

Part A. PERSONAL INFORMATION

CV date	23/09/2021
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First and Family name	Ana Vallés Lluch		
Social Security, Passport, ID number	73779451M	Age	44
Researcher codes	WoS Researcher ID (*)	D-1891-2010	
	SCOPUS Author ID(*)	23391246000	
	Open Researcher and Contributor ID (ORCID) **	0000-0002-7896-8666	

(*) At least one of these is mandatory

(**) Mandatory

A.1. Current position

Name of University/Institution	Universitat Politècnica de València		
Department	Dpto. Termodinámica Aplicada, ETS Ingenieros Industriales		
Address and Country	Camino de Vera s/n, 46022 Valencia		
Phone number	963873231	E-mail	avalles@ter.upv.es
Current position	Full Professor (Catedrática de Univ.)	From	2018
Key words	Biopolymers; Biomaterials; Polymers; Tissue Engineering		

A.2. Education

PhD	University	Year
Chemical Engineer	Escuela Técnica Superior de Ingenieros Industriales, Universitat Politècnica de Valencia	2001
PhD by the Universitat Politècnica de Valencia (International Doctorate)	Universitat Politècnica de Valencia	2008

A.3. JCR articles, h Index, thesis supervised...

Six-year research terms (sexenios de investigación): 3 (2002-07, 2008-13, 2014-19)

PhD theses conducted: 5 (and 2 in progress)

JCR articles: 72

Total publications in first quartile (Q1): 29

Total cites: 949

Average number of cites/year during the last 5 years: 110.2

Index h: 19

Part B. CV SUMMARY (max. 3500 characters, including spaces)

I am a Doctor Chemical Engineer by the Universitat Politècnica de Valencia (UPV) since 2008, Full Professor (*Catedrática de Universidad*, 12/2018) in its Dept for Applied Thermodynamics. I have been Research Deputy Director in said Dept (2012-17) and Teaching Deputy Director since 2017.

After a short period in which my research focused on the processes of polymer degradation and its translation into thermal properties (10 articles, 13 congresses), in 2005 I joined the Center for Biomaterials and Tissue Engineering (CBIT, UPV), where I have focused on polymer-based materials with biomedical applications. My PhD dealt with bioactive nanohybrids for guided regeneration of dentin (2008, European Doctorate, cum laude), derived from which are 8 articles, 3 book chapters and 13 congresses. In 2009 I received the 1st Prize for Basic Research of the VI Ed. Fundación Vital Dent International Award to the Research in Odontostomatology. I have participated in research projects of public calls in which we have developed biomaterials with diverse polymeric chemistries (synthetic and natural gels, nanohybrids, networks, interpenetrated polymers) and controlled microporous structures (polymer scaffolds, electrospun membranes, microparticles, combinations with gel coating or fillings), with application as culture supports or in tissue regeneration, and its biological interaction (*in vitro* with proteins/cells, and *in vivo* implants in the scope of collaborations). This work has resulted in 46 articles, 3 book chapters and 23 international congresses.

I have been PI of projects related to the development of materials with application in neural regeneration (3, subsidized by the UPV, GVA and MINECO) and as artificial kidney tissue (MINECO). In other projects I have developed materials for the regeneration of cardiac tissue, phantoms that



simulate the electromagnetic behavior of human tissues for use in the test of electronic medical devices, or devices for intramedullary exoprothetization, for example, within the scope of competitive projects funded by the EU, MICINN (DTS), GVA (AVI-Valuation and transfer of research results to companies). I also have participated/led 2 research contracts with companies. I have been granted with 3 projects to conduct research stays in a national company specialized in medical imaging. I received the positive assessment of three research terms (*sexenios*) by CNEAI (2002-119). I own 4 patents.

Since 2005 I have taught courses related with my research in the Industrial Eng, Biomedical Eng and Biotechnology Degrees and MSci in Biomedical Eng, Biomedical Biotechnology and Industrial Engineering. I have been a member of the Academic Committee of the Master in Biomedical Biotechnology (2014-19) and am of the Academic and Evaluation Commission of the Bachelor's Degree in Industrial Technology Eng (2017-). I have supervised 5 Doctoral Thesis -2 in progress-, 35 Final Master Projects, 22 Final Degree Projects and 13 stages of foreign students, 9 MEC and 2 CIBER-BBN Collaboration Scholars. In 2013 I received the Teacher Excellence Award from the UPV Social Council-GVA Education, Training and Employment Council.

I have been a remote Evaluator and ViceChair in H2020 FETOPEN calls and a Reviewer for the National Agency for Scientific Promotion of Argentina. I have taken part of the Experts Panel in the ACADEMIA Program of ANECA (2014-16). I keep an updated personal website: <http://anvalllu.webs.upv.es/index.html>

Part C. RELEVANT MERITS

C.1. Publications (9 articles and 1 book chapter)

- Authors:* J.C. Chachques, N. Lila, C. Soler-Botija, C. Martínez-Ramos, A. Vallés, JG. Autret, M.C. Perier, N. Mirochnik, A. Carpentier, M. Monleón-Pradas, A. Bayés-Genís, C.E. Semino
Title: Elastomeric cardiopatch scaffold for myocardial repair and ventricular support
Ref. (ISBN, ISSN,...): European Journal of Cardio-Thoracic Surgery A, ISSN: 1873-734X
doi: 10.1093/ejcts/ezz252. [Epub ahead of print]
- Authors:* M. Herrero-Herrero, J.A. Gómez Tejedor, A. Vallés-Lluch
Title: PLA/PCL electrospun membranes of tailored fibres diameter as drug delivery systems
Ref. (ISBN, ISSN,...): European Polymer Journal, ISSN: 0014-3057
Volume: 99 *Pages:* 445-455 *Year:* 2018
- Authors:* Conejero-García A, Rivero Gimeno H, Moreno Sáez, Y, Vilariño-Feltrer G, Ortuño-Lizarán I, Vallés-Lluch A
Title: Correlating synthesis parameters with physicochemical properties of poly(glycerol sebacate)
Ref. (ISBN, ISSN,...): European Polymer Journal, ISSN: 0014-3057
Volume: 87 *Pages:* 406-419 *Year:* 2017
- Authors:* Ortuño-Lizarán I, Vilariño-Feltrer G, Martínez-Ramos C, Monleón Pradas M, Vallés-Lluch A
Title: Influence of synthesis parameters on hyaluronic acid hydrogels intended as nerve conduits
Ref. (ISBN, ISSN,...): Biofabrication, ISSN: 1758-5090
Volume: 8 *Pages:* 045011 *Year:* 2016
- Authors:* C. Martínez-Ramos, E. Rodríguez Pérez, J.C. Chachques, A. Vallés Lluch, M. Monleón Pradas
Title: Design and assembly procedures for large-sized biohybrid scaffolds as patches for myocardial infarct in a big animal model
Ref. (ISBN, ISSN,...): Tissue Engineering C: Methods, ISSN: 2152-4947 (Print), 2152-4955 (Online)
Volume: 20 *Pages:* 1-11 *Year:* 2014
- Authors:* A. Vallés-Lluch, D.M. García Cruz, J.L. Escobar Ivirico, C. Martínez Ramos, M. Monleón Pradas
Title: Polymers as materials for tissue engineering scaffolds
Editorial: Wiley, Hoboken, New Jersey
Ref.: Polymers in Regenerative Medicine: Biomedical Applications from Nano- to Macro-Structures, ISBN: 978-0-470-59638-8
Pages: 3-47 (44 pages) *Year:* 2014 (**Book chapter with ISBN**)
- Authors:* A. Vallés Lluch, S. Poveda Reyes, P. Amorós, D. Beltrán, M. Monleón Pradas
Title: Hyaluronic acid-silica nanohybrid gels
Ref. (ISBN, ISSN,...): Biomacromolecules, ISSN: 1525-7797
Volume: 14 *Pages:* 4217-4225 *Year:* 2013

8. *Authors:* A. Vallés Lluch, M. Arnal Pastor, C. Martínez Ramos, G. Vilariño-Feltrer, L. Vikingsson, C. Castells-Sala, C.E. Semino, M. Monleón Pradas
Title: Combining self-assembling peptide gels with three-dimensional elastomer scaffolds
Ref. (ISBN, ISSN,...): Acta Biomaterialia, ISSN: 1742-7061
Volume: 9 *Pages:* 9451-9460 *Year:* 2013
9. *Authors:* A. Vallés-Lluch, E. Novella-Maestre, M. Sancho-Tello, M. Monleón Pradas, G. Gallego Ferrer, C. Carda Batalla
Title: Mimicking natural dentin bioactive nanohybrid scaffolds for dentinal tissue engineering
Ref. (ISBN, ISSN,...): Tissue Engineering Part A, ISSN: 1937-3341
Volume: 16 *Pages:* 2783-2793 *Year:* 2010
10. *Authors:* A. Vallés Lluch, G. Gallego Ferrer, M. Monleón Pradas
Title: Biomimetic apatite coating on P(EMA-co-HEA)/SiO₂ hybrid nanocomposites
Ref. (ISBN, ISSN,...): Polymer, ISSN: 0032-3861
Volume: 50 *Pages:* 2874-2884 *Year:* 2009

C.2. Research projects and grants

1. *Title:* Análisis morfológico y funcional mediante resonancia magnética de un organoide linfático artificial
Funding entity: Generalitat Valenciana, Conselleria de Educació, Investigació, Cultura y Deporte – AEST/2019/040
Duration, from: 01/09/2019 *until:* 30/04/2020 *Grant amount:* 40000 €
Leader researcher: Ana Vallés Lluch *Participant researchers:* 1
2. *Title:* Estudio por tomografía computerizada de microestructuras porosas capaces de inducir la nucleación de hidroxiapatita ósea: análisis estructural y del crecimiento celular
Funding entity: Generalitat Valenciana, Conselleria de Educació, Investigació, Cultura y Deporte – AEST/2018/014
Duration, from: 01/09/2018 *until:* 30/04/2019 *Grant amount:* 40000 €
Leader researcher: Ana Vallés Lluch *Participant researchers:* 1
3. *Title:* Desarrollo de un nuevo sistema de fijación intramedular para implantes (prótesis, clavos para fracturas y exoprótesis) – DTS18/00177
Funding entity: Ministerio de Ciencia, Innovación y Universidades – Convocatoria 2018 Acción Estratégica en Salud, Proyectos de Desarrollo Tecnológico en Salud
Duration: 2018 (2 years) *Grant amount:* 99550 €
Leader researcher: Antonio Silvestre Muñoz *Participant researchers:* 3
4. *Title:* Soportes poliméricos multifuncionales para co-cultivo celular indirecto y estimulación química destinados a mimetizar tejido renal in vitro - DPI2015-65401-C3-2-R
Funding entity: Ministerio de Economía y Competitividad
Duration, from: 01/01/2016 *until:* 31/12/2018 *Grant amount:* 204248 €
Leader researcher: Ana Vallés Lluch (co-PI: J.A. Gómez Tejedor) *Participant researchers:* 4
5. *Title:* Materiales bifuncionales para la regeneración neural de áreas afectadas por ictus - PRI-PIMNEU-2011-1372
Funding entity: Ministerio de Economía y Competitividad
Duration, from: 01/11/2011 *until:* 01/11/2014 *Grant amount:* 146000 €
Leader researcher: Manuel Monleón Pradas *Participant researchers:* 5
6. *Title:* Constructos para la regeneración guiada de estructuras del sistema nervioso central - MAT2011-28791-C03-03
Funding entity: Ministerio de Ciencia e Innovación
Duration, from: 01/10/2011 *until:* 30/09/2014 *Grant amount:* 94999.52 €
Leader researcher: Ana Vallés Lluch *Participant researchers:* 6
7. *Title:* Regeneration of cardiac tissue by bioactive implants – CP-FP 229239-2
Funding entity: Comisión de la comunidad europea I+D colaborativa competitiva
Duration, from: 01/01/2010 *until:* 01/01/2013 *Grant amount:* 304186 €
Investigador responsable: Manuel Monleón Pradas *Número de investigadores participantes:* 5



C.3. Contracts

- Title:* Caracterización de prototipos basados en biopolímeros, en el marco del proyecto VOLFIL - I+D de nuevos monofilamentos en base a biopolímeros avanzados y de altas prestaciones - AITEX
Funding entity: Instituto Valenciano de Competitividad Empresarial (IVACE). 2018
Duration, from: 01/06/2018 *until:* 31/12/2018 *Grant amount:* 21780 €
Leader researcher: Ana Vallés Lluch *Participant researchers:* 1
- Title:* Diseño de sistemas basados en materiales hidrorreguladores para el control de humedad en ambientes interiores TECNO-CAI – Acciona Infraestructuras SA
Funding entity: Ministerio de Ciencia e Innovación. Subprograma de apoyo a consorcios estratégicos nacionales de investigación técnica (CENIT-E). 2009
Duration, from: 31/03/2010 *until:* 31/03/2012 *Grant amount:* 180754 €
Leader researcher: Manuel Salmerón *Participant researchers:* 3 (UPV)

C.4. Patents

- Title:* Dispositivo para exo-protetización de extremidades y otras aplicaciones percutáneas. J. Expósito Ollero, J.V. Hoyos Fuentes, J. Albelda Vitoria, A. Vallés Lluch, A. Silvestre Muñoz. Universitat Politècnica de València. *National with preliminary examination* ES2588951B2 *Filling Date:* 14/09/2017. PCT/ES2017/070619 22/03/2018, WO2018/050944A1; *USA extension* 16/333,107 13/03/2019
- Title:* Dispositivo de fijación intramedular. Expósito Ollero, J.V. Hoyos Fuentes, J. Albelda Vitoria, A. Vallés Lluch, A. Silvestre Muñoz. Universitat Politècnica de València. *National with preliminary examination* ES2599389B2 *Filling Date:* 21/12/2017. PCT/ES2017/070562 22/03/2018, WO2018/050934A1; *Europe extension* EP3476320 01/05/2019
- Title:* Modelo sintético de tejidos biológicos para la evaluación de la transmisión inalámbrica de ondas electromagnéticas. N. Cardona Marcet, A. Vallés Lluch, C. García Pardo, S. Castelló Palacios, A. Fornés Leal. Universitat Politècnica de València. *National* ES2575731B1. *Filling Date:* 22/12/2015. PCT/ES2016/070912 29/06/2017, WO2017/109252A1
- Title:* Biohybrid for the Use Thereof in the Regeneration of Neural Tracts M. Monleón Pradas, A. Vallés Lluch, C. Martínez Ramos, G. Vilariño Feltrer, J.A. Barcia Albarcar, U. Gómez Pinedo. Universitat Politècnica de València. *National with preliminary examination* ES2577883B2. *Filling Date:* 14/11/2014. PCT/ES2015/070 15/12/2015, WO2016/097448A1; *USA extension* 15/622,853 14/06/2017 US2017/0281826A1; *China extension* 15/12/2015 CN201580068465; *Europe extension* 15/12/2015 EP20150869394

C.5. Other merits

Prizes, mentions and distinctions:

- Description:* Accésit de trabajo dirigido. 13º Certamen Universitario Arquímedes, Ministerio de Educación. 2014. Á. Conejero García. *Title:* Estructuras poliméricas con poros unidireccionales con aplicación en regeneración neural guiada. *Awarding entity:* Ministerio de Educación *Date:* 13/11/2014
- Description:* Accésit de trabajo dirigido. X Premio Científico-técnico Ciutat d'Algemés para jóvenes investigadores. 2013. G. Vilariño Feltrer, I. Ortuño Lizarán *Title:* Conductos de ácido hialurónico para el crecimiento axonal guiado. *Awarding entity:* Científico-técnico Ciutat d'Algemés *Date:* 12/03/2014
- Description:* PRIMER PREMIO de Investigación Básica de la VI Edición del Premio Fundación Vital Dent a la Investigación en Odontología (Edición Internacional) *Awarding entity:* Fundación Vital Dent *Date:* 16/10/2009

Participation in companies: Co-founding member of the spin-off company Metis Biomaterials, S.L. (2007) of the Centre for Biomaterials and Tissue Engineering (Universitat Politècnica de València). Activity: Development, manufacture and production of materials for cell culture in the field of tissue engineering in regenerative medicine.

Supervision of academic works (other than PhD theses):

35x Master Thesis (Master in Biomedical Biotechnology-UPV; in Biomedical Engineering-UPV; in Chemical Engineering-UPV; in Neurosciences-University of Valencia; in molecular approaches in health sciences-Universitat de València; in Molecular, Cellular and Genetic Biology-Jaume I University of Castellón). 22x Final Degree Projects (Chemical Engineering, Biomedical engineering, Biotechnology, Engineering in Industrial Technologies-UPV)