

Models/Materials	Transgenic animals	HD mice (R6/2 line)
	Cell lines	CHO
	Other	In vivo models are: (a) cerebral microdialysis technique for estimation of extracellular concentrations of excitatory aminoacids, adenosine, ATP, GABA, taurine; (b) permanent and transient focal brain ischemia in the rat induced by insertion of a siliconated monofilament into the right internal carotid artery to occlude the medial cerebral artery (MCAo); (c) chronic ischemia (obtained by bilateral carotid artery occlusion). In vitro models are: (a) hippocampal slices submitted to oxygen-glucose deprivation to mimic ischemic episodes. Extracellular field excitatory postsynaptic potentials and anoxic depolarization (AD) are recorded in the CA1 and dentate gyrus subfields; (b) glial cell culture models of neurotoxicity induced by lipopolysaccharide; (c) cultures of human mesenchymal stem cells, of oligodendrocyte precursors and of astrocytes, where ATP outflow is estimated and specific ionic currents are recorded by patch-clamp techniques
Protocols and Methods	Cell culture	Primary culture of: oligodendrocyte precursor cells (OPC) and human mesenchymal stem cells
	Biochemistry	Adenosine and ATP assay by high performance liquid chromatography (HPLC) and luminescence.
	Gene expression	real time PCR
	Immunohistochemistry	Histochemical and immunohistochemical techniques are currently used for estimation of brain damage, morphology of neuron and glial cells, mitogen activated protein kinases (MAPK: p38, JNK, ERK1/2) expression and purinergic receptor distribution
	Molecular Biology	
	Receptor binding	
	Western blotting	Quantitative analysis of MAPKs (p38, JNK, ERK1/2) and purinergic receptor density is performed by Western Blot technique
	Electrophysiology	Extracellular recording from rodent brain slices, patch clamp recording (current- and voltage clamp) from isolated cells.
	Behaviour	Estimation of both motor and cognitive behaviours: neurological score test, turning behaviour, rotarod, inclined plane, water maze test, Y maze test, step down, passive avoidance test, paw-pressure test
	Other	Fluorescent and confocal microscopy

Non commercial antibodies	P1 receptors	
	P2 receptors	
Non commercial drugs		PV4 (hexapotassium dihydrogen monotitanoundecatungstocobaltate(II) tridecahydrate (K ₆ H ₂ [TiW ₁₁ CoO ₄₀] _· 13H ₂ O); different adenosinergic selective agonists and antagonists.
Fluorescent probes		
Investigational diagnostic test		
Biosamples	Human origin	human mesenchymal stem cells
	Animal origin	rat and mouse