Osteoprotegerin: a double-edged sword in osteoarthritis development

Rodriguez Ruiz, A.

List of publications

Mutation in the CCAL1 locus accounts for bidirectional process of human subchondral bone turnover and cartilage mineralization.
Alejandro Rodríguez Ruiz[§], Marcella van Hoolwerff[§], Sara Sprangers, Eka Suchiman, Ton Schoenmaker, Petra Dibbets-Schneider, Johan L. Bloem, Rob GHH Nelissen, Christian Freund, Christine Mummery, Vincent Everts, Teun J. de Vries, Yolande F. M. Ramos[#], and Ingrid Meulenbelt[#]
Rheumatology (Oxford). 2022;00:1-13.

The role of *TNFRSF11B* in development of osteoarthritic cartilage.
Alejandro Rodríguez Ruiz, Margo Tuerlings, Ankita Das, Rodrigo Coutinho de Almeida, Eka Suchiman, Rob G. H. H. Nelissen, Yolande F. M. Ramos, Ingrid Meulenbelt.
Rheumatology (Oxford). 2022;61(2):856-864.

High-impact *FN1* mutation decreases chondrogenic potential and affects cartilage deposition via decreased binding to collagen type II.
Marcella van Hoolwerff[§] , **Alejandro Rodríguez Ruiz**[§], Marga Bouma, Eka Suchiman, Roman I. Koning, Carolina R. Jost, Aat A. Mulder, Christian Freund, Farshid Guilak, Yolande F. M. Ramos, and Ingrid Meulenbelt.
Sci Adv. 2021 Nov 5;7(45):eabg8583. [§]Shared first coauthors.

Cartilage from humaninduced pluripotent stem cells: comparison with neocartilage from chondrocytes and bone marrow mesenchymal stromal cells.
Alejandro Rodríguez Ruiz, Amanda Dicks, Margo Tuerlings, Koen Schepers, Melissa van Pel, Rob G. H. H. Nelissen, Christian Freund, Christine L. Mummery, Valeria Orlova, Farshid Guilak, Ingrid Meulenbelt & Yolande F. M. Ramos.
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RNA sequencing data integration reveals an miRNA interactome of osteoarthritis cartilage.
Rodrigo Coutinho de Almeida, Yolande F. M. Ramos, Ahmed Mahfouz, Wouter den Hollander, Nico Lakenberg, Evelyn Houtman, Marcella van Hoolwerff, Eka Suchiman, **Alejandro Rodríguez Ruiz**, P. Eline Slagboom, Hailiang Mei, Szymon M Kiełbasa, Rob G. H. H. Nelissen, Marcel Reinders, Ingrid Meulenbelt.
Ann Rheum Dis 2019;78:270–277.

WWP2 osteoarthritis risk allele rs1052429-A confers risk by affecting cartilage matrix deposition via hypoxia associated genes
Margo Tuerlings, G.M.C. Janssen, Ilja Boone, Marcella van Hoolwerff, **Alejandro Rodríguez Ruiz**, Evelyn Houtman, Eka Suchiman, Robert J. P. van der Wal, Rob

G.H.H. Nelissen, Rodrigo Coutinho de Almeida, Peter A. van Veelen, Yolande F. M. Ramos, and Ingrid Meulenbelt.
In revision in Osteoarthritis and cartilage.

The role of epigenetics as a stable marker to monitor cartilage quality in hiPSC chondrogenesis
Ghazaleh Hajmousa, Rodrigo Coutinho de Almeida, **Alejandro Rodríguez Ruiz**, Marga Bouma, Roderick Sliecker, Hailing Mei, Rob G.H.H. Nelissen, Christian Freund, Judith Bovee, Keito Ito, Yolande F M Ramos, Ingrid Meulenbelt
In preparation for submission.

Curriculum vitae

Alejandro Rodríguez Ruiz was born on the 19th of November of 1992 in Valencia, Spain. He attended high school education in San Pedro Pascual. In 2010, he started his bachelor in Biotechnology at the Polytechnic University of Valencia (UPV), where he specialized in biotechnology applied to biomedical research.

For his bachelor thesis, he worked at the Centre of Biomaterials and Tissue Engineering (CBIT), where he generated three different biomaterials to achieve a controlled release system of growth factors upon brain injury. In 2014, he started a two years masters in Biomedical Sciences at the KU Leuven in Belgium, which he finished *cum laude*. During his masters, he performed two minor internships at the Genetics Laboratory and the Stem Cell institute in Leuven. For his final internship he moved to London to investigate osteosarcoma disease in a 3D *in vitro* biomaterial system and enter into the fascinating skeletal system field at the University College London (UCL).

In 2017, he started his PhD in the Biomedical Data Sciences group at Leiden University Medical Centre (LUMC) under the guidance of Prof. Dr. Ingrid Meulenbelt and Dr. Yolande Ramos. During his PhD he established and worked with an induced pluripotent stem cell (hiPSC) model of cartilage and bone to unravel the role of osteoprotegerin in osteoarthritis (OA). In August 2021, he became a postdoctoral researcher at the department of Pulmonology at the LUMC in the group of Prof. Dr. Pieter Hiemstra and Dr. Anne van der Does to generate hiPSC-derived alveolar models for lung repair.

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After five years of doctoral research, I can say that this exciting journey has come to an end. A rollercoaster full of ups and downs, unexpected turns, short and long cuts and some detours that finally conclude with a title: Doctor. This journey would not have been possible without the help of many people to whom I would like to dedicate some words.

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