

Table S6: Variable definition for simulations

X – axis: Class (Regenerative dependent variables), up/downregulate (an increase in a cellular marker result in an increase of a regenerative dependent variable), Variable (specific cellular markers/ characteristics), Description (of the specific cellular markers), Applicable Studies (number of manuscripts that utilize a specific variable)

*=characteristic is included in two categories (regenerative dependent variable)

**= characteristic is included in three categories (regenerative dependent variable)

Class	Up/down regulate	Variable	Description	Applicable Studies (put reference in eventually)	Variable	Description	Applicable Studies
Differentiation	Up	NSE	Neuron specific enolase	1	O4	Oligodendrocyte marker	1
		GFAP	Glial Fibrillary Astrocyte Protein	6	B-III tubulin		2
		Tuj1		6	Nestin		1
		NeuroD		3	Galc		1
		Mash1		3	MBP	Myelin basic protein	1
		Math3		3	Olig1		1
		Ngn1	Neurogenin	3	miR-219-5p		1
		Ngn2		3	CNP	2',3' Cyclic Nucleotide 3' Phosphodiesterase	2
		Hes6		2	SOX10	Sry-type HMG box	1
		Olig2	Oligodendrocyte transcription factor	1	NT-3**	Neurotrophin	2
		Map2	Microtubules associated protein	5	NG2*	Neuron-glial antigen	1
		DCX	Doublecortin	1	NGF**	Nerve growth factor	1
		Other		1	TRKa**	Neurotrophic receptor tyrosine kinase	1
		TRKb**		1	GDNF**	Glial cell derived neurotrophic factor	1
		pCREB**	cAMP response element binding protein	1			

	Down	Hes1**		4	s100**		3
		Hes5*		3	Lingo1*	Leucine Rich Repeat and Ig Domain Containing	1
Proliferation	Up	MTT assay*	3 – (4,5 – dimethylthiazole– 2 – yl) – 2,5 – diphenyltetrazolium bromide	3	Cyclin D		1
		EdU	5-Ethynyl-2'-deoxyuridine	4	Cyclin E		1
		Primary NPs	neurospheres	1	Cyclin B		1
		Secondary NPs		1	PCNA	Proliferating cell nuclear antigen	1
		Sox2		3	NG2*		1
		Ki67		1	NGF**		1
		CCK-8 Assay*	Cell Counting Kit	4	TrkA**		1
		Cells in G1	Growth/ gap	2	TrkB**		1
		Cells in G2		2	pCREB**		1
		Cells in S	synthesis	2	Cells in M1	Mitosis	1
		Neurosphere diameter		2	Cells in M2		1
		BrdU	Bromodeoxyuridine	4	Cells in M3		1
		Total neurospheres (>50 um)		1	Covered areas*		1
		Total neurospheres (>100 um)		1			
	Down	Hes1**		4	s100**		3
		Hes5*		3	miR-338		1
		p53		2	miR-138		1

		p21		2	miR-9		1
		GADD45	Growth arrest and DNA Damage-inducible	2			
Viability	Up	MTT Assay*		3	TrkA**		1
		CCK-8 Assay*		4	TrkB**		1
		BDNF**		3	MTS	Mitochondrial Targeting Sequence	1
		NT-3**		2	NGF**		1
		Mitochondrial activity		1	PI/Calcein	Potassium iodide	1
		Cell membrane integrity (CFDA)	Carboxyfluorescein Diacetate Acetoxymethyl Ester	1	GDNF*		1
		BCL2		1			
	Down	Hes1**		4	TUNEL	Terminal deoxynucleotidyl transferase dUTP nick end labeling	1
		s100**		4	DNA fragmentation apoptosis ratio		1
		Flow cytometry apoptosis ratio		1	Bax	Bcl-2 Associated X-protein	1
Growth	Up	Total length of neurite		4	NT-3**		2
		Number of primary neurites		1	Number of cells showing neurite outgrowth		1
		Number of branch points		1	Covered area of flask		1
		BDNF**		3			
	Down	Nude axons		1			

* = characteristic is included in two categories.

** = characteristic is included in three categories