Daniel Édgar Cortés Pérez

dcortes@ifc.unam.mx

Male, 35 years

EDUCATION

Universidad Nacional Autónoma de México, Mexico City, Mexico

Ph.D., Biochemistry Sciences Program. February, 2017

Dissertation: “Transgenic expression of Glial cell-line Derived Neurotrophic Factor promotes neuronal differentiation of embryonic stem cells

Committee: Principal, Dr. Iván Velasco Velázquez
Dr. Lourdes Massieu Trigo, Dr. Susana Castro Obregón

Universidad Nacional Autónoma de México, Mexico City, Mexico

Master in Sciences, Biological sciences program, October 2008

Thesis: “Ischemia-reperfusion-induced hyperglycemia is stimulated by inosine through hepatic A3 adenosine receptor”

Advisor: Dr. Enrique Piña Garza

Universidad Nacional Autónoma de México, Mexico City, Mexico

BA, Medical doctor, june 2007

RESEARCH INTERESTS:

Stem Cells biology

Aging

Regenerative Medicine

CRISPR-Cas

Transgenesis

Neuroscience

Axonal Growth and Guidance

Epigenetics

PROFILE

Propositive and hard-worker, enthusiast, self-motivated and adaptable to any work environment. Also tenacious and analytical.

Experimental Techniques:

Cell culture. Stem cell culture and differentiation towards dopaminergic and motor neurons. IPSC production, transfection, viral production, transduction, transformation, Production of competent cells, plasmid purification, subcloning, primer designing, Immunohistochemistry, immunofluorescence, PCR final point and quantitative, cortex and mesencephalic dissections of rodent embryos, MEFs production, stereotaxic surgery, behavioral evaluation in rodents for motor skills, statistical analysis, laboratory administration.

PUBLICATIONS:

Cortés D, Robledo-Arratia Y, Hernández-Martínez R, Escobedo-Ávila I, Bargas J, Velasco I. (2016). Transgenic GDNF Positively Influences Proliferation, Differentiation, Maturation and Survival of Motor Neurons Produced from Mouse Embryonic Stem Cells. Front Cell Neurosci. Sep 12;10:217. doi: 10.3389/fncel.2016.00217. Original Article

Escobedo-Avila I, Vargas-Romero F, Molina-Hernández A, López-González R, **Cortés D**, De Carlos JA, Velasco. (2014). Histamine impairs midbrain dopaminergic development in vivo by activating histamine type 1 receptors. Mol Brain. Aug 12;7(1):58. doi: 10.1186/s13041-014-0058-x.

Cortés D, Guinzberg R, Villalobos-Molina R, Piña E. (2009). Evidence that endogenous inosine and adenosine-mediated hyperglycaemia during ischaemia-reperfusion through A3 adenosine receptors. Auton Autacoid Pharmacol. Oct;29(4):157-64. doi: 10.1111/j.1474-8665.2009.00443.x.

Guinzberg R, **Cortés D**, Díaz-Cruz A, Riveros-Rosas H, Villalobos-Molina R, Piña E. (2006) Inosine released after hypoxia activates hepatic glucose liberation through A3 adenosine receptors. Am J Physiol Endocrinol Metab. 2006 May;290(5):E940-51. Epub 2005 Dec 13.

FELLOWSHIPS:

Ph.D. fellowship, National Council for Science and Technology, 2009-2014

IBRO, travel grant for international congress, Rio de Janeiro. 2015

Master in sciences fellowship, National Council for Science and Technology, 2006-2007

Researcher's assistant fellowship, Researcher's national system. 2002-2005

CONGRESS PRESENTATIONS

National:

Cortés, D. Robledo, Y. Escobedo, I. Hernández, R. Bargas, J. Velasco, I. TRANSGENIC GDNF POSITIVELY AFFECTS PROLIFERATION, DIFFERENTIATION, MATURATION AND SURVIVAL OF DOPAMINE AND MOTOR NEURONS PRODUCED FROM MOUSE ES CELLS. Third congress of stem cells and regenerative medicine. Sociedad mexicana para la investigación en células troncales. México, D.F. November 2015. Oral presentation and Poster

Cortés, D. Robledo, Y. Escobedo, I. Hernández, R. Bargas, J. Velasco, I. Glial-derived neurotrophic factor (GDNF) favors differentiation of mouse embryonic stem cells to motor neurons. XXX congress of the national society for biochemistry. Sociedad Mexicana de Bioquímica. November 2014. Guadalajara, Jalisco, Mex. Poster.

Cortés, D, Velasco, I. Transgenic expression of Glial cell line-Derived Neurotrophic factor promotes differentiation and survival of ESC-derived dopaminergic neurons. First national congress of stem cell and regenerative medicine. México DF. September 2013. Poster

Cortés, D, Velasco, I. Effect of GDNF transgenic expression over ESC differentiation towards dopaminergic neurons. X Congress of the national society for developmental biology. Sociedad Mexicana de Biología del Desarrollo A.C. San Miguel Regla, México. October, 2011. Poster

Cortés D, Guinzberg R, Piña E. Hormonal role of inosine through A3 adenosine receptor released after ischemia/reperfusión within skeletal muscle. Regulation of hepatic metabolism. XXVI congress of the national society for biochemistry. Sociedad Mexicana de Bioquímica. November 2006. Guanajuato, Gto, México. Poster

Cortés D, Guinzberg R. Inosina binds specifically to A3 adenosine receptor. XXV congress of the national society for biochemistry. Sociedad Mexicana de Bioquímica. December 2004. Ixtapa Zihuatanejo, México. Poster

Cortés D, Guinzberg R, Piña E. Participation of inosine receptors in hepatic metabolism regulation. XXIV congress of the national society for biochemistry. Sociedad Mexicana de Bioquímica. November 2002. Pto. Vallarta, Jalisco, México. Poster.

International:

Cortés, D. Robledo, Y. Escobedo, I. Hernández, R. Bargas, J. Velasco, I. GLIAL-DERIVED NEUROTROPHIC FACTOR (GDNF) PROPERTIES DURING PROLIFERATION, DIFFERENTIATION, MATURATION AND SURVIVAL OF DOPAMINERGIC AND MOTOR NEURONS DIFFERENTIATED FROM MOUSE EMBRYONIC STEM CELLS. International brain research organization, 9th international congress. Rio de Janeiro, Brazil. July 7-11, 2015. Poster

Cortés D, Velasco I. Transgenic expression of Glial-cell derived neurotrophic factor (GDNF) promotes differentiation and survival of mouse embryonic stem cell-derived dopaminergic neurons. International society for stem cell research.11th International annual meeting. June 12-15, Boston, MA. USA. Poster

Cortés D, Guinzberg R, Piña E. Ischemia-reperfusion stress produced inosine-mediated hyperglycemia through A3 adenosine receptor. Purines 2008, Copenhaguen, Denmark, June 29th – July, 2nd 2008. Poster

AWARDS

2007 Gustavo Baz Prada Social Service Award

COURSES

Stem Cell Research Training Course 2009. Generation of induced-Pluripotent Stem Cells (iPS) from skin fibroblasts. Differentiation of iPS cells into motoneurons. Partners of Harvard Medical School/Harvard Stem Cell Institute/Universidad Nacional de Cordoba. Cordoba, Argentina. August 21st-29th, 2009

POSITIONS

2002-2003 Assistant Teacher. Biochemistry and Molecular Biology. UNAM Medical School

2006-2007 Assistant Teacher. Biochemistry and Molecular Biology. UNAM Medical School

2010-2011 Assistant Teacher. Physiology. UNAM. Medical School

2014 to date. Academic Technician. Ivan Velasco's lab. IFC-UNAM

Cites

	Scopus 01/17/17	Google Scholar 17/01/17
Transgenic GDNF positively influences proliferation, differentiati survival of motor neurons produced from mouse embryonic sten	-	-
Histamine impairs midbrain dopaminergic development in vivo by activating histamine type 1 receptors	2	3
Evidence that endogenous inosine and adenosine-mediated hyperglycaemia during ischaemia-reperfusion through A3 adenosine receptors	6	9
Inosine released after hypoxia activates hepatic glucose liberation through A3 adenosine receptors	31	40

Magazine or Book Chapters:

Magazine chapter:

Iván Velasco, Itzel Escobedo-Avila, **Daniel Cortés**, Oscar Carballo-Molina. Diferenciación neuronal de células troncales. Revista de la Facultad de Medicina, UNAM, Mensaje Bioquímico. Volumen XXXIX, ISSN 0188-137X, 2015

Book chapter:

“Células Troncales: Biología y Aplicaciones en Biomedicina”, Antonieta Chávez-González, Jesús Chimal-Monroy, Eugenia Flores-Figueroa y Mónica Lamas, Editores. Co-publicado por la UNAM y la editorial Porrúa-Grañen. Capítulo 3. Células troncales embrionarias. Verónica Ramos Mejía, Iván Velasco, **Daniel Cortés**. En prensa (In press).

Appearance in media:.

TV Report: “diálogos en confianza” de Canal Once del IPN en el programa “mitos y realidades de las células madre” (12-12-16).

Formation of junior students:

Advisor of BA Biology María José Castellanos
Advisor of Master in Science student Cristina Castillo