



# Bone Pathophysiology and Biomaterials Group

Publications: 7

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## Research Activity

### Doctoral theses

**Escudero Duch C.** Aplicaciones biomédicas de matrices poliméricas fototérmicas [dissertation]. Madrid: UAM: 2019 [21/02/2019].

**Directors:** Vilaboa Díaz N,  
Martín Saavedra FM.

### Publications

- Escudero-Duch C, Martín-Saavedra F, Prieto M, Sánchez-Casanova S, López D, Sebastián V, Arruebo M, Santamaria J, Vilaboa N. Gold nanoparticles for the in situ polymerization of near-infrared responsive hydrogels based on fibrin. *Acta Biomater.* 2019; 100: 306-15. Article. IF: 7.242; D1
- García-Rey E, Carbonell-Escobar R, Cordero-Ampero J, García-Cimbrello E. Outcome of a hemis-

pherical porous-coated acetabular component with a proximally hydroxyapatite-coated anatomical femoral component an update at 23 to 26 years follow up. *Bone Joint J.* 2019; 101B(4): 378-85. Article. IF: 4.306; D1

- Monción A, Harmon JS, Li Y, Natla S, Farrell EC, Kripfgans OD, Stegemann JP, Martín-Saavedra FM, Vilaboa N, Franceschi RT, Fabiilli ML. Spatiotemporally-controlled transgene expression in hydroxyapatite-fibrin composite scaffolds using high intensity focused ultrasound. *Biomaterials.* 2019; 194: 14-24. Article. IF: 10.317; D1
- Mora-Boza A, López-Donaire ML, Saldaña L, Vilaboa N, Vázquez-Lasa B, San Román J. Glycerolphytate compounds with tunable ion affinity and osteogenic properties. *Sci Rep-Uk.* 2019; 9: 11491. Article. IF: 3.998; Q1
- Ojeda-Thies C, Sáez-López P, Currie CT, Tarazona-

Santalbina FJ, Alarcón T, Muñoz-Pascual A, Pareja T, Gómez-Campelo P, Montero-Fernández N, Mora-Fernández J, Larrainzar-Garajo R, Gil-Garay E, Etxebarria-Foronda I, Caeiro JR, Diez-Pérez A, Prieto-Alhambra D, Navarro-Castellanos L, Otero-Puime A, Gonzalez-Montalvo JI. Spanish National Hip Fracture Registry (RNFC): analysis of its first annual report and international comparison with other established registries. *Osteoporosis Int.* 2019; 30(6): 1243-54. Article. IF: 3.864; Q2

- Saldaña L, Bensiarnar F, Vallés G, Mancebo FJ, García-Rey E, Vilaboa N. Immunoregulatory potential of mesenchymal stem cells following activation by macrophage-derived soluble factors. *Stem Cell Res Ther.* 2019; 10: 58. Article. IF: 5.116; Q1
- Vaquero-Picado A, González-Morán G, Garay EG, Moraleda L. Developmental dysplasia of the hip: update of management. *Efort Open Rev.* 2019; 4(9): 548-56. Article. IF: 2.295; Q2

### Research projects

**Aguilar de Armas MR, Ramírez R, Vilaboa Díaz N.** Preparation and application of eardrops for the inhibition of sensorineural hearing loss (NADEAFNESS). CIBER-BBN. 2017-2019.

**Management centre:** CIBER-BBN

**Saldaña Quero L.** Contrato Miguel Servet T2 (CPII16/00038). ISCIII. 2017-2019.

**Management centre:** FIBHULP

**Saldaña Quero L.** Contrato de garatía juvenil técnico de laboratorio (PEJD-2018-PRE/BMD-7965). CM. 2019-2019.

**Management centre:** FIBHULP

**Saldaña Quero L.** Identificación de factores moleculares implicados en la osteonecrosis

idiopática: análisis del transcriptoma del tejido óseo (PI18/00643). ISCIII. 2019-2021.

**Managment centre:** FIBHULP

**Saldaña Quero L.** Preacondicionamiento inflamatorio de células madre mesenquimales para su aplicación en terapias avanzadas de regeneración ósea mediante ingeniería de tejidos (PI15/00752). ISCIII. 2016-2019.

**Managment centre:** FIBHULP

**Santamaria J, Vilaboa Díaz N.** Bone substitutes based on hydrogels responsive to near infrared light for the generation of therapeutic hyperthermia (NIRHYD). CIBER-BBN. 2018-2021.

**Managment centre:** CIBER-BBN.

**Vilaboa Díaz N.** Animal model of bone regeneration induced by tissue intermediates responsive to near-infrared light. Roche Farma S.A. 2016-Ongoing.

**Managment centre:** FIBHULP

**Vilaboa Díaz N.** Contrato Miguel Servet Estabilizado I2. CM. 2007-2025.

**Managment centre:** FIBHULP

**Vilaboa Díaz N.** Desarrollo de fluidos que potencien o favorezcan la osteointegración de los implantes ante distintas situaciones. Mozo-Grau S.A. 2017-Ongoing.

**Managment centre:** FIBHULP

**Vilaboa Díaz N.** Detección de Activación de HSF. HSF Pharmaceutica. 2004-Ongoing.

**Managment centre:** FIBHULP

**Vilaboa Díaz N.** Estudio de actividad osteoblástica de dos sustancias: ranelato de estroncio y la16034. Lacer S.A. 2011-Ongoing.

**Managment centre:** FIBHULP

**Vilaboa Díaz N.** Hacia una terapia avanzada de regeneración ósea: intermediarios tisulares activables mediante energía infrarroja para la expresión controlada de factores osteogénicos



cos y angiogénicos (PI15/01118). ISCIII. 2016-2019.

**Managment centre:** FIBHULP

**Vilaboa Díaz N.** Hidrogeles que responden a energía infrarroja y contienen adenovirus de alta capacidad. Aplicación en regeneración ósea (NIRABOR) (RTI2018-095159-B-I00 ). Ministerio de Ciencia, Innovación y Universidades. 2019-2021.

**Managment centre:** FIBHULP

### Cibers and Retics

**Vilaboa Díaz NE.** Networked Biomedical Research Center for Bio-engineering, Biomaterials and Nanomedicine. (CIBER-bbn). ISCIII. (31/12/2019).

**Managment centre:** FIBHULP

### Patents and trademarks

**Martin Saavedra FM, Vilaboa Díaz NE, Cebrián Hernando V, Arruebo Gordó M, Santamaria Ramiro J, Gómez Navascués L,** inventors; FIBHULP, CIBER-BBN, Universidad de Zaragoza, assignees. Fibrin hydrogel with plasmonic nanoparticles; P201330894, PCT/ES2014/070484; 2013 June 14.

**Vilaboa Díaz NE, Calzado Martín A, Crespo García L, Saldaña Quero L, Moreo Calvo P, Alastrué Vera V,** inventors; FIBHULP, CIBER-BBN, assignees. Chamber device for dynamic cell culture on biomaterials; P201330040, PCT/ES2013/070819; 2013 January 16.

**Vilaboa Díaz NE, González Carrasco JL, Multigner Domínguez M, Lieblich Rodríguez M, Muñoz Hernández M, Frutos Torres E, Saldaña Quero L,** inventors; FIBHULP, CSIC, CIBER-BBN, Universidad Alfonso X El Sabio, assignees. Magnesium/polymer composite biomaterial for biomedical applications; P201030950, PCT/

ES2011/070440; 2010 June 21.

**Vilaboa Díaz NE, González Carrasco JL, Saldaña Quero L, Frutos Torres E,** inventors; FIBHULP, CSIC, CIBER-BBN, assignees. Method to obtain a metallic-coated biomaterial; P201030949, PCT/ES2011/070400; 2010 June 21.

**Voellmy R, Vilaboa Díaz NE,** inventors; HSF Pharmaceuticals S.A., assignee. Inhibitors of heat shock factor I and uses thereof. US 62/495,501; 2016 September 16.

**Voellmy R, Vilaboa Díaz NE.** Inventors; HSF Pharmaceuticals SA. Assignees. Compounds that induce protein unfolding and a mitigated response thereto, and methods of use thereof. US 62/764,569. 2018 August 08

**Voellmy R, Vilaboa Díaz NE.** Inventors; HSF Pharmaceuticals SA. Assignees. Inhibitors of heat shock factors and uses thereof. US62/499,650. 2017 February 17

