

Date of the CVA	17/02/2021
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Section A. PERSONAL DATA

Name and Surname	Elisa López Dolado		
DNI	51382096G	Age	
Researcher's identification number	Researcher ID	Z-2782-2019	
	Scopus Author ID	6507419770	
	ORCID	0000-0002-3358-727X	

* Obligatorio

A.1. Current professional situation

Institution	Hospital Nacional de Paraplégicos		
Dpt. / Centre			
Address	Avenida Intergolf, 14, 45200, Illescas		
Phone	(0034) 678715849	Email	lamidolado@gmail.com ; lopdolel@hotmail.com ; elopez@sescam.jccm.es
Professional category	Jefe de Sección de Rehabilitación	Start date	2021
Keywords			

A.2. Academic education (Degrees, institutions, dates)

Bachelor/Master/PhD	University	Year
Departamento de Medicina	Universidad Autónoma de Madrid	2012

A.3. General quality indicators of scientific production

Section B. SUMMARY OF THE CURRICULUM

The whole of Dr. Elisa López Dolado's professional career has pivoted around the care of patients with spinal cord injury in the Hospital Nacional de Paraplégicos de Toledo (Spain), a monographic health center and national reference of multidisciplinary care in this pathology. Between 1999 and 2009 she led the Electrostimulation Unit and since 2003, she is in charge of the **Pediatric Rehabilitation Unit**, coordinating a multidisciplinary team of 36 professionals. Promoting the improvement of clinical care levels of this pediatric unit, optimizing its organizational and management resources, and boosting academic and research activities related to spinal cord damage to children and adolescents are objectives with which she is firmly compromised.

Parallel to her Works as a clinician, since 2002 she is involved in basic researcher, having focused her interest on the study of motor disorders in animal models of incomplete cervical spinal cord injury.

In January of 2014 Dr E. López Dolado she started a close and fruitful collaboration with Dr. Concepción Serrano, currently tenured scientist of the Group of Materials for Health of the Instituto de Ciencia de Materiales (ICMM- CSIC) in Madrid, devoted to investigating the spinal and systemic response to the implantation of a biomaterial based on graphene oxide.

In addition, and alsosince 2014, she begun an active collaboration with the "Individualized Translational Medicine in Inflammation and Cancer Research Group " of the Department of Medicine and Medical Specialities of the Universidad de Alcalá (Spain), with the aim of elucidate the alterations of the inflammatory immune system in patients with chronic spinal cord injury, its pathogenic and clinical relevance and some possible therapeutic modulations.

In September 2016 she applied and obtained an Associate Profesor posición in the Department of Medicine of the Universidad de Alcalá and only a few moth later, in 2017, Dr E. López begun to lead the **Laboratory of Interfaces for Neural Repair** at the **Hospital Nacional de Paraplégicos** (HNP-SESCAM).

Section C. MOST RELEVANT MERITS (ordered by typology)

C.1. Publications

AC: Autor de correspondencia; (nº x / nº y): posición firma solicitante / total autores

- 1 Scientific paper.** David Diaz; Elisa Lopez-Dolado; Sergio Haro; Jorge Monserrat; Carlos Martinez-Alonso; Dimitrios Balomeros; Agustín Albillos. 2021. Systemic Inflammation and the Breakdown of Intestinal Homeostasis Are Key Events in Chronic Spinal Cord Injury Patients *Int. J. Mol. Sci.* 22-744, pp.1-19.
- 2 Scientific paper.** Raquel Madroñero Mariscal. 2020. Management of Femur Refractures in a 3-Year-Old Female with Myelomeningocele. A Case Report and Review of Literature. *Ortho Res Online J.Crimson Editors.* 7(5)-OPROJ. 000673..
- 3 Scientific paper.** Enrique Calvo; Nerea Corbacho-Alonso; Tamara Sastre-Oliva; et al;. 2020. J. Pers. Med. Why Does COVID-19 Affect Patients with Spinal Cord Injury Milder? A Case-Control Study: Results from Two Observational Cohorts. 10-182, pp.2-13.
- 4 Scientific paper.** A. Domínguez-Bajo; B.L. Rodilla; I. Calaresu; et al;. 2020. Interfacing Neurons with Nanostructured Electrodes Modulates Synaptic Circuit Features *Adv Biosyst.* 4-9, pp.e2000117.
- 5 Scientific paper.** Ana Domínguez-Bajo; Ankor González-Mayorga; Elisa López-Dolado; Carmen Munuera; Mar García-Hernández; María Concepción Serrano. 2020. Graphene Oxide Microfibers Promote Regenerative Responses after Chronic Implantation in the Cervical Injured Spinal Cord *ACS Biomaterial Science and Engineering.* 2, pp.2401-2414.
- 6 Scientific paper.** Miguel Rodríguez-Cola; Irena Jiménez-Velasco; Francisco Gutiérrez-Henares; Elisa López-Dolado; Claudia Gambarrutta-Malfatti; Eduardo Vargas-Baquero; Ángel Gil Agudo. 2020. Clinical features of coronavirus disease 2019 (COVID-19) in a cohort of patients with disability due to spinal cord injury *Spinal Cord Series and Cases.* 6, pp.39-44.
- 7 Scientific paper.** Elisa López-Dolado; Ángel Gil Agudo. 2020. Lessons learned from the coronavirus disease 2019 (Covid-19) outbreak in a monographic center for spinal cord injury *Spinal Cord.* 58, pp.517-519.
- 8 Scientific paper.** María Alvarez Rodríguez; Elisa López-Dolado; M. Salas-Monedero; Vicente Lozano Berrio; Silvia Ceruelo Abajo; Ángel Gil Agudo; Ana De los Reyes Guzman. 2020. Concurrent Validity of a Virtual Version of Box and Block Test for Patients with Neurological Disorders *World Journal of Neuroscience. Scientific Research Publishing.* 10, pp.79-89.
- 9 Scientific paper.** Ana De los Reyes Guzmán; Elisa López-Dolado Do; Félix Monasterio Huelin; Ángel Gil Agudo. 2019. Methodological Refinement of Upper Limb Kinematics of Spinal Cord Injured Patients Through Principal Component Analyses *Biomed J Sci & Tech Res |.* 23-4, pp.17634-17639.
- 10 Scientific paper.** Ana Domínguez-Bajo; Ankor González-Mayorga; CR Guerrero; FJ Palomares; R García; Elisa López-Dolado; MC Serrano. 2019. Myelinated axons and functional blood vessels populate mechanically compliant rGO foams in chronic cervical hemisectioned rats. *Biomaterials.* 192-2, pp.461-474.
- 11 Scientific paper.** ENRIQUE HERNÁNDEZ-BALAGUERA; ELISA LÓPEZ-DOLADO; JOSÉ LUIS POLO SANZ. 2018. In Vivo Rat Spinal Cord and Striated Muscle Monitoring Using the Current Interruption Method and Bioimpedance Measurements *Journal of The Electrochemical Society.* 165-12, pp.G3099-G3103.
- 12 Scientific paper.** Elisa López-Dolado; M^a del Mar Atienza-Pérez; David Díaz. 2018. Could fatigue be a clinical marker of systemic inflammation in chronic spinal cord injury patients? *Journal of Neurotrauma.* 35-8, pp.A 43-A 45.
- 13 Scientific paper.** Elisa LÓPEZ-DOLADO; Vicente LOZANO-BERRIO; Ángel M. GIL-AGUDO; Ana DE LOS REYES GUZMÁN. 2018. Motor control aspects related to upper limb movements in spinal cord injury patients *Journal of Neurotrauma.* 35-8, pp.A-173-A-173.

- 14 **Scientific paper.** Ankor González-Mayorga; Elisa López-Dolado; María C. Gutiérrez; Jorge E. Collazos-Castro; M. Luisa Ferrer; Francisco del Monte; María C. Serrano; María C. Serrano. 2017. Favorable Biological Responses of Neural Cells and Tissue Interacting with Graphene Oxide Microfibers *ACS OMEGA*. 2, pp.8253-8263.
- 15 **Scientific paper.** Ana Domínguez-Bajo; Ankor González-Mayorga; Elisa López-Dolado; María C Serrano. 2017. Graphene-derived materials interfacing the spinal cord: Outstanding in Vitro and in Vivo findings *Frontiers in Systems Neuroscience*. 11-71, pp.1-8.
- 16 **Scientific paper.** Ana De los Reyes-Guzmán; Elisa López-Dolado; Vicente Lozano-Berrio; Soraya Pérez-Nombela; Diego Torricelli; José Luis Pons. 2017. Upper Limb Electromyographic Analysis Synchronized with Kinematics in Cervical Spinal Cord Injured Patients during the Activity of Daily Living of Drinking. *JSM Physical Med Rehabil. SciMedCentral*. 1-1, pp.1004-1013.
- 17 **Scientific paper.** JM Talavera Mosquera. 2016. Daño medular intraoperatorio en cirugía de escoliosis idiopática: reinstrumentar y cuándo Rehabilitación (Madr) doi: 10.1016/j.rh.2016.04.002.
- 18 **Scientific paper.** E López-Dolado; A González-Mayorga; MC Gutiérrez; MC Serrano. 2016. Immunomodulatory and angiogenic responses induced by graphene oxide scaffolds in chronic spinal hemisectioned rats *Biomaterials*.
- 19 **Scientific paper.** E Hernández-Balaguera; E López-Dolado; JL Polo. 2016. Obtaining electrical equivalent circuits of biological tissues using the current interruption method, circuit theory and fractional calculus *RSC Adv*.6, pp.22312-22319.
- 20 **Scientific paper.** E López-Dolado; A González-Mayorga; MT Portolés; MJ Feito; ML Ferrer; F Del Monte; MC Gutiérrez; MC Serrano. 2015. Subacute Tissue Response to 3D Graphene Oxide Scaffolds Implanted in the Injured Rat Spinal Cord *Adv Healthc Mater*.4-12, pp.1861-1868.
- 21 **Scientific paper.** E López-Dolado; A Lucas-Osma; JE Collazos-Castro. 2013. Dynamic motor compensations with permanent, focal loss of forelimb force after cervical spinal cord injury *J Neurotrauma*. 30, pp.191-210.
- 22 **Scientific paper.** GR Hernández-Labrado; JL Polo; E López-Dolado; JE Collazos-Castro. 2011. Spinal Cord Direct Current Stimulation: Finite Element Analysis of the Electric Field and Current-Density *Medical & Biological Engineering & Computing*. 49, pp.417-429.
- 23 **Scientific paper.** J Florensa Vila; E López-Dolado; T Arzo Lezaun; JM Gomez-Arguelles; F Sebastian de la Cruz; A Oliviero. 2010. A Severe Case of High Cervical Spinal Cord Injury without Radiographic Abnormality *Eur Neurol*. 63-3, pp.188-188.
- 24 **Scientific paper.** F Talavera Díaz; E López-Dolado. 2010. Actualizaciones en Pediatría. Espina bífida *Formación Continuada*. 15, pp.62-68.
- 25 **Scientific paper.** S Rodríguez Palero; S Muñoz González; M Amosa Delgado; F Iodrovo; E López-Dolado. 2010. Interfenciones que mejoran el pronóstico de la neurofibromatosis tipo 2 *Rehabilitación (Mad)*. 45-2, pp.173-176.
- 26 **Scientific paper.** JM Gómez-Argüelles; A Sánchez-Solla; E López-Dolado; E Díez-De la Lastra; J Florensa Vila. 2009. Acute transverse myelitis: a clinical review and algorithm for diagnostic intervention *Rev Neurol*. 49-10, pp.533-540.
- 27 **Scientific paper.** D Jiménez García; E López-Dolado; C López Zarzuela. 2008. Tratamiento de la tendinopatía calcificante de hombro *Rehabilitación (Madr)*. 42-5, pp.239-245.
- 28 **Scientific paper.** A Oliviero; M Rubio-Esteban; G Foffani; et al;. 2007. Effects of baclofen on temperature perception in humans *Neuroscience Research*. 59-1, pp.89-92.
- 29 **Scientific paper.** S Bestmann; A Oliviero; M Voss; P Dechent; E López-Dolado; J Driver; J Baudewig. 2006. Cortical correlates of TMS-induced phantom hand movements revealed with concurrent TMS-fMRI *Neuropsychologia*. 44, pp.2959-2971.
- 30 **Scientific paper.** JE Collazos-Castro; E López-Dolado; M Nieto-Sampedro. 2006. Locomotor deficits and adaptive mechanisms after thoracic spinal cord contusion in the adult rat. *Journal of Neurotrauma*. 23-1, pp.1-17.
- 31 **Scientific paper.** E López-Dolado; F Calderón Muñoz. 2006. Tratamiento intervencionista del dolor Neuropático *Rehabilitación*. 40-1, pp.48-55.

- 32 Scientific paper.** M Alcobendas Maestro; E López-Dolado; A Esclarín De Ruz; MC Valdizán Valledor. 2004. Gait training in incomplete spinal cord injuries with body weight support Rev. Neurol. 39, pp.406-410.
- 33 Scientific paper.** F Sebastián De La Cruz; E López-Dolado. 1999. Devic's optic neuromyelitis: analysis of 7 cases Rev.Neurol.28, pp.476-482.
- 34 Book chapter.** E López-Dolado; JE Collazos-Castro. 2013. Forelimb force deficits and whole body compensations after rat cervical spinal hemisection Converging Clinical and Engineering Research on Neurorehabilitation Biosystems & Biorobotics. Springer-Verlag. 1, pp.1071-1075.
- 35 Book chapter.** JE Collazos-Castro; E López-Dolado. 2003. Correlation of kinematics and neuroanatomy in normal and thoracic spinal cord injured rats Motor control. St. Kliment Ohridski University Press. pp.295-303.
- 36 Review.** Elisa López Dolado. 2019. Medicine Mielopatías no traumáticas. 12-75, pp.44001-44011.

C.2. Participation in R&D and Innovation projects

- 1 European Training on innovative Restorative Protocols for clinical and technological changeable - PROTOCOLS Antonio Oliviero. (Servicio de Salud de Castilla-La Mancha). 01/01/2021-31/12/2023. 61.977 €.
- 2 MAXILLOFACIAL BONE REGENERATION BY 3D-PRINTED LASER-ACTIVATED GRAPHENE OXIDE SCAFFOLDS (MARGO) Cefe López. (Instituto de Ciencia de Materiales de Madrid). 01/05/2020-30/04/2023.
- 3 MEDICINA INDIVIDUALIZADA TRASLACIONAL EN INFLAMACIÓN Y CÁNCER Melchor Álvarez-Mon Soto. (Universidad de Alcalá). 01/01/2018-31/12/2021. 807.300 €.
- 4 ByAXON: Towards an active bypass for neural reconnection. Proposal number 737116 European Commission. H2020-FETOPEN-2016-2017. María Concepción Serrano López-Terradas. (Servicio de Salud de Castilla-La Mancha). 2017-2020. 450.000 €.
- 5 Diseño y desarrollo de un biomaterial 3D bioactivo de óxido de grafeno funcionalizado para el tratamiento de la lesión medular Ministerio de Ciencia e Innovación. Convocatoria RETOS 20016. María Concepción Serrano López-Terradas. (Hospital Nacional de Parapléjicos). 2017-2019. 100.000 €.
- 6 Diseño de electrodos de baja impedancia eléctrica para interfaces neurales. (Consejería de Educación y Ciencia, Junta de Comunidades de Castilla – La Mancha.). 01/09/2014-01/09/2015.

C.3. Participation in R&D and Innovation contracts

C.4. Patents