



### **Óscar Aguilera Martínez, PhD**

Translational Oncology Division  
Oncohealth Institute  
Health Research Institute FJD-UAM  
University Hospital "Fundación Jiménez Díaz"  
Avda. Reyes Católicos, 2 28040, Madrid (SPAIN)  
Phone number. (+34) 91 5504800 ext. 2820  
Mail: oscar.aguilera@ FJD.es

#### **Bachelor's degree**

Universidad de Oviedo      06/07/1996

#### **PhD in Molecular Biology**

Universidad de Oviedo      19/07/2000

#### **Postdoctoral positions**

- Post-doctoral of excellence Marie Curie Fellowship Dep. Mathematics.  
University of Groningen (Holland) Oct 2001- Oct 2003
  
- Post-doctoral MECD      Instituto de Investigaciones Biomédicas “Alberto Sols” CSIC Jun 2003- Jun 2005
  
- Post-doctoral I3P Instituto de Investigaciones Biomédicas “Alberto Sols” CSIC Agost 2005- Sept 2009
  
- Awarded with Post-doctoral position at the AECC (Asociación Española contra el Cáncer) Instituto de Investigaciones Biomédicas “Alberto Sols” CSIC Aug 2009- Sept 2012
  - [http://www.casareal.es/EN/actividades/Paginas/actividades\\_actividades\\_detail.aspx?data=7472](http://www.casareal.es/EN/actividades/Paginas/actividades_actividades_detail.aspx?data=7472)

- Senior researcher at the Oncohealth Institute Health Research Institute FJD-UAM Jan 2013-

### **Chapters in books**

1. Stem Cells in Cancer: Should We Believe or Not? ISBN 978-94-017-8754
2. Targeting KRAS mutant CMS3 subtype by metabolic inhibitors Springer (2018, in press)

### **Teaching and training experience**

“Master in Molecular and cellular Biol.” Universidad Autónoma de Madrid (UAM)  
year: 2008

“Master in Molecular and cellular Biol.” Universidad Autónoma de Madrid (UAM)  
year: 2009

“Master in Molecular and cellular Biol.” Universidad Autónoma de Madrid (UAM)  
year: 2010

Master direction: antitumoral activities of ascorbic acid in colorectal cancer  
Translational Oncology Division Oncoheath (Fundación Jiménez Díaz)  
year 2014

### **Press notes and interviews**

Press note La Nueva España

<http://www.lne.es/gijon/2014/01/10/plaga-cancer-vertientes/1525343.html>

Press note Europapress

<http://www.europapress.es/cantabria/noticia-cientificos-espanoles-identificado-nuevo-biomarcador-respuesta-quimioterapia-cancer-colon-20150608144437.html>

Press note Gaceta Médica

<http://www.europapress.es/cantabria/noticia-cientificos-espanoles-identificado-nuevo-biomarcador-respuesta-quimioterapia-cancer-colon-20150608144437.html>

Press note in Dicoverry Salud

<https://www.dsalud.com/reportaje/oscar-aguilera-la-vitamina-c-es-anticancerigena/>

Interviews at Discovery Salud

<https://www.youtube.com/watch?v=czfLrE0DeH0>

<https://youtu.be/awpQZh-fvr>

## Research articles

Author, co-author and/or corresponding author of **23** research articles the focused in the fields of molecular microbiology, epigenetics and cancer biology.

1) Targeting the RAS-dependent chemoresistance: The Warburg connection.

Serna-Blasco R, Sanz-Álvarez M, **Aguilera Ó**, García-Foncillas J.

*Semin Cancer Biol.* 2018 Feb 9. pii: S1044-579X(17)30272-9. doi: 10.1016/j.semcancer.2018.01.016. [Epub ahead of print] Review.

2) Colon cancer modulation by a diabetic environment: A single institutional experience.

Prieto I, Del Puerto-Nevado L, Gonzalez N, Portal-Nuñez S, Zazo S, Corton M, Minguez P, Gomez-Guerrero C, Arce JM, Sanz AB, Mas S, **Aguilera O**, Alvarez-Llamas G, Esbrit P, Ortiz A, Ayuso C, Egido J, Rojo F, Garcia-Foncillas J; DiabetesCancerConnect Consortium..

*PLoS One.* 2017 Mar 2;12(3):e0172300.

3) 2017 update on the relationship between diabetes and colorectal cancer: epidemiology, potential molecular mechanisms and therapeutic implications.

González N, Prieto I, Del Puerto-Nevado L, Portal-Nuñez S, Ardura JA, Corton M, Fernández-Fernández B, **Aguilera O**, Gomez-Guerrero C, Mas S, Moreno JA, Ruiz-Ortega M, Sanz AB, Sanchez-Niño MD, Rojo F, Vivanco F, Esbrit P, Ayuso C, Alvarez-Llamas G, Egido J, García-Foncillas J, Ortiz A, Consortium DC

*Oncotarget.* 2017 Jan 3. doi: 10.18632/oncotarget.14472.

- 4) Vitamin C uncouples the Warburg metabolic switch in KRAS mutant colon cancer.

**Aguilera O**, Muñoz-Sagastibelza M, Torrejón B, Borrero-Palacios A, Del Puerto-Nevado L, Martínez-Useros J, Rodriguez-Remirez M, Zazo S, García E, Fraga M, Rojo F, García-Foncillas J.

*Oncotarget*. 2016 Jul 26;7(30):47954-47965

- 5) Nuclear DICKKOPF-1 as a biomarker of chemoresistance and poor clinical outcome in colorectal cancer.

**Aguilera Ó**, González-Sancho JM, Zazo S, Rincón R, Fernández AF, Tapia O, Canals F, Morte B, Calvanese V, Orgaz JL, Niell N, Aguilar S, Freije JM, Graña O, Pisano DG, Borrero A, Martínez-Useros J, Jiménez B, Fraga MF, García-Foncillas J, López-Otín C, Lafarga M, Rojo F, Muñoz A.

*Oncotarget*. 2015 Mar 20;6(8):5903-17

- 6) Comment on 'TAp63 suppress metastasis via miR-133b in colon cancer cells'.

Cristobal I, Madoz-Gurpide J, Martin-Aparicio E, Carames C, **Aguilera O**, Rojo F, Garcia-Foncillas J.

*Br J Cancer*. 2014 Dec 9;111(12):2369. doi: 10.1038/bjc.2014.390

- 7) Deregulation of miR-200b, miR-200c and miR-429 indicates its potential relevant role in patients with colorectal cancer liver metastasis.

Cristóbal I, Rincón R, Manso R, Caramés C, **Aguilera O**, Madoz-Gurpide J, Rojo F, García-Foncillas J.

*J Surg Oncol*. 2014 Sep;110(4):484-5.

- 8) Clinical significance of miR-126 in colorectal cancer.

Cristóbal I, **Aguilera O**, García-Foncillas J, Zazo S, Madoz-Gúrpide J, Rojo F.

*Genes Chromosomes Cancer*. 2014 Oct;53(10):881. doi: 10.1002/gcc.22192

- 9) Active angiogenesis in metastatic renal cell carcinoma predicts clinical benefit to sunitinib-based therapy.

del Puerto-Nevado L, Rojo F, Zazo S, Caramés C, Rubio G, Vega R, Chamizo C, Casado V, Martínez-Useros J, Rincón R, Rodríguez-Remírez M, Borrero-Palacios A, Cristóbal I, Madoz-Gúrpide J, **Aguilera O**, García-Foncillas J.  
Br J Cancer. 2014 May 27;110(11):2700-7

10) PP2A inhibition is a common event in colorectal cancer and its restoration using FTY720 shows promising therapeutic potential.

Cristóbal I, Manso R, Rincón R, Caramés C, Senin C, Borrero A, Martínez-Useros J, Rodriguez M, Zazo S, **Aguilera O**, Madoz-Gúrpide J, Rojo F, García-Foncillas J.

*Mol Cancer Ther.* 2014 Apr;13(4):938-47

11) Epigenetic repression of ROR2 has a Wnt-mediated, pro-tumourigenic role in colon cancer.

Lara E, Calvanese V, Huidobro C, Fernández AF, Moncada-Pazos A, Obaya AJ, **Aguilera O**, González-Sancho JM, Sánchez L, Astudillo A, Muñoz A, López-Otín C, Esteller M, Fraga MF.

*Mol Cancer.* 2010 Jun 30;9:170.

12) Epigenetics and environment: a complex relationship.

**Aguilera O**, Fernández AF, Muñoz A, Fraga MF.

*J Appl Physiol* (2010). 2010 Jul;109(1):243

13) 'Loss of pigment epithelium-derived factor enables migration, invasion and metastatic spread of human melanoma'.

Orgaz JL, Ladhami O, Hoek KS, Fernández-Barral A, Mihic D, **Aguilera O**, Seftor EA, Bernad A, Rodríguez-Peralto JL, Hendrix MJ, Volpert OV, Jiménez B.

*Oncogene.* 2009 Nov 26;28(47):4147-61.

14) Vitamin D and Wnt/beta-catenin pathway in colon cancer: role and regulation of DICKKOPF genes.

Pendás-Franco N, **Aguilera O**, Pereira F, González-Sancho JM, Muñoz A.  
*Anticancer Res.* 2008 Sep-Oct;28(5A):2613-2

15) The Wnt antagonist DICKKOPF-1 gene is induced by 1alpha,25-dihydroxyvitamin D3 associated to the differentiation of human colon cancer cells.

**Aguilera O**, Peña C, García JM, Larriba MJ, Ordóñez-Morán P, Navarro D, Barbáchano A, López de Silanes I, Ballestar E, Fraga MF, Esteller M, Gamallo C, Bonilla F, González-Sancho JM, Muñoz A.

*Carcinogenesis*. 2007 Sep;28(9):1877-84

16) Epigenetic alterations of the Wnt/beta-catenin pathway in human disease.

**Aguilera O**, Muñoz A, Esteller M, Fraga MF.

*Endocr Metab Immune Disord Drug Targets*. 2007 Mar;7(1):13-21

17) Vitamin D regulates the phenotype of human breast cancer cells.

Pendás-Franco N, González-Sancho JM, Suárez Y, **Aguilera O**, Steinmeyer A, Gamallo C, Berciano MT, Lafarga M, Muñoz A.

*Differentiation*. 2007 Mar;75(3):193-207.

18) Epigenetic inactivation of the Wnt antagonist DICKKOPF-1 (DKK-1) gene in human colorectal cancer.

**Aguilera O**, Fraga MF, Ballestar E, Paz MF, Herranz M, Espada J, García JM, Muñoz A, Esteller M, González-Sancho JM.

*Oncogene*. 2006 Jul 6;25(29):4116-21.

19) Vitamin D and cancer: an update of in vitro and in vivo data.

Ordonez-Moran P, Larriba MJ, Pendas-Franco N, **Aguilera O**, Gonzalez-Sancho JM, Munoz A.

*Front Biosci*. 2005 Sep 1;10:2723-4

20) The Wnt antagonist DICKKOPF-1 gene is a downstream target of beta-catenin/TCF and is downregulated in human colon cancer.

González-Sancho JM, **Aguilera O**, García JM, Pendás-Franco N, Peña C, Cal S, García de Herreros A, Bonilla F, Muñoz A.  
*Oncogene*. 2005 Feb 3;24(6):1098-103.

21) Transferrins selectively cause ion efflux through bacterial and artificial membranes.

**Aguilera O**, Quiros LM, Fierro JF.

*FEBS Lett*. 2003 Jul 31;548(1-3):5-10.

22) Permeabilizing action of an antimicrobial lactoferricin-derived peptide on bacterial and artificial membranes.

**Aguilera O**, Ostolaza H, Quirós LM, Fierro JF.

*FEBS Lett*. 1999 Dec 3;462(3):273-7

23) Evaluation of the antimicrobial effect of lactoferrin on *Porphyromonas gingivalis*, *Prevotella intermedia* and *Prevotella nigrescens*.

**Aguilera O**, Andrés MT, Heath J, Fierro JF, Douglas CW.

*FEMS Immunol Med Microbiol*. 1998 May;21(1):29-36

## Other

Member of the Editorial Board of **Annals of Short Reports**