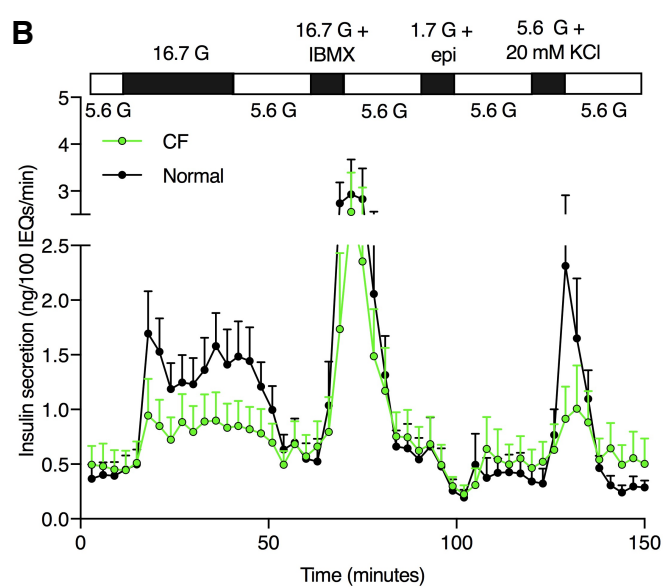
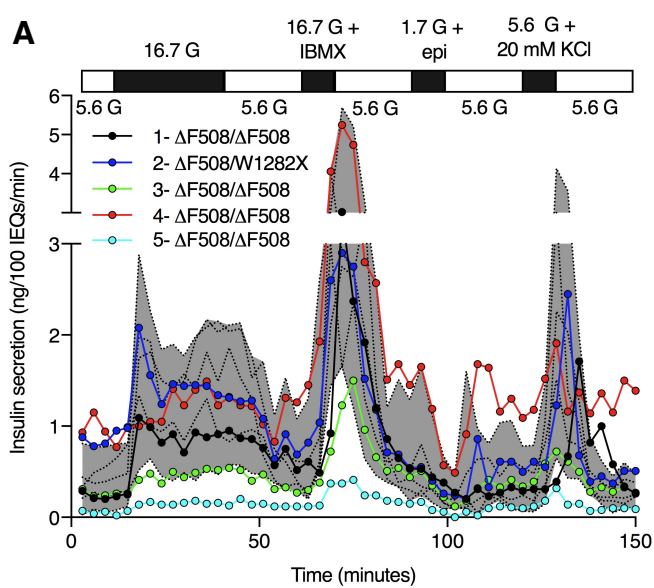
Supplemental Figure 6: Gross pancreatic anatomy of CF donor pancreata was characterized by inflammation, adipose and fibrotic tissue infiltration. (A) Donor 1, (B) donor 2, (C) donor 3, (D) donor 5, (E) donor 6 and (F) donor 7. *No image available for donor 4

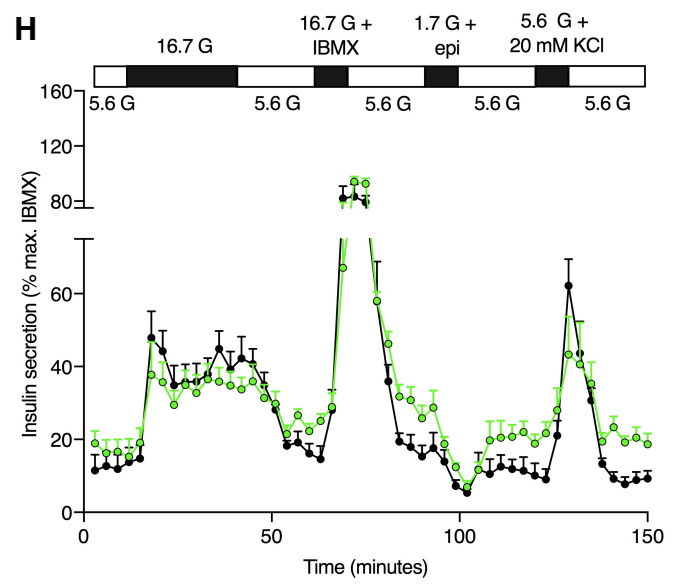
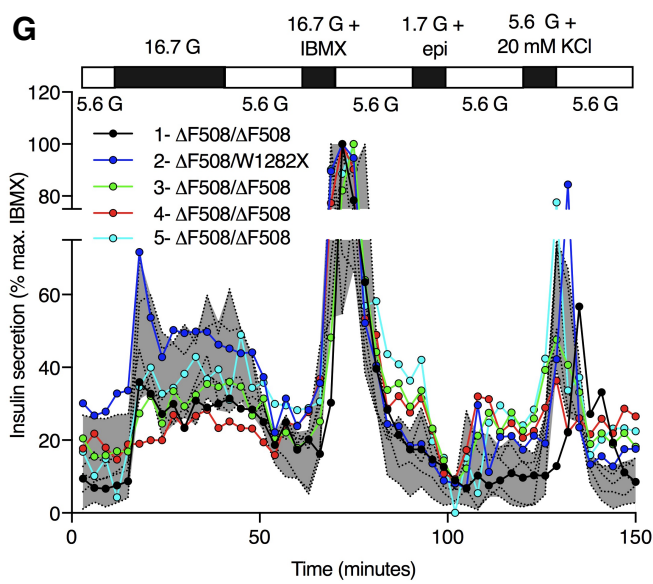


Supplemental Figure 7: β cell apoptosis and proliferation quantification. (A) Percent insulin and TUNEL positive cells in CF (n=7) and normal donors (n=5). (B) Percent insulin and Ki67 positive cells in CF (n=7) and normal donors (n=7). Data represent mean $\pm$ S.E.M. No statistical significance ($p < 0.05$) was observed. Unpaired 2-tailed Student's *t* test was used for statistical analysis.

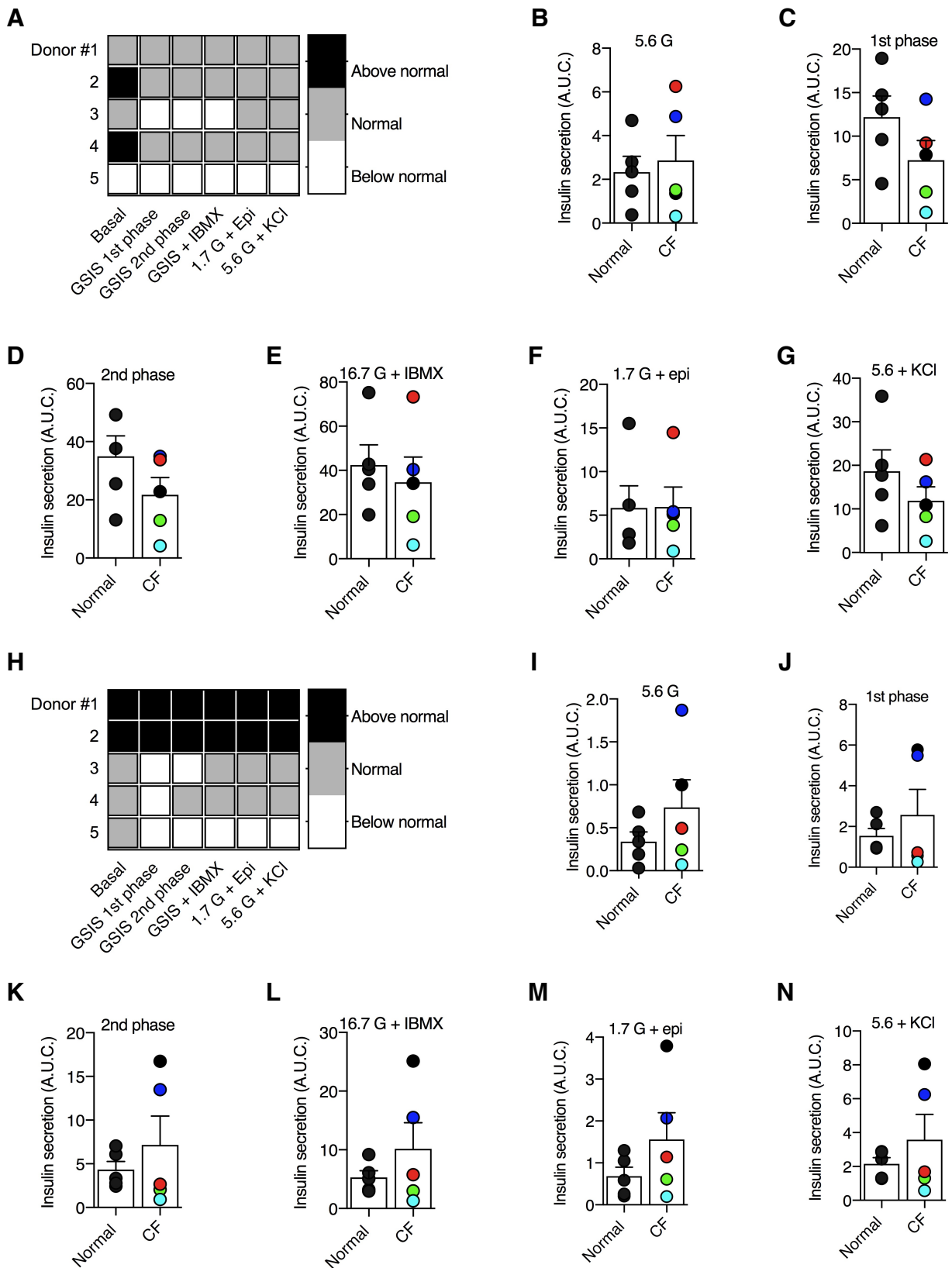


Supplemental Figure 8: Insulin perfusion profiles of individual CF islets. CF islets were subjected to a variety of conditions during the perfusion (5.6 G, 16.7 G, 16.7 G + IBMX, 1.7 G + Epi, 5.6 G + KCl) and responded to all. Note changes in scales to visualize secretory profiles. Insulin secretion was normalized to IEQ. (A) Donor 1, (B) donor 2, (C) donor 3, (D) donor 4 and (E) donor 5.

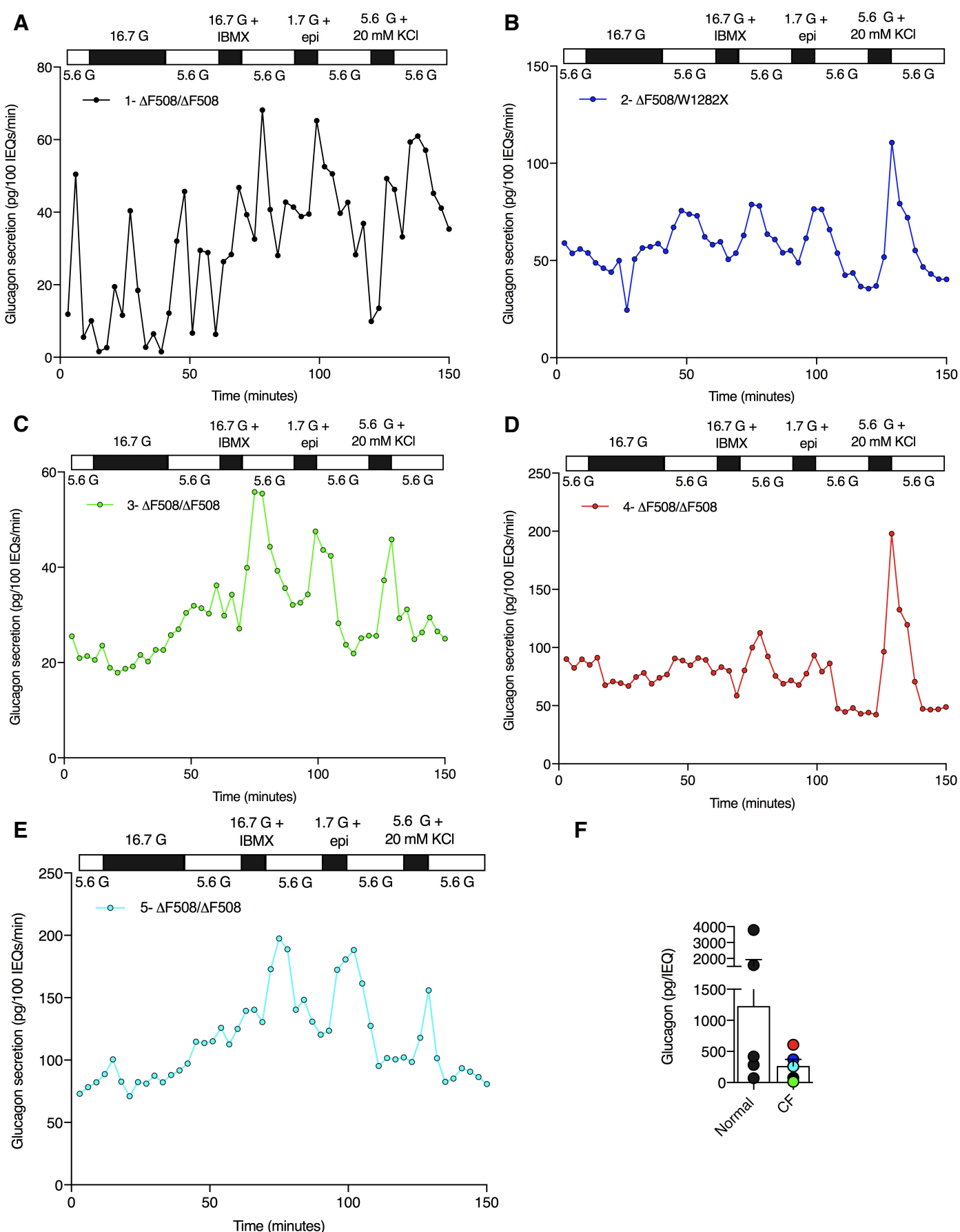




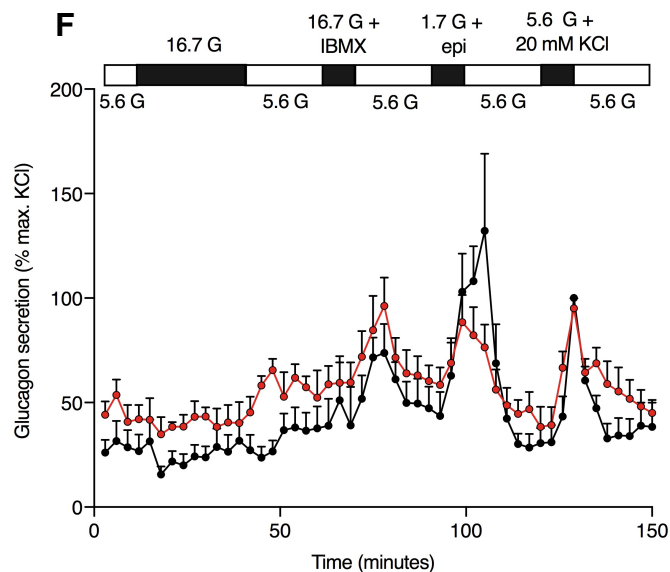
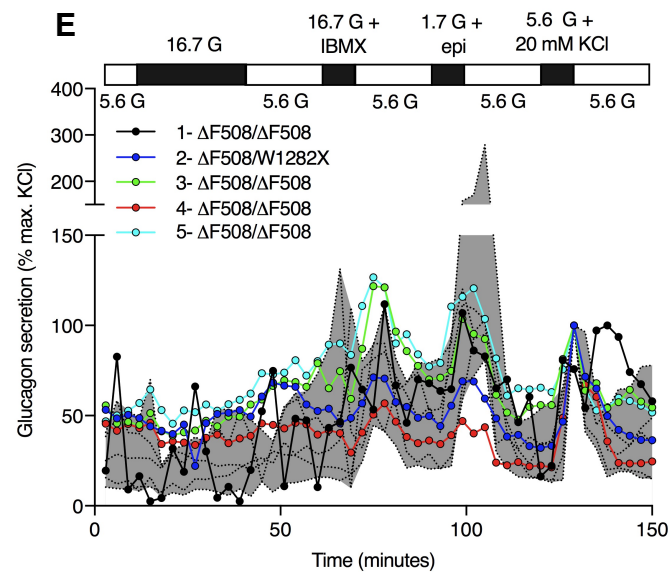
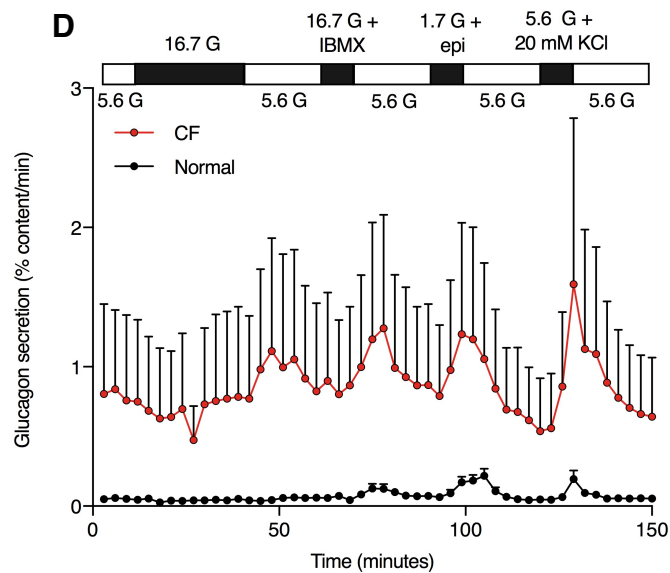
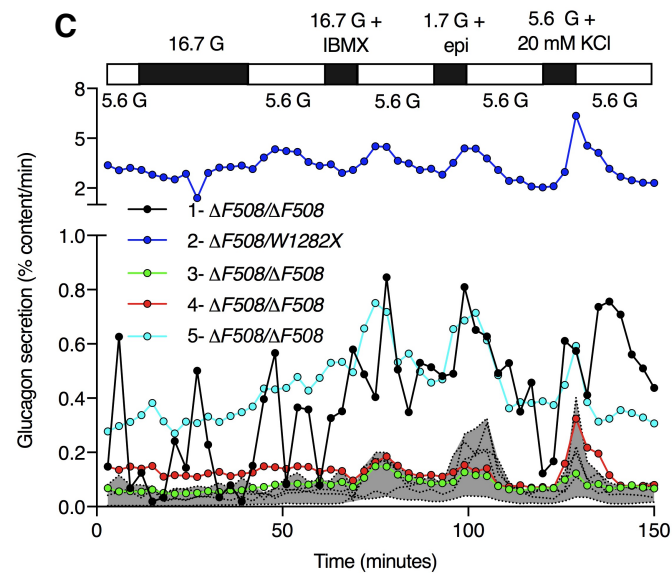
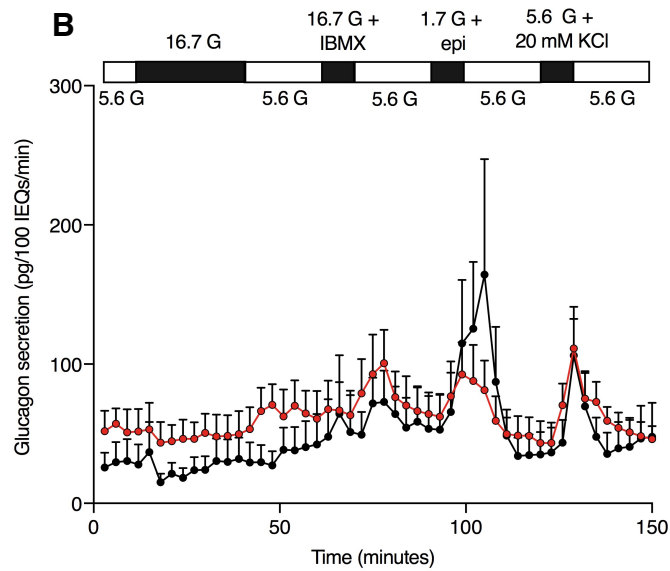
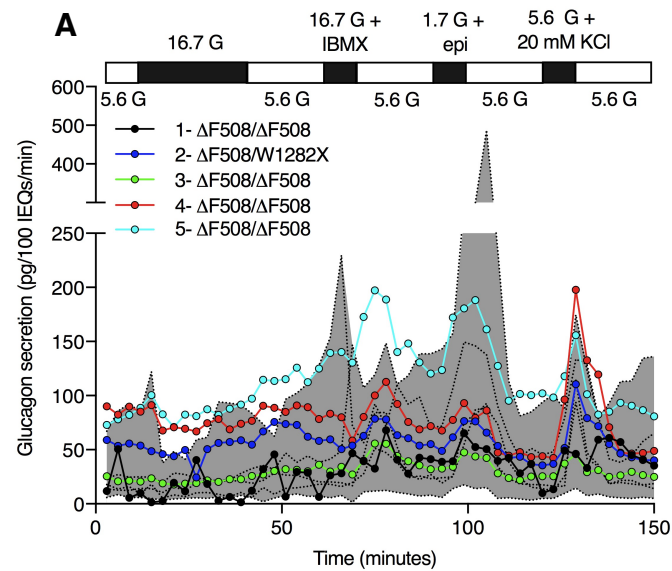
Supplemental Figure 9: Insulin perfusion profiles of CF and normal islets normalized to different values. Islet insulin secretion in response to different perfusion conditions presented as individual (A,C,E,G) and mean (B,D,F,H) values. Insulin secretion was normalized to (A,B) IEQ (disease status effect: $p=0.0021$, time effect: $p<0.0001$, interaction: $p=0.8231$), (C,D) content (disease status effect: $p<0.0001$, time effect: $p<0.0001$, interaction: $p=>0.9999$), (E,F) % maximum KCl secretion (disease status effect: $p=0.0001$, time effect: $p<0.0001$, interaction: $p=0.6251$) and (G,H) % maximum IBMX secretion (disease status effect: $p=0.0003$, time effect: $p<0.0001$, interaction: $p=0.0424$). Statistical differences between CF and normal islet secretion was determined by ordinary two-way ANOVA.

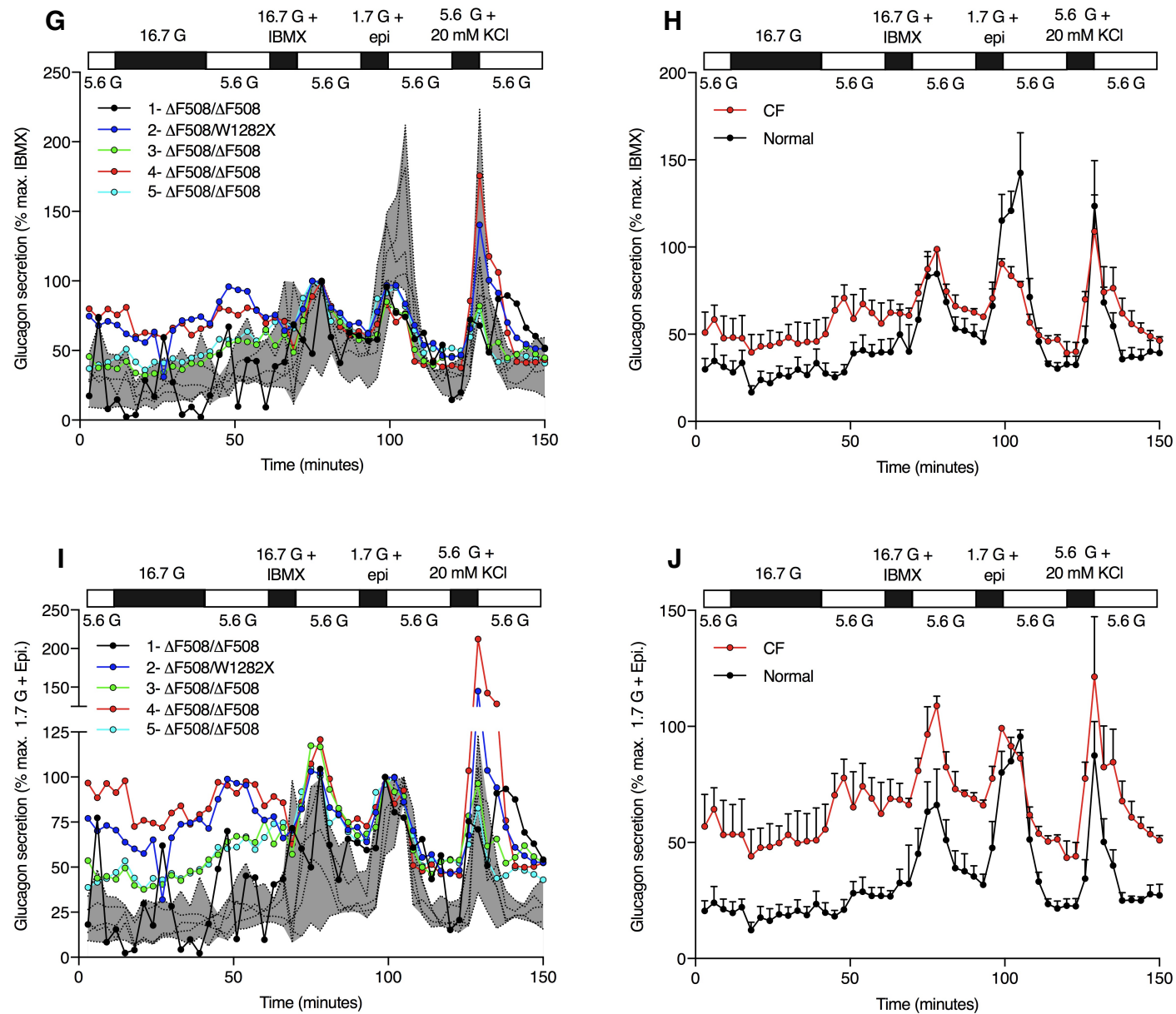


Supplemental Figure 10: Summary of CF islet insulin secretion ranges compared to normal islets. Insulin secretory responses to perfusion conditions normalized to (A-G) IEQ and (H-N) islet insulin content. (A,H) Summary of individual CF donor perfusion area under the curve (A.U.C.) measurements compared to the range observed in normal donors (basal- initial 3 fractions of 5.6 G). Insulin secretion A.U.C. during exposure to (A,I) 5.6 G (3-9 min.), 16.7 G- (C,J) 1st phase (15-24 min.) and (D,K) 2nd phase (27-54 min.), (E,L) 16.7 G + IBMX (63-87 min.), (F,M) 1.7 G + epi (93-108 min.), and (G,N) 5.6 G + KCl, 123-138 min.). Data represent mean $\pm$ S.E.M. No statistical difference ($p < 0.05$) in A.U.C. was detected using an unpaired 2-tailed Student's *t* test.

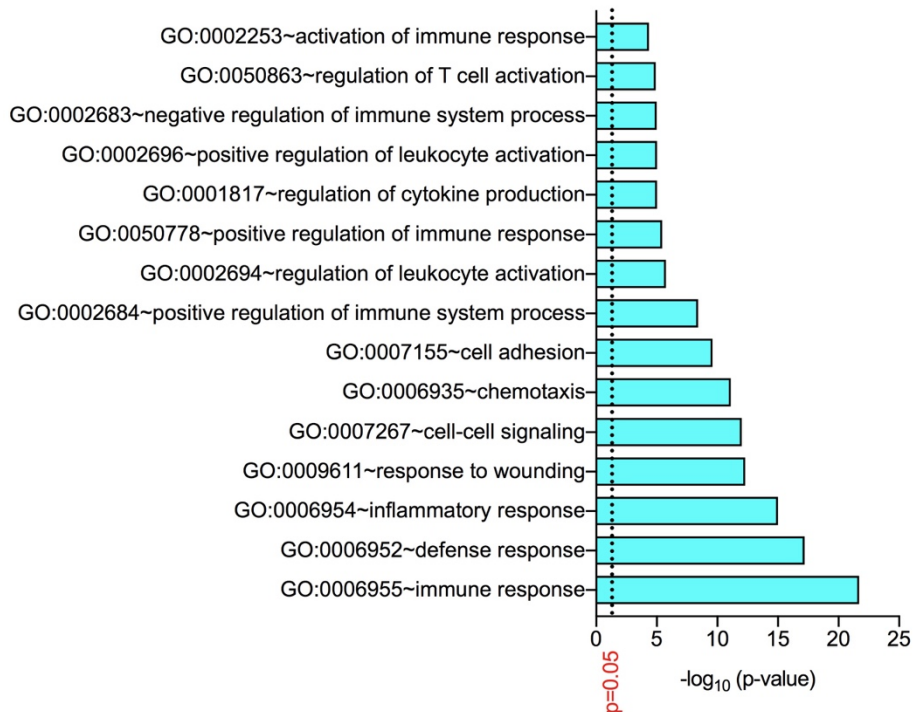
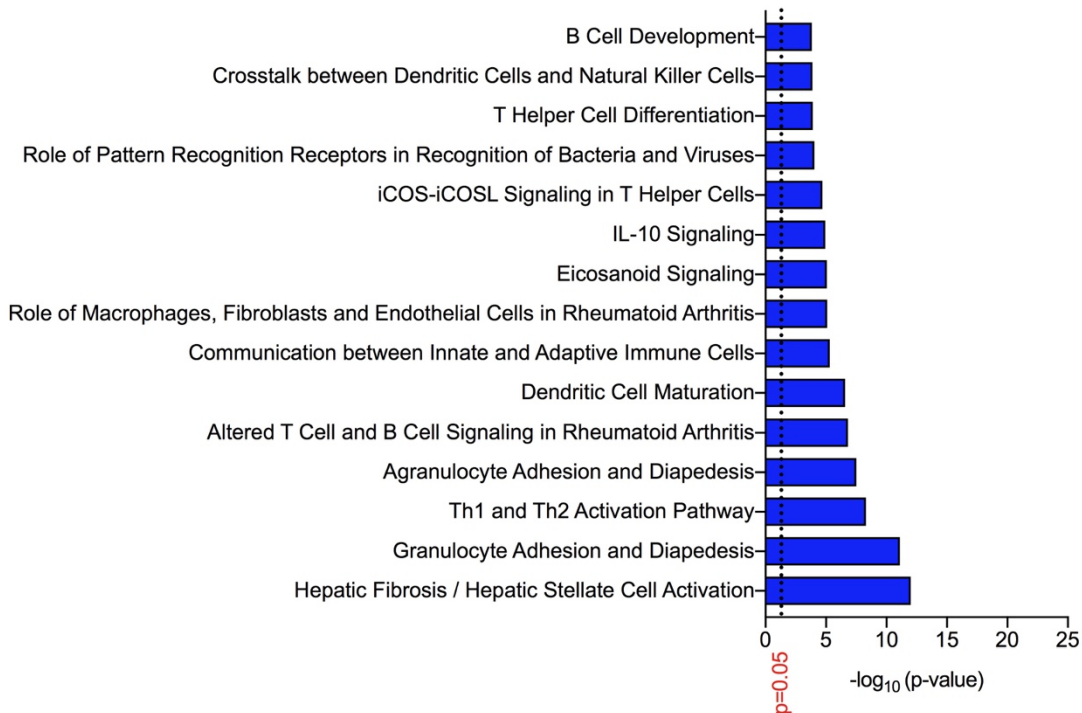


Supplemental Figure 11: Full length glucagon perfusion profiles and islet glucagon content of individual CF donors. CF islets were subjected to a variety of conditions during the perfusion (5.6 G, 16.7 G, 16.7 G + IBMX, 1.7 G + Epi, 5.6 G + KCl). Note changes in scales to visualize secretory profiles. Glucagon secretion was normalized to IEQ. (A) Donor 1, (B) donor 2, (C) donor 3, (D) donor 4 and (E) donor 5. Data in (F) represent mean $\pm$ S.E.M. No statistical difference ($p < 0.05$) in glucagon content (F) was detected using an unpaired 2-tailed Student's *t* test.

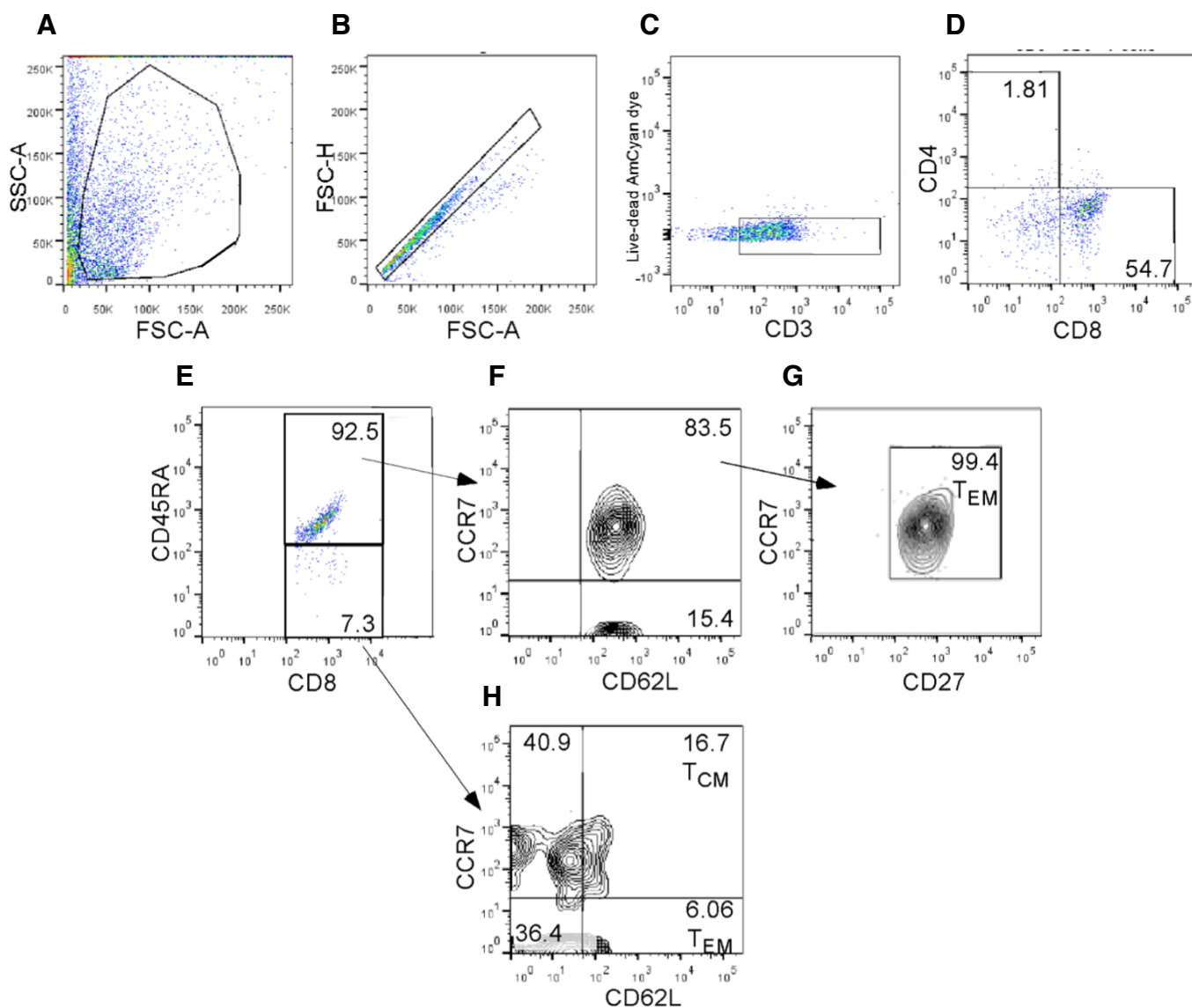




Supplemental Figure 12: Full length glucagon perfusion profiles of CF and normal islets normalized to different values. Islet glucagon secretion in response to different perfusion conditions presented as individual (**A,C,E,G,I**) and mean (**B,D,F,H,J**) values. Glucagon secretion was normalized to (**A,B**) IEQ (disease status effect: $p=0.0020$, time effect: $p=0.0004$, interaction: $p=0.9994$), (**C,D**) content (disease status effect: $p<0.0001$, time effect: $p>0.9999$, interaction: $p>0.9999$), (**E,F**) % maximum KCl secretion (disease status effect: $p<0.0001$, time effect: $p<0.0001$, interaction: $p=0.4634$), (**G,H**) % maximum IBMX secretion (disease status effect: $p<0.0001$, time effect: $p<0.0001$, interaction: $p=0.0002$) and (**I,J**) % maximum 1.7 G + Epi. secretion (disease status effect: $p<0.0001$, time effect: $p<0.0001$, interaction: $p=0.8126$). Two-way ANOVA was used to compare perfusion curves.

A**B**

Supplemental Figure 13: Transcriptomic analyses revealed activation of numerous immune processes. Selected (A) DAVID biological processes and (B) IPA Pathways activated in CF islets reveal complex immune signaling and activation within CF islets.



Supplemental Figure 14. T cell FACS sorting from Donor 5. One hundred live hand-picked islets from donor 5 were dissociated with enzyme and immediately stained viability dye and T cell markers, and then detected by flow cytometry. **(A)** The lymphocyte gate was then gated for **(B)** single cells, for **(C)** viable, CD3+ cells, and then for **(D)** CD4 and CD8. **(E)** Cells in the CD8+ gate were then interrogated for CD45RA. **(F)** CD8+ CD45RA+ T cells were interrogated for CCR7 and CD62L. **(G)** CD8+CD45RA+CCR7+CD62L+ T cells were interrogated for CD27. **(H)** CD8+CD45RA- T cells were interrogated for CCR7 and CD62L.

Line ID	CD107a	IFN- γ	TNF α
CD4.1	-	-	+
CD4.2	-	-	+
CD4.3	+	+	++
CD4.4	-	-	+
CD4.5	-	-	-
CD4.6	-	-	$\pm$
CD4.7	-	-	-
CD4.8	$\pm$	-	$\pm$
CD4.9	$\pm$	-	$\pm$
CD4.10	+	-	+

Supplemental Table 1: CD4 T cell lines grown from individual islets from donor 5 express TNF α . CD4 T cell lines grown from individual donor islets were expanded as described and then assayed (after passages 1-3 in cell culture) for intracellular expression of CD107a, IFN γ and TNF α and cell surface expression of CD4 and CD8 β after overnight stimulation with soluble anti-CD3 and then 6 hours of stimulation with soluble anti-CD28 (10 μ g/ml and 2 μ g/ml, respectively). For each line and marker, the signal of unstained cells is compared to stained cells.

- no separation of peak of stained cells from unstained cells
- $\pm$ minor shoulder or tail for stained cells as compared to unstained cells
- + shoulder or tail for stained cells as compared to unstained cells
- ++ separation of peaks for stained versus unstained cells

Line ID	CD107a	IFN- γ	TNF α
CD8.1	++	++	+
CD8.2	++	++	+
CD8.3	++	++	+
CD8.4	++	++	+
CD8.5	++	++	++
CD8.6	++	++	++
CD8.7	++	++	++
CD8.8	++	++	++
CD8.9	++	++	+

Supplemental Table 2: CD8 T cell lines grown from individual islets from donor 5 express a degranulation marker, CD107a, IFN γ and TNF α . CD8 T cell lines grown from individual donor islets were expanded as described and then assayed (after passages 1-3 in cell culture) for intracellular expression and cell surface expression of CD4 and CD8 β of CD107a, IFN γ and TNF α and cell surface expression of CD4 and CD8 β after overnight stimulation with soluble anti-CD3 and then 6 hours of stimulation with soluble anti-CD28 (10 μ g/ml and 2 μ g/ml, respectively). For each line and marker, the signal of unstained cells is compared to stained cells.

- no separation of peak of stained cells from unstained cells
- ± minor shoulder or tail for stained cells as compared to unstained cells
- + shoulder or tail for stained cells as compared to unstained cells
- ++ separation of peaks for stained versus unstained cells

Line ID	CD4			CD8		
	CD107a	IFN- γ	TNF α	CD107a	IFN- γ	TNF α
M.1	-	+	++	++	+	++
M.2	-	$\pm$	+	++	+	+
M.3	$\pm$	+	++	++	++	++
M.4	-	-	+	++	+	++
M.5	+	$\pm$	+	++	++	+
M.6	+	-	$\pm$	++	+	+
M.7	+	-	$\pm$	++	+	$\pm$
M.8	$\pm$	-	$\pm$	++	+	+
M.9	+	$\pm$	+	++	+	+
M.10	+	+	+	++	++	+
M.11	++	$\pm$	$\pm$	++	++	+
M.12	+	+	+	++	++	+
M.13	+	+	+	++	++	+
M.14	+	$\pm$	+	++	++	+
M.15	+	-	+	++	++	++
M.16	+	-	$\pm$	$\pm$	++	+
M.17	+	-	$\pm$	+	++	++
M.18	++	++	+	++	++	$\pm$
M.19	++	++	+	++	++	+
M.20	$\pm$	+	+	$\pm$	+	$\pm$
M.21	$\pm$	+	+	++	+	+
M.22	$\pm$	+	$\pm$	+	++	+
M.23	$\pm$	+	+	$\pm$	+	+

Supplemental Table 3: T cell lines grown from individual islets from donor 5 that are mixtures of CD4 and CD8 β T cells express a degranulation marker, CD107a, IFN γ and TNF α . T cell lines grown from individual donor islets were expanded as described and then assayed (after passages 1-3 in cell culture) for intracellular expression of CD107a, IFN γ and TNF α and cell surface expression of CD4 and CD8 β after overnight stimulation with soluble anti-CD3 and then 6 hours of stimulation with soluble anti-CD28 (10 μ g/ml and 2 μ g/ml, respectively). For each line and marker, the signal of unstained cells is compared to stained cells.

- no separation of peak of stained cells from unstained cells
- $\pm$ minor shoulder or tail for stained cells as compared to unstained cells
- + shoulder or tail for stained cells as compared to unstained cells
- ++ separation of peaks for stained versus unstained cells

Supplemental Table 4: Primary antibodies

Antigen	Host	Class	Source	Catalog #	Dilution
Insulin	Guinea pig	Polyclonal	Dako	A0564	1:1000
Glucagon	Mouse	Monoclonal	Abcam	ab10988	1:200
Glucagon	Rabbit	Polyclonal	Cell Signaling Tech.	2760s	1:100
Somatostatin	Goat	Polyclonal	Santa Cruz Biotech.	SC-7819	1:500
CD45	Mouse	Monoclonal	BD Pharmigen	555480	1:100
IBA1	Rabbit	Polyclonal	Wako	019-19741	1:500
Ki67	Rabbit	Polyclonal	Abcam	ab15580	1:5000
CFTR	Mouse	Monoclonal	Cystic Fibrosis Foundation	217 (Ab code: A3)	1:250
CFTR	Mouse	Monoclonal	Cystic Fibrosis Foundation	432 (Ab code: A7)	1:250
CFTR	Mouse	Monoclonal	Cystic Fibrosis Foundation	450 (Ab code: A6)	1:250

Supplemental Table 5: Determination of the number of immune cells in the human pancreas with CD45+ labeling.

#	Slides examined	Pancreatic regions	Total DAPI+ cells counted	
1		3	H,B,T	83,426
2		3	B	279,705
3		1	T	37,861
4		3	H,B,T	243,038
5		3	H,B,T	56,731
6		3	Unspecified regions	353,606
7		3	H,B,T	26,960
21		3	H,B,T	968,320
22		3	H,B,T	1,581,614
23		3	H,B,T	1,378,030
24		3	H,T	1,521,143

*H-Head, B-Body, T-Tail

Supplemental Table 6: Determination of islet endocrine cell contribution to the endocrine compartment of the pancreas.

#	Slides examined	Pancreatic regions	Total DAPI+ & Hormone+ cells counted	
1		1	H	18,554
2		1	B	6,609
3		1	T	8,951
4		1	T	1,731
5		1	H	9,929
6		1	Unspecified region	3,487
7		1	T	1,769
21	1	B	9,509	
22	1	H	11,765	
23	1	T	14,832	
24	1	T	7,065	
25	1	B	2,759	
26	1	B	9,204	
27	1	B	5,155	

*H-Head, B-Body, T-Tail

Supplemental Table 7: Determination of β cell proliferation with Ki67 staining.

#	Slides examined	Pancreatic regions	Total DAPI+ cells counted	
1		1	H	48,039
2		1	B	80,929
3		1	T	25,455
4		1	T	18,717
5		1	H	18,317
6		1	Unspecified region	87,209
7		1	T	8,022
22		1	H	671,525
23		1	T	625,839
24		1	T	248,270
25		1	B	187899
26		1	B	819,275
27		1	B	226,296

*H-Head, B-Body, T-Tail

Supplemental Table 8: Determination of β cell apoptosis with TUNEL assay.

#	Slides examined	Pancreatic regions	Total DAPI+ cells counted	
1		1	H	38,468
2		1	B	128,825
3		1	T	37,129
4		1	T	26,872
5		1	H	21,032
6		1	Unspecified region	131,835
7		1	B	8,914
22		1	H	611,610
23		1	H	472,260
25		1	H	179,619
26		1	T	452,422
27		1	B	214,032

*H-Head, B-Body, T-Tail

Supplemental Table 9: β cell area determination

#	Slides examined	Pancreatic regions	Total area classified (mm ²)	
1		3	H, B, T	184.8
2		4	B	356.9
3		3	H, B, T	90.1
4		3	H,B,T	202.8
5		3	H,B,T	151.3
6		3	Unspecified regions	273.9
7		3	H,B,T	133.4
21		3	H,B,T	180.8
22		3	H,B,T	194.4
23		3	H,B,T	289.9
24		3	H,B,T	204.4
25		3	H,B,T	84.7
26		3	H,B,T	242.1
27		2	H,B	73.2

*H-Head, B-Body, T-Tail

	*Unique ID (e.g. UNOS ID, IIDP isolation #, etc.)	Age (years)	Sex (M/F)	BMI	Ethnicity	HbA1c (%)	Diabetes	COD	Warm ischemia (mins)	Cold ischemia time (hr:mins)	Origin/Source	Isolation center	Purity (%)	Preparation viability (%)	Additional purification (handpick, sort)	Approximate total culture time (days)	Functional assay (e.g. perfusion, static culture, electric)	Genomic studies (i.e. DNA sequencing, RNA Sequencing)	Experimental use (e.g. Figure X)
1	Donor 1-ABKW476	25	M	19.1	Caucasian	5.5	No	Anoxia	0	19:30	NDRI	Allegheny-Pittsburgh	70-80	N/A	handpicked	1	Perfusion	Islet RNA-Sequencing, pancreatic tissue DNA isolation for identification of CF-causing mutations	Figure 4A, D, E, G; Figure 5A-F (and all supplemental perfusion traces); Figure 5G and 6E (and all RNA-Sequencing); Figure 6A, C, D
2	Donor 2-ACJF321	22	F	21.8	Caucasian	5.2	Yes, duration unknown	Respiratory infection/disease	17	25:00:00	IAM	Allegheny-Pittsburgh	30-35	N/A	handpicked	1	Perfusion	Islet RNA-Sequencing, pancreatic tissue DNA isolation for identification of CF-causing mutations	Figure 4B, D, F, G; Figure 5A-F (and all supplemental perfusion traces); Figure 5G and 6E (and all supplemental RNA-Sequencing); Figure 6B, C, D
3	Donor 3-ADH4365	34	F	14.7	Caucasian	N/A	Yes, 6-10 years	Anoxia	0	16:35	IAM	Allegheny-Pittsburgh	20%	60%	handpicked	1	Perfusion	Islet RNA-Sequencing, pancreatic tissue DNA isolation for identification of CF-causing mutations	Figure 4C, D, G; Figure 5A-F (and all supplemental perfusion traces); Figure 5G and 6E (and all supplemental RNA-Sequencing); Figure 6C, D
4	Donor 4-ADIM017	24	M	24.1	Caucasian	5.2	Yes, >10 years	Anoxia	0	17:00	IAM	Allegheny-Pittsburgh	45%	~60%	handpicked	2	Perfusion	Islet RNA-Sequencing, pancreatic tissue DNA isolation for identification of CF-causing mutations	Figure 4D, G; Figure 5A-F (and all supplemental perfusion traces); Figure 5G and 6E (and all supplemental RNA-Sequencing); Figure 6C, D
5	Donor 5-AEAG232	34	F	17	Caucasian	N/A	Yes, 6-10 years	Air emboli	0	15:15	IAM	University of Louisville	90%	N/A	handpicked	1	Perfusion	pancreatic tissue DNA isolation for identification of CF-causing mutations	Figure 4D, G, I; Figure 5A-F (and all supplemental perfusion traces); Figure 6F-H (all supplemental information regarding isolated immune cells);Figure 6C, D
6	Donor 6-ABDE372	20	M	16.9	Caucasian	N/A	Yes, ~7 years	Anoxia	N.I.	N.I.	NDRI	Allegheny-Pittsburgh	N.I.	N.I.	N.I.	N.I.	N.I.	pancreatic tissue DNA isolation for identification of CF-causing mutations	Figure 4D, G, H; Figure 6C, D
7	Donor 7-ACBQ176	42	F	27.7	Caucasian	5.9	Yes, < 1 year	Anoxia	24	14:27	NDRI	Allegheny-Pittsburgh	75	N/A	handpicked	1	N/A	Islet RNA-Sequencing, pancreatic tissue DNA isolation for identification of CF-causing mutations	Figure 4D, G; Figure 5G and 6E (and all RNA-Sequencing)
8	R076	63	F	26.5	N/A	N/A	No	N/A	N/A	N/A	University of Alberta-IsleCore	University of Alberta-IsleCore	N/A	N/A	Post-stained for insulin	N/A	N/A	N/A	Figure 2E; Supplemental Figure 5B
9	R077	54	F	24.7	N/A	5.2	No	N/A	N/A	N/A	University of Alberta-IsleCore	University of Alberta-IsleCore	N/A	N/A	Post-stained for insulin	N/A	N/A	N/A	Figure 2E; Supplemental Figure 5B
10	R078	47	F	35.3	N/A	5.9	Yes, Type 2, duration unknown	N/A	N/A	N/A	University of Alberta-IsleCore	University of Alberta-IsleCore	N/A	N/A	Post-stained for insulin	N/A	N/A	N/A	Figure 2E; Supplemental Figure 5B
11	R080	57	M	28.3	N/A	5.8	Yes, Type 2, duration unknown	N/A	N/A	N/A	University of Alberta-IsleCore	University of Alberta-IsleCore	N/A	N/A	Post-stained for insulin	N/A	N/A	N/A	Figure 2E; Supplemental Figure 5B
12	R081	68	M	23.7	N/A	5.9	No	N/A	N/A	N/A	University of Alberta-IsleCore	University of Alberta-IsleCore	N/A	N/A	Post-stained for insulin	N/A	N/A	N/A	Figure 2E; Supplemental Figure 5B
13	R072	54	F	30.6	N/A	6.2	No	N/A	N/A	N/A	University of Alberta-IsleCore	University of Alberta-IsleCore	N/A	N/A	N/A	N/A	Static	N/A	Figure 2F
14	R073	74	F	28.3	N/A	5.4	No	N/A	N/A	N/A	University of Alberta-IsleCore	University of Alberta-IsleCore	N/A	N/A	N/A	N/A	Static	N/A	Figure 2F
15	R074	27	M	26.2	N/A	5.4	No	N/A	N/A	N/A	University of Alberta-IsleCore	University of Alberta-IsleCore	N/A	N/A	N/A	N/A	Static	N/A	Figure 2F
16	H1773	48	M	20	N/A	5.4	No	N/A	N/A	N/A	University of Alberta-IsleCore	University of Alberta-IsleCore	N/A	N/A	N/A	N/A	Static	N/A	Figure 2F
24	ACEZ381	24	M	35.5	Caucasian	5.5	No	Head trauma	N/A	N/A	IAM	Allegheny-Pittsburgh	N/A	N/A	handpicked	1	Perfusion	RNA-Sequencing	Figure 4D, G; Supplemental Figure 7A-B; Figure 5G and 6E (and all RNA-Sequencing); Figure 6C
27	ADD3367	20	M	27.8	Caucasian	5.3	No	Head trauma	0	14:28	NDRI	Allegheny-Pittsburgh	N/A	N/A	handpicked	1	Perfusion	N/A	Figure 4D, G; Supplemental Figure 7A-B; Figure 5A-F (and all supplemental perfusion traces)
28	ACKV075	26	F	35.9	Hispanic/Latino	N/A	No	Anoxia	0	12:25	IIDP	University of Pennsylvania	90	95	handpicked	2	N/A	RNA-Sequencing	Figure 5G and 6E (and all RNA-Sequencing)
29	ACK4174	55	M	27.8	Caucasian	####	No	Cerebrovascular/stroke	0	9:58	IIDP	University of Illinois	90	99	handpicked	2	Perfusion	RNA-Sequencing	Figure 5G and 6E (and all RNA-Sequencing)
30	ADB0275A	35	F	23.6	Caucasian	4.6	No	Anoxia	0	7:40	IIDP	University of Pennsylvania	80	94	handpicked	2	Perfusion	RNA-Sequencing	Figure 5G and 6E (and all RNA-Sequencing)
31	ADB0Q038	50	M	30.2	African american	N/A	No	Cerebrovascular/stroke	30	6:57	IIDP	University of Illinois	90	97	handpicked	3	Perfusion	RNA-Sequencing	Figure 5G and 6E (and all RNA-Sequencing)
32	R224	30	M	33.3	N/A	N/A	No	N/A	N/A	N/A	University of Alberta-IsleCore	University of Alberta-IsleCore	80	N/A	handpicked	N/A	Perfusion	N/A	Figure 5A-F (and all supplemental perfusion traces)
33	AEX417A	24	F	32.2	Hispanic/Latino	N/A	No	Anoxia	0	9:02	IIDP	University of Pennsylvania	95	N/A	handpicked	4	Perfusion	N/A	Figure 5A-F (and all supplemental perfusion traces)
34	ADID015	32	F	24.9	Caucasian	N/A	No	Anoxia	21	12:10	IIDP	Sharp Lacy Research Institute	90	95	handpicked	2	Perfusion	N/A	Figure 5A-F (and all supplemental perfusion traces)
35	ACCZ042	44	F	23.8	African american	N/A	No	Cerebrovascular/stroke	0	6:11	IIDP	University of Pennsylvania	90	95	handpicked	2	Perfusion	N/A	Figure 5A-F (and all supplemental perfusion traces)

*N/A- Not available

*N.I.-No islets isolated

Additional Notes	Patient History	Medications
homozygous c.1521-1523CTT (p.Phe508del), pancreatic biopsy	Required home oxygen. Presented with rapid respiratory failure, presumed to be related to pneumonia. Intubated 9 days prior to organ procurement. ECMO 6 days prior to organ procurement.	oxygen, azithromycin, sulfamethoxazole, vancomycin, fentanyl, cyproheptadine, pulmozyme, symbicort, ventolin, acetaminophen, ergocalciferol, ferrous sulfate, pantoprazole, viokace, zenpep
heterozygous c.1521-1523CTT (p.Phe508del)/ c.2846G>A (p.Trp1282X), pancreatic biopsy	History of CFRD, pancreatic insufficiency, gastroesophageal reflux disease (GERD), sinusitis, fibromyalgia, opioid dependence and acute kidney injury. MRSA positive sputum culture	Not reported
homozygous c.1521-1523CTT (p.Phe508del), pancreatic biopsy	History of CFRD, exocrine pancreatic insufficiency, distal intestinal obstruction, bilateral lung transplant with rejection, chronic rhinosinusitis with nasal polyps, tracheal diverticulum with pseudomonas, gastroparesis, GERD-fundoplication, severe malnutrition, osteoporosis, hypothyroidism, C. diff colitis, hypertension, appendectomy, renal cysts Presented with pneumothorax.	Not reported
homozygous c.1521-1523CTT (p.Phe508del), pancreatic biopsy	History of CFRD, liver transplant (acetaminophen toxicity), and bowel obstruction. Severely hypoglycemic at time of hospital admission.	Anti-rejection, pancreatic enzymes, insulin
homozygous c.1521-1523CTT (p.Phe508del), pancreatic biopsy	History of CFRD, lung transplant, pharyngitis, deep vein thrombosis, allergic bronchopulmonary aspergillosis, hypertension, GERD, liver disease, malnutrition, osteopenia, pancreatic insufficiency, recurrent fever, sinusitis with pseudomonas, migraines, tinnitus Presented with active pneumonia.	Tacrolimus, Valganclovir, Tylenol, Albuterol, Pulmicort, colistimethate, Norvasc, Coreg, Atovaquone, Zithromax, calcium carbonate, iron supplement, vitamin E, Protonix, pancrelipase, Imitrex, cholecalciferol, Humalog.
homozygous c.1521-1523CTT (p.Phe508del), pancreatic biopsy	History of frequent hospitalizations due to CF including CFRD, asthma, juvenile rheumatoid arthritis, gastroparesis, GERD, pancreatic insufficiency, appendectomy and small bowel obstruction at birth, lap band surgery, sinusitis, fundoplication, gastric tube, multiple sinus surgeries, lymph node removal. Intubation ~2 weeks prior to death	Oxycodone, Miralax, Cetirizine, Mometasone, Protonix, Albuterol, Creon, Duloxetine, Oxycontin, Pulmozyme, Insulin glargine, Lispro, Vitamin D3, Multivitamin, Cyclobenzaprine, Naproxen, Colace, Senna, Budesonide
heterozygous c.3909>G (p.Asn1303Lys)/ c.1657>T (p.Arg553X), pancreatic biopsy	History of CFRD, steatorrhea, sinusitis, bronchopulmonary aspergillosis, appendectomy, cholecystectomy, benign pituitary adenoma, nephrolithiasis, hypothyroidism and bilateral lung transplant complicated by bronchial stenosis Presented with obstructive pneumonia, and lung collapse, fever and hypoxic respiratory failure, bilateral pneumothorax. ECMO ~3 weeks prior to death.	Not reported
Electrophysiology		
Electrophysiology		
Electrophysiology		
Electrophysiology		
Electrophysiology		
VX Compounds static insulin secretion		
VX Compounds static insulin secretion		
VX Compounds static insulin secretion		
VX Compounds static insulin secretion		
IHC-BCM,cell comp., ki67, TUNEL, RNA-Seq, CD45, pancreatic biopsy		
IHC-BCM,cell comp., ki67, TUNEL, Perfusion, pancreatic biopsy		
RNA-Seq		
RNA-Seq		
RNA-Seq		
RNA-Seq		
Perfusion		
Perfusion		
Perfusion		
Perfusion		

	*Unique ID (e.g. UNOS ID, IIDP isolation #)	Age (years)	Sex (M/F)	BMI	Ethnicity	HbA1c	Diabetes	COD	Origin/Source	Experimental use (e.g. Figure X)
	Donor 1-ABKW476	Both islets and pancreatic tissue used. See "Islet								
	Donor 2-ACJF321									
	Donor 3-ADH4365									
	Donor 4-ADIM017									
	Donor 5-AEAG232									
	Donor 6-ABDE372									
	Donor 7-ACBQ176									
	ACEZ381									
	ADD3367									
17	AAFZ420	1 day	F	N/A	Caucasian	N/A	No	Anencephaly	IIAM	Supplemental Figure 5
18	OD40736	3 mo	M	N/A	Hispanic	N/A	No	Head trauma	IIAM	Figure 2C, Supplemental Figure 5
19	ND01482	10 mo	F	N/A	Caucasian	N/A	No	Cerebrovascular accident	NDRI	Supplemental Figure 5
20	AAIC353	4	F	19	Caucasian	N/A	No	Head trauma	IIAM	Supplemental Figure 5
21	ADBN085	19	M	27.2	Caucasian	N/A	No	Head trauma	NDRI	Figure 4D, G; Supplemental Figure 7A, B; Figure 6C
22	ABI2259	35	M	26.9	Caucasian	5.1	No	Head trauma	IIAM	Figure 4D, G; Supplemental Figure 7A, B; Figure 6C
23	ACEZ011	20	M	19.4	Hispanic/Latino	5.6	No	Head trauma	IIAM	Figure 4D, G; Supplemental Figure 7A, B; Figure 6C
25	ACHM315	55	M	35.6	African american	N/A	No	Cerebrovascular accident	IIAM	Figure 4D, G; Supplemental Figure 7A, B; 6C
26	ABHB279	18	M	25.1	Caucasian	N/A	No	Head trauma	IIAM	Figure 4D, G; Supplemental Figure 7A, B; ,

*N/A- Not available

Additional Notes
Donor Info" tab
IHC-CFTR
IHC-CFTR
IHC-CFTR
IHC-CFTR
IHC-BCM,cell comp., ki67, TUNEL, CD45
IHC-BCM,cell comp., ki67, TUNEL, CD45
IHC-BCM,cell comp., ki67, TUNEL, CD45
IHC-BCM,cell comp., ki67, TUNEL
IHC-BCM,cell comp., ki67, TUNEL