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# Efferocytosis induces a novel SLC program to promote glucose uptake and lactate release

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## Supplementary Table 1. Gene List Associated with Figure 1a (Page 2)

<u>Glycolysis-associated genes</u>		<u>Anti-inflammatory-associated genes</u>		<u>Anti-apoptotic-associated genes</u>		<u>Calcium signaling-associated genes</u>		<u>Actin rearrangement/Cell motility genes</u>		<u>ER Stress/UPR-associated genes</u>	
Up-regulated	Down-regulated	Up-regulated	Down-regulated	Up-regulated	Down-regulated	Up-regulated	Down-regulated	Up-regulated	Down-regulated	Up-regulated	Down-regulated
Ranbp2		Fos		Hspa8		Itpr3	Calhm3	Gas2l3	Swap70	Eif5	Tri3
Txnip		Fosl1		Gtse1		Cask	Cpne2	Cdc42ep2	Col16a1	eIF5L	Herpud1
Pgm1		Fosl2		Ier3		Nfatc3		Cdc42ep1	Itga3	Clcc1	Dnajb9
Gys1		Dusp6		Usp27x		Ppp2r2a		Cdc42se1	Ssx2ip	Ero1l	Vapb
Pea15		Tnfaip3		Sept4		Asph		Rai14	Dock4	Ppwd1	Atf3
Myo1c		il1rl1		Ywhaz		Cacna1c		Pcdh7	Pkp2	Tmem129	Dab2
Nucks1		Il25		Kiaa0020		Atp2b1		Mical2	Fscn1	Heatr3	Ppp1r15a
Pfkfb3		Il33		Ltbp1		Orai1		Ssh1	Sh3yl1	Faf2	Grina
Pik3r3		Ifngr1		Api5		Ezr		Actr2	Fmnl3	Sec61a2	
Trmt10a		Ifngr2		Fam129b		Cd44		Nrg2		C3orf58	
Ppcdc		Thbs1		WISP1		Arhgdia		Fmnl2		Tbl2	
Hk1		Metrnl		Map4k4				Elmo3		EIF2B4	
Aldoa		Zfyve9		C3orf38				Pak2		EIF2B5	
Eno1		Mybbp1a		Plrg1				Syne3		ERN1	
Hk2		Sema3e		Ripk1				Tubb4b		Atf6b	
Pdk1		Tnfrsf21		Celf1				TUBA1A		ATF4	
Pdk4		Thbd		Srm				Miip		Ddit3	
Pfkl		Vasn		Ovca2				Incenp			
Pgam1		Sdc1		Ptgr2				Lama3			
Hif1a		Sap30		Rtn4				Camsap1			
Pgk1		Nkrf		C1qbp				Fam83d			
Gpi		Tgif1		Ddx3x				Ckap2			
Got1		Cnpy4		Mcl1				Gja1			
Got2		Hmox1		Bcl2l1				Enah			
Sp1		Klf9		Spata13				Tm4sf1			
Slc2a1				Coro1c				Diexf			
				Gadd45a				Arhgap19			
								Actg1			
								Vim			
								Kif20b			
								Kif2c			
								Tnc			
								Ralgds			
								Tjap1			
								Srpx2			
								Palld			
								Zmpste24			
								Ankrd28			
								Spire1			
								Ezr			
								Cd44			
								Arhgdia			
								Kifc3			
								Anln			
								Tiam2			

## Supplementary Table 2. Categorization and disease associations of SLCs modified during efferocytosis

Gene	Alt ID	Primary Categorization	Additional Categorizations	Monogenic Disease?	SNP/Phenotype Association?	SLC Family
Slc2a1	Glut1	Carbohydrate Metabolism	Cell Volume Regulation	GLUT1 Deficiency Syndrome, Intellectual Disability and Epilepsy		Glucose transporter
Slc4a7	Nbc2	intracellular pH			Breast Cancer, Systolic/Diastolic Blood Pressure	Sodium Bicarbonate Cotransporter
Slc5a6	SMVT	Vitamin Transport	Carbohydrate Metabolism	Child presenting with: microcephaly, cerebral palsy, developmental delay, variable immunodeficiency, severe gastro-esophageal reflux, osteoporosis, & pathologic bone fractures		Sodium/Multivitamin And Iodide Cotransporter
Slc6a6	TAUT	Cell Volume Regulation	Membrane stability		Retinal Degeneration	Taurine Transporter
Slc7a7	LPI	Amino Acid Transport & Catabolism	Urea Cycle; Cell Migration; NO Synthesis	Lysinuric Protein Intolerance Patient presenting with: orthostatic intolerance, respiratory weakness, multiple endocrine abnormalities, pancreatic insufficiency, and multiorgan failure involving the gut and bladder		Amino Acid Transporter Light Chain, Y+L system
Slc12a2	NKCC1	Cell Volume Regulation	Membrane stability		Schizophrenia, Salivation Deficiency, Deafness, Male infertility (spermatogenesis)	Electrically Silent Transporter System
Slc14a1	JK, UT1	Cell Volume Regulation	Nitrogen Secretion, Urea Cycle	Chronic Multifocal Osteomyelitis	Human Urothelial Cancer	Urea transporter
Slc16a1	MCT1	intracellular pH	Excretion of monocarboxylates	Recurrent Ketoacidosis	Hyperinsulinism	Monocarboxylate Transporter
Slc19a1	IFC-1	Vitamin Transport	One carbon metabolism, nucleoside synthesis		Pregnancy Loss, Myelomeningocele	Folate Transporter
Slc20a1	GLVR1	Carbohydrate Metabolism			Combined pituitary hormone deficiency	Phosphate Transporter
Slc26a6	Pendrin L1	intracellular pH			Calcium Oxalate Urolithiasis; Irritable Bowel Disease, Crohn's Disease, Ulcerative Colitis	Anion Exchanger
Slc29a1	ENT1	Nucleoside salvage	Nucleotide synthesis, carbohydrate metabolism, one carbon metabolism	Augstine Blood Group	Mineralization	Equilibrative Nucleoside Transporter
Slc29a2	ENT2/HNP36	Nucleoside salvage	Nucleotide synthesis, carbohydrate metabolism, one carbon metabolism			Equilibrative Nucleoside Transporter
Slc35a4	MGC2541	Glycosylation				Nucleotide-Sugar Transporter Family
Slc35e1	FLJ14251	Glycosylation				Nucleotide-Sugar Transporter Family
Slc39a10	ZIP-10	Membrane stability	Protein synthesis and stability, Enzyme catalyst, Cell death regulation			Zinc Transporter
Slc41a2	LOC100771510	Enzyme catalysis	Carbohydrate metabolism, nucleotide synthesis, cell volume regulation, FAO, OXPHOS			Magnesium Transporter
Slc45a4	N/A	Unknown			Multiple Blood Cell Variants	Putative Sugar Transporter
Slc46a1	HCP1	Vitamin Transport	One carbon metabolism, nucleoside synthesis	Hereditary Folate Malabsorption		Folate Transporter
Gene	Alt ID	Primary Categorization	Additional Categorizations	Monogenic Disease?	SNP/Phenotype Association?	SLC Family
Slc1a4	ASCT-1	Amino Acid Transport & Catabolism	Neutral amino acid transport	Severe Intellectual Disability & Microcephaly		Glutamate/Neutral Amino Acid Transporter
Slc6a4	SHTT	Serotonin				Neurotransmitter Transporter
Slc15a3	OCTP	Amino Acid Transport & Catabolism	Endosome/lysosome function			Oligopeptide Transporter
Slc17a5	sialin	Amino Acid Transport & Catabolism	Neutral amino acid transport, endosome/lysosome function	Sialic Acid Storage Diseases. Salla Disease		Vesicular glutamate transporter family
Slc25a42	N/A	OXPHOS			Mitochondrial Myopathy/Encephalomyelopathy	Mitochondrial carrier
Slc25a45	N/A	OXPHOS				Mitochondrial carrier
Slc29a3	ENT3	Mitochondrial respiration	Endosome/lysosome function	H syndrome, Pigmented Hypertrichotic Dermatitis with Insulin-dependent Diabetes, Dysosteosclerosis		Equilibrative Nucleoside Transporter
Slc31a2	COPT2	Enzymatic catalysis	OXPHOS, pro-inflammatory mediators			Copper Transporter
Slc33a1	ACATN	OXPHOS	FAO, ER stress, autophagy, glycolysis	Hupke-Brendel Syndrome, Autosomal Dominant Spastic Paraplegias, Autosomal-Recessive Syndrome of Congenital Cataracts, Hearing Loss, and Severe Developmental Delay	Autism Spectrum Disorder	Acetyl-CoA Transporter
Slc35d2	UGTrel8	Glycosylation				UDP-GlcNAc/UDP-Glucose Transporter
Slc35f5	NSSATP3	Glycosylation				Nucleoside-Sugar Transporter
Slc36a1	PAT1	Amino Acid Transport & Catabolism	Neutral amino acid transport			Amino Acid Transporter
Slc41a3	n/A	Enzyme catalysis	FAO, OXPHOS, membrane integrity		Hypomagnesemia, Hydronephrosis	Magnesium transporter
Slc45a1	DNB5	Oxidative stress	FAO, OXPHOS, glycolysis	Intellectual Disability and Epilepsy		Glycoside-Pentoside-Hexuronide Cation Symporter Transporter Family

### Supplementary Table 3. List of Hamster-Specific and Mouse-Specific Taqman Primers

	<b>Gene Name</b>	<b>TaqMan Primer</b>	<b>Gene Name</b>	<b>TaqMan Primer</b>
<b>Hamster</b>	Slc2a1	Cg04422507_g1	Slc25a42	Cg04611876_m1
	Slc41a2	Cg04609763_m1	Slc25a45	Cg0522193_m1
	Slc20a1	Cg04424040_g1	Slc29a3	Cg04611892_m1
	Slc4a7	Cg04579143_m1	Slc31a2	Cg04601434_m1
	Slc16a1	Cg04439014_m1	Slc33a1	Cg04588736_m1
	Slc26a6	Cg04435061_g1	Slc41a3	Cg04624425_m1
	Slc29a1	Cg04611942_g1	Slc45a1	Cg04460700_m1
	Slc29a2	Cg04599787_m1	Slc1a4	Cg04422018_m1
	Slc12a2	Cg04623926_m1	Slc15a3	Cg04548708_m1
	Slc14a1	Cg04467092_m1	Slc17a5	Cg04626606_m1
	Slc6a6	Cg04435061_g1	Slc35d2	Cg04618339_m1
	Slc39a10	Cg04581977_m1	Slc35f5	Cg04635914_m1
	hGAPDH	Cg04424038_gH	Sgk1	Cg04627078_g1
	<b>Mouse</b>	Slc2a1	Mm00441480_m1	Mgl1
Slc20a1		Mm00489378_m1	Mgl2	Mm00460844_m1
Slc14a1		Mm00472199_m1	Tgfb	Mm01178820_m1
Slc12a2		Mm01265951_m1	Vegf	Mm01281449_m1
Slc29a1		Mm01270577_m1	IL10	Mm01288386_m1
Slc29a2		Mm00432817_m1	TNF	Mm00443258_m1
Slc4a7		Mm01310972_m1	IL6	Mm00446190_m1
Slc16a1		Mm01310972_m1		
Slc29a3		Mm00469915_m1		
mGAPDH		Mm99999915_g1		

## Supplementary Table 4. List of Statistical Tests and Sample Sizes Used From Each Figure (Page 1)

### Main Figures

Figure ID	Statistical test used	Post-hoc test	Direction	p value range	Measure of Centre	Error	Technical replicates	Biological replicates	Experimental replicates
Figure 1a	Differential Expression	Indep. Filtering	Two-sided	adjusted p <.1	N/A	N/A	N/A	n=1 per group	n=4
Figure 2a	Mann-Whitney U Test	N/A	Two-sided	<.001 to <.05	Mean	SEM	N/A	AC, n=3; FC, n=4	n=2
Figure 2c	Mann-Whitney U Test	N/A	Two-sided	<.001 to <.01	Mean	SEM	N/A	n=6/group	n=2
Figure 3a	Two-way ANOVA	Sidek	N/A	<.001	Mean	SD	n=2	N/A	n=3
Figure 3b	One-way ANOVA	Tukey	N/A	<.001	Mean	SD	n=2	N/A	n=3
Figure 3c	Mann-Whitney U Test	N/A	Two-sided	<.001	Mean	SEM	n=2	n=2/experiment	n=3
Figure 3d	Mann-Whitney U Test	N/A	Two-sided	<.001	Mean	SEM	N/A	n=6/group	n=2
Figure 3e	Mann-Whitney U Test	N/A	Two-sided	<.001	Mean	SD	N/A	n=2 or 3/group	n=2
Figure 3f	Two-way ANOVA	Sidek	N/A	<.05	Mean	SEM	N/A	n=3 or 4/group	n=2
Figure 3g	Mann-Whitney U Test	N/A	Two-sided	<.01	Mean	SD	N/A	n=3	n=2
Figure 3h	Mann-Whitney U Test	N/A	Two-sided	<.01	Mean	SEM	N/A	n=7 or 8/group	n=2
Figure 4a	Two-way ANOVA	Sidek	N/A	<.001	Mean	SD	n=2	N/A	n=3
Figure 4b	Two-way ANOVA	Sidek	N/A	<.001	Mean	SEM	n=2	n=3	n=2
Figure 4c	Two-way ANOVA	Sidek	N/A	<.01 - <.05	Mean	SD	N/A	n=2	n=2
Figure 4e	One-way ANOVA	Tukey	N/A	<.001	Mean	SD	N/A	n=3 or 4/group	n=3
Figure 4f	One-way ANOVA	Tukey	N/A	<.001	Mean	SD	N/A	n=3 or 4/group	n=3
Figure 4g	Mann-Whitney U Test	N/A	Two-sided	<.001	Mean	SD	N/A	n=2 or 3/group	n=2
Figure 4h	One-way ANOVA	Tukey	N/A	<.001	Mean	SD	N/A	n=3 or 4/group	n=3
Figure 4i	Two-way ANOVA	Sidek	N/A	<.01 - <.05	Mean	SEM	N/A	n=3 or 4/group	n=3
Figure 5a	Mann-Whitney U Test	N/A	Two-sided	<.001	Mean	SEM	N/A	n=3 or 4/group	n=2
Figure 5b	One-way ANOVA	Tukey	N/A	<.001	Mean	SEM	N/A	n=3 or 4/group	n=2
Figure 5c	One-way ANOVA	Tukey	N/A	<.001	Mean	SEM	N/A	n=3 or 4/group	n=2
Figure 5d	Mann-Whitney U Test	N/A	Two-sided	<.001 - <.05	Mean	SD	N/A	n=3 or 4/group	n=2
Figure 5f	One-way ANOVA	Tukey	N/A	<.001 - <.05	Mean	SEM	N/A	n=3 or 4/group	n=2

## Supplementary Table 4. List of Statistical Tests and Sample Sizes Used From Each Figure (Page 2)

### Extended Data

Figure ID	Statistical test used	Post-hoc test	Direction	p value range	Measure of Centre	Error	Technical replicates	Biological replicates	Experimental replicates
Ext. Data 1a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	n=1/group	n=4
Ext. Data 1b	Principal Component	N/A	N/A	N/A	N/A	N/A	N/A	n=1/group	n=4
Ext. Data 2a	Differential Expression	Indep. Filtering	Two-sided	adjusted p <.1	N/A	N/A	N/A	n=1/group	n=4
Ext. Data 3a	Mann-Whitney U Test	N/A	Two-sided	<.001 - <.05	Mean	SEM	N/A	n=3 or 4/group	n=2
Ext. Data 4a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	n=1/group	n=3
Ext. Data 4b	N/A	N/A	N/A	N/A	Mean	SEM	N/A	n=3	n=1
Ext. Data 4c	N/A	N/A	N/A	N/A	Fold Change	N/A	N/A	n=1/group	n=1
Ext. Data 4d	N/A	N/A	N/A	N/A	Fold Change	N/A	N/A	n=1/group	n=1
Ext. Data 5a	Mann-Whitney U Test	N/A	Two-sided	<.001	Mean	SD	N/A	n=2 or 3/group	n=2
Ext. Data 5b	N/A	N/A	N/A	N/A	Fold Change	N/A	N/A	n=1/group	n=1
Ext. Data 5c	Mann-Whitney U Test	N/A	Two-sided	<.001	Mean	SEM	N/A	n=2/group	n=2
Ext. Data 5d	N/A	N/A	N/A	N/A	Fold Change	N/A	N/A	n=1/group	n=1
Ext. Data 5e	Mann-Whitney U Test	N/A	Two-sided	<.001	Mean	SD	N/A	n=2 or 3/group	n=2
Ext. Data 5f	Mann-Whitney U Test	N/A	Two-sided	ns	Mean	SD	N/A	n=3 or 4/group	n=2
Ext. Data 5g	N/A	N/A	N/A	N/A	N/A	N/A	N/A	n=1/group	n=2
Ext. Data 6a	Two-way ANOVA	Sidek	N/A	<.001	Mean	SD	N/A	n=3 or 4/group	n=3
Ext. Data 6b	Two-way ANOVA	Sidek	N/A	<.001	Mean	SD	N/A	n=2 or 3/group	n=2
Ext. Data 6c	Two-way ANOVA	Sidek	N/A	<.001 - <.01	Mean	SD	N/A	n=4/group	n=1
Ext. Data 7a	One-way ANOVA	Tukey	N/A	<.001	Mean	SEM	n=2	n=1/group	n=3
Ext. Data 7b	Mann-Whitney U Test	N/A	Two-sided	<.001	Mean	SD	N/A	n=3/group	n=2
Ext. Data 7c	Mann-Whitney U Test	N/A	N/A	N/A	N/A	N/A	N/A	n=1/group	n=2
Ext. Data 7d	Two-way ANOVA	Sidek	N/A	<.001	Mean	SD	N/A	n=3 or 4/group	n=3
Ext. Data 7e	Two-way ANOVA	Sidek	N/A	<.001	Mean	SEM	n=2	n=3 or 4/group	n=3
Ext. Data 8a	One-way ANOVA	Tukey	N/A	<.01	Mean	SEM	N/A	n=3 or 4/group	n=2
Ext. Data 8b	One-way ANOVA	Tukey	N/A	<.001	Mean	SEM	N/A	n=3 or 4/group	n=2
Ext. Data 8c	Mann-Whitney U Test	N/A	Two-sided	<.001	Mean	SD	N/A	n=3/group	n=2
Ext. Data 8d	Mann-Whitney U Test	N/A	Two-sided	<.001	Mean	SD	N/A	n=6/group	n=2
Ext. Data 8e	One-way ANOVA	Tukey	N/A	<.001 - <.05	Mean	SEM	N/A	n=2 or 3/group	n=2
Ext. Data 8f	N/A	N/A	N/A	N/A	N/A	N/A	N/A	n=2 or 3/group	n=2