

CURRICULUM VITAE

Name: **MANEL ESTELLER**
 Citizenship: Born in Sant Boi de Llobregat, Barcelona, Catalonia, Spain.
 DOB: September 6th, 1968
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EDUCATION AND PROFESSIONAL EXPERIENCE:

10/1/86-6/30/92 Medical Student, University of Barcelona, Spain.
 10/1/88-6/30/92 Assistant Fellow, Department of Biochemistry and Molecular Biology, School of Medicine, University of Barcelona, Spain.
 5/1/95-9/1/95 Research Fellow, School of Biological and Medical Sciences, St. Andrews University, United Kingdom.
 10/1/92-12/31/96 Graduate Student, Biomedical Research Unit, Hospital Universitari Maternal Vall d'Hebrón, Barcelona, Spain.
 1/1/97-3/1/97 Postdoctoral Fellow, Biomedical Research Unit, Hospital Universitari Maternal Vall d'Hebrón, Barcelona, Spain.
 4/1/97-5/31/00 Postdoctoral Fellow, The Johns Hopkins Oncology Center, The Johns Hopkins University and School of Medicine, Baltimore, USA.
 6/1/00-8/31/01 Research Associate, The Johns Hopkins Oncology Center, The Johns Hopkins University and School of Medicine, Baltimore, USA.
 9/1/01-09/30/08 Group Leader, Cancer Epigenetics Laboratory, Molecular Pathology Program, Spanish National Cancer Center (CNIO), Madrid, Spain.
 10/1/8-6/30/17 Professor of Genetics, School of Medicine, University of Barcelona.
 10/1/8-5/14/19 Director and Group Leader, Cancer Epigenetics and Biology Program (PEBC), Bellvitge Biomedical Campus, Barcelona, Catalonia, Spain.
 5/15/19-8/31/24 Director, Josep Carreras Leukaemia Research Institute (IJC), Badalona, Barcelona, Catalonia, Spain.
 5/15/19- Present Group Leader, Cancer Epigenetics Group, Josep Carreras Leukaemia Research Institute (IJC), Badalona, Barcelona, Catalonia, Spain.
 10/1/8 - Present Catalan Institution for Research and Advanced Studies (ICREA) Research Professor
 7/1/17 - Present Chairman of Genetics, School of Medicine, University of Barcelona

SCIENTIFIC STAYS AS PI

Summer of 2014 Visiting Professor, University of California San Diego (UCSD), San Diego, California, USA.
 Summer of 2016 Visiting Professor, Beth Israel Deaconess Medical Center (BIDMC), Harvard University, MA, USA
 Summer of 2018 Visiting Professor, Mount Sinai School of Medicine, New York City, NY, USA.
 Summer of 2022 Visiting Professor, New York University (NYU) School of Medicine, New York City, NY, USA
 Summer of 2024 Visiting Professor, Weill Cornell Medicine (WCM), New York, NY, USA

SCIENTIFIC HONORS AND AWARDS:

- 1986 Prize young scientists CIRIT (Generalitat de Catalunya) 1985-1986.
- 1987 Prize young scientists CIRIT (Generalitat de Catalunya) 1986-1987.
- 1990-1992 Grant Consejo Superior de Investigaciones Científicas (CSIC-I.E.I.).
- 1992 Medical Graduate with Honors. Barcelona University.
- 1992 Grant " Agustí Pedro i Pons " Foundation.
- 1992 Grant " Spanish Association for Cancer Research " .
- 1995 Grant I.E.S. (Institut d'Estudis de la Salut)
- 1992-1996 Predoctoral Grant Ministry of Education and Science. Rovira i Virgili University.
- 1997 Ph. D. Degree with Honors " *cum laude* " .
- 1997-1999 Postdoctoral Fellowship Ministry of Education and Science. The Johns Hopkins Oncology Center, Johns Hopkins University and School of Medicine.
- 1998 Young Investigator Award American Association for Cancer Research-AFLAC.
- 1998 Gordon Research Conferences (GRC) Award in Cancer.
- 1998 European School of Medical Oncology (ESMO) Award.
- 1999 Young Investigator Award American Association for Cancer Research (AACR-Bristol-Myers Squibb).
- 1999 First Prize in Basic Research at The Johns Hopkins Oncology Center Fellows Day.
- 2000 Special Late-Breaking Abstract at AACR Meeting.
- 2000 European Association for Cancer Research "Young Cancer Researcher Award".
- 2001 Young Investigator Award AACR-AFLAC
- 2002 Merit Award American Society of Clinical Oncology (ASCO)
- 2003 Mary Béve Lecturer, Nordic Society for Paediatric Haematology and Oncology
- 2005 Translational Research Award. Hospital of Madrid Foundation
- 2006 Magistral Lecturer, Universidad Internacional Menendez y Pelayo
- 2006 Beckman-Coulter Award Spanish Society Biochemistry and Molecular Biology
- 2006 FPRC Young Investigator Award, Fondazione Piemontese per la Ricerca sul Cancro-ONLU
- 2006 Foundation Francisco Cobos Award in Biomedical Research
- 2006 Swiss Bridge Cancer Award
- 2006 Carcinogenesis Award Oxford University Press
- 2007 National Research Award in Oncology "Maria Julia Castillo"
- 2007 "Dr Josep Trueta" Award, Academy of Medical Sciences of Catalonia
- 2007 Innovation Award, Commonwealth of Massachusetts.
- 2007 Human Frontier Science Program Award
- 2008 "Dr Jacint Vilardell" Award, Gastroenterology Foundation
- 2008 Debiopharm Life Sciences Award École Polytechnique Fédérale Lausanne
- 2009 Prize « Conde de Cartagena », National Royal Academy of Medicine
- 2009 Best Ideas in Health, Diario Medico
- 2009 Premio de Investigacion Biomedica Fundacion Lilly
- 2009 Dr. Josef Steiner Cancer Research Award
- 2009 Carmen y Severo Ochoa Foundation Research Award in Molecular Biology
- 2010 Research Award in Health Sciences, Foundation Caja Rural de Granada
- 2010 Deichmann Award, International Union of Toxicology
- 2010 World Health Summit and Pfizer Award for Innovation in Biomedical Research
- 2011 EACR Cancer Researcher Award Lecture
- 2011 European Research Council Advanced Grant
- 2011 National Award in Genetics, Spanish Society of Genetics
- 2012 Best Ideas in Health, Centenarian Epigenome, Diario Medico
- 2012 Research Award in Medicine, Hospitales de Madrid
- 2012 National Award in Cancer Research "Doctores Diz Pintado"
- 2012 Dexeus International Award in Women Health

- 2013 BIAL Award Distinction
- 2013 Research Award in Life Sciences Royal Academy of Natural and Physical Sciences
- 2013 Severo Ochoa Prize for Biomedical Research by Ferrer Foundation
- 2013 Rey Jaime I Prize in Basic Science
- 2014 Award Vanguardia de la Ciencia
- 2014 National Award in Oncology by Echevarne Foundation
- 2014 European Research Council Proof of Concept Grant
- 2015 “Dr Josep Trueta” Medal, Generalitat de Catalunya (Catalan Government)
- 2015 National Research Award, Generalitat de Catalunya (Catalan Government)
- 2016 Best Ideas in Health, EPICUP, Diario Medico
- 2016 European Research Council Proof of Concept Grant
- 2017 Best Ideas in Health, Epitranscriptome, Diario Medico
- 2018 Scientific Achievements Prize, Foundation for the Excellence in Oncology (ECO)
- 2018 Scientific Innovation Award Team in Clinical Research, Pfizer Foundation
- 2018 Innovation Health Award in Oncology by Celgene Endowment
- 2019 Lansdowne Lecture Award, University of Victoria, British Columbia, Canada
- 2019 Best Ideas in Health, Glioblastoma Research, Diario Medico
- 2020 Distinguished Lecture Recognition, International Society for Cutaneous Lymphoma
- 2020 “Narcís Monturiol” Medal, Generalitat de Catalunya (Catalan Government)
- 2021 Elected as Section Editor for Epigenetics at “Molecular Oncology”
- 2021 Award Dr. Fernández-Cruz Memorial Foundation
- 2021 Elected Member of the Academia Europaea
- 2021 Elected Fellow of the European Academy of Sciences
- 2021 Award Ennova Health in Big Data and Artificial Intelligence
- 2022 Advisory Board Member of Faculty Opinions
- 2022 Award “Constantes y Vitales” for Scientific Career in Biomedical Research by AXA Foundation and Atresmedia
- 2022 Landmark Article in Cancer Research by AACR and National Cancer Act
- 2023 Elected Member of Sigma XI, The Scientific Research Honor Society
- 2023 Admirable Award in Research by Diario Medico and Correo Farmaceutico
- 2023 Elected Member of the Royal European Academy of Doctors
- 2023 “Jané Mateu Foundation” Award
- 2023 Prize “Rafael Hervada” for Biomedical Research
- 2024 Award Ennova Health in Big Data and Artificial Intelligence
- 2024 Burdinola Research Award for New Molecular Targets in Medicine
- 2024 Research Award of the National Royal Academy of Pharmacy
- 2024 Prize of The Royal Academy of Medicine
- 2025 Reseach Prize of the Barrié Foundation-RAMG

SOCIAL HONORS AND AWARDS:

- 2003 "Predilect Son" Sant Boi de Llobregat, Barcelona, Catalonia
- 2006 Special Prize "Ciutat de Sant Boi", Barcelona, Catalonia
- 2008 Nominated for the "Catalan of the Year" Award
- 2008 Patron of the Foundation "Sandra Ibarra de Solidaridad frente al Cáncer"
- 2009 Premio Dulcinea Asociación Mujeres Cáncer de Mama Castilla-La Mancha
- 2009 Finalist of the “Catalan of the Year” Award
- 2009 Mai Award, IES Valdemosa, Barcelona, Catalonia
- 2009 Gaudi Gresol Award, Reus, Catalonia
- 2011 Jesus Montoliu Conference Award, Lleida, Catalonia
- 2012 Patron of the Biotechnology Graduation Ceremony, Lleida University, Catalonia
- 2013 Finalist Boehringer Ingelheim Award in Medical Journalism
- 2014 Prize “Doctor Benaprès”

- 2014 Finalist Boehringer Ingelheim Award in Medical Journalism
- 2014 Medical Personality of the Decade by Redaccion Medica
- 2015 Prize “El Llobregat” to the Professional Excellence
- 2015 Distinguished Member Institute of Catalan Studies (IEC)
- 2016 “Predilect Son”, Atzeneta del Maestrat, Castellò, València
- 2016 Honor Gold Medal, Parlament of Catalonia
- 2016 Premi Internacional de Catalunya, Generalitat de Catalunya (Catalan Government)
- 2017 Patron Biomedical Sciences Graduation Ceremony, Lleida University, Catalonia
- 2017 “Carlemagne Falcon” Award, Girona, Catalonia
- 2018 Finalist Best Health article, National Association of Health Journalists (ANIS)
- 2018 Finalist Best Initiative to Improve Patient Health Forum Albert Jovell Janssen-Cilag
- 2018 Finalist Dissemination Award, Catalan Society of Biology (SCB)
- 2018 Finalist FIPSE Implemented Innovation in Health Award
- 2018 “Joan Sardà” Award to Social Commitment, Catalan Association for Civil Rights
- 2018 Award for the Best Science and Humanities Dissemination Activities by the Board of Trustees and the Doctors' Senate of the University of Barcelona (UB)
- 2019 Finalist Dissemination Award, Catalan Society of Biology (SCB)
- 2021 Board of Trustees, Barça Foundation (F.C. Barcelona)
- 2022 Premi Joan Salvat for Social Service, Baix Llobregat Council
- 2022 Board of Trustees, Interuniversity Institute Foundation -InterAc Salut
- 2022 Scientific Advisory Board, Chair Santiago Ramón y Cajal

ACADEMIA:

- 2004-present Honorary Professor, Autonomus University of Madrid
- 2008-present Associate Professor of Genetics, University of Barcelona
- 2008-present Institutio Catalana de Recerca i Estudis Avançats (ICREA) Research Professor
- 2008-present Member of the Royal Academy of Medicine of Catalonia (RAMC)
- 2011-present Member of the Royal Academy of Pharmacy of Spain (RANF)
- 2011-present Faculty of 1000 (F1000)
- 2015-present Member of the Institut d’Estudis Catalans (IEC)
- 2021-present Elected Member of the Academia Europaea
- 2021-present Elected Fellow of the European Academy of Sciences
- 2023-present Elected Member of Sigma XI, The Scientific Research Honor Society
- 2023-present Elected Member of the Royal European Academy of Doctors

MEMBERSHIP:

- 1992-present Catalan Association of Biology (SCB)
- 1997-present Spanish Association for Cancer Research (ASEICA)
- 1997-present European Association for Cancer Research (EACR)
- 1997-present The Johns Hopkins Medical and Surgical Association
- 1997-present American Association for the Advancement of Science (AAAS)
- 1997-present American Association for Cancer Research (AACR)
- 1998-present New York Academy of Sciences
- 1998-present European School of Medical Oncology (ESMO)
- 2001-present DNA Methylation Society
- 2006-present Academy of Medical and Health Sciences of Catalonia and Balears
- 2006-present Spanish Society of Biochemistry and Molecular Biology (SEBBM)
- 2006-present American Society for Biochemistry and Molecular Biology (ASBMB)
- 2006-present Associate Member, Epigenome Network of Excellence
- 2008-present President, Epigenetics Society
- 2021-present Active Member, International Society for Experimental Hematology (ISEH)
- 2021-present Active Member, European Hematology Association (EHA)
- 2021-present International Member, American Society of Hematology (ASH)

688 ORIGINAL PUBLICATIONS IN PEER-REVIEWED SCIENTIFIC JOURNALS:

- ✓ **Total Impact Factor: 8,807.7 Average Impact Factor per Article: 12.80**
- ✓ **Total Number of Citations: 108,355 h-Index: 153 Web of Science/Clarivate Analytics**
- ✓ **Total Number of Citations: 149,342 h-Index: 177 Google Scholar**
- ✓ **30 Highly Cited Articles - Essential Science Indicators, Thomson Reuters**
- ✓ **Highly Cited Researcher (Top 1% Citations, Decade 2008-2018) Clarivate Analytics**
- ✓ **Top 500 World Scientists Google Scholar by National Research Council (CSIC) (2020, 2021 and 2022)**
- ✓ **Top 0.5% Best World Scientist according to Research.com (2022-2023), #1 in Spain**
- ✓ **Highly Cited Researcher™ by Clarivate Web of Science in 2018, 2019, 2020 and 2021**
- ✓ **Top 0.1% World Scientists based on Impact by Biomedical Data Science, and Statistics and Meta-Research Innovation Center (METRICS) at Stanford University (2019, 2020, 2021, 2022 and 2023)**

Summary of Publications (number of manuscripts in parentheses):

Nature Genetics (4), New England Journal of Medicine (3), Cancer Cell (4), Proc Natl Acad Sci USA (10), Nature (3), Science (3), Cell (6), Molecular Cell (2), The Lancet (1), Nature Medicine (3), The Lancet Oncology (3), Cancer Discovery (4), Nature Communications (18), Cancer Research (44), The Journal of The National Cancer Institute (11), Nature Structural & Molecular Biology (2), Nature Immunology (1), Nature Biotechnology (1), Cell Metabolism (1), EMBO Journal (4), Nature Cell Biology (2), Nature Aging (1), CA: A Cancer Journal for Clinicians (1), Cancer Research Communications (1), The Lancet Respiratory Medicine (1), Genome Research (4), Genome Biology (5), Cell Reports (6), Cell Genomics (1), Cell Reports Medicine (1), Journal of Clinical Oncology (5), Oncogene (34), Nature Reviews Genetics (4), Nature Reviews Clinical Oncology (1), Nature Biotechnology (1), Developmental Cell (2), Molecular Cancer (9), Molecular and Cellular Biology (2), Human Molecular Genetics (6), Nucleic Acids Research (6), Journal of Cell Science (2), EMBO Reports (1), Carcinogenesis (7), Clinical Cancer Research (17), Journal of Biological Chemistry (2), Cell Cycle (3), Critical Reviews in Hematology/Oncology (3), Am J Respir Critical Care Medicine (1), Human Genetics (2), Genes, Chromosomes & Cancer (1), Brain (1), JCI Insight (1), Briefings in Bioinformatics (1), Advanced Science (1), Cancer Communications (1), Journal of Experimental Medicine (2), Gastroenterology (4), EMBO Molecular Medicine (1), Lancet EBiomedicine (3), Lancet EClinicalMedicine (1), Trends in Cancer (4), Trends in Immunology (1), Trends in Genetics (1), Haematologica (3), British Journal of Haematology (5), Blood (5), Blood Advances (1), Leukemia (7), Blood Cancer Discovery (3), Other Journals (377).

ORIGINAL ARTICLES:**1994**

- 1) **Esteller M**, Ureña J, Carreras J, Martelly I, Climent F. Thyroid Hormone Stimulates Phosphoglycerate Mutase Activity and Isozyme Transition in Rat Muscle Tissues. ***Life Sciences***, 54, 533-538, 1994.

1995

- 2) **Esteller M**, Martínez-Palones JM, García A, Cabero A, Reventós J. Detection of c-erbB-2/neu and fibroblast growth factor-3/INT-2 but not epidermal growth factor receptor gene amplification in endometrial cancer by differential polymerase chain reaction. ***Cancer***, 75, 2139-2146, 1995.
- 3) **Esteller M**, Martínez-Palones JM, García A, Xercavins J, Reventós J. High rate of *MDR-1* and heterogeneous pattern of *MRP* expression without gene amplification in endometrial cancer. ***International Journal of Cancer***, 63, 798-803, 1995.

1997

- 4) Cairns P, Okami K, Halachmi S, Halachmi N, **Esteller M**, Herman JG, Jen J, Isaacs WB, Bova GS, Sidransky D. Frequent inactivation of *PTEN/MMAC1* in primary prostate cancer. ***Cancer Research***, 57, 4997-5000, 1997.
- 5) **Esteller M**, Martínez-Palones JM, Garcia A, Xercavins J, Reventós J. Detection of clonality and genetic alterations in endometrial pipelle biopsy and its surgical specimen counterpart. ***Laboratory Investigation***, 76, 109-116, 1997.
- 6) **Esteller M**, Garcia A, Martínez-Palones JM, Xercavins J, Reventós J. Susceptibility to endometrial cancer: allelism at *p53*, glutathione-S-transferase (*GSTM1* and *GSTT1*) and cytochrome P-450 (*CYP1A1*) loci. ***British Journal of Cancer***, 75, 1385-1388, 1997.
- 7) **Esteller M**, Garcia A, Martínez-Palones JM, Xercavins J, Reventós J. The clinicopathological significance of K-RAS point mutation and gene amplification in endometrial cancer. ***European Journal of Cancer***, 33, 1572-1577, 1997.
- 8) **Esteller M**, Garcia A, Martínez-Palones JM, Xercavins J, Reventós J. Germ line polymorphisms in cytochrome-P450 1A1 (C4887 CYP1A1) and methylenetetrahydrofolate reductase (MTHFR) genes and endometrial cancer susceptibility ***Carcinogenesis***, 18, 2307-2311, 1997.

1998

- 9) **Esteller M**, Levine R, Hedrick Ellenson L, Baylin SB, Herman JG. *MLH1* promoter hypermethylation is associated with the microsatellite instability phenotype in sporadic endometrial carcinomas. ***Oncogene***, 17, 2413-2417, 1998.
- 10) Cairns P, Evron E, Okami K, Halachmi N, **Esteller M**, Herman JG, Bose S, Wang SI, Parsons R, Sidransky D. Point mutation and homozygous deletion of PTEN/MMAC1 in primary bladder cancers. ***Oncogene***, 16, 3215-3217, 1998.
- 11) **Esteller M**, Corn PG, Urena JM, Gabrielson E, Baylin SB, Herman JG. Inactivation of glutathione-S-transferase P1 by promoter hypermethylation in human neoplasia. ***Cancer Research***, 58, 4515-4518, 1998.

1999

- 12) **Esteller M**, Sanchez-Cespedes M, Rosell R, Baylin SB, Sidransky D, Herman JG. Detection of aberrant promoter methylation of tumor suppressor genes in serum DNA from non-small cell lung cancer patients. *Cancer Research*, 59, 67-70, 1999.
- 13) **Esteller M**, Hamilton SR, Burger PC, Baylin SB, Herman JG. Inactivation of the DNA repair gene *O*⁶-methylguanine-DNA methyltransferase by promoter hypermethylation is a common event in primary human neoplasia. *Cancer Research*, 59, 793-797, 1999.
- 14) Ahrendt SA, Chow JT, Xu L, Yang SC, Eisenberg CF, Wu L, **Esteller M**, Herman JG, Wu L, Decker PA, Jen J, Sidransky D. Molecular detection of tumor cells in bronchoalveolar lavage fluid from patients with early stage lung cancer. *Journal of the National Cancer Institute*, 91, 332-339, 1999.
- 15) **Esteller M**, Garcia A, Martínez-Palones JM, Xercavins J, Reventós J. Clinicopathological features and genetic alterations in endometrioid carcinoma of the uterus with villoglandular differentiation. *American Journal of Clinical Pathology*, 111, 336-342, 1999.
- 16) Fleisher SA *, **Esteller M** *, Yin J, Newkirk C, Zou TT, Abraham JM, Wang S, Kong D, Smolinski KN, Shi YQ, Rhyu MG, Powell SM, Tamura G, Herman JG, Mettler SR. Hypermethylation of the hMLH1 gene promoter in human gastric cancers with microsatellite instability. *Cancer Research*, 59, 1090-1095, 1999. * Both authors contributed equally to this work.
- 17) Corn PG, Kuerbitz SJ, Van Noesel MM, **Esteller M**, Compitello N, Baylin SB, Herman JG. Transcriptional silencing of the *p73* gene in acute lymphoblastic leukemia and Burkitt's lymphoma is associated with 5' CpG island methylation. *Cancer Research* 59, 3352-3356, 1999.
- 18) Sanchez-Cespedes M, **Esteller M**, Hibi K, Cope FO, Westra WH, Piantadosi S, Herman JG, Jen J, Sidransky D. Molecular detection of neoplastic cells in lymph nodes of metastatic colorectal cancer patients predicts recurrence. *Clinical Cancer Research* 5, 2450-4, 1999.
- 19) **Esteller M**, Garcia A, Martínez-Palones JM, Xercavins J, Reventós J. Endometrial carcinoma in tamoxifen-treated breast cancer patient: clinicopathological, immunohistochemical and genetic analysis. *International Journal of Gynecological Pathology* 18, 293-6, 1999.
- 20) **Esteller M**, Catusus L, Matias-Guiu X, Mutter G, Baylin SB, Prat J, Herman JG. *hMLH1* promoter hypermethylation is an early event in endometrial tumorigenesis. *American Journal of Pathology* 155, 1767-72, 1999.

2000

- 21) **Esteller M**, Garcia-Foncillas J, Andion E, Goodman SN, Hidalgo OF, Vanaclocha V, Baylin SB, Herman JG. Inactivation of the DNA-repair gene MGMT and the clinical response of gliomas to alkylating agents. *New England Journal of Medicine* 343, 1350-4, 2000.
- 22) **Esteller M**, Avyzinete E, Corn P, Lothe R, Baylin SB, Aaltonen L, Herman JG. Epigenetic inactivation of *LKB1* in primary tumors associated with the Peutz-Jeghers syndrome. *Oncogene* 19, 164-8, 2000.
- 23) **Esteller M**, Tortola S, Toyota M, Capella G, Peinado MA, Baylin SB, Herman JG. Hypermethylation-associated inactivation of *p14^{ARF}* is independent of *p16^{INK4a}* methylation and *p53* mutational status. *Cancer Research* 60,129-33, 2000.
- 24) Sanchez-Cespedes M, **Esteller M**, Wu L, Narrowz-Danish H, Koch W, Baylin SB, Herman JG, Sidransky D. Gene promoter hypermethylation in tumors and serum of head and neck cancer patients. *Cancer Research* 60, 892-5, 2000.
- 25) **Esteller M**, Toyota M, Sanchez-Cespedes M, Issa JP, Capella G, Peinado MA, Baylin SB, Herman JG. Inactivation of the DNA repair gene *O*⁶-methylguanine-DNA methyltransferase by promoter hypermethylation is associated with G to A mutations in K-ras in colorectal tumorigenesis. *Cancer Research* 60, 2368-71, 2000.
- 26) Trojan J, Brieger A, Raedle J, **Esteller M**, Zeuzem S. 5'-CpG island methylation of the *LKB1/STK11* promoter and allelic loss at chromosome 19p13.3 in sporadic colorectal cancer. *GUT* 47, 272-6, 2000.

- 27) **Esteller M**, Sparks A, Toyota M, Sanchez-Cespedes M, Capella G, Peinado MA, Gozalez S, Tarafa G, Sidransky D, Meltzer SJ. Analysis of adenomatous polyposis coli promoter hypermethylation in human cancer. *Cancer Research* 60, 4366-71, 2000.
- 28) Fleisher AS, **Esteller M**, Wang S, Tamura G, Suzuki H, Yin J, Herman JG, Mettler SJ. Microsatellite instability in inflammatory bowel disease-associated neoplastic lesions is associated with hypermethylation and diminished expression of the DNA mismatch repair gene, hMLH1. *Cancer Research* 60, 4864-8, 2000.
- 29) **Esteller M**, Silva JM, Dominguez G, Bonilla F, Matias-Guiu X, Bussaglia E, Lerma E, Prat J, Harkes IC, Repasky EA, Gabrielson E, Schutte M, Baylin SB, Herman JG. Promoter hypermethylation and BRCA1 inactivation in sporadic breast and ovarian tumors. *Journal of the National Cancer Institute* 92, 564-9, 2000.

2001

- 30) Soengas MS, Capodiceci P, Polsky D, Mora J, **Esteller M**, Optiz-Araya X, McCombie R, Herman JG, Gerald WL, Lazebnik YA, Cordon-Cardo C, Lowe SW. Inactivation of the apoptosis effector Apaf-1 in melanoma. *Nature* 409, 207-11, 2001.
- 31) Fleisher AS, **Esteller M**, Wang S, Tamura G, Suzuki H, Yin J, Herman JG, Mettler SJ. Hypermethylation of the hMLH1 gene promoter is associated with microsatellite instability in early human gastric neoplasia. *Oncogene* 20, 329-335, 2001.
- 32) **Esteller M**, Gonzalez S, Risques RA, Marcuello E, Mangués R, Germa JR, Herman JG, Capella G, Peinado MA. K-ras and p16 alterations confer poor prognosis in human colorectal cancer. *Journal of Clinical Oncology* 19, 299-304, 2001.
- 33) Hedelfank I, Duggan D, Chen Y, Radmacher M, Bittner M, Simon R, Meltzer P, Gusterson B, **Esteller M**, Kallioniemi OP, Wilfond B, Borg A, Trent J. Gene-expression profiles in hereditary breast cancer. *New England Journal of Medicine* 344, 539-48, 2001.
- 34) Sanchez-Cespedes M, Anthony P Decker, Kara M Doffek, **Esteller M**, Westra WH, Enas A Alawi, Herman JG, Demeure MJ, Sidransky D and Ahrendt SA. Increased loss of chromosome 9p21 but not p16 inactivation in primary non-small cell lung cancer from smokers. *Cancer Research* 61, 2092-2096, 2001.
- 35) **Esteller M**, Cordon-Cardo C, Corn PG, Meltzer SJ, Pohar KS, Watkins DN, Capella G, Peinado MA, Matias-Guiu X, Prat J, Baylin SB, Herman JG. *p14^{ARF}* silencing by promoter hypermethylation mediates abnormal intracellular localization of MDM2. *Cancer Research* 61, 2816-21, 2001.
- 36) **Esteller M**, Corn PG, Baylin SB, Herman JG. A gene hypermethylation profile of human cancer. *Cancer Research* 61, 3225-9, 2001.
- 37) **Esteller M**, Risques RA, Toyota M, Capella G, Moreno V, Peinado MA, Baylin SB and Herman JG. Promoter Hypermethylation of the DNA Repair Gene O⁶-Methylguanine-DNA Methyltransferase is Associated with the Presence of G:C to A:T Transition Mutations in p53 in Human Colorectal Tumorigenesis. *Cancer Research* 61, 4689-92, 2001.
- 38) Caballero OL, Cohen D, Liu Q, **Esteller M**, Bonacum, White P, Engles J, Yochem R, Herman JG, Westra WH, Lengauer C, Sidransky D, Jen J. Loss of chromosome arms 3p and 9p and inactivation of p16INK4a in normal epithelium of patients with primary lung cancer. *Genes, Chromosomes and Cancer* 32,119-125, 2001.
- 39) Cairns P, **Esteller M**, Herman JG, Schoenberg M, Jeronimo C, Sanchez-Cespedes M, Chow NH, Grasso M, Wu L, Westra WB, Sidransky D. Molecular Detection of Prostate Cancer in Urine by GSTP1 Hypermethylation. *Clinical Cancer Research*, 7, 2727-30, 2001.
- 40) Sanchez-Cespedes M, Parrella P, Nomoto S, Cohen D, Xiao Y, **Esteller M**, Jeronimo C, Jordan RC, Nicol T, Koch WM, Schoenberg M, Mazzarelli P, Fazio VM, Sidransky D. Identification of a mononucleotide repeat as a major target for mitochondrial DNA alterations in human tumors. *Cancer Research* 61, 7015-9, 2001.
- 41) **Esteller M**, Fraga MF, Guo M, Garcia-Foncillas J, Hedelfank I, Godwin AK, Trojan J, Vaurs-Barrière C, Bignon Y-J, Ramus S, Benitez J, Akiyama Y, Caldes T, Canal MJ, Rodriguez R, Capella

G, Peinado MA, Borg A, Aaltonen LA, Ponder BA, Baylin SB, Herman JG. DNA methylation patterns in hereditary human cancer mimics sporadic tumorigenesis. *Human Molecular Genetics*, 10, 3001-7, 2001.

2002

- 42) **Esteller M**, Gaidano G, Goodman SN, Zagonel V, Capello D, Botto B, Rossi D, Gloghini A, Vitolo U, Carbone A, Baylin SB, Herman JG. Hypermethylation of the DNA repair gene O6-methylguanine DNA methyltransferase and survival of patients with diffuse large B-cell lymphoma. *The Journal of the National Cancer Institute*, 94, 26-32, 2002.
- 43) Laiho P, Launonen V, Lahermo P, **Esteller M**, Guo M, Herman JG, Mecklin JP, Järvinen H, Sistonen P, Kim KM, Shibata D, Houlston RR, Aaltonen LA. Low-level microsatellite instability in most colorectal carcinomas. *Cancer Research*, 62, 1166-70, 2002.
- 44) Osorio A, de la Hoya M, Rodriguez-Lopez R, Martinez-Ramirez M, Cazorla A, Granizo JJ, **Esteller M**, Rivas C, Caldes T, Benitez J. Loss of heterozygosity analysis at the BRCA loci in tumor samples from patients with familial breast cancer. *International Journal of Cancer*, 99, 305-9, 2002.
- 45) Fraga MF, Uriol E, Diego LB, Berdasco M, **Esteller M**, Cañal MJ, Rodriguez R. High performance capillary electrophoretic method for the quantification of 5-methyl 2'-deoxycytidine in genomic DNA: application to plant, animal and human cancer tissues. *Electrophoresis*, 23, 1677-1681, 2002.
- 46) Sanchez-Cespedes M, Parella P, **Esteller M**, Nomoto S, Trink B, Engles JM, Westra WH, Herman JG, Sidransky D. Inactivation of LKB1/STK11 is a common event in adenocarcinomas of the lung. *Cancer Research*, 62, 3659-3662, 2002.
- 47) Lerma E, **Esteller M**, Herman JG, Prat J. Alterations of the p16/Rb/cyclin-D1 pathway in vulvar carcinoma, vulvar intraepithelial neoplasia, and lichen sclerosus. *Human Pathology*, 33, 1120-5, 2002.
- 48) Paz MF, Avila S, Fraga MF, Sanchez-Cespedes M, Guo M, Sidransky D, Capella G, Peinado MA, Baylin SB, Herman JG, **Esteller M**. Germline variants in methyl-group metabolism genes and susceptibility to DNA methylation in normal tissues and human primary tumors. *Cancer Research*, 62, 4519-24, 2002.
- 49) **Esteller M**, Guo M, Moreno V, Peinado MA, Capella G, Galm O, Baylin SB, Herman JG. Hypermethylation-associated inactivation of the cellular retinol-binding-protein 1 gene in human cancer. *Cancer Research*, 62, 5902-5, 2002.
- 50) Fournier C, Goto Y, Ballestar E, Delavai K, Hever AM, **Esteller M**, Feil R. Allele-specific histone lysine methylation marks regulatory regions at imprinted mouse genes. *EMBO J*, 21, 6560-70, 2002.
- 51) Tort F, Hernandez S, Bea S, Martinez A, Pinyol M, **Esteller M**, Puig X, Camacho E, Hernandez L, Sanchez M, Nayach I, Fernandez PL, Colomer D, Campo E. CHK2 protein downregulation and infrequent genetic alterations in aggressive types of non-Hodgkin's lymphomas. *Blood*, 100, 4602-8, 2002.
- 52) Moreno-Bueno G, Hardisson D, Sanchez C, Sarrio D, Cassia R, Garcia-Rostan G, Prat J, Guo M, Herman JG, Matias-Guiu X, **Esteller M**, Palacios J. Abnormalities of the APC/beta-catenin pathway in endometrial cancer. *Oncogene*, 21, 7981-90, 2002.
- 53) **Esteller M**, Fraga MF, Paz MF, Campo E, Colomer D, Novo FJ, Calasanz MJ, Galm O, Guo M, Benitez J, Herman JG. Cancer epigenetics and methylation. *Science*, 297, 1807-8, 2002.

2003

- 54) Ballestar E, Paz MF, Valle L, Wei S, Fraga MF, Espada J, Cigudosa JC, Huang TH, **Esteller M**. Methyl-CpG binding proteins identify novel sites of epigenetic inactivation in human cancer. *EMBO J*, 22, 6335-45, 2003.
- 55) Chen WY, Zeng X, Carter MG, Morrell CN, Yen RWC, **Esteller M**, Watkins DN, Herman JG, Mankowski JL, Baylin SB. Heterozygous disruption of Hic-1 predisposes mice to a gender-dependent spectrum of malignant tumors. *Nature Genetics*, 33, 197-202, 2003.

- 56) Galm O, Yoshikawa H, **Esteller M**, Osieka R, Herman JG. SOCS-1, a negative regulator of cytokine signaling, is frequently silenced by methylation in multiple myeloma. *Blood*, 101, 2784-8, 2003.
- 57) Bolos V, Peinado H, Perez-Moreno MA, Fraga MF, **Esteller M**, Cano A. The transcription factor Slug represses *E-cadherin* expression and induces epithelial-mesenchymal transitions: A comparison with Snail and E47 repressors. *Journal of Cell Science*, 116, 499-511, 2003.
- 58) Paz MF, Fraga MF, Avila S, Guo M, Baylin SB, Herman JG, **Esteller M**. A systematic profile of DNA methylation in human cancer cell lines. *Cancer Research*, 63, 1114-21, 2003.
- 59) Fraga MF, Ballestar E, Montoya G, Taysavang P, Wade PA, **Esteller M**. The affinity of different MBD proteins for a specific methylated locus depends on their intrinsic binding properties. *Nucleic Acids Research*, 31, 1765-74, 2003.
- 60) Hernandez-Boluda JC, Cervantes F, Colomer D, Vela MC, Costa D, Paz MF, **Esteller M**, Montserrat E. Genomic p16 abnormalities in the progression of chronic myeloid leukemia to the blast crisis: a sequential study of 42 patients. *Experimental Hematology*, 31, 204-10, 2003.
- 61) Moreno-Bueno G, Hardisson D, Sarrío D, Sanchez C, Cassia R, Prat J, Herman JG, **Esteller M**, Matias-Guiu X, Palacios P. Abnormalities of E- and P-cadherin and catenin (β , γ -catenin and p120^{cas}) expression in endometrial cancer and endometrial atypical hyperplasia. *Journal of Pathology*, 199, 471-8, 2003.
- 62) Holst CR, Nuovo GJ, **Esteller M**, Chew K, Baylin SB, Herman JG, Tlsty TD. Methylation of *p16*^{INK4a} Promoters Occurs *In Vivo* in Histologically Normal Human Mammary Epithelia. *Cancer Research*, 63, 1596-601, 2003.
- 63) Fraga MF, Ballestar E, **Esteller M**. Capillary electrophoresis-based method to quantitate DNA-protein interactions. *Journal of Chromatography*, 789, 431-5, 2003.
- 64) Sarrío D, Moreno-Bueno D, Hardisson D, Sanchez C, Guo M, Herman JG, Gamallo C, **Esteller M**, Palacios J. Epigenetic and genetic alterations of APC and CDH1 genes in lobular breast cancer: relationships with abnormal E-cadherin and catenin expression, and microsatellite instability. *International Journal of Cancer*, 106, 208-15, 2003.
- 65) Palmisano WA, Crume KP, Winters SA, Toyota M, **Esteller M**, Joste N, Baylin SB, Belinsky SA. Aberrant promoter methylation of the transcription factor genes PAX5 alpha and beta in human cancers. *Cancer Research* 63, 4620-5, 2003.
- 66) Villar-Garea A, Fraga MF, Espada J, **Esteller M**. Procaine is a DNA demethylating agent with growth-inhibitory effects in human cancer cells. *Cancer Research*, 63, 4984-9, 2003.
- 67) Akiyama Y, Watkins N, Suzuki H, Jair KW, van Engeland M, **Esteller M**, Sakai H, Ren CY, Yuasa Y, Herman JG, Baylin SB. GATA-4 and GATA-5 transcription factor genes and potential downstream antitumor target genes are epigenetically silenced in colorectal and gastric cancer. *Molecular and Cellular Biology*, 23, 8429-39, 2003.
- 68) Paz MF, Wei S, Cigudosa JC, Rodriguez-Perales S, Peinado MA, Huang T, **Esteller M**. Genetic unmasking of epigenetically silenced tumor suppressor genes in colon cancer cells deficient in DNA methyltransferases. *Human Molecular Genetics*, 12, 2209-19, 2003.

2004

- 69) Alaminos M, Davalos V, Cheung NK, Gerald WL, **Esteller M**. Clustering of gene hypermethylation associated with clinical risk groups in neuroblastoma. *The Journal of The National Cancer Institute*, 96, 1208-19, 2004.
- 70) Peinado H, Ballestar E, **Esteller M**, Cano A. Snail mediates E-cadherin repression by the recruitment of the Sin3A/histone deacetylase 1 (HDAC1)/HDAC2 complex. *Molecular and Cellular Biology*, 24, 306-19, 2004.
- 71) Nieto M, Samper E, Fraga MF, Gonzalez De Buitrago G, **Esteller M**, Serrano M. The absence of p53 is critical for the induction of apoptosis by 5-aza-2'-deoxycytidine. *Oncogene*, 23, 735-43, 2004.

- 72) Medina PP, Carretero J, Fraga MF, **Esteller M**, Sidransky D, Sanchez-Cespedes M. Genetic and Epigenetic screening for gene alterations of the chromatin-remodeling factor, SMARCA4/BRG1, in lung tumors. *Genes Chromosomes Cancer*, 41, 170-177, 2004.
- 73) Musulen E, Moreno V, Reyes G, Sancho FJ, Peinado MA, **Esteller M**, Herman JG, Combalia N, Rey M, Capella G. Standardized approach for microsatellite instability detection in gastric carcinomas. *Human Pathology*, 35, 335-342, 2004.
- 74) Rossi D, Capello D, Gloghini A, Franceschetti S, Paulli M, Bhatia K, Saglio G, Vitolo U, Pileri SA, **Esteller M**, Carbone A, Gaidano G. Aberrant promoter methylation of multiple genes throughout the clinico-pathologic spectrum of B-cell neoplasia. *Haematologica*, 89, 154-64, 2004.
- 75) Cascon A, Ruiz-Llorente S, Fraga MF, Leton R, Telleria D, Sastre J, Jose Diez J, Martinez Diaz-Guerra G, Diaz Perez JA, Benitez J, **Esteller M**, Robledo M. Genetic and epigenetic profile of sporadic pheochromocytomas. *J Med Genet*, 41, E30, 2004.
- 76) Blanco D, Vicent S, Elizegi E, Pino I, Fraga MF, **Esteller M**, Saffiotti U, Lecanda F, Montuenga LM Altered expression of adhesion molecules and epithelial-mesenchymal transition in silica-induced rat lung carcinogenesis. *Laboratory Investigation*, 84, 999-1012, 2004.
- 77) Fernandez P, Carretero J, Medina PP, Jimenez AI, Rodriguez-Perales S, F Paz M, Cigudosa JC, **Esteller M**, Lombardia L, Morente M, Sanchez-Verde L, Sotelo T, Sanchez-Cespedes M Distinctive gene expression of human lung adenocarcinomas carrying LKB1 mutations. *Oncogene*, 23, 5084-91, 2004.
- 78) Pellisé M, Castells A, Ginès A, Agrelo R, Solé M, Castellví-Bel S, Fernández-Esparrach G, Llach J, **Esteller M**, Bordas JM, Piqué JM. Detection of Lymph Node Micrometastases by Gene Promoter Hypermethylation in Samples Obtained by Endosonography- Guided Fine-Needle Aspiration Biopsy. *Clinical Cancer Research*, 10, 4444-9, 2004.
- 79) Douglas DB, Akiyama Y, Carraway H, Belinsky SA, **Esteller M**, Gabrielson E, Weitzman S, Williams T, Herman JG, Baylin SB. Hypermethylation of a Small CpGuanine-Rich Region Correlates with Loss of Activator Protein-2 Expression during Progression of Breast Cancer . *Cancer Research*, 64, 1611-20, 2004.
- 80) Lund G, Andersson L, Lauria M, Lindholm M, Fraga MF, Villar-Garea A, Ballestar E, **Esteller M**, Zaina S. DNA methylation polymorphisms precede any histological sign of atherosclerosis in mice lacking apolipoprotein E. *Journal of Biological Chemistry* 279, 29147-54, 2004.
- 81) Paz MF, Yaya-Tur R, Rojas-Marcos I, Reynes G, Pollan M, Aguirre-Cruz L, García-Lopez JL, Piquer J, Safont MJ, Balaña C, Sanchez-Cespedes M, García-Villanueva M, Arribas L, and **Esteller M**. CpG Island Hypermethylation of the DNA Repair Enzyme Methyltransferase Predicts Response to Temozolomide in Primary Gliomas. *Clinical Cancer Research*, 10, 4933-8, 2004.
- 82) de Caceres II, Battagli C, **Esteller M**, Herman JG, Dulaimi E, Edelson MI, Bergman C, Ehya H, Eisenberg BL, Cairns P. Tumor cell-specific BRCA1 and RASSF1A hypermethylation in serum, plasma, and peritoneal fluid from ovarian cancer patients. *Cancer Research* 64, 6476-81, 2004.
- 83) Sanchez-Beato M, Sanchez E, Garcia JF, Perez-Rosado A, Montoya MC, Fraga M, Jesus Artiga M, Navarrete M, Abaira V, Morente M, **Esteller M**, Koseki H, Vidal M, Piris MA. Abnormal PcG protein expression in Hodgkin's lymphoma. Relation with E2F6 and NFkappaB transcription factors. *Journal of Pathology*. 204, 528-37, 2004.
- 84) Lind GE, Thorstensen L, Lovig T, Meling GI, Hamelin R, Rognum TO, **Esteller M**, Lothe RA. A CpG island hypermethylation profile of primary colorectal carcinomas and colon cancer cell lines. *Molecular Cancer*. 3, 28-33, 2004.
- 85) Matarazzo MR, Lembo F, Angrisano T, Ballestar E, Ferraro M, Pero R, De Bonis ML, Bruni CB, **Esteller M**, D'Esposito M, Chiariotti L. In vivo analysis of DNA methylation patterns recognized by specific proteins: coupling CHIP and bisulfite analysis. *Biotechniques*. 666-73, 2004.
- 86) Irimia M, Fraga MF, Sanchez-Cespedes M, **Esteller M**. CpG island promoter hypermethylation of the Ras-effector gene NRE1A occurs in the context of a wild-type K-ras in lung cancer. *Oncogene* 23. 8695-9, 2004.
- 87) Ropero S, Setien F, Espada J, Fraga MF, Herranz M, Asp J, Benassi MS, Franchi A, Patino A, Ward LS, Bovee J, Cigudosa JC, Wim W, **Esteller M**. Epigenetic loss of the familial tumor-suppressor

- gene exostosin-1 (EXT1) disrupts heparan sulfate synthesis in cancer cells. *Human Molecular Genetics* 13, 2753-65 2004.
- 88) Espada J, Ballestar E, Fraga MF, Villar-Garea A, Juarranz A, Stockert JC, Robertson KD, Fuks F, **Esteller M**. Human DNA methyltransferase 1 is required for maintenance of the histone H3 modification pattern. *Journal of Biological Chemistry*, 279, 37175-84, 2004.
- 89) Fraga MF, Herranz M, Espada J, Ballestar E, Paz MF, Ropero S, Erkek E, Bozdogan O, Peinado H, Niveleau A, Mao JH, Balmain A, Cano A, **Esteller M**. A mouse skin multistage carcinogenesis model reflects the aberrant DNA methylation patterns of human tumors. *Cancer Research*, 64, 5527-34, 2004.

2005

- 90) Fraga MF, Ballestar E, Villar-Garea A, Boix-Chornet M, Espada J, Schotta G, Bonaldi T, Haydon C, Ropero S, Petrie K, Iyer NG, Pérez-Rosado A, Calvo E, Lopez JA, Cano A, Calasanz MJ, Colomer D, Piris MA, Ahn N, Imhof A, Caldas C, Jenuwein T, **Esteller M**. Loss of acetylation at Lys16 and trimethylation at Lys20 of histone H4 is a common hallmark of human cancer. *Nature Genetics*, 37, 391-400, 2005.
- 91) Alvarez S, Diaz-Uriarte R, Osorio A, Barroso A, Melchor L, Paz MF, Honrado E, Rodriguez R, Urioste M, Valle L, Diez O, Cigudosa JC, Dopazo J, **Esteller M**, Benitez J. A predictor based on the somatic genomic changes of the BRCA1/BRCA2 breast cancer tumors identifies the non-BRCA1/BRCA2 tumors with BRCA1 promoter hypermethylation. *Clinical Cancer Research*, 11, 1146-53, 2005.
- 92) Frigola J, Sole X, Paz MF, Moreno V, **Esteller M**, Capella G, Peinado MA. Differential DNA hypermethylation and hypomethylation signatures in colorectal cancer. *Human Molecular Genetics*, 14, 319-26, 2005.
- 93) Galaz S, Espada J, Stockert JC, Pacheco M, Sanz-Rodriguez F, Arranz R, Rello S, Canete M, Villanueva A, **Esteller M**, Juarranz A. Loss of E-cadherin mediated cell-cell adhesion as an early trigger of apoptosis induced by photodynamic treatment. *J Cell Physiol*, 205, 86-96, 2005.
- 94) Ballestar E, Ropero S, Alaminos M, Armstrong J, Setien F, Agrelo R, Fraga MF, Herranz M, Avila S, Pineda M, Monros E, **Esteller M**. The impact of MECP2 mutations in the expression patterns of Rett syndrome patients. *Human Genetics*, 116, 91-104, 2005.
- 95) Yague J, Nunez A, Boix M, **Esteller M**, Alfonso P, Casal JI. Oxidation of carboxyamidomethyl cysteine may add complexity to protein identification. *Proteomics*, 5, 2761-8, 2005.
- 96) Espada J, Peinado H, **Esteller M**, Cano A. Direct metabolic regulation of beta-catenin activity by the p85alpha regulatory subunit of phosphoinositide 3-OH kinase. *Exp Cell Res*, 305, 409-17, 2005.
- 97) Medina PP, Carretero J, Ballestar E, Angulo B, Lopez-Rios F, **Esteller M**, Sanchez-Cespedes M. Transcriptional targets of the chromatin-remodelling factor SMARCA4/BRG1 in lung cancer cells. *Human Molecular Genetics*, 14, 973-82, 2005.
- 98) Lluís F, Ballestar E, Suelves M, **Esteller M**, Muñoz-Canoves P, Medina PP. E47 phosphorylation by p38 MAPK promotes MyoD/E47 association and muscle-specific gene transcription. *EMBO Journal*, 24, 974-84, 2005.
- 99) Gallagher WM, Bergin OE, Rafferty M, Kelly ZD, Nolan IM, Fox EJ, Culhane AC, McArdle L, Fraga MF, Hughes L, Currid CA, O'mahony F, Byrne A, Murphy AA, Moss C, McDonnell S, Stallings RL, Plumb JA, **Esteller M**, Brown R, Dervan PA, Easty DJ. Multiple markers for melanoma progression regulated by DNA methylation: insights from transcriptomic studies. *Carcinogenesis*, 26, 1856-67, 2005.
- 100) Galm O, Suzuki H, Akiyama Y, **Esteller M**, Brock MV, Osieka R, Baylin SB, Herman JG. Inactivation of the tissue inhibitor of metalloproteinases-2 gene by promoter hypermethylation in lymphoid malignancies. *Oncogene*, 24, 4799-805, 2005.
- 101) Agrelo R, Setien F, Espada J, Artiga MJ, Rodriguez M, Perez-Rosado A, Sanchez-Aguilera A, Fraga MF, Piris MA, **Esteller M**. Inactivation of the lamin A/C gene by CpG island promoter

- hypermethylation in hematologic malignancies, and its association with poor survival in nodal diffuse large B-cell lymphoma. *Journal of Clinical Oncology*, 23, 3940-3947, 2005.
- 102) Alaminos M, Davalos V, Ropero S, Setien F, Paz MF, Herranz M, Fraga MF, Mora J, Cheung NK, Gerald WL, **Esteller M**. EMP3, a myelin-related gene located in the critical 19q13.3 region, is epigenetically silenced and exhibits features of a candidate tumor suppressor in glioma and neuroblastoma. *Cancer Research*, 65, 2565-2571, 2005.
- 103) Herranz M, Martin-Caballero J, Fraga MF, Ruiz-Cabello J, Flores JM, Desco M, Marquez V, **Esteller M**. The novel DNA methylation inhibitor zebularine is effective against the development of murine T-cell lymphoma. *Blood* 107, 1174-7, 2006.
- 104) Gonzalo S, García-Cao M, Fraga MF, Schotta G, Peters A, Cotter SE, Eguía R, Dean DC, **Esteller M**, Jenuwein T, Blasco MA. Role of the RB family in stabilizing histone methylation at constitutive heterochromatin. *Nature Cell Biology*, 7, 420-428, 2005.
- 105) Fraga MF, Ballestar E, Paz MF, Ropero S, Setien F, Ballestar ML, Heine-Suner D, Cigudosa JC, Urioste M, Benitez J, Boix-Chornet M, Sanchez-Aguilera A, Ling C, Carlsson E, Poulsen P, Vaag A, Stephan Z, Spector TD, Wu YZ, Plass C, **Esteller M**. Epigenetic differences arise during the lifetime of monozygotic twins. *Proc Natl Acad Sci USA*, 102, 10604-10609, 2005.

2006

- 106) Ropero S, Fraga MF, Ballestar E, Hamelin R, Yamamoto H, Boix-Chornet M, Caballero R, Alaminos M, Setien F, Paz MF, Herranz M, Palacios J, Arango D, Orntoft TF, Aaltonen LA, Schwartz Jr S., **Esteller M**. A truncating mutation of HDAC2 in human cancers confers resistance to histone deacetylase inhibition. *Nature Genetics*, 38, 566-9, 2006.
- 107) Cebrian A, Pharoah PD, Ahmed S, Ropero S, Fraga MF, Smith PL, Conroy D, Luben R, Perkins B, Easton DF, Dunning AM, **Esteller M**, Ponder BA. Genetic variants in epigenetic genes and breast cancer risk. *Carcinogenesis*, 27, 1661-9, 2006.
- 108) Tang M, Torres-Lanzas J, Lopez-Rios F, **Esteller M**, Sanchez-Cespedes M. Wnt signaling promoter hypermethylation distinguishes lung primary adenocarcinomas from colorectal metastasis to the lung. *International Journal of Cancer*, 119, 2603-6, 2006.
- 109) Martinez R, Schackert G, **Esteller M**. Hypermethylation of the proapoptotic gene TMS1/ASC: prognostic importance in glioblastoma multiforme. *J Neurooncol*, 82(2):133-9 2006.
- 110) Lind G, Skotheim R, Fraga M, Abeler V, **Esteller M**, Lothe R. Novel epigenetically deregulated genes in testicular cancer include homeobox genes and SCGB3A1 (HIN-1). *Journal of Pathology*, 210, 441-9, 2006.
- 111) Rodriguez J, Frigola J, Vendrell E, Risques RA, Fraga MF, Morales C, Moreno V, **Esteller M**, Capella G, Ribas M, Peinado MA. Chromosomal Instability Correlates with Genome-wide DNA Demethylation in Human Primary Colorectal Cancers. *Cancer Research*, 66, 8462-9468, 2006.
- 112) Boix-Chornet M1, Fraga MF, Villar-Garea A, Caballero R, Espada J, Nuñez A, Casado J, Largo C, Casal JI, Cigudosa JC, Franco L, **Esteller M**, Ballestar E. Release of hypoacetylated and trimethylated histone H4 is an epigenetic marker of early apoptosis. *J Biol Chem*, 281, 13540-7, 2006
- 113) Lopez-Serra L, Ballestar E, Fraga MF, Alaminos M, Setien F, **Esteller M**. A Profile of Methyl-CpG Binding Domain Protein Occupancy of Hypermethylated Promoter CpG Islands of Tumor Suppressor Genes in Human Cancer. *Cancer Research*, 66, 8342-8346, 2006.
- 114) Vire E, Brenner C, Deplus R, Blanchon L, Fraga MF, Didelot C, Morey L, Van Eynde A, Bernard D, Vanderwinden JM, Bollen M, **Esteller M**, Di Croce L, Launoit Y, Fuks F. The Polycomb group protein EZH2 directly controls DNA methylation. *Nature*, 439, 871-874, 2006.
- 115) Gonzalo SW, Jaco I, Fraga MF, Chen T, Li, E, **Esteller M**, Blasco MA. DNA methyltransferases control telomere length and telomere recombination in mammalian cells. *Nature Cell Biology*, 8, 416-24, 2006.
- 116) Agrelo R, Cheng WS, Setien F, Ropero S, Espada J, Fraga MF, Herranz M, Paz MF, Sanchez-Cespedes M, Artiga MJ, Guerrero D, Castells A, von Kobbe C, Bohr VA, **Esteller M**. Epigenetic

inactivation of the premature aging Werner syndrome gene in human cancer. *Proc Natl Acad Sci USA*, 102, 103, 8822-7, 2006.

2007

- 117) Lujambio A, Ropero S, Ballestar E, Fraga MF, Cerrato C, Setien F, Casado S, Suarez-Gauthier A, Montserrat Sanchez-Céspedes M, Gitt A, Spiteri I, Das PP, Caldas C, Miska E, **Esteller M**. Genetic Unmasking of an Epigenetically Silenced microRNA in Human Cancer Cells. *Cancer Research*, 67, 1424-9, 2007.
- 118) Matarazzo MR, De Bonis ML, Strazzullo M, Cerase A, Ferraro M, Vastarelli P, Ballestar E, **Esteller M**, Kudo S, D'Esposito M. Multiple binding of methyl-CpG and polycomb proteins in long-term gene silencing events. *J Cell Physiol*. 210, 711-9, 2007.
- 119) Yoshikawa H, Matsubara K, Zhou X, Okamura S, Kubo T, Murase Y, Shikauchi Y, **Esteller M**, Herman JG, Wei Wang X, Harris CC. WNT10B Functional Dualism: {beta}-Catenin/Tcf-dependent Growth Promotion or Independent Suppression with Deregulated Expression in Cancer. *Mol Biol Cell*, 18, 4292-303, 2007.
- 120) Perrin D, Ballestar E, Fraga MF, Frappart L, **Esteller M**, Guerin JF, Dante R. Specific hypermethylation of LINE-1 elements during abnormal overgrowth and differentiation of human placenta. *Oncogene*, 26, 2518-24, 2007.
- 121) Honrado E, Osorio A, Milne RL, Paz MF, Melchor L, Cascon A, Urioste M, Cazorla A, Diez O, Lerma E, **Esteller M**, Palacios J, Benitez J. Immunohistochemical classification of non-BRCA1/2 tumors identifies different groups that demonstrate the heterogeneity of BRCA families. *Mod Pathol*. 20, 1298-306, 2007.
- 122) Martinez R, Schackert G, Yaya-Tur R, Rojas-Marcos I, Herman JG, **Esteller M**. Frequent hypermethylation of the DNA repair gene MGMT in long-term survivors of glioblastoma multiforme. *J Neurooncology*. 83, 91-3, 2007.
- 123) Blanco D, Vicent S, Fraga MF, Fernandez-Garcia I, Freire J, Lujambio A, **Esteller M**, Ortiz-de-Solorzano C, Pio R, Lecanda F, Montuenga LM. Molecular analysis of a multistep lung cancer model induced by chronic inflammation reveals epigenetic regulation of p16 and activation of the DNA damage response pathway. *Neoplasia*. 9, 840-52, 2007.
- 124) Aguilera O, Pena C, Garcia JM, Larriba MJ, Ordonez-Moran P, Navarro D, Barbachano A, Lopez de Silanes I, Ballestar E, Fraga MF, **Esteller M**, Gamallo C, Bonilla F, Gonzalez-Sancho JM, Munoz A. The Wnt antagonist DICKKOPF-1 gene is induced by 1{alpha},25-dihydroxyvitamin D3 associated to the differentiation of human colon cancer cells. *Carcinogenesis*. 28, 1877-1884, 2007.
- 125) Caballero R, Setien F, Lopez-Serra L, Boix-Chornet M, Fraga MF, Ropero S, Megias D, Alaminos M, Sanchez-Tapia EM, Montoya MC, **Esteller M**, Gonzalez-Sarmiento R, Ballestar E. Combinatorial effects of splice variants modulate function of Aiolos. *J Cell Science*, 120, 2619-30, 2007.
- 126) Urdinguio RG, Pino I, Ropero S, Fraga MF, **Esteller M**. Histone H3 and H4 Modification Profiles in a Rett Syndrome Mouse Model. *Epigenetics*, 2, 11-14, 2007.
- 127) Martinez R, Setien F, Voelter C, Casado S, Quesada MP, Schackert G, **Esteller M**. CpG island promoter hypermethylation of the pro-apoptotic gene caspase-8 is a common hallmark of relapsed glioblastoma multiforme. *Carcinogenesis*, 28, 1264-8, 2007.
- 128) Grego-Bessa, J., Luna-Zurita, L., del Monte, G., Melgar, P., Bolos, V., Ballestar, E., **Esteller, M.**, Perez-Pomares, J.M. de la Pompa, J.L. Notch signaling is essential for ventricular chamber development. *Developmental Cell*, 12, 415-29, 2007.
- 129) Perdiguero E, Ruiz-Bonilla V, Gresh L, Hui L, Ballestar E, Sousa-Victor P, Baeza-Raja B, Jardí M, Bosch-Comas A, **Esteller M**, Caelles C, Serrano AL, Wagner EF, Muñoz-Cánoves P. Genetic analysis of p38 MAP kinases in myogenesis: fundamental role of p38alpha in abrogating myoblast proliferation. *EMBO J*, 26, 1245-56, 2007.
- 130) Espada J, Ballestar E, Santoro R, Fraga MF, Villar-Garea A, Nemeth A, Lopez-Serra L, Ropero S, Aranda A, Orozco H, Moreno V, Juarranz A, Stockert JC, Langst G, Grummt I, Bickmore W,

- Esteller M.** Epigenetic disruption of ribosomal RNA genes and nucleolar architecture in DNA methyltransferase 1 (Dnmt1) deficient cells. *Nucleic Acids Research*, 35, 2191-8, 2007.
- 131) Jacinto FV, Ballestar E, Ropero S, **Esteller M.** Discovery of Epigenetically Silenced Genes by Methylated DNA Immunoprecipitation in Colon Cancer Cells *Cancer Research*, 67, 11481-6, 2007.

2008

- 132) Lujambio A, Calin GA, Villanueva A, Ropero R, Sánchez-Céspedes M, Blanco D, Montuenga LM, Rossi S, Nicoloso MS, Faller WJ, Gallagher WM, Eccles SA, Carlo M, Croce CM, **Esteller M.** A microRNA DNA methylation signature for human cancer metastasis. *Proc Natl Acad Sci USA*, 105, 13556-61, 2008.
- 133) Lopez-Serra L, Ballestar E, Ropero S, Setien F, Lise-Marie Billard LM, Mario F, Fraga MF, Lopez-Nieva P, Alaminos M, Guerrero D, Dante R, **Esteller M.** Unmasking of Epigenetically Silenced Candidate Tumor Suppressor Genes by Removal of Methyl-CpG Binding Domain Proteins. *Oncogene*, 27, 3556-66, 2008.
- 134) Fraga MF, Berdasco M, Ballestar E, Ropero S, Lopez-Nieva P, Lopez-Serra L, Martín-Subero JI, Calasanz MJ, Lopez de Silanes I, Setien F, Casado S, Fernandez A.F., Siebert R, Stifani D, **Esteller M.** Epigenetic Inactivation of the Groucho Homologue Gene TLE1 in Hematological Malignancies. *Cancer Research*, 68, 4116-22, 2008.
- 135) Martínez-Chantar ML, Vázquez-Chantada M, Ariz U, Martínez N, Varela M, Luka Z, Capdevila A, Rodriguez J, Aransay AM, Matthiesen R, Yang H, Calvisi DF, **Esteller M,** Fraga M, Lu SC, Wagner C, Mato JM. Loss of the Glycine N-Methyltransferase Gene Leads to Steatosis and Hepatocellular Carcinoma in Mice. *Hepatology*, 47, 1191-9, 2008.
- 136) Gomez-Duran A, Ballestar E, Carvajal-Gonzalez JM, Marlowe JL, Puga A, **Esteller M,** Fernandez-Salguero PM. Recruitment of CREB1 and histone deacetylase 2 (HDAC2) to the mouse Ltbp1 promoter regulates its constitutive expression in a dioxin receptor-dependent manner. *Journal of Molecular Biology*, 380, 1-16, 2008.
- 137) Vera E, Canela A, Fraga MF, **Esteller M,** Blasco MA. Epigenetic regulation of telomeres in human cancer. *Oncogene*, 27, 6817-33, 2008.
- 138) José-Enériz ES, Román-Gómez J, Cordeu L, Ballestar E, Gárate L, Andreu EJ, Isidro I, Guruceaga E, Jiménez-Velasco A, Heiniger A, Torres A, Calasanz MJ, **Esteller M,** Gutiérrez NC, Rubio A, Pérez-Roger I, Agirre X, Prósper F. BCR-ABL1-induced expression of HSPA8 promotes cell survival in chronic myeloid leukaemia. *Br J Haematol*. 142, 571-582, 2008.
- 139) Bertolo C, Guerrero D, Vicente F, Cordoba A, **Esteller M,** Ropero S, Guillen-Grima F, Martinez-Peñuela JM, Lera JM. Differences and molecular immunohistochemical parameters in the subtypes of infiltrating ductal breast cancer. *Am J Clin Pathol*. 130, 414-24, 2008.
- 140) Sánchez A, Setién N, Martínez M, Oliva JL, Herranz M, Fraga M.F, Alaminos M, **Esteller M,** Rojas JM. Epigenetic Inactivation of the ERK Inhibitor Spry2 in B-Cell Diffuse Lymphomas. *Oncogene*, 27, 4969-72 2008.
- 141) Calvanese V, Horrillo A, Hmadcha A, Suarez-Alvarez B, Fernandez AF, Lara E, Casado S, Menendez P, Bueno C, Garcia-Castro J, Rubio R, Lapunzina P, Alaminos M, Borghese L, Terstegge S, Harrison NJ, Moore HD, Brustle O, Lopez-Larrea C, Andrews PA, Soria B, **Esteller M,** Fraga MF. Cancer Genes Hypermethylated in Human Embryonic Stem Cells. *PLoS ONE*, 3, e3294 2008.
- 142) Mulero-Navarro S, **Esteller M.** Chromatin remodeling factor CHD5 is silenced by promoter CpG island hypermethylation in human cancer. *Epigenetics*. 3, 210-215, 2008.
- 143) Segditsas S, Sieber OM, Rowan A, Setien F, Neale K, Phillips RK, Ward R, **Esteller M,** Tomlinson IP. Promoter hypermethylation leads to decreased APC mRNA expression in familial polyposis and sporadic colorectal tumours, but does not substitute for truncating mutations. *Exp Mol Pathol* 85, 201-6, 2008.
- 144) Aleman A, Cebrian V, Alvarez M, Lopez V, Orenes E, Lopez-Serra L, Algaba F, Bellmunt J, López-Beltrán A, Gonzalez-Peramato P, Cordon-Cardo C, García J, del Muro JG, **Esteller M,** Sánchez-

- Carbayo M. Identification of PMF1 methylation in association with bladder cancer progression. *Clin Cancer Res.* 14, 8236-43, 2008.
- 145) Moore LE, Pfeiffer R, Poscablo C, Real F; Kogevinas M, Silverman D, Garcia-Closas R, Chanock S, Tardon A, Serra C, Carrato A, Dosemeci M, Garcia-Closas M, **Esteller M**, Fraga M, Rothman N, Malats N. Genomic DNA hypomethylation as a biomarker for bladder cancer susceptibility in the Spanish Bladder Cancer Study: a case-control study. *Lancet Oncology.* 9,359-66, 2008.
- 146) Urdinguio RG, Lopez-Serra L, Lopez-Nieva P, Alaminos M, Diaz-Uriarte R, Fernandez AF, **Esteller M**. Mecp2-null mice provide new neuronal targets for Rett syndrome. *PLoS ONE*, 3, e3669, 2008.
- 147) Ropero S, Esteban Ballestar, Alaminos M, Arango D, Schwartz Jr S, **Esteller M**. Transforming pathways unleashed by a HDAC2 mutation in human cancer. *Oncogene*, 27, 4008-12, 2008.

2009

- 148) Teixeira FK, Heredia F, Sarazin A, Roudier F, Boccaro M, Ciaudo C, Cruaud C, Poulain J, Berdasco M, Fraga MF, Voinnet O, Wincker P, **Esteller M**, Colot V. A Role for RNAi in the Selective Correction of DNA Methylation Defects. *Science* 323, 1600-4, 2009.
- 149) Fernandez AF, Rosales C, Lopez-Nieva P, Graña O, Ballestar E, Ropero S, Espada J, Melo SA, Lujambio A, Fraga MF, Pino I, Javierre B, Carmona FJ, Acquadro F, Steenbergen RDM, Snijders PJF, Chris J. Meijer, Pascal Pineau, Anne Dejean, Lloveras B, Capella G, Quer J, Buti M, Esteban JI, Allende H, Rodriguez-Frias F, Castellsague X, Minarovits J, Ponce J, Capello D, Gaidano G, Cigudosa JC, Gomez-Lopez G, Pisano DG, Valencia A, Piris MA, Bosch FX, Cahir-McFarland E, Kieff E, **Esteller M**. The dynamic DNA methylomes of double-stranded DNA viruses associated with human cancer. *Genome Research*, 19, 438-51, 2009.
- 150) Zubia A, Ropero S, Otaegui D, Ballestar E, Fraga MF, Boix-Chornet M, Berdasco M, Martinez A, Coll-Mulet L, Gil J, Cossío FP, **Esteller M**. Identification of (1H)-pyrroles as histone deacetylase inhibitors with antitumoral activity. *Oncogene*. 28, 1477-84, 2009.
- 151) González-García S, García-Peydró M, Martín-Gayo E, Ballestar E, **Esteller M**, Bornstein R, de la Pompa JL, Ferrando AA, Toribio ML. CSL-MAML-dependent Notch1 signaling controls T lineage-specific IL-7R{alpha} gene expression in early human thymopoiesis and leukemia. *J Exp Med*. 206, 779-91, 2009.
- 152) Martín-Subero JI, Kreuz M, Bibikova M, Bentink S, Ammerpohl O, Wickham-Garcia E, Rosolowski M, Richter J, Lopez-Serra L, Ballestar E, Berger H, Agirre X, Bernd HW, Calvanese V, Cogliatti SB, Drexler HG, Fan JB, Fraga MF, Hansmann ML, Hummel M, Klapper W, Korn B, Küppers R, Macleod RA, Möller P, Ott G, Pott C, Prosper F, Rosenwald A, Schwaenen C, Schübeler D, Seifert M, Stürzenhofecker B, Weber M, Wessendorf S, Loeffler M, Trümper L, Stein H, Spang R, **Esteller M**, Barker D, Hasenclever D, Siebert R; Molecular Mechanisms in Malignant Lymphomas Network Project of the Deutsche Krebshilfe. New insights into the biology and origin of mature aggressive B-cell lymphomas by combined epigenomic, genomic, and transcriptional profiling. *Blood* 113, 2488-97, 2009.
- 153) Guerrero-Preston R, Báez A, Blanco A, Berdasco M, Fraga M, **Esteller M**. Global DNA methylation: a common early event in oral cancer cases with exposure to environmental carcinogens or viral agents. *P R Health Sci J*. 28, 24-9, 2009.
- 154) Lara E, Mai A, Calvanese V, Altucci L, Lopez-Nieva P, Martinez-Chantar ML, Varela-Rey M, Rotili D, Nebbioso A, Ropero S, Montoya G, Oyarzabal J, Velasco S, Serrano M, Witt M, Villar-Garea A, Imhof A, Mato JM, **Esteller M**, Fraga MF. Salermide, a Sirtuin inhibitor with a strong cancer-specific proapoptotic effect. *Oncogene* 28, 781-91, 2009.
- 155) Rodríguez-Paredes M, Ceballos-Chávez M, **Esteller M**, García-Domínguez M, Reyes JC. The chromatin remodeling factor CHD8 interacts with elongating RNA polymerase II and controls expression of the cyclin E2 gene. *Nucleic Acids Res.* 37, 2449-60, 2009.
- 156) de Silanes IL, Gorospe M, Taniguchi H, Abdelmohsen K, Srikantan S, Alaminos M, Berdasco M, Urdinguio RG, Fraga MF, Jacinto FV, **Esteller M**. The RNA-binding protein HuR regulates DNA methylation through stabilization of DNMT3b mRNA. *Nucleic Acids Res.* 37, 2658-71, 2009.

- 157) Martinez R, Martin-Subero JI, Rohde V, Kirsch M, Alaminos M, Fernandez AF, Ropero S, Schackert G, **Esteller M**. A microarray-based DNA methylation study of glioblastoma multiforme. *Epigenetics* 4, 255-64, 2009.
- 158) Wiesmann F, Veeck J, Galm O, Hartmann A, **Esteller M**, Knuchel R, Dahl E. Frequent loss of endothelin-3 (EDN3) expression due to epigenetic inactivation in human breast cancer. *Breast Cancer Res.* 11, R34, 2009.
- 159) García-Faroldi G, Correa-Fiz F, Abrighach H, Berdasco M, Fraga MF, **Esteller M**, Urdiales JL, Francisca Sanchez-Jimenez F, Fajardo I. Polyamines affect histamine synthesis during early stages of IL-3-induced bone marrow cell differentiation. *J Cell Biochem.* 108, 261-71, 2009.
- 160) Aranda P, Agirre I X, Ballestar E, Andreu EJ, Román-Gómez J, Prieto I, Martín-Subero JI, Cigudosa JC, Siebert R, **Esteller M**, Prosper F. Epigenetic signatures associated with different levels of differentiation potential in human stem cells. *PLoS ONE*, 4(11):e7809, 2009.
- 161) Jacinto FV, Ballestar E, Seruca R, **Esteller M**. Impaired Recruitment of the Histone Methyltransferase DOT1L Contributes to the Incomplete Reactivation of Tumor Suppressor Genes upon DNA Demethylation. *Oncogene*, 28, 4212-24, 2009.
- 162) Taniguchi H, Fernández AF, Setién F, Ropero S, Ballestar E, Yamamoto Y, Imai K, Shinomura Y, **Esteller M**. Epigenetic Inactivation of the Circadian Clock Gene BMAL1 in Hematological Malignancies. *Cancer Research*, 69, 8447-54, 2009.
- 163) Berdasco M, Ropero S, Setien F, Fraga MF, Lapunzina P, Lossone R, Alaminos M, Cheung NK, Rahman N, **Esteller M**. Epigenetic inactivation of the Sotos overgrowth syndrome gene histone methyltransferase NSD1 in human neuroblastoma and glioma. *Proc Natl Acad Sci USA*, 106, 21830-35, 2009.

2010

- 164) Veeck J, Ropero S, Setien F, Gonzalez-Suarez E, Osorio A, Benitez J, Herman JG, **Esteller M**. BRCA1 CpG island hypermethylation predicts sensitivity to poly(adenosine diphosphate)-ribose polymerase inhibitors. *Journal of Clinical Oncology*, 28, e563-4, 2010.
- 165) Javierre BM, Fernandez AF, Richter J, Al-Shahrour F, Martin-Subero JI, Rodriguez-Ubreva J, Berdasco M, Fraga MF, O'Hanlon TP, Rider LG, Jacinto FV, Lopez-Longo FJ, Dopazo J, Forn M, Peinado MA, Carreño L, Sawalha AH, Harley JB, Siebert R, **Esteller M**, Miller FW, Ballestar E. Changes in the pattern of DNA methylation associate with twin discordance in systemic lupus erythematosus. *Genome Research*, 20, 170-9, 2010.
- 166) Masquelet A, Ballestar E, **Esteller M**, Dante R. A Role for Methyl-CpG Binding Domain Protein 2 in the Modulation of the Estrogen Response of pS2/TFF1 gene. *PLoS ONE*, 5, e9665, 2010.
- 167) Rotili D, Mai A, Domenico T, Carafa V, Lara E, Meade S, Botta G, Nebbioso A, Schemies J, Jung M, Kazantsev AG, **Esteller M**, Fraga MF, Altucci L. Identification of Tri- and Tetracyclic Pyrimidindiones as Novel Sirtuin Inhibitors. *ChemMedChem*, 5, 674-7, 2010.
- 168) Varela-Rey M, Martínez-López N, Fernández-Ramos D, Embade N, Calvisi DF, Woodhoo A, Rodríguez J, Fraga MF, Frades I, Torres L, Luka Z, Wagner C, **Esteller M**, Lu SC, Martínez-Chantar ML, Mato JM. Fatty liver and fibrosis in glycine N-methyltransferase knockout mice is prevented by nicotinamide. *Hepatology*, 52, 105-114, 2010.
- 169) Azuara D, Rodriguez-Moranta F, de Oca J, Soriano-Izquierdo A, Mora J, Guardiola J, Biondo S, Blanco I, Peinado MA, Moreno V, **Esteller M**, Capella G. Novel Methylation Panel for the Early Detection of Colorectal Tumors in Stool DNA. *Clinical Colorectal Cancer*, 168-76, 2010, 2010.
- 170) Lara E, Calvanese V, Huidobro C, Fernandez AF, Moncada-Pazos A, Obaya AJ, Aguilera O, Gonzalez-Sancho JM, Sanchez L, Astudillo A, Munoz A, Lopez-Otin C, **Esteller M**, Fraga MF. Epigenetic repression of ROR2 has a Wnt-mediated, pro-tumorigenic role in colon cancer. *Molecular Cancer*, 9, 170, 2010.
- 171) Calvanese V, Lara E, Suarez-Álvarez B, Dawud RA, Vázquez-Chantada M, Martínez-Chantar ML, Lopez-Nieva, Horrillo A, Hmadcha A, Soria B, Mato JM, Andrews PW, Lopez-Larrea C, **Esteller**

- M**, Fraga, M.F. Sirtuin 1 regulation of developmental genes during differentiation of stem cells. *Proc Natl Acad Sci USA*, 107, 13736-41, 2010.
- 172) Faller WJ, Rafferty M, Hegarty S, Gremel G, Ryan D, Fraga MF, **Esteller M**, Dervan PA, Gallagher WM. Metallothionein 1E is methylated in malignant melanoma and increases sensitivity to cisplatin-induced apoptosis. *Melanoma Research*, 20, 392-400, 2010.
- 173) Alvarez S, Valencia A, Fernandez A, Wunderlich M, Agirre X, Prosper F, Martin-Subero JI, Maiques A, Acquadro F, Rodriguez-Perales S, Calasanz MJ, Roman-Gomez J, Sibert R, Mulloy JC, Cervera J, Sanz MA, **Esteller M**, Cigudosa JC. DNA methylation profiles and their relationship with cytogenetic status in adult acute myeloid leukemia. *PloS ONE*, 5, e12197, 2010.
- 174) Guerrero D, Guarch R, Ojer A, Casas JM, Méndez-Meca C, **Esteller M**, Barba-Ramos E, Garcia-Bragado F, Puras A. Differential hypermethylation of genes in vulvar cancer and lichen sclerosus coexisting or not with vulvar cancer. *International Journal of Cancer*. 128, 2853-64, 2010.
- 175) Urduñigo Rg, Fernandez AF, Lopez-Nieva P, Rossi S, Huertas D, Kulis M, Liu CG, Croce C, Calin GA, **Esteller M**. Disrupted microRNA expression caused by Mecp2 loss in a mouse model of Rett syndrome. *Epigenetics*, 5, 656-63 2010.
- 176) Melo SA, Moutinho C, Ropero S, Calin GA, Rossi S, Spizzo R, Fernandez AF, Davalos V, Villanueva A, Yamamoto H, Schwartz Jr, **Esteller M**. A Genetic Defect in Exportin-5 Traps Precursor MicroRNAs in the Nucleus of Cancer Cells. *Cancer Cell*, 18, 303–15, 2010.
- 177) Lujambio A, Portela A, Liz J, Melo SA, Rossi S, Spizzo R, Croce CM, Calin GA, **Esteller M**. CpG Island Hypermethylation-Associated Silencing of Non-Coding RNAs transcribed from Ultraconserved Regions in Human Cancer. *Oncogene*, 29, 6390-401, 2010.

2011

- 178) Huertas D, Soler M, Moreto J, Villanueva A, Martinez A, Vidal A, Charlton M, Moffat D, Patel S, McDermott J, Owen J, Brotherton D, Krige D, Cuthill S, **Esteller M**. Antitumor Activity of a Small Molecule Inhibitor of the Histone Kinase Haspin. *Oncogene*, 31, 1408-18, 2011.
- 179) Espada J, Peinado H, Lopez-Serra L, Setién F, Lopez-Serra P, Portela A, Renart J, Carrasco E, Calvo M, Juarranz A, Cano A, **Esteller M**. Regulation of SNAIL1 and E-cadherin function by DNMT1 in a DNA methylation-independent context. *Nucleic Acids Research*, 39, 9194-9205, 2011.
- 180) Melo S, Villanueva A, Moutinho C, Davalos V, Spizzo R, Ivan C, Rossi S, Setien F, Casanovas O, Sio-Riudalbas L, Carmona FJ, Carrere J, Vidal A, Aytes A, Puertas S, Ropero S, Kalluri R, Croce CM, Calin GA, **Esteller M**. Small molecule enoxacin is a cancer-specific growth inhibitor that acts by enhancing TAR RNA-binding protein 2-mediated microRNA processing. *Proc Natl Acad Sci USA*, 108, 4394-9, 2011.
- 181) Simó-Riudalbas L, Melo SA, **Esteller M**. DNMT3B Gene Amplification Predicts Resistance to DNA Demethylating Drugs. *Genes, Chromosomes and Cancer*, 50, 50, 527-34, 2011.
- 182) Stefansson OA, Jonasson JG, Olafsdottir K, Hilmarsdottir H, Olafsdottir G, **Esteller M**, Johannsson OT, Eyfjord JE. CpG island hypermethylation of BRCA1 and loss of pRb as co-occurring events in basal/triple-negative breast cancer. *Epigenetics*, 6, 638-49, 2011.
- 183) Guerrero-Preston R, Soudry E, Acero J, Orera M, Moreno-López L, Macía-Colón G, Jaffe A, Berdasco M, Ili-Gangas C, Brebi-Mieville P, Fu Y, Engstrom C, Irizarry R, **Esteller M**, Westra W, Koch W, Califano J, Sidransky D. NID2 and HOXA9 promoter hypermethylation as biomarkers for prevention and early detection in Oral Cavity Squamous Cell Carcinoma tissues and saliva. *Cancer Prevention Research*, 4, 1061-72, 2011.
- 184) Sandoval J, Heyn HA, Moran S, Serra-Musach J, Pujana MA, Bibikova M, **Esteller M**. Validation of a DNA methylation microarray for 450,000 CpG sites in the human genome. *Epigenetics*, 6, 692-702, 2011.
- 185) Vegliante MC, Royo C, Palomero J, Salaverria I, Balint B, Martín-Guerrero I, Agirre X, Lujambio A, Richter J, Xargay-Torrent S, Bea S, Hernandez L, Enjuanes A, Calasanz MJ, Rosenwald A, Ott G, Roman-Gomez J, Prosper F, **Esteller M**, Jares P, Siebert R, Campo E, Martín-Subero JI, Amador

- V. Epigenetic Activation of SOX11 in Lymphoid Neoplasms by Histone Modifications. ***PLoS ONE***, 6, e21382, 2011.
- 186) Wilop S, Fernandez AF, Jost E, Herman JG, Brümmendorf TH, **Esteller M**, Galm O. Array-based DNA methylation profiling in acute myeloid leukemia. ***British Journal of Haematology***, 155, 65-72, 2011.
- 187) Javierre BM, Rodriguez-Ubreva J, Al-Shahrour F, Corominas M, Graña O, Ciudad L, Agirre X, Pisano DG, Valencia A, Roman-Gomez J, Calasanz MJ, Prosper F, **Esteller M**, Gonzalez-Sarmiento, Ballestar E. Long-Range Epigenetic Silencing Associates with Dereglulation of Ikaros Targets in Colorectal Cancer Cells. ***Molecular Cancer Research***, 9, 1139-51, 2011
- 188) Rubio A, Sanchez/Mut JV, Garcia E, Velasquez ZD, Oilver J, **Esteller M**, Avila J. Epigenetic control of somatostatin and cortistatin expression by β Amyloid peptide. ***Journal of Neuroscience Research***, 90, 13-20, 2011.
- 189) Mayor R, Muñoz M, Coolen MW, Custodio J, **Esteller M**, Clark SJ, Peinado MA. Dynamics of bivalent chromatin domains upon drug induced reactivation and resilencing in cancer cells. ***Epigenetics***, 6, 1138-48. 2011.
- 190) Incoronato M, Urso L, Portela A, Laukkanen MO, Soini Y, Quintavalle C, **Esteller M**, Condorelli G. Epigenetic regulation of miR-212 expression in lung cancer. ***PLoS ONE***, 6, e27722, 2011.
- 191) Jost LK, Rottach A, Mildner M, Bertulat B, Becker A, Wolf P, Sandoval J, Petazzi P, Huertas D, **Esteller M**, Kremmer E, Leonhardt H, Cardoso MC. Generation and characterization of rat and mouse monoclonal antibodies specific for MeCP2 and their use in X-inactivation studies. ***PLoS ONE***, 6, e26499, 2011.
- 192) Pilar López-Nieva P, Vaquero C, Pablo Fernández-Navarro P, González-Sánchez L, Villa-Morales M, Santos J, **Esteller M**, Fernández-Piqueras J. EPHA7, a new target gene for 6q deletion in T-cell lymphoblastic lymphomas. ***Carcinogenesis***, 33, 452-8, 2011.
- 193) Rangel-Salazar R, Wickstrom-Lindholm M, Aguilar-Salinas CA, Alvarado-Caudillo Y, Dossing KB, **Esteller M**, Labourier E, Lund G, Nielsen FC, Rodriguez-Rios D, Solis-Martinez MO, Wrobel K, Wrobel K, Zaina S. Human native lipoprotein-induced de novo DNA methylation is associated with repression of inflammatory genes in THP-1 macrophages. ***BMC Genomics***, 12, 582, 2011.
- 194) Iliou MS1, Lujambio A, Portela A, Brüstle O, Koch P, Andersson-Vincent PH, Sundström E, Hovatta O, **Esteller M**. Bivalent histone modifications in stem cells poise miRNA loci for CpG island hypermethylation in human cancer. ***Epigenetics***, 6, 1344-53, 2011.
- 195) Léveillé N, Elkon R, Davalos V, Manoharan V, Hollingworth D, Vrielink JO, le Sage C, Melo CA, Horlings HM, Wesseling J, Ule J, **Esteller M**, Ramos A, Agami R. Selective inhibition of miRNA accessibility by RBM38 is required for p53 activity. ***Nature Communications***, 2, 513, 2011.
- 196) Davalos V, Moutinho C, Villanueva A, Boque R, Silva P, Carneiro F, **Esteller M**. Dynamic Epigenetic Regulation of the microRNA-200 Family Mediates Epithelial and Mesenchymal Transitions in Human Tumorigenesis. ***Oncogene***, 31, 2062-74 2011.
- 197) Taniguchi H, Jacinto FV, Villanueva A, Fernandez AF, Yamamoto H, Carmona FJ, Puertas S, Marquez VE, Shinomura Y, Imai K, **Esteller M**. Silencing of the Kruppel-like factor 2 by the histone methyltransferase EZH2 in human cancer. ***Oncogene***, 31, 1988-94, 2011.

2012

- 198) Guil S, Soler M, Portela A, Carrère J, Fonalleras E, Gómez A, Villanueva A, **Esteller M**. Intronic RNAs mediate EZH2 regulation of epigenetic targets. ***Nature Structural & Molecular Biology***, 19, 664-70, 2012.
- 199) Fernandez AF, Assenov Y, Martin-Subero JI, Balint B, Siebert R, Taniguchi H, Yamamoto H, Hidalgo M, Tan AC, Galm O, Ferrer I, Sanchez-Céspedes M, Villanueva A, Carmona FJ, Sanchez-Mut JV, Berdasco M, Moreno V, Capella G, Monk D, Ballestar E, Ropero S, Martinez R, Sanchez-Carbayo M, Prosper F, Agirre X, Fraga MF, Graña O, Perez-Jurado L, Mora J, Puig S, Prat J, Badimon L, Puca AA, Meltzer SJ, Lengauer T, Bridgewater J, Bock C, **Esteller M**. A DNA Methylation Fingerprint of 1,628 Human Samples. ***Genome Research***, 22, 407-19, 2012.

- 200) Carmona FJ, Villanueva A, Muñoz C, Penin RM, Gomà M, Piulats JM, Mesía R, Sánchez-Céspedes M, Manós M, Condom E, Eccles SA, **Esteller M**. Epigenetic Disruption of Cadherin-11 in Human Cancer Metastasis. *The Journal of Pathology*, 228, 230-40, 2012.
- 201) Ferreira HJ, Heyn H, Moutinho C, **Esteller M**. CpG Island Hypermethylation-Associated Silencing of Small Nucleolar RNAs in Human Cancer. *RNA Biology*, 9, 881-90, 2012.
- 202) Latos PA, Powell C, Mosaku O, Dudzinska DA, Stubbs B, Berdasco M, **Esteller M**, Hendrich B. NuRD-dependent DNA methylation prevents ES cells from accessing a trophectoderm fate. *Biology Open*, 1, 341-52, 2012.
- 203) Casati L, Sendra R, Colciago A, Negri-Cesi P, Berdasco M, **Esteller M**, Celotti F. Polychlorinated biphenyls (PCBs) affect histone modification pattern in early development of rats: a possible role for androgen receptor-dependent modulation? *Epigenomics*, 4, 101-112, 2012.
- 204) Ribel-Madsen R, Fraga MF, Jacobsen S, Bork-Jensen J; Lara E, Calvanese V, Fernandez AF, Friedrichsen M, Vind BF, Hojlund K, Beck-Nielsen H; **Esteller M**, Vaag A, Poulsen P. Genome-Wide Analysis of DNA Methylation Differences in Muscle and Fat from Monozygotic Twins Discordant for Type 2 Diabetes. *PLoS ONE*, 7, e51302, 2012.
- 205) Heyn H, Vidal E, Sayols S, Sanchez-Mut JV, Moran S, Medina I, Sandoval J, Simó-Riudalbas L, Szczesna K, Huertas D, Gatto S, Matarazzo MR, Dopazo J, **Esteller M**. Whole-genome bisulfite DNA sequencing of a DNMT3B mutant patient. *Epigenetics*, 7, 542-50, 2012.
- 206) Vidal A, Munoz C, Guillen MJ, Moreto J, Puertas S, Martinez-Iniesta M, Figueras A, Padulles L, Garcia-Rodriguez FJ, Berdiel-Hacer M, Pujana MA, Salazar R, Gil-Martin M, Marti L, Ponce J, Mollevi DG, Capella G, Condom E, Vinals F, Huertas D, Cuevas C, **Esteller M**, Aviles P, Villanueva A. Lurbinedin (PM01183), a New DNA Minor Groove Binder, Inhibits Growth of Orthotopic Primary Graft of Cisplatin-Resistant Epithelial Ovarian Cancer. *Clinical Cancer Research*, 18, 5399-411, 2012.
- 207) Oster B, Linnet L, Christensen LL, Thorsen K, Ongen H, Dermitzakis ET, Sandoval J, Moran S, **Esteller M**, Hansen TF, Lamy P; On behalf of the COLOFOL steering group, Laurberg S, Orntoft TF, Andersen CL. Non-CpG island promoter hypomethylation and miR-149 regulate the expression of SRPX2 in colorectal cancer. *Int J Cancer*, 132, 2303-15, 2012.
- 208) Mayol G, Martín-Subero JI, Ríos J, Queiros A, Kulis M, Suñol M, **Esteller M**, Gómez S, Garcia I, de Torres C, Rodríguez E, Galván P, Mora J, Lavarino C. DNA hypomethylation affects cancer-related biological functions and genes relevant in neuroblastoma pathogenesis *PLoS One*, 7, e48401, 2012.
- 209) Simmer F, Brinkman AB, Assenov Y, Matarese F, Kaan A, Sabatino L, Villanueva A, Huertas D, **Esteller M**, Lengauer T, Bock C, Colantuoni V, Altucci L, Stunnenberg HG. Comparative genome-wide DNA methylation analysis of colorectal tumor and matched normal tissues. *Epigenetics*, 7, 1355-67, 2012.
- 210) Rotili D, Tarantino D, Nebbioso A, Paolini C, Huidobro C, Lara E, Mellini P, Lenoci A, Pezzi R, Botta G, Lahtela-Kakkonen M, Poso A, Steinkuhler C, Gallinari P, De Maria R, Fraga MF, **Esteller M**, Altucci L, Mai A. Discovery of Salermide-Related Sirtuin Inhibitors: Binding Mode Studies and Antiproliferative Effects in Cancer Cells Including Cancer Stem Cells. *J Med Chem*, 55, 10937-47, 2012.
- 211) Heyn H, Ferreira HJ, Bassas LL, Bonache S, Sayols S, Sandoval J, **Esteller M**, Larriba S. Epigenetic Disruption of the PIWI Pathway in Human Spermatogenic Disorders. *PLoS ONE*, 7, e47892, 2012.
- 212) Stefansson OA, Villanueva A, Vidal A, Martí L, **Esteller M**. BRCA1 epigenetic inactivation predicts sensitivity to platinum-based chemotherapy in breast and ovarian cancer. *Epigenetics*, 7, 1225-9, 2012.
- 213) Krausz C, Sandoval J, Sayols S, Chianese C, Giachini C, Heyn H, **Esteller M**. Novel insights into DNA methylation features in spermatozoa: stability and peculiarities. *PLoS ONE*, 7, e44479, 2012.
- 214) Sandoval J, Heyn H, Méndez-González J, Gomez A, Moran S, Baiget M, Melo M, Badell I, Nomdedéu JF, **Esteller M**. Genome-wide DNA methylation profiling predicts relapse in childhood B-cell acute lymphoblastic leukemia. *British Journal of Haematology*, 160, 406-9, 2012.

- 215) Heyn H, Carmona FJ, Gomez A, Ferreira HJ, Bell JT, Sayols S, Ward K, Stefansson OA, Moran S, Sandoval J, Eyfjord JE, Spector TD, **Esteller M**. DNA methylation profiling in breast cancer discordant identical twins identifies DOK7 as novel epigenetic biomarker. *Carcinogenesis*, 34, 102-8, 2012.
- 216) Barrero MJ, Berdasco M, Paramonov I, Bilic J, Vitaloni M, **Esteller M**, Izpisua-Belmonte JC. DNA hypermethylation in somatic cells correlates with higher reprogramming efficiency. *Stem Cells*, 30, 1696-702, 2012.
- 217) Berdasco M, Melguizo C, Prados J, Gómez A, Alaminos M, Pujana MA, Lopez M, Setien F, Ortiz R, Zafra I, Aranega A, **Esteller M**. DNA methylation plasticity of human adipose-derived stem cells in lineage commitment. *American Journal of Pathology*, 181, 2079-93, 2012.
- 218) Heyn H, Li N, Ferreira HJ, Moran S, Pisano DG, Gomez A, Diez J, Sanchez-Mut JV, Setien F, Carmona FJ, Puca AA, Sayols S, Pujana MA, Serra-Musach J, Iglesias-Plata I, Formiga F, Fernandez AF, Fraga MF, Heath S, Valencia A, Gut IG, Wang J, **Esteller M**. The Distinct DNA Methylomes of Newborns and Centenarians. *Proc Natl Acad Sci USA*, 109, 10522-7, 2012

2013

- 219) Heyn H, Moran S, Hernando-Herraez I, Sayols S, Gomez A, Sandoval J, Monk D, Hata K, Marques-Bonet T, Wang L, **Esteller M**. DNA methylation contributes to natural human variation. *Genome Research*, 23, 1363-72, 2013.
- 220) Lister R, Mukamel EA, Nery JR, Urich M, Puddifoot CA, Johnson ND, Lucero J, Huang Y, Dwork AJ, Schultz MD, Yu M, Tonti-Filippini J, Heyn H, Hu S, Wu JC, Rao A, **Esteller M**, He C, Haghghi FG, Sejnowski TJ, Behrens MM, Ecker JR. Global Epigenomic Reconfiguration During Mammalian Brain Development. *Science*, 341, 1237905, 2013.
- 221) Petazzi P, Sandoval J, Szczesna K, Jorge OC, Roa L, Sayols S, Gomez A, Huertas D, **Esteller M**. Dysregulation of the long non-coding RNA transcriptome in a Rett syndrome mouse model. *RNA Biology*, 10, 1197-203, 2013.
- 222) Azuara D, Rodriguez-Moranta F, de Oca J, Sanjuan X, Guardiola J, Lobaton T, Wang A, Boadas J, Piqueras M, Monfort D, Galter S, **Esteller M**, Moreno V, Capella G. Novel methylation panel for the early detection of neoplasia in high risk Ulcerative Colitis and Crohn's Colitis patients. *Inflammatory Bowel Diseases*, 19, 165-73, 2013.
- 223) Heyn H, Moran S, **Esteller M**. Aberrant DNA methylation profiles in the premature aging disorders Hutchinson-Gilford Progeria and Werner Syndrome. *Epigenetics*, 8, 28-33, 2013.
- 224) Hernando H, Shannon-Lowe C, Islam S, Al-Shahrour F, Rodríguez-Ubrevia J, Rodríguez-Cortez VC, Javierre BM, Mangas C, Fernández AF, Parra M, Delecluse HJ, **Esteller M**, López-Granados E, Fraga MF, López-Bigas N, Ballestar E. The B cell transcription program mediates hypomethylation and overexpression of key genes in Epstein-Barr virus-associated proliferative conversion. *Genome Biology*, 14, R3, 2013.
- 225) Stuss D, Cheema M, Ng M, DePaz A, Williamson B, Missiaen K, Cosman J, McPhee D, **Esteller M**, Hendzel M, Delaney K, Ausio J. Impaired in vivo binding of MeCP2 to chromatin in the absence of its DNA methyl-binding domain. *Nucleic Acids Research*, 41, 4888-900, 2013.
- 226) David Guerrero-Setas D, Pérez-Janices N, Blanco-Fernandez L, Ojer A, Cambra K, Berdasco M, **Esteller M**, Maria-Ruiz S, Torrea N, Guarch R. RASSF2 hypermethylation is present and related to shorter survival in squamous cervical cancer. *Modern Pathology*, 26, 1111-22, 2013.
- 227) Carmona FJ, Azuara D, Berenguer Llergo A, Fernandez AF, Biondo S, de Oca J, Rodriguez-Moranta F, Salazar R, Villanueva A, Fraga MF, Guardiola J, Capella G, **Esteller M**, Moreno V. DNA methylation biomarkers for non-invasive diagnostic of Colorectal Cancer. *Cancer Prevention Research (Phila)*, 6, 656-65, 2013.
- 228) Quintavalle C1, Mangani D, Roscigno G, Romano G, Diaz-Lagares A, Iaboni M, Donnarumma E, Fiore D, De Marinis P, Soini Y, **Esteller M**, Condorelli G. MiR-221/222 target the DNA methyltransferase MGMT in glioma cells. *PLoS One*, 8, e74466, 2013.

- 229) Ferreira HJ, Heyn H, Garcia Del Muro X, Vidal A, Larriba S, Muñoz C, Villanueva A, **Esteller M**. Epigenetic loss of the PIWI/piRNA machinery in human testicular tumorigenesis. *Epigenetics*, 9, 113-8, 2013.
- 230) Subtil-Rodríguez A, Vázquez-Chávez E, Ceballos-Chávez M, Rodríguez-Paredes M, Martín-Subero JI, **Esteller M**, Reyes JC. The chromatin remodeller CHD8 is required for E2F-dependent transcription activation of S-phase genes. *Nucleic Acids Research*, 42, 2185-96, 2013.
- 231) Amatu A, Sartore-Bianchi A, Moutinho C, Belotti A, Bencardino K, Chirico G, Cassingena A, Rusconi F, Esposito A, Nichelatti M, **Esteller M**, Siena S. Promoter CpG Island Hypermethylation of the DNA Repair Enzyme MGMT Predicts Clinical Response to Dacarbazine in a Phase II Study for Metastatic Colorectal Cancer. *Clinical Cancer Research*, 19, 2265-72, 2013.
- 232) Portela A, Liz J, Nogales V, Setién F, Villanueva A, **Esteller M**. DNA methylation determines nucleosome occupancy in the 5'-CpG islands of tumor suppressor genes. *Oncogene*, 32, 5421-8, 2013.
- 233) Rodriguez-Paredes M, Martinez de Paz A, Simó-Riudalbas L, Sayols S, Moutinho C, Moran S, Villanueva A, Vázquez-Cedeira M, Lazo PA, Carneiro F, Moura CS, Vieira J, Teixeira MR, **Esteller M**. Gene Amplification of the Histone Methyltransferase SETDB1 Contributes to Human Lung Tumorigenesis. *Oncogene*, 33, 2807-13, 2013.
- 234) Hernando-Herraez I, Prado-Martinez J, Garg P, Fernandez-Callejo M, Heyn H, Hvilsom C, Navarro A, **Esteller M**, Sharp AJ, Marques-Bonet T. Dynamics of DNA Methylation in Recent Human and Great Apes Evolution. *PLoS Genetics*, 9, e1003763, 2013.
- 235) Sanchez-Mut JV, Aso E, Panayotis N, Lott I, Dierssen M, Rabano A, Urduingio RG, Fernandez AF, Astudillo A, Martin-Subero JI, Balint B, Fraga MF, Gomez A, Gurnot C, Roux JC, Avila J, Hensch TK, Ferrer I, **Esteller M**. DNA methylation map of mouse and human brain identifies target genes in Alzheimer's disease. *Brain*, 136, 3018-27, 2013.
- 236) Iliou MS, da Silva-Diz V, Carmona FJ, Ramalho-Carvalho J, Heyn H, Villanueva A, Muñoz P, **Esteller M**. Impaired DICER1 Function Promotes Stemness and Metastasis in Colon Cancer. *Oncogene*, 33, 4003-15, 2013.
- 237) Sandoval J, Mendez-Gonzalez J, Nadal E, Chen G, Carmona FJ, Sayols S, Moran S, Heyn H, Vizoso M, Gomez A, Sanchez-Cespedes M, Assenov Y, Müller F, Bock C, Taron M, Mora J, Muscarella LA, Liloglou T, Davies M, Pollan M, Pajares MJ, Torre W, Montuenga LM, Brambilla E, Field JK, Roz L, Iacono ML, Scagliotti GV, Rosell R, Beer DG, **Esteller M**. A Prognostic DNA Methylation Signature for Stage I Non-Small Cell Lung Cancer. *Journal of Clinical Oncology*, 31, 4140-7, 2013.

2014

- 238) Lopez-Serra P, Marcilla M, Villanueva A, Ramos-Fernandez A, Palau A, Leal L, Wahi JE, Setien-Baranda F, Szczesna K, Moutinho C, Martinez-Cardus A, Heyn H, Sandoval J, Puertas S, Vidal A, Sanjuan X, Martinez-Balibrea E, Viñals F, Perales JC, Bramsem JB, Ørntoft TF, Andersen CL, Tabernero J, McDermott U, Boxer MB, Vander Heiden MG, Albar JP, **Esteller M**. A DERL3 Associated Defect in the Degradation of SLC2A1 Mediates the Warburg Effect. *Nature Communications*, 5:3608, 2014.
- 239) Moutinho C, Martinez-Cardús A, Santos C, Navarro-Pérez V, Martínez-Balibrea E, Musulen E, Carmona FJ, Sartore-Bianchi A, Cassingena A, Siena S, Elez E, Tabernero J, Salazar R, Abad A, **Esteller M**. Epigenetic Inactivation of the BRCA1 Interactor SRBC and Resistance to Oxaliplatin in Colorectal Cancer. *The Journal of the National Cancer Institute*, 106(1), doi: 10.1093/jnci/djt322, 2014.
- 240) Heyn H, Sayols S, Moutinho C, Vidal E, Sanchez-Mut JV, Stefansson OA, Nadal E, Moran S, Eyfjord J, Gonzalez-Suarez E, Pujana MA, **Esteller M**. Linkage of DNA Methylation Quantitative Trait Loci to Human Cancer Risk. *Cell Reports*, 7, 331-8, 2014.
- 241) Court F, Tayama C, Romanelli V, Martin-Trujillo A, Iglesias-Platas I, Okamura K, Sugahara N, Simón C, Moore H, Harness JV, Keirstead H, Sanchez-Mut JV, Kaneki E, Lapunzina P, Soejima H, Wake N, **Esteller M**, Ogata T, Hata K, Nakabayashi K, Monk D. Genome-wide parent-of-origin

- DNA methylation analysis reveals the intricacies of the human imprintome and suggests a germline methylation independent establishment of imprinting. *Genome Research*, 24, 554-69, 2014.
- 242) Petazzi P, Akizu N, Garcia A, Estarás C, Martínez de Paz A, Rodríguez-Paredes M, Martínez-Balbás M, Huertas D, **Esteller M**. An Increase in MeCP2 Dosage Impairs Neural Tube Formation. *Neurobiology of Disease*, 67, 49-56, 2014.
- 243) Guillaumet-Adkins A, Richter J, Odero MD, Sandoval J, Agirre X, Catala A, **Esteller M**, Prósper F, Calasanz MJ, Buño I, Kwon M, Court F, Siebert R, Monk D. Hypermethylation of the alternative AWT1 promoter in hematological malignancies is a highly specific marker for acute myeloid leukemias despite high expression levels. *Journal of Hematology & Oncology* 7:4, 2014.
- 244) Sanchez-Mut JV, Aso E, Heyn H, Matsuda T, Bock C, Ferrer I, **Esteller M**. Promoter hypermethylation of the phosphatase DUSP22 mediates PKA-dependent TAU phosphorylation and CREB activation in Alzheimer's disease. *Hippocampus*, 24, 363-368, 2014.
- 245) Guo M, Jia Y, Yu Z, House MG, **Esteller M**, Brock MV, Herman JG. Epigenetic changes associated with neoplasms of the exocrine and endocrine pancreas. *Discovery Medicine*, 17, 67-73, 2014.
- 246) Romanelli V, Nakabayashi K, Patino MV, Moran S, Iglesias-Platas I, Sugahara N, Simón C, Hata K, **Esteller M**, Court F, Monk D. Variable maternal methylation overlapping the nc886/vtRNA2-1 locus is locked between hypermethylated repeats and is frequently altered in cancer. *Epigenetics*, 9, 783-90, 2014.
- 247) Court F, Camprubi C, Garcia CV, Guillaumet-Adkins A, Sparago A, Seruggia D, Sandoval J, **Esteller M**, Martin-Trujillo A, Riccio A, Montoliu LI, Monk D. The PEG13-DMR and brain-specific enhancers dictate imprinted expression within the 8q24 intellectual disability risk locus. *Epigenetics & Chromatin* 78:5, doi: 10.1186/1756-8935-7-5, 2014.
- 248) Bonifaci N, Colas E, Serra-Musach J, Karbalai N, Brunet J, Gómez A, **Esteller M**, Fernández-Taboada E, Berenguer A, Reventós J, Müller-Myhsok B, Amundadottir L, Duell EJ, Pujana MA. Integrating gene expression and epidemiological data for the discovery of genetic interactions associated with cancer risk. *Carcinogenesis*, 35, 578-85, 2014.
- 249) Juliachs M, Muñoz C, Moutinho CA, Vidal A, Condom E, **Esteller M**, Graupera M, Casanovas O, Germà JR, Villanueva A, Viñals F. The PDGFR β -AKT Pathway Contributes to CDDP-Acquired Resistance in Testicular Germ Cell Tumors. *Clinical Cancer Research*, 20, 658-67, 2014.
- 250) Martínez R, Carmona FJ, Vizoso M, Rohde V, Kirsch M, Schacker G, Roper S, Paulus W, Barrantes A, Gomez A, **Esteller M**. DNA Methylation Alterations in Grade II- and Anaplastic Pleomorphic Xanthoastrocytoma. *BMC Cancer*, 14, 213, 2014.
- 251) Ramnath N, Nadal E, Jeon CK, Sandoval J, Colacino J, Rozek LS, Christensen PJ, **Esteller M**, Beer DG, Kim SH. Epigenetic regulation of vitamin d metabolism in human lung adenocarcinoma. *J Thorac Oncol*, 9, 473-82, 2014.
- 252) Michailidi C, Soudry E, Brait M, Maldonado L, Jaffe A, Ili-Gangas C, Brebi-Mieville P, Perez J, Kim MS, Zhong X, Yang Q, Valle B, Meltzer SJ, Torbenson M, **Esteller M**, Sidransky D, Guerrero-Preston R. Genome-wide and gene-specific epigenomic platforms for hepatocellular carcinoma biomarker development trials. *Gastroenterol Res Pract*, 2014, 597164, 2014.
- 253) Aguilar H, Urruticoechea A, Halonen P, Kiyotani K, Mushiroda T, Barril X, Serra-Musach J, Islam A, Caizzi L, Di Croce L, Nevedomskaya E, Zwart W, Bostner J, Karlsson E, Tenorio GP, Fornander T, Sgroi DC, Garcia-Mata R, Jansen MP, García N, Bonifaci N, Climent F, Soler MT, Rodríguez-Vida A, Gil M, Brunet J, Martrat G, Gómez-Baldó L, Extremera AI, Figueras A, Balart J, Clarke R, Burnstein KL, Carlson KE, Katzenellenbogen JA, Vizoso M, **Esteller M**, Villanueva A, Rodríguez-Peña AB, Bustelo XR, Nakamura Y, Zembutsu H, Stål O, Beijersbergen RL, Pujana MA. VAV3 mediates resistance to breast cancer endocrine therapy. *Breast Cancer Research*. 16(3):R53, 2014.
- 254) Moran S, Vizoso M, Martínez-Cardús A, Gomez A, Matías-Guiu X, Chiavenna SM, Fernandez AG, **Esteller M**. Validation of DNA methylation profiling in formalin-fixed paraffin-embedded samples using the Infinium HumanMethylation450 Microarray. *Epigenetics*, 9:829-33,2014.
- 255) Iglesias-Platas I, Martin-Trujillo A, Petazzi P, Guillaumet-Adkins A, **Esteller M**, Monk D. Altered expression of the imprinted transcription factor PLAGL1 deregulates a network of genes in the human IUGR placenta. *Human Molecular Genetics*. 23, 6275-6285, 2014.

- 256) Varela-Rey M, Iruarrizaga-Lejarreta M, Lozano JJ, Aransay AM, Fernandez AF, Lavin JL, Mosen-Ansorena D, Berdasco M, Turmaine M, Luka Z, Wagner C, Lu SC, **Esteller M**, Mirsky R, Jessen KR, Fraga MF, Martínez-Chantar ML, Mato JM, Woodhoo A. S-adenosylmethionine levels regulate the Schwann cell DNA methylome. *Neuron*, 81, 1024-1039, 2014.
- 257) Szczesna K, de la Caridad O, Petazzi P, Soler M, Roa L, Saez MA, Fourcade S, Pujol A, Artuch-Iriberri R, Molero-Luis M, Vidal A, Huertas D, **Esteller M**. Improvement of the Rett Syndrome Phenotype in a Mecp2 Mouse Model Upon Treatment with Levodopa and a Dopa- Decarboxylase Inhibitor. *Neuropsychopharmacology*. 39, 2846-2856, 2014.
- 258) Zaina S, Heyn H, Carmona FJ, Varol N, Sayols S, Condom E, Ramírez-Ruz J, Gomez A, Gonçalves I, Moran S, **Esteller M**. A DNA Methylation Map of Human Atherosclerosis. *Circulation Cardiovascular Genetics*. 7, 692-700, 2014
- 259) Ambrogio C, Carmona FJ, Vidal A, Falcone M, Nieto P, Romero OA, Puertas S, Vizoso M, Nadal E, Poggio T, Sanchez-Céspedes M, **Esteller M**, Mulero F, Voena C, Chiarle R, Barbacid M, Santamaria D, Villanueva A. Modeling Lung Cancer Evolution and Preclinical Response By Orthotopic Mouse Allografts. *Cancer Research*, 74:5978-88, 2014.
- 260) Wrage M, Hagmann W, Kemming D, Uzunoglu FG, Riethdorf S, Effenberger K, Westphal M, Lamszus K, Kim SZ, Becker N, Izbicki JR, Sandoval J, **Esteller M**, Pantel K, Risch A, Wikman H. Identification of HERC5 and its potential role in NSCLC progression. *International Journal of Cancer*, 136:2264-72, 2014.
- 261) Cornella H, Alsinet C, Sayols S, Zhang Z, Hao K, Cabellos L, Hoshida Y, Villanueva A, Thung S, Ward SC, Rodriguez-Carunchio L, Vila-Casadesús M, Imbeaud S, Lachenmayer A, Quaglia A, Nagorney DM, Minguez B, Carrilho F, Roberts LR, Waxman S, Mazzaferro V, Schwartz M, **Esteller M**, Heaton ND, Zucman-Rossi J, Llovet JM. Unique genomic profile of fibrolamellar hepatocellular carcinoma. *Gastroenterology*, 148, 806-18, 2014.
- 262) Huertas-Martínez J, Rello-Varona S, Herrero-Martín D, Barrau I, García-Monclús S, Sáinz-Jaspeado M, Lagares-Tena L, Núñez-Álvarez Y, Mateo-Lozano S, Mora J, Roma J, Toran N, Moran S, López-Aleman R, Gallego S, **Esteller M**, Peinado MA, Del Muro XG, Tirado OM. Caveolin-1 is down-regulated in alveolar rhabdomyosarcomas and negatively regulates tumor growth. *Oncotarget*. 5, 9744-55, 2014
- 263) Yuan W, Xia Y, Bell C, Yet I, Ferreira T, Ward K, Gao F, Loomis K, Hyde C, Wu H, Lu H, Liu Y, Small K, Viñuela A, Morris A, Berdasco M, **Esteller M**, Brosnan M, Deloukas P, McCarthy M, John S, Bell J, Wang J, Spector T. An integrated epigenomic analysis for type 2 diabetes susceptibility loci in monozygotic twins. *Nature Communications*, 5, 5719, 2014.
- 264) Viré E, Curtis C, Davalos V, Git A, Vidal A, Barbieri I, Avelle L, Bruna A, Villanueva A, Down T, Poli V, Aparicio S, **Esteller M**, Caldas C, Kouzarides T. The breast cancer oncogene EMSY represses transcription of antimetastatic microRNA miR-31. *Molecular Cell*, 53, 1-13, 2014.
- 265) Deplus R, Blanchon L, Rajavelu A, Boukaba A, Defrance M, Luciani J, Rothé F, Dedeurwaerder S, Denis H, Brinkman AB, Simmer F, Müller F, Bertin B, Berdasco M, Putmans P, Calonne E, Litchfield DW, de Launoit Y, Jurkowski TP, Stunnenberg HG, Bock C, Sotiriou C, Fraga M, **Esteller M**, Jeltsch A, and Fuks F. Regulation of DNA methylation patterns by CK2-mediated phosphorylation of Dnmt3a. *Cell Reports*, 8,743-53, 2014.
- 266) Carmona FJ, Davalos V, Vidal E, Gomez A, Heyn H, Hashimoto Y, Vizoso M, Martinez-Cardus A, Sayols S, Ferreira H, Sanchez-Mut J, Moran S, Margeli M, Castilla E, Berdasco M, Stefansson OA, Eyfjord JE, Gonzalez-Suarez E, Dopazo J, Orozco M, Gut I, **Esteller M**. A Comprehensive DNA Methylation Profile of Epithelial-to-Mesenchymal Transition. *Cancer Research*, 74, 5608-19, 2014.
- 267) Ongen H, Andersen CL, Bramsen JB, Oster B, Rasmussen MH, Ferreira PG, Sandoval J, Vidal E, Whiffin N, Planchon A, Padioleau I, Bielser D, Romano L, Tomlinson I, Houlston RS, **Esteller M**, Orntoft TF, Dermitzakis ET. Putative cis-regulatory drivers in colorectal cancer. *Nature*, 512, 87-90, 2014.
- 268) Liz J, Portela A, Soler M, Gómez A, Ling H, Michlewski G, Calin GA, Guil S, **Esteller M**. RNA-Directed Regulation of pri-miRNA Processing by a Long Noncoding RNA Transcribed from an Ultraconserved Region. *Molecular Cell*, 55, 138-47, 2014.

2015

- 269) Simo-Riudalbas L, Perez-Salvia M, Setien F, Villanueva A, Moutinho C, Martinez-Cardus A, Moran S, Berdasco M, Gomez A, Vidal E, Soler M, Heyn H, Vaquero A, de la Torre C, Barcelo-Batllori S, Vidal A, Roz L, Pastorino U, Szakszon K, Borck G, Moura C, Carneiro F, Zondervan I, Savola S, Iwakawa R, Kohno T, Yokota J, **Esteller M**. KAT6B is a tumor suppressor histone H3 lysine 23 acetyltransferase undergoing genomic loss in small cell lung cancer. *Cancer Research*, 75, 3936-45, 2015.
- 270) Stefansson OA, Moran S, Gomez A, Sayols S, Arribas-Jorba C, Sandoval J, Hilmarsdottir H, Olafsdottir E, Tryggvadottir L, Jonasson JG, Eyfjord J, **Esteller M**. A DNA methylation-based definition of biologically distinct breast cancer subtypes. *Molecular Oncology*, 9, 555-68, 2015.
- 271) Boque-Sastre R, Soler M, Oliveira-Mateos C, Portela A, Moutinho C, Sayols S, Villanueva A, **Esteller M**, Guil S. Head-to-head antisense transcription and R-loop formation promotes transcriptional activation. *Proc Natl Acad Sci U S A*, 112, 5785-90, 2015.
- 272) Fernández AF, Bayón GF, Urdinguio RG, Torano EG, García MG, Carella A, Petrus-Reurer S, Ferrero C, Martinez-Cambor P, Cubillo I, García-Castro J, Delgado-Calle J, Pérez-Campo MF, Riancho JA, Bueno C, Menéndez P, Mentink A, Mareschi K, Claire F, Fagnani C, Medda E, Toccaceli V, Brescianini S, Moran S, **Esteller M**, Stolzing A, de Boer J, Nisticó L, Stazi MA, Fraga MF. H3K4me1 marks DNA regions hypomethylated during aging in human stem and differentiated cells. *Genome Research*, 25, 27-40, 2015.
- 273) Zaina S, Heyn H, Carmona FJ, Varol N, Sayols S, Condom E, Ramírez-Ruz J, Gomez A, Moran S, Lund G, Valencia-Morales MP, Rodríguez-Ríos D, Sánchez-Flores A, **Esteller M**. The DNA methylation drift of the atherosclerotic aorta increases with lesion progression. *BMC Medical Genomics*, doi: 10.1186/s12920-015-0085-1, 2015.
- 274) Cappetta M, Berdasco M, Hochmann J, Bonilla C, Sans M, Hidalgo PC, Artagaveytia N, Kittles R, Martínez M, **Esteller M**, Bertoni B. Effect of genetic ancestry on leukocyte global DNA methylation in cancer patients. *BMC Cancer*, 27, 434, 2015.
- 275) Gurnot C, Martin-Subero I, Mah SM, Weikum W, Goodman SJ, Brain U, Werker JF, Kobor MS, **Esteller M**, Oberlander TF, Hensch TK. Prenatal antidepressant exposure associated with CYP2E1 DNA methylation change in neonates. *Epigenetics*, 10, 361-72, 2015.
- 276) Sandoval J, Díaz-Lagares A, Salgado R, Servitje O, Climent F, Ortiz-Romero PL, Pérez-Ferriols A, Garcia-Muret MP, Estrach T, Garcia M, Nonell L, **Esteller M**, Pujol RM, Espinet B, Gallardo F. MicroRNA expression profiling and DNA methylation signature for deregulated microRNA in cutaneous T-cell lymphoma. *J Invest Dermatol.*, 135, 1128-37, 2015.
- 277) Agrelo R, Sutz MA, Setien F, Aldunate F, **Esteller M**, Da Costa V, Achenbach R. A novel Werner Syndrome mutation: pharmacological treatment by read-through of nonsense mutations and epigenetic therapies. *Epigenetics*, 10, 329-41, 2015.
- 278) Martínez de Paz A, Vicente Sanchez-Mut J, Samitier-Martí M, Petazzi P, Sáez M, Szczesna K, Huertas D, **Esteller M**, Ausió J. Circadian cycle-dependent MeCP2 and brain chromatin changes. *PLoS One*, 10, e0123693, 2015.
- 279) Villanueva A, Portela A, Sayols S, Battiston C, Hoshida Y, Méndez-González J, Imbeaud S, Letouzé E, Hernandez-Gea V, Cornella H, Pinyol R, Solé M, Fuster J, Zucman-Rossi J, Mazzaferro V, **Esteller M**, Llovet JM. DNA Methylation-based prognosis and epidrivers in hepatocellular carcinoma. *Hepatology*, 61, 1945-56, 2015.
- 280) Barneda-Zahonero B, Collazo O, Azagra A, Fernández-Duran I, Serra-Musach J, Islam AB, Vega-García N, Malatesta R, Camós M, Gómez A, Román-González L, Vidal A, López-Bigas N, Villanueva A, **Esteller M**, Parra M. The transcriptional repressor HDAC7 promotes apoptosis and c-Myc downregulation in particular types of leukemia and lymphoma. *Cell Death & Disease*, 6, e1635, 2015.
- 281) Vizoso M, Puig M, Carmona FJ, Maqueda M, Velásquez A, Gómez A, Labernadie A, Lugo R, Gabasa M, Rigat-Brugarolas LG, Trepas X, Ramírez J, Moran S, Vidal E, Reguart N, Perera A,

- Esteller M**, Alcaraz J. Aberrant DNA methylation in non-small cell lung cancer-associated fibroblasts. *Carcinogenesis*, 36, 1453-63, 2015.
- 282) Cascón A, Comino-Méndez I, Currás-Freixes M, de Cubas AA, Contreras L, Richter S, Mancikova V, Pérez-Barrios A, Calatayud M, Azriel S, Villar-Vicente R, Aller J, Setién F, Garcia JF, Río-Machín A, Letón R, Gómez-Graña A, Inglada-Pérez L, Apellániz-Ruiz M, Roncador G, **Esteller M**, Rodríguez-Antona C, Satrústegui J, Eisenhofer G, Urioste M, Robledo M. Whole-exome sequencing identifies MDH2 as a new familial paraganglioma gene. *The Journal of the National Cancer Institute*, 107, pii: djv0532015, 2015.
- 283) Leveille N, Melo CA, Rooijers K, Diaz-Lagares A, Melo S, Kormaz G, Lopes R, Moqadam F, Maia A, Wijchers P, Geeven G, den Boer M, Kalluri R, de Laat W, **Esteller M**, Agami R. Genome wide profiling of stress-activated enhancer RNAs uncovers an essential lncRNA-dependent epigenetic regulation. *Nature Communications*, 6, 6520, 2015.
- 284) Vizoso M, Ferreira HJ, Lopez-Serra P, Carmona FJ, Martínez-Cardús A, Girotti MR, Villanueva A, Guil S, Moutinho C, Liz J, Portela A, Heyn H, Moran S, Vidal A, Martínez-Iniesta M, Manzano JL, Fernandez-Figueras MT, Elez E, Muñoz-Couselo E, Botella-Estrada R, Berrocal A, Pontén F, Oord JV, Gallagher WM, Frederick DT, Flaherty KT, McDermott U, Lorigan P, Marais R, **Esteller M**. Epigenetic activation of a cryptic TBC1D16 transcript enhances melanoma progression by targeting EGFR. *Nature Medicine*, 21, 741-50, 2015.

2016

- 285) Diaz-Lagares A, Crujeiras AB, Lopez-Serra P, Soler M, Setien F, Goyal A, Sandoval J, Hashimoto Y, Martínez-Cardús A, Gomez A, Heyn H, Moutinho C, Espada J, Vidal A, Paúles M, Galán M, Sala N, Akiyama Y, Martínez-Iniesta M, Farré L, Villanueva A, Gross M, Diederichs S, Guil S, **Esteller M**. Epigenetic inactivation of the p53-induced long noncoding RNA TP53 target 1 in human cancer. *Proc Natl Acad Sci USA*, 113, E7535-E7544, 2016.
- 286) Heyn H, Vidal E, Ferreira HJ, Vizoso M, Sayols S, Gomez A, Moran S, Boque-Sastre R, Guil S, Martínez-Cardús A, Lin CY, Royo R, Sanchez-Mut JV, Martínez R, Gut M, Torrents D, Orozco M, Gut I, Young RA, **Esteller M**. Epigenomic analysis detects aberrant super-enhancer DNA methylation in human cancer. *Genome Biology*, 17, 11, DOI: 10.1186/s13059-016-0879-2, 2016.
- 287) Anadón C, Guil S, Simó-Riudalbas L, Moutinho C, Setien F, Martínez-Cardús A, Moran S, Villanueva A, Calaf M, Vidal A, Lazo PA, Zondervan I, Savola S, Kohno T, Yokota J, Ribas de Pouplana L, **Esteller M**. Gene Amplification-Associated Overexpression of the RNA Editing Enzyme ADAR1 Enhances Human Lung Tumorigenesis. *Oncogene*, 35, 4407-13, 2016.
- 288) Martínez-Cardús A, Moran S, Musulen E, Moutinho C, Manzano JL, Martínez-Balibrea E, Tierno M, Élez E, Landolfi S, Lorden P, Arribas C, Müller B, Bock C, Tabernero J, **Esteller M**. Epigenetic homogeneity within colorectal tumors predicts shorter relapse-free and overall survival times for patients with loco-regional cancer. *Gastroenterology*, 151, 961-972, 2016.
- 289) Ferreira HJ, Heyn H, Vizoso M, Moutinho C, Vidal E, Gomez A, Martínez-Cardús A, Simó-Riudalbas L, Moran S, Jost E, **Esteller M**. DNMT3A mutations mediate the epigenetic reactivation of the leukemogenic factor MEIS1 in acute myeloid leukemia. *Oncogene*, 35, 3079-82, 2016.
- 290) Sanchez-Mut JV, Heyn H, Vidal E, Moran S, Sayols S, Delgado-Morales R, Schultz MD, Ansoleaga B, Garcia-Esparcia P, Pons-Espinal M, Martínez de Lagran M, Dopazo J, Rabano A, Avila J, Dierssen M, Lott I, Ferrer I, Ecker JR, **Esteller M**. Human DNA methylomes of neurodegenerative diseases show common epigenomic patterns. *Translational Psychiatry*, 6:e718, doi:10.1038/tp.2015.214, 2016.
- 291) Moran S, Arribas C, **Esteller M**. Validation of a DNA methylation microarray for 850,000 CpG sites of the human genome enriched in enhancer sequences. *Epigenomics*, 8, 389-99, 2016.
- 292) Lucariello M, Vidal E, Vidal S, Saez M, Roa L, Huertas D, Pineda M, Dalfó E, Dopazo J, Jurado P, Armstrong J, **Esteller M**. Whole exome sequencing of rett syndrome-like patients reveals the mutational diversity of the clinical phenotype. *Human Genetics*, 135, 1343-54, 2016.

- 293) Sáez MA, Fernández-Rodríguez J, Moutinho C, Sanchez-Mut JV, Gomez A, Vidal E, Petazzi P, Szczesna K, Lopez-Serra P, Lucariello M, Lorden P, Delgado-Morales R, de la Caridad OJ, Huertas D, Gelpí JL, Orozco M, López-Doriga A, Milà M, Perez-Jurado LA, Pineda M, Armstrong J, Lázaro C, **Esteller M**. Mutations in JMJD1C are involved in Rett syndrome and intellectual disability. *Genetics in Medicine*. 18, 378-85, 2016.
- 294) Nogales V, Reinhold WC, Varma S, Martinez-Cardus A, Moutinho C, Moran S, Heyn H, Sebio A, Barnadas A, Pommier Y, **Esteller M**. Epigenetic Inactivation of the Putative DNA/RNA Helicase SLFN11 in Human Cancer Confers Resistance to Platinum Drugs. *Oncotarget*, 7, 3084-97, 2016.
- 295) da Silva-Diz V, Simón-Extremera P, Bernat-Peguera A, de Sostoa J, Urpí M, Penin RM, Pérez Sidelnikova D, Bermejo O, Viñals JM, Rodolosse A, Gonzalez-Suarez E, Gómez Moruno A, Pujana MA, **Esteller M**, Villanueva A, Viñals F, Muñoz P. Cancer stem-like cells act at via distinct signaling pathways in promoting late stages of malignant progression. *Cancer Research*, 76, 1245-59, 2016.
- 296) Royo F, Zuñiga-Garcia P, Torrano V, Loizaga A, Sanchez-Mosquera P, Ugalde-Olano A, González E, Cortazar AR, Palomo L, Fernández-Ruiz S, Lacasa-Viscasillas I, Berdasco M, Sutherland JD, Barrio R, Zabala-Letona A, Martín-Martí N, Arruabarrena-Aristorena A, Valcarcel-Jimenez L, Caro-Maldonado A, Gonzalez-Tampan J, Cachi-Fuentes G, **Esteller M**, Aransay AM, Unda M, Falcón-Pérez JM, Carracedo A. Transcriptomic profiling of urine extracellular vesicles reveals alterations of CDH3 in prostate cancer. *Oncotarget*, DOI: 10.18632/oncotarget.6899, 2016.
- 297) Silva-Martínez GA, Rodríguez-Ríos D, Alvarado-Caudillo Y, Vaquero A, **Esteller M**, Carmona FJ, Moran S, Nielsen FC, Wickström-Lindholm, Wrobel K, Wrobel K, Barbosa-Sabanero G, Zaina S, Lund G. Arachidonic and oleic acid exert distinct effects on the DNA methylome. *Epigenetics*, 18, 1-14, 2016.
- 298) de la Rocha C, Pérez-Mojica JE, León SZ, Cervantes-Paz B, Tristán-Flores FE, Rodríguez-Ríos D, Molina-Torres J, Ramírez-Chávez E, Alvarado-Caudillo Y, Carmona FJ, **Esteller M**, Hernández-Rivas R, Wrobel K, Wrobel K, Zaina S, Lund G. Associations between whole peripheral blood fatty acids and DNA methylation in humans. *Scientific Reports*, 6, 25867, 2016.
- 299) Amatu A, Barault L, Moutinho C, Cassingena A, Bencardino K, Ghezzi S, Palmeri L, Bonazzina E, Tosi F, Ricotta R, Cipani T, Crivori P, Gatto R, Chirico G, Marrapese G, Truini M, Bardelli A, **Esteller M**, Di Nicolantonio F, Sartore-Bianchi A, Siena S. Tumor MGMT promoter hypermethylation changes over time limit temozolomide efficacy in a phase II trial for metastatic colorectal cancer. *Annals of Oncology*, doi: 10.1093/annonc/mdw071, 2016.
- 300) Nuñez O, Román A, Johnson Sr, Inoue Y, Hirose M, Casanova A, Ruiz de Garibay G, Herranz C, Bueno-Moreno G, Boni J, Mateo F, Petit A, Climent F, Soler T, Vidal A, Sánchez-Mut JV, **Esteller M**, López JI, García N, Gumà G, Ortega R, Plà MJ, Campos M, Ansótegui E, Molina-Molina M, Valenzuela C, Ussetti P, Laporta R, Ancochea J, Xaubet A, Pollán M, Pujana MA. Study of breast cancer incidence in patients of lymphangioliomyomatosis. *Breast Cancer Research and Treatment*, 156, 195-201, 2016.
- 301) Villalba M, Diaz-Lagares A, Redrado M, de Aberasturi AL, Segura V, Bodegas ME, Pajares MJ, Pio R, Freire J, Gomez-Roman J, Montuenga LM, **Esteller M**, Sandoval-del Amor J, Calvo A. Epigenetic alterations leading to Tmprss4 promoter hypomethylation and protein overexpression predict poor prognosis in squamous lung cancer patients. *Oncotarget*, DOI: 10.18632/oncotarget.8045, 2016.
- 302) Alelú-Paz R, Carmona FJ, Sanchez-Mut JV, Cariaga-Martínez A, González-Corpas A, Ashour N, Orea MJ, Escanilla A, Monje A, Guerrero Márquez C, Saiz-Ruiz J, **Esteller M**, Ropero S. Epigenetics in Schizophrenia: A Pilot Study of Global DNA Methylation in Different Brain Regions Associated with Higher Cognitive Functions. *Front Psychol*, 7, 1496, 2016.
- 303) Toll A, Salgado R, Espinet B, Diaz-Lagares A, Hernandez-Ruiz E, Andrades E, Sandoval J, **Esteller M**, Pujol RM, Hernandez-Muñoz I. miR-204 silencing in intraepithelial to invasive cutaneous squamous cell carcinoma progression. *Molecular Cancer*, 15, 53, DOI: 10.1186/s12943-016-0537-z2016.
- 304) Crujeiras AB, Diaz-Lagares A, Moreno-Navarrete JM, Sandoval J, Hervas D, Gomez A, Ricart W, Casanueva FF, **Esteller M**, Fernandez-Real JM. Genome-wide DNA methylation pattern in visceral

- adipose tissue differentiates insulin-resistant from insulin-sensitive obese subjects. *Translational Research*, doi: 10.1016/j.trsl.2016.07.002, 2016.
- 305) Serra-Musach J, Mateo F, Capdevila-Busquets E, Zhang X, Guha R, Thomas CJ, Grueso J, Ruiz de Garibay G, Villanueva A, Jaeger S, Heyn H, Vizoso M, Pérez H, Cordero A, Gonzalez-Suarez E, **Esteller M**, Moreno-Bueno G, Tjärnberg A, Lázaro C, Serra V, Arribas J, Benson M, Gustafsson M, Ferrer M, Aloy P, Pujana MA. Cancer network activity associated with therapeutic response and synergism. *Genome Medicine*, 8:88, DOI: 10.1186/s13073-016-0340-x, 2016.
- 306) Tenorio J, Romanelli V, Martín-Trujillo A, Fernández GM, Segovia M, Perandones C, Pérez Jurado LA, **Esteller M**, Fraga M, Arias P, Gordo G, Dapía I, Mena R, Palomares M, Pérez de Nanclares G, Nevado J, García-Miñaur S, Santos-Simarro F, Martínez-Glez V, Vallespín E, The SOGRI Consortium, Monk D, Lapunzina P. Clinical and molecular analyses of Beckwith–Wiedemann syndrome: Comparison between spontaneous conception and assisted reproduction techniques. *American Journal of Medical Genetics*, DOI: 10.1002/ajmg.a.37852.
- 307) Reinhold WC, Varma S, Sunshine M, Rajapakse V, Luna A, Kohn KW, Stevenson H, Wang Y, Heyn H, Nogales V, Moran S, Goldstein DJ, Doroshow JH, Meltzer PS, **Esteller M**, Pommier Y. The NCI-60 Methylome and its Integration into CellMiner. *Cancer Research*, pii: canres.0655.2016, 2016.
- 308) Niu N, Ly RC, Liu T, Tan X, Deng M, Fridley BL, Kalari KR, Abo RP, Jenkins G, Batzler A, Carlson EE, Moran S, Heyn H, **Esteller M**, Wang L. Metformin Pharmacogenomics: A genome-wide associate study to identify genetic and epigenetic biomarkers involved in metformin anticancer response using human lymphoblastoid cell lines. *Human Molecular Genetics*, pii: ddw301, 2016.
- 309) Martínez-Quetglas I, Pinyol R, Dauch D, Torrecilla S, Tovar V, Moeini A, Alsinet C, Portela A, Rodríguez-Carunchio L, Solé M, Lujambio A, Villanueva A, Thung S, **Esteller M**, Zender L, Llovet JM. IGF2 is Upregulated by Epigenetic Mechanisms in Hepatocellular Carcinomas and is an Actionable Oncogene Product in Experimental Models. *Gastroenterology*, 151, 1192-205, 2016.
- 310) Diaz-Lagares A, Mendez-Gonzalez J, Hervas D, Saigi M, Pajares MJ, Garcia D, Belen Crujeiras A, Pio R, Montuenga LM, Zulueta J, Nadal E, Rosell A, **Esteller M**, Sandoval del Amor J. A novel epigenetic signature for early diagnosis in lung cancer. *Clinical Cancer Research*, doi: 10.1158/1078-0432.CCR-15-2346, 2016.
- 311) Vento-Tormo R, Company C, Rodríguez-Ubrevia J, de la Rica L, Urquiza JM, Javierre BM, Sabarinathan R, Luque A, **Esteller M**, Aran JM, Álvarez-Errico D, Ballestar E. IL-4 orchestrates STAT6-mediated DNA demethylation leading to dendritic cell differentiation. *Genome Biology*, 17, 4, doi: 10.1186/s13059-015-0863-2, 2016.
- 312) Vaclová T, Woods NT, Megías D, Gomez-Lopez S, Setién F, García Bueno JM, Macías JA, Barroso A, Urioste M, **Esteller M**, Monteiro ANA, Benítez J, Osorio A. Germline missense pathogenic variants in the BRCA1 BRCT domain, p.Gly1706Glu and p.Ala1708Glu, increase cellular sensitivity to PARP inhibitor Olaparib by a dominant negative effect. *Human Molecular Genetics*, pii: ddw343, 2016.
- 313) ter Brugge P, Kristel P, van der Burg E, Boon U, de Maaker M, Lips E, Mulder L, de Ruiter J, Moutinho C, Gevensleben H, Marangoni E, Majewski I, Józwiak K, Kloosterman W, van Roosmalen M, Duran K, Hogervorst F, Turner N, **Esteller M**, Cuppen E, Wesseling J, Jonkers J. Mechanisms of therapy resistance in patient-derived xenograft models of BRCA1-deficient breast cancer. *The Journal of the National Cancer Institute*, doi: 10.1093/jnci/djw148, 2016.
- 314) Azagra A, Roman-Gonzalez L, Collazo O, Rodríguez-Ubrevia J, de Yébenes VG, Barneda-Zahonero B, Rodríguez J, Castro de Moura M, Grego-Bessa J, Fernandez-Duran I, Islam A, **Esteller M**, Ramiro AR, Ballestar E, Parra M. In vivo genetic deletion of HDAC7 reveals its requirement to establish proper B lymphocyte identity and development. *Journal of Experimental Medicine*, DOI: 10.1084/jem.20150821, 2016.
- 315) Bock C, Halbritter F, Carmona FJ, Sascha Tierling, Paul Datlinger, Assenov Y, Berdasco M, Bergmann AK, Booher K, Busato F, Campan M, Dahl C, Dahmcke CM, Diep D, Fernández AF, Gerhauser C, Haake A, Heilmann K, Holcomb T, Hussmann D, Ito M, Kläver R, Kreutz M, Kulis M, Lopez V, Nair SS, Paul DS, Plongthongkum N, Qu W, Queirós AC, Sauter G, Schlomm T, Stirzaker C, Statham A, Strogantsev R, Urduingio RG, Walter K, Weichenhan D, Weisenberger DJ,

- Beck S, Clark SJ, **Esteller M**, Ferguson-Smith AC, Fraga MF, Guldberg P, Hansen LL, Laird PW, Martin-Subero JI, Nygren AOH, Peist R, Plass C, Shames DS, Siebert R, Sun X, Tost J, Walter J, Zhang K, for the BLUEPRINT consortium. Quantitative comparison of DNA methylation assays for biomarker development and clinical applications. *Nature Biotechnology*, 34, 726-37, 2016.
- 316) Iorio F, Knijnenburg TA, Vis DJ, Bignell GR, Menden MP, Schubert M, Aben N, Gonçalves E, Barthorpe S, Lightfoot H, Greninger P, van Dyk E, Chang H, de Silva H, Heyn HA, Deng X, Egan RK, Liu Q, Mironenko T, Mitropoulos X, Richardson L, Wang J, Zhang T, Moran S, Sayols S, Soleimani M, Tamborero D, Lopez-Bigas N, Ross-Macdonald P, **Esteller M**, Gray N, Daniel A, Haber, Stratton MR, Benes CH, Wessels LFA, Saez-Rodriguez J, McDermott U, Garnett MJ. A landscape of pharmacogenomic interactions in cancer. *Cell*, 166, 740-54, 2016.
- 317) Moran S, Martínez-Cardús A, Sayols S, Musulén E, Balana C, Estival-Gonzalez A, Moutinho C, Heyn H, Diaz-Lagares A, Castro de Moura M, Stella GM, Comoglio PM, Ruiz-Miró M, Matias-Guiu X, Pazo-Cid R, Antón A, Lopez-Lopez R, Soler G, Longo F, Guerra I, Fernandez S, Assenov Y, Plass C, Morales R, Carles J, Bowtell D, Mileschkin L, Sia D, Tothill R, Tabernero J, Llovet JM, **Esteller M**. Epigenetic profiling to classify cancer of unknown primary: a multicentre, retrospective analysis. *The Lancet Oncology*, 17, 1386–95, 2016.

2017

- 318) Anadón C, van Tetering G, Ferreira HJ, Moutinho C, Martínez-Cardús A, Villanueva A, Soler M, Heyn H, Moran S, Castro de Moura M, Setien F, Vidal A, Genescà E, Ribera JM, Nomdedeu JF, Guil S, **Esteller M**. Epigenetic loss of the RNA decapping enzyme NUDT16 mediates C-MYC activation in T-cell acute lymphoblastic leukemia. *Leukemia*, 31, 1622-5, 2017.
- 319) Jordà M, Díez-Villanueva A, Mallona I, Martín B, Lois S, Barrera V, **Esteller M**, Vavouri T, Peinado MA. The epigenetic landscape of Alu repeats delineates the structural and functional genomic architecture of colon cancer cells. *Genome Research*, 27, 118-32, 2017.
- 320) Crujeiras AB, Díaz-Lagares A, Stefansson OA, Macias M, Sandoval J, Cueva J, López-López R, Moran S, Jonasson JG, Tryggvadottir L, Olafsdottir E, Tinahones FJ, Carreira MC, Casanueva FF, **Esteller M**. Obesity and menopause modify the epigenomic profile of breast cancer. *Endocrine-Related Cancer*, 24, 351-63, 2017.
- 321) Romero OA, Verdura S, Torres-Diz M, Gomez A, Moran S, Condom E, **Esteller M**, Villanueva A, Sanchez-Cespedes M. Sensitization of retinoids and corticoids to epigenetic drugs in MYC-activated lung cancers by antitumor reprogramming. *Oncogene*, 36, 1287-96, 2017.
- 322) Huertas-Martínez J, Court F, Rello-Varona S, Herrero-Martín D, Almacellas-Rabaiget O, Sáinz-Jaspeado M, Garcia-Monclús S, Lagares-Tena L, Buj R, Hontecillas-Prieto L, Sastre A, Azorin D, Sanjuan X, López-Alemany R, Moran S, Roma J, Gallego S, Mora J, García Del Muro X, Giangrande PH, Peinado MA, Alonso J, de Alava E, Monk D, **Esteller M**, Tirado OM. DNA methylation profiling identifies PTRF/Cavin-1 as a novel tumor suppressor in Ewing sarcoma when co-expressed with caveolin-1. *Cancer Letters*, 386, 196-207, 2017.
- 323) Crujeiras AB1, Diaz-Lagares A, Sandoval J, Milagro FI, Navas-Carretero S, Carreira MC, Gomez A, Hervas D, Monteiro MP, Casanueva FF, **Esteller M**, Martinez JA. DNA methylation map in circulating leukocytes mirrors subcutaneous adipose tissue methylation pattern: a genome-wide analysis from non-obese and obese patients. *Scientific Reports*, 7, 41903, 2017.
- 324) Sanchez-Mut JV, Heyn H, Vidal E, Delgado-Morales R, Moran S, Sayols S, Sandoval J, Ferrer I, **Esteller M**, Gräff J. Whole Genome Grey and White matter DNA Methylation Profiles in Dorsolateral Prefrontal cortex. *Synapse*, doi: 10.1002/syn.21959, 2017.
- 325) Martín-Sánchez E, Mendaza S, Ulazia-Garmendia A, Monreal-Santesteban I, Blanco-Luquin I, Córdoba A, Vicente-García F, Pérez-Janices N, Escors D, Megías D, López-Serra P, **Esteller M**, Illarramendi JJ, Guerrero-Setas D. CHL1 hypermethylation as a potential biomarker of poor prognosis in breast cancer. *Oncotarget*, 8, 15789-801, 2017.
- 326) Torres-Ferreira J, Ramalho-Carvalho J, Gomez A, Menezes FD, Freitas R, Oliveira J, Antunes L, Bento MJ, **Esteller M**, Henrique R, Jeronimo C. MiR-193b promoter methylation accurately detects

- prostate cancer in urine sediments and miR-34b/c or miR-129-2 promoter methylation define subsets of clinically aggressive tumors. *Molecular Cancer*, 16, 26, 2017.
- 327) Barbano R, Pasculli B, Rendina M, Fontana A, Fusilli C, Copetti M, Castellana S, Valori VM, Morritti M, Graziano P, Luigi C, Coco M, Picardo F, Mazza T, Evron E, Murgo R, Maiello E, **Esteller M**, Fazio VM, Parrella P. Stepwise analysis of MIR9 loci identifies miR-9-5p to be involved in Oestrogen regulated pathways in breast cancer patients. *Scientific Reports*, 7, 45283, 2017.
- 328) Rojas S, Brugulat-Serrat A, Bargalló N, Minguillón C, Tucholka A, Falcon C, Carvalho A, Morán S, **Esteller M**, Gramunt N, Fauria K, Camí J, Molinuevo JL, Gispert JD. Higher prevalence of cerebral white matter hyperintensities in homozygous APOE-ε4 allele carriers aged 45-75: Results from the ALFA study. *J Cereb Blood Flow Metab*, doi: 10.1177/0271678X17707397, 2017
- 329) Ramalho-Carvalho J, Graça I, Gomez A, Oliveira J, Henrique R, **Esteller M**, Jerónimo C. Downregulation of miR-130b~301b cluster is mediated by aberrant promoter methylation and impairs cellular senescence in prostate cancer. *Journal of Hematology and Oncology*, 10, 43, 2017.
- 330) Gómez-Miragaya J, Palafox M, Pare L, Yoldi G, Ferrer I, Vila S, Galvan P, Pellegrini P, Perez-Montoyo H, Igea A, Muñoz P, **Esteller M**, Nebreda AR, Urruticoechea A, Morilla I, Pernas S, Climent F, Soler-Monso MT, Petit A, Serra V, Prat A, González-Suárez E. Resistance to taxanes in triple negative breast cancer associates with the dynamics of a CD49f+ tumor initiating population. *Stem Cell Reports*, 9, 1392-1407, 2017.
- 331) Gimenez-Xavier P, Pros E, Bonastre E, Moran S, Aza A, Graña O, Gómez-López G, Derdak S, Davad M, Esteve-Codina A, Hernandez Mora JR, Salinas-Chaparro D, **Esteller M**, Pisano D, Sanchez-Cespedes M. Genomic and molecular screenings identify different mechanisms for acquired resistance to MET inhibitors in lung cancer cells. *Molecular Cancer Therapeutics*, 16, 1366-76, 2017.
- 332) Hernandez Mora JR, Sanchez-Delgado M, Petazzi P, Moran S, **Esteller M**, Iglesias-Platas I, Monk D. Profiling of oxBS-450K 5-hydroxymethylcytosine in human placenta and brain reveals enrichment at imprinted loci. *Epigenetics*, doi: 10.1080/15592294.2017.1344803, 2017.
- 333) Claveria-Gimeno R, Lanuza PM, Morales-Chueca I, Jorge OC, Vega S, Abian O, **Esteller M**, Velazquez-Campoy A. The intervening domain from MeCP2 enhances the DNA affinity of the methyl binding domain and provides an independent DNA interaction site. *Scientific Reports*, 7, 41635, 2017.
- 334) Mathot P, Grandin M, Devailly G, Souaze F, Cahais V, Moran S, Campone M, Herceg Z, **Esteller M**, Juin P, Mehlen P, Dante R. DNA methylation signal plays a major role in the response of human breast cancer cells to the microenvironment. *Oncogenesis*, 6, e390, 2017.
- 335) Barault L, Amatu A, Siravegna G, Ponzetti A, Moran S, Cassingena A, Mussolin B, Falcomatà C, Binder A, Cristiano C, Oddo D, Guarrera S, Cancelliere C, Bustreo S, Bencardino K, Maden S, Vanzati A, Zavattari P, Matullo G, Truini M, Grady WM, Racca P, Michels KB, Siena S, **Esteller M**, Bardelli A, Sartore-Bianchi A, Di Nicolantonio F. Discovery Of Methylated Circulating DNA Biomarkers For Comprehensive Non-Invasive Monitoring Of Treatment Response In Metastatic Colorectal Cancer. *Gut*, doi: 10.1136/gutjnl-2016-313372, 2017.
- 336) Hernández-Alvarez MI, Díaz-Ramos A, Berdasco M, Cobb J, Planet E, Cooper D, Pazderska A, Wanic K, O'Hanlon D, Gomez A, de la Ballina LR, **Esteller M**, Palacin M, O'Gorman DJ, Nolan JJ, Zorzano A. Early-onset and classical forms of type 2 diabetes show impaired expression of genes involved in muscle branched-chain amino acids metabolism. *Scientific Reports*, 7, 13850, 2017.
- 337) Izquierdo-Bouldstridge A, Alberto Bustillos A, Bonet-Costa C, Aribau-Miralbés P, García-Gomis D, Dabad M, Esteve-Codina A, Pascual-Reguant L, Peiró S, **Esteller M**, Murtha M, Millán-Ariño L, Jordan A. Histone H1 depletion triggers an interferon response in cancer cells via activation of heterochromatic repeats. *Nucleic Acids Research*, doi: 10.1093/nar/gkx746, 2017.
- 338) Sia D, Jiao Y, Martinez-Quetglas I, Kuchuk O, Villacorta-Martin C, Castro de Moura M, Putra J, Camprecios G, Bassaganyas L, Akers N, Losic B, Waxman S, Thung SN, Mazzaferro V, **Esteller M**, Friedman SL, Schwartz M, Villanueva A, Llovet JM. Identification of an Immune-specific Class of Hepatocellular Carcinoma, Based on Molecular Features. *Gastroenterology*, 153, 812-26, 2017.

- 339) Remacha L, Comino-Méndez I, Richter S, Contreras L, Currás-Freixes M, Pita G, Letón R, Galarreta A, Torres-Pérez R, Honrado E, Jiménez S, Maestre I, Moran S, **Esteller M**, Satrustegui J, Eisenhofer G, Robledo M, Cascón A. Targeted exome sequencing of Krebs cycle genes reveals candidate cancer predisposing mutations in pheochromocytomas and paragangliomas. *Clinical Cancer Research*. DOI: 10.1158/1078-0432.CCR-16-2250, 2017.
- 340) Rigoutsos I, Lee SK, Nam SY, Anfossi S, Pasculli B, Pichler M, Jing Y, Rodriguez-Aguayo C, Telonis AG, Rossi S, Ivan C, Ivkovic TC, Fabris L, Clark P, Ling H, Shimizu M, Redis RS, Shah MY, Zhang X, Okugawa Y, Jung EJ, Tsirigos A, Huang L, Ferdin J, Gafà R, Spizzo R, Nicoloso MS, Paranjape AN, Shariati M, Tiron A, Yeh JJ, Teruel-Montoya R, Xiao L, Melo SA, Menter D, Jiang ZC, Flores ER, Negrini M, Goel A, Bar-Eli M, Mani SA, Liu CG, Lopez-Berestein G, Berindan-Neagoe I, **Esteller M**, Kopetz S, Keating MJ, Lanza G, Calin GA. N-BLR, a primate-specific non-coding transcript leads to colorectal cancer invasion and migration. *Genome Biology*, 18, 98, 2017.
- 341) Oleksiewicz U, Gładych M, Raman AT, Heyn HA, Lota P, Andrzejewska A, Sozańska B, Samant N, Fąk K, Auguscik P, Kosiński M, Wróblewska J, Tomczak K, Kulcenty K, Biecek P, **Esteller M**, Shah PK, Rai K, Wiznerowicz M. TRIM28 and novel interacting KRAB-ZNFs preserve self-renewal of human pluripotent stem cells through H3K9me3 and DNA methylation mediated repression of pro-differentiation genes. *Stem Cell Reports*, doi.org/10.1016/j.stemcr.2017.10.031, 2017.
- 342) Bramsen JB, Rasmussen MH, Ongen H, Mattesen TB, Ørntoft MBW, Árnadóttir SS, Sandoval J, Laguna T, Vang S, Øster B, Lamy P, Madsen R, Laurberg S, **Esteller M**, Dermitzakis E, Ørntoft TF, Andersen CJ. Molecular Subtype-specific Biomarkers Improve Prediction of Prognosis in Colorectal Cancer. *Cell Reports*, 19, 1268–80, 2017.
- 343) Martin-Trujillo A, Vidal E, Monteagudo-Sánchez A, Sanchez-Delgado M, Moran S, Hernandez Mora JR, Heyn H, Guitart M, **Esteller M**, Monk D. Copy number rather than epigenetic alterations are the major dictator of imprinted methylation in tumours. *Nature Communications*, 8, 467, 2017.
- 344) Bosch-Presegué L, Raurell-Vila H, Thackray J, Casal C, González-Nieto J, Kane-Goldsmith N, Vizoso M, Brown J, Gómez A, Ausió J, Zimmermann T, **Esteller M**, Schotta G, Singh P, Serrano L, Vaquero A. Mammalian HP1 isoforms have specific roles in heterochromatin structure and organization. *Cell Reports*, doi: http://dx.doi.org/10.1016/j.celrep.2017.10.092, 2017.
- 345) Berdasco M, Gómez A, Rubio MJ, Català-Mora J, Zanón-Moreno V, Lopez M, Hernández C, Yoshida S, Nakama T, Ishikawa K, Ishibashi T, Boubekeur AM, Louhibi L, Pujana MA, Sayols S, Setien F, Corella D, de Torres C, Parareda A, Mora J, Zhao L, Zhang K, Leonart ME, Alonso J, Simó R, Caminal JM, **Esteller M**. DNA methylomes reveal biological networks involved in human eye development, functions and associated disorders. *Scientific Reports*, 7, 11762, 2017.
- 346) Wouters J, Vizoso M, Martinez-Cardus A, Carmona FJ, Govaere O, Laguna T, Joseph J, Dynodot P, Aura C, Foth M, Cloots R, van den Hurk K, Balint B, Murphy IG, McDermott EW, Sheahan K, Jirström K, Nodin B, Udipi GM, van den Oord JJ, Gallagher WM, **Esteller M**. Comprehensive DNA methylation study identifies novel progression-related and prognostic markers for cutaneous melanoma. *BMC Medicine*, 15, 101, 2017.
- 347) Pérez-Salvia M, Simó-Riudalbas L, Llinàs-Arias P, Roa L, Setien F, Soler M, Castro de Moura M, Bradner JE, Gonzalez-Suarez E, Moutinho C, **Esteller M**. Bromodomain Inhibition Shows Antitumoral Activity in Mice and Human Luminal Breast Cancer. *Oncotarget*, 8, 51621-9, 2017.
- 348) Vidal E, Sayols S, Moran S, Guillaumet-Adkins A, Schroeder MP, Royo R, Orozco M, Gut M, Gut I, Lopez-Bigas N, Heyn H, **Esteller M**. A DNA Methylation Map of Human Cancer at Single Base-Pair Resolution. *Oncogene*, 36, 5648-57, 2017.

2018

- 349) Jorge-Torres OC, Szczesna K, Roa L, Casal C, Gonzalez-Sommeyer L, Soler M, Velasco CD, Martínez-San Segundo P, Petazzi P, Sáez MA, Delgado-Morales R, Fourcade S, Pujol A, Huertas D, Llobet A, Guil S, **Esteller M**. Inhibition of Gsk3b reduces NFκ-B signaling and rescues synaptic

- activity to improve the Rett syndrome phenotype in Mecp2-knockout mice. *Cell Reports*, 23, 1665-1677, 2018.
- 350) Santos-Barriopedro I, Bosch-Presegué L, Marazuela-Duque A, de la Torre C, Colomer C, Vazquez BN, Fuhrmann T, Martínez-Pastor B, Lu W, Braun T, Bober E, **Esteller M**, 10-12, Jenuwein T, Serrano L, Cheng X, Barceló-Batllori S, Mostoslavsky R, Espinosa L, Vaquero A. SIRT6-dependent cysteine monoubiquitination in the PRE-SET domain of Suv39h1 regulates the NF- κ B pathway. *Nature Communications*, 9, 101, 2018.
- 351) Aznar M, Labiano S, Diaz-Lagares A, Molina C, Garasa S, Azpilicueta A, Etxeberria I, Rodriguez-Paulete A, Korman A, **Esteller M**, Sandoval J, Melero I. CD137 (4-1BB) costimulation modifies DNA methylation in CD8 T-cell relevant genes. *Cancer Immunology Research*, 7, 13850, 2018.
- 352) Marcos-Villar L, Díaz-Colunga J, Sandoval J, Zamarreño N, Landeras-Bueno S, **Esteller M**, Falcón A, Nieto A. Epigenetic control of influenza virus: role of H3K79 methylation in interferon-induced antiviral response. *Scientific Reports*, 1230, doi:10.1038/s41598-018-19370-6, 2018.
- 353) Schlüter A, Sandoval J, Fourcade S, Díaz-Lagares A, Ruiz M, Casaccia P, **Esteller M**, Pujol A. Epigenomic signature of adrenoleukodystrophy predicts compromised oligodendrocyte differentiation. *Brain Pathology*, doi: 10.1111/bpa.12595, 2018.
- 354) Cacciaglia R, Grau-Rivera O, Falcon C, Brugulat-Serrat A, Ródenas P, Ramos R, Morán S, **Esteller M**, Bargalló N, Molinuevo JL, Gispert JD. Effect of age and APOE genotypes on brain microstructure in cognitively healthy subjects as measured by diffusion-weighted imaging. *Alzheimer's & Dementia*, doi.org/10.1016/j.jalz.2017.06.422, 2018.
- 355) Operto G, Cacciaglia R, Grau-Rivera O, Falcon C, Brugulat-Serrat A, Ródenas P, Ramos R, Morán S, **Esteller M**, Bargalló N, Molinuevo JL, Gispert JD; ALFA Study White matter microstructure is altered in cognitively normal middle-aged APOE- ϵ 4 homozygotes. *Alzheimers Research & Therapy*, 10, 48, 2018, doi: 10.1186/s13195-018-0375-x.
- 356) Crujeiras AB, Morcillo S, Diaz-Lagares A, Sandoval J, Castellano-Castillo D, Torres E, Moran S, **Esteller M**, Macias-Gonzalez M, Casanueva F Tinahones FJ. Identification of an episinature of human colorectal cancer associated with obesity by genome-wide DNA-methylation analysis. *International Journal of Obesity*, doi: 10.1038/s41366-018-0065-6, 2018.
- 357) Crujeiras AB, Pissios P, Moreno-Navarrete JM, Diaz-Lagares A, Sandoval J, Gomez A, Ricart W, **Esteller M**, Casanueva FF, Fernandez-Real JM. An Epigenetic Signature in Adipose Tissue is Linked to Nicotinamide N-Methyltransferase Gene Expression. *Mol Nutr Food Res*. doi: 10.1002/mnfr.201700933, 2018.
- 358) Capper D, Engel N, Stichel D, Lechner M, Glöss S, Schmid S, Kölsche C, Schrimpf D, Niesen J, Wefers A, Jones D, Sill M, Weigert O, Ligon K, Olar A, Koch A, Forster M, Moran S, Tirado O, Sáinz-Japeado M, Mora J, Esteller M, Alonso J, Garcia del Muro X, Paulus W, Felsberg J, Reifemberger G, Glatzel M, Frank S, Monoranu C, Lund V, von Deimling A, Pfister S, Buslei R, Ribbat-Idel J, Perner S, Gudziol V, Meinhardt M, Schüller U. DNA methylation-based reclassification of olfactory neuroblastoma. *Acta Neuropathologica*, <https://doi.org/10.1007/s00401-018-1854-7>, 2018.
- 359) Koelsche C, Hartmann W, Schrimpf D, Stichel D, Jabar S, Ranft A, Reuss DE, Sahm F, Jones DW, Bewerunge-Hudler M, Trautmann M, Klingebiel T, Vokuhl C, Gessler M, Wardelmann E, Petersen I, Baumhoer D, Flucke U, Antonescu C, **Esteller M**, Fröhling S, Kool M, Pfister SM, Mechttersheimer G, Dirksen U, von Deimling A. Array-based DNA-methylation profiling in sarcomas with small blue round cell histology provides valuable diagnostic information. *Modern Pathology*, doi:10.1038/s41379-018-0045-3, 2018.
- 360) Gallardo-Gómez M, Moran S, Páez de la Cadena M, Martínez-Zorzano VS, Rodríguez-Berrocal FJ, Rodríguez-Girondo M, **Esteller M**, Cubiella J, Bujanda L, Castells A, Balaguer F, Jover R, De Chiara L. A new approach to epigenome-wide discovery of non-invasive methylation biomarkers for colorectal cancer screening in circulating cell-free DNA using pooled samples. *Clinical Epigenetics*, 10, 53, doi: 10.1186/s13148-018-0487-y, 2018.
- 361) Shen S, Zhang R, Guo Y, Loehrer E, Wei Y, Zhu Y, Yuan Q, Moran S, Fleischer T, Bjaanæs MM, Karlsson A, Planck M, Staaf J, Helland A, **Esteller M**, Su L, Chen F, Christiani DC. A multi-omic

- study reveals BTG2 as a reliable prognostic marker for early-stage non-small cell lung cancer. *Molecular Oncology*, doi: 10.1002/1878-0261.12204, 2018.
- 362) Ramalho-Carvalho J, Gonçalves CS, Graça I, Bidarra D, Pereira-Silva E, Salta S, Godinho MI, Gomez A, **Esteller M**, Costa BM, Henrique R, Jeronimo C. A multiplatform approach identifies miR-152-3p as a common epigenetically regulated onco-suppressor in prostate cancer targeting TMEM97 *Clinical Epigenetics*, 10, 40, doi: 10.1186/s13148-018-0475-2, 2018.
- 363) Koelsche1 C, Mynarek M, Schrimpf D, Bertero L, Serrano J, Sahm F, Reuss DE, 2, Hou Y, Baumhoer D, Vokuhl C, Flucke U, Petersen I, Brück W, Rutkowski S, Leon JLG, Coronado RYD, Gessler M, Tirado OM, Mora J, Alonso J, Garcia del Muro X, **Esteller M**, Pfister SM, Korshunov A, Snuderl M, Mechttersheimer G, Schüller U, Jones DTW, von Deimling A. Primary intracranial embryonal rhabdomyosarcomas share a highly distinct methylation profile and DICER1 mutations. *Acta Neuropathologica*, doi: 10.1007/s00401-018-1871-6, 2018.
- 364) Wei Y, Liang J, Zhang R, Guo Y, Shen S, Su L, Lin X, Moran S, Helland Å, Bjaanæs MM, Karlsson A, Planck M, Esteller M, Fleischer T, Staaf J, Zhao Y, Chen F, Christiani DC. Epigenetic modifications in KDM lysine demethylases associate with survival of early-stage NSCLC. *Clinical Epigenetics*, 10, 41, doi: 10.1186/s13148-018-0474-3, 2018.
- 365) Hernandez Mora JR, Tayama C, Sánchez-Delgado M, Monteagudo-Sánchez A, Hata K, Ogata T, Medrano J, Poo-Llanillo ME, Simón C, Moran S, **Esteller M**, Tenorio J, Lapunzina P, Kagami M, Monk D, Nakabayashi K. Characterization of parent-of-origin methylation using the Illumina Infinium MethylationEPIC array platform. *Epigenomics*, 10, 941-954, 2018.
- 366) Mur P, de Voer RM, Olivera-Salguero R, Rodríguez-Perales S, Pons T, Setién F, Aiza G, Valdés-Mas R, Bertini A, Pineda M, Vreede L, Navarro M, Iglesias S, González S, Brunet J, Valencia A, **Esteller M**, Lázaro C, Kops GJPL, Urioste M, Puente XS, Capellá G, Valle L. Germline mutations in the spindle assembly checkpoint genes BUB1 and BUB3 are infrequent in familial colorectal cancer and polyposis. *Molecular Cancer*, 17, 23, 2018.
- 367) Piulats JM, Vidal A, García-Rodríguez FJ, Muñoz C, Nadal M, Moutinho C, Martínez-Iniesta M, Mora J, Figueras A, Guinó E, Padulles L, Aytés A, Mollevi DG, Puertas S, Martínez-Fernández C, Castillo W, Juliachs M, Moreno V, Muñoz P, Stefanovic M, Pujana MA, Codom E, **Esteller M**, Germà-Lluch JR, Capella G, Farré L, Morales A, Viñals F, Garcia del Muro X, Cerón J, Villanueva A. Orthoxenografts of testicular germ cell tumors uncover genomic changes associated to cisplatin resistance and identify PDMP as a re-sensitizing agent. *Clinical Cancer Research*, doi: 10.1158/1078-0432.CCR-17-1898, 2018.
- 368) Huertas CS, Aviñó A, Kurachi C, Piqué A, Sandoval J, Eritja R, **Esteller M**, Lechuga LM. Label-free DNA-methylation detection by direct ds-DNA fragment screening using poly-purine hairpins. *Biosensors and Bioelectronics*, doi.org/10.1016/j.bios.2018.08.027, 2018.
- 369) Collord C, Tarpey P, Kurbatova N, Martincorena I, Moran S, Castro M, Nagy T, Bignell G, Maura F, Matthew MD, Berna J, Tubio JM, McMurrin CE, Young AMH, Sanders M, Noorani I, Price SJ, Watts C, Leinritz E, Kirsch M, Schackert G, Pearson D, Devadass A, Zvi Ram Z, Collins VP, Allinson K, Michael D, Jenkinson MD, Zakaria R, Syed K, Hanemann CO, Dunn J, McDermott MW, Kirillos RW, George S, Vassiliou GS, **Esteller M**, Behjati S, Brazma A, Santarius T, McDermott U. An integrated genomic analysis of anaplastic meningioma identifies prognostic molecular signatures. *Scientific Reports*, 8, 13537, 2018.
- 370) Guo Y, Zhang R, Shen S, Wei Y, Moran S, Fleischer T, Bjaanæs MJ, Karlsson A, Planck M, Su K, Zhu Z, Staaf J, Helland Å, **Esteller M**, Christiani DC. DNA Methylation of LRRC3B: A Biomarker for Survival of Early-Stage Non-Small Cell Lung Cancer Patients. *Cancer Epidemiology, Biomarkers & Prevention*, doi: 10.1158/1055-9965.EPI-18-0454, 2018.
- 371) Korkut A, Zaidi S, Kanchi RS, Rao S, Gough NR, Schultz A, Li X, Lorenzi PL, Berger AC, Robertson G, Kwong LN, Datto M, Roszik J, Ling S, Ravikumar V, Manyam G, Rao A, Shelley S, Liu Y, Ju Z, Hansel D, de Velasco G, Pennathur A, Andersen JB, O'Rourke CJ, Ohshiro K, Jogunoori W, Nguyen BN, Li S, Osmanbeyoglu HU, Ajani JA, Mani SA, Houseman A, Wiznerowicz M, Chen J, Gu S, Ma W, Zhang J, Tong P, Cherniack AD, Deng C, Resar L; Cancer Genome Atlas Research Network*Including **Esteller M**, Weinstein JN, Mishra L, Akbani R. A Pan-Cancer Analysis Reveals High-

- Frequency Genetic Alterations in Mediators of Signaling by the TGF- β Superfamily. *Cell Systems*, pii: S2405-4712(18)30357-0, 2018.
- 372) Ferreira HJ, Davalos V, Castro de Moura M, Soler M, Perez-Salvia M, Bueno-Costa A, Setien F, Moran S, Villanueva A, **Esteller M**. Circular RNA CpG Island Hypermethylation-Associated Silencing in Human Cancer, *Oncotarget*, 9, 29208-29219, 2018.
- 373) Perez-Salvia M, Aldaba E, Vara Y, Fabre M, Ferrer C, Masdeu C, Zubia A, San Sebastian E, Otaegui D, Llinàs-Arias P, Rosselló-Tortella M, Berdasco M, Moutinho C, Setien F, Villanueva A, González-Barca E, Muncunill J, Navarro JT, Piris MA, Cossio FP, **Esteller M**. In vitro and in vivo activity of a new small-molecule inhibitor of HDAC6 in mantle cell lymphoma. *Haematologica*, 103, e537-e540, 2018.
- 374) Sanchez-Mut JV, Heyn H, Silva BA, Dixsaut L, Garcia-Esparcia P, Vidal E, Sayols S, Glauser L, Monteagudo-Sánchez A, Perez-Tur J, Ferrer I, Monk D, Schneider B, **Esteller M**, Gräff J. PM20D1 methylation quantitative trait locus is associated with Alzheimer's disease. *Nature Medicine*, 24, 598-603, 2018.
- 375) Duruisseaux M, Martínez-Cardús A, Calleja-Cervantes ME, Moran S, Castro de Moura M, Davalos V, Piñeyro D, Sanchez-Céspedes M, Girard N, Breve M, Giroux-Leprieur E, Dumenil C, Pradotto M, Bironzo P, Capelleto E, Novello S, Cortot A, Copin MC, Karachaliou N, Gonzalez-Cao M, Peralta S, Montuenga LM, Gil-Bazo I, Baraibar I, Lozano MD, Varela M, Ruffinelli JC, Palmero R, Nadal E, Moran T, Perez L, Ramos I, Xiao Q, Fernandez AF, Fraga MF, Gut M, Gut I, Teixidó C, Vilariño N, Prat A, Reguart N, Benito A, Garrido P, Barragan I, Emile JF, Rosell R, Brambilla E, **Esteller M**. Epigenetic prediction of response to anti-PD-1 treatment in non-small-cell lung cancer: a multicenter, retrospective analysis. *The Lancet Respiratory Medicine*, 6, 771-781, 2018.

2019

- 376) Llinàs-Arias P, Rosselló-Tortella M, López-Serra P, Pérez-Salvia M, Setién F, Marin S, Juan P, Muñoz JP, Junza A, Capellades J, Calleja-Cervantes ME, Ferreira HJ, Castro de Moura M, Srbic M, Martínez-Cardús A, de la Torre C, Villanueva A, Cascante M, Yanes O, Zorzano A, Moutinho C, **Esteller M**. Epigenetic Loss of the Endoplasmic Reticulum-Associated Degradation Inhibitor SVIP Induces Cancer Cell Metabolic Reprogramming. *Journal of Clinical Investigation Insight*, 5, pii: 125888, doi: 10.1172/jci.insight.125888, 2019.
- 377) Requena J, Alvarez-Palomo AB, Codina-Pascual M, Delgado-Morales R, Moran S, **Esteller M**, Sal M, Juan-Otero M, Boronat Barado A, Consiglio A, Addeleccia Bogle O, Wolvertang E, Ovchinnikov D, Alvarez I, Jaraquemada D, Mezquita-Pla J, Oliva R, Edel MJ. Global proteomic and methylome analysis in human induced pluripotent stem cells reveals overexpression of a human TLR3 affecting proper innate immune response signaling. *Stem Cells*, 37, 476-88, 2019.
- 378) Zhang R, Lai L, He J, You D, Duan W, Dong X, Zhu Y, Lin L, Shen S, Guo Y, Su L, Shafer A, Moran S, Fleischer T, Moksnes Bjaanæs M, Karlsson A, Planck M, Staaf J, Helland A, Esteller M, Wei Y, Chen F, Christiani, CD. EGLN2 methylation and expression interact with HIF1A to affect survival of early-stage NSCLC. *Epigenetics*, 21, 1-12, 2019.
- 379) Pineda B, Diaz-Lagares A, Pérez-Fidalgo JA, Burgués O, González-Barrallo I, Crujeiras AB, Sandoval J, **Esteller M**, Lluch A, Eroles P. A 2-gene epigenetic signature for the prediction of response to neoadjuvant chemotherapy in triple negative breast cancer patients. *Clinical Epigenetics*, 11, 33, 2019.
- 380) Cacciaglia R, Molinuevo JL, Falcón C, Sánchez-Benavides G, Gramunt N, Brugulat-Serrat A, **Esteller M**, Morán S, Fauria K, Gispert JD; ALFA study. APOE- ϵ 4 risk variant for Alzheimer's disease modifies the association between cognitive performance and cerebral morphology in healthy middle-aged individuals. *Neuroimage Clinical*, 24, 101818, 2019.
- 381) Monteagudo-Sánchez A, Sánchez-Delgado M, Mora JRH, Santamaría NT, Gratacós E, **Esteller M**, de Heredia ML, Nunes V, Choux C, Fauque P, de Nanclares GP, Anton L, Elovitz MA, Iglesias-Platas I, Monk D. Differences in expression rather than methylation at placenta-specific imprinted loci is associated with intrauterine growth restriction. *Clinical Epigenetics*, 11, 35, 2019.

- 382) Kel A, Boyarskikh U, Stegmaier P, Leskov LS, Sokolov AV, Yevshin I, Mandrik N, Stelmashenko D, Koschmann J, Kel-Margoulis O, Krull M, Martínez-Cardús A, Moran S, **Esteller M**, Kolpakov F, Filipenko M, Wingender E. Walking pathways with positive feedback loops reveal DNA methylation biomarkers of colorectal cancer. *BMC Bioinformatics*, 20,119, 2019
- 383) Belhadj S, Moutinho C, Mur P, Setién F, Llinàs-Arias P, Perez-Salvia M, Pons T, Pineda M, Brunet J, Navarro M, **Esteller M**, Valle L. Germline variation in MGMT as cause of hereditary colorectal cancer. *Cancer Letters*, 447, 86-9, 2019.
- 384) Zhang R, Lai L, Dong X, He J, You D, Chen C, Lin L, Zhu Y, Huang H, Shen S, Wei L, Chen X, Guo Y, Liu L, Su L, Shafer A, Moran S, Fleischer T, Bjaanaes MM, Karlsson A, Planck M, Staaf J, Helland Å, **Esteller M**, Wei Y, Chen F, Christiani DC. SIPA1L3 methylation modifies the benefit of smoking cessation on lung adenocarcinoma survival: An epigenomic-smoking interaction analysis. *Molecular Oncology*, 13, 1235-48, 2019.
- 385) Palomeras S, Diaz-Lagares A, Viñas G, Setien F, Ferreira HJ, Oliveras G, Crujeiras AB, Hernández A, Lum DH, Welm AL, **Esteller M**, Puig T. Epigenetic Silencing of TGFBI Confers Resistance to Trastuzumab in Human Breast Cancer. *Breast Cancer Research*, 21, 79, 2019.
- 386) Santamaría A, Majem B, Parrilla A, Jiménez C, Marin A, Suárez L, Castellvi J, Tamayo G, Moreno G, Ponce J, Matias-Guiu X, Alameda F, Romero I, Sánchez JL, Perez-Benavente A, Moran S, **Esteller M**, Reventos J, Rigau M, Gil-Moreno A, Segura M, Barber M. MicroRNA-654-5p suppresses ovarian cancer development impacting on MYC, WNT and AKT pathways. *Oncogene*, 8, 6035-50, 2019.
- 387) Montal R, Andreu-Oller C, Bassaganyas L, Esteban-Fabro R, Morán S, Montironi C, Moeini A, Pinyol R, Peix J, Cabellos L, Villanueva A, Sia D, **Esteller M**, Llovet JM. Molecular Portrait of High Alpha-Fetoprotein in Hepatocellular Carcinoma: Implications for Biomarker-Driven Clinical Trials. *British Journal of Cancer*, 121, 340-3, 2019.
- 388) Gómez-Miragaya J, Morán S, Ms. Calleja-Cervantes ME, Collado-Solé A, Paré L, Gómez A, Serra V, Dobrolecki LE, Lewis MT, Diaz-Lagares A, Eroles P, Prat A, **Esteller M**, González-Suárez E. DNA methylation and transcriptomic profiling of docetaxel resistance in breast cancer. *Molecular Cancer Research*, 17, 2063-76, 2019.
- 389) Dong X, Zhang R, He J, Lai L, Alolga RN, Shen S, Zhu Y, You D, Lin L, Chen C, Zhao Y, Duan W, Su L, Shafer A, Salama M, Fleischer T, Bjaanaes MM, Karlsson A, Planck M, Wang R, Staaf J, Helland Å, **Esteller M**, Wei Y, Chen F, Christiani DC. Trans-omics biomarker model improves prognostic prediction accuracy for early-stage lung adenocarcinoma. *Aging* (Albany NY). 11, 6312-33, 2019.
- 390) Fernández-Sanlés A, Sayols-Baixeras S, Castro de Moura M, **Esteller M**, Subirana I, Torres-Cuevas S, Pérez-Fernández S, Aslibekyan S, Marrugat J, Elosua R. Physical activity and genome-wide DNA methylation: the REGICOR study. *Medicine & Science in Sports & Exercise*, doi: 10.1249/MSS.0000000000002174, 2019.
- 391) Martinez de Paz A, Khajavi L, Martin H, Claveria Gimeno R, Dieck ST, Cheema MS, Sanchez-Mut JV, Moksa M, Carles A, Brodie N, Sheikh TI, Freeman ME, Petrotchenko EV, Borchers C, Schuman EM, Zytnicki M, Velazquez-Campoy A, Abian O, Hirst M, **Esteller M**, Vincent JB, Malnou CE, Ausio J. MeCP2-E1 isoform is a dynamically expressed, weakly DNA-bound protein with different protein and DNA interactions compared to MeCP2-E2. *Epigenetics & Chromatin*, 12, 63, 2019.
- 392) Pasculli B, Barbano R, Rendina M, Fontana A, Copetti M, Mazza T, Valori VM, Morrìti M, Maiello E, Graziano P, Murgo R, Fazio V, **Esteller M**, Parrella P. High levels of microRNA-210 are associated with increased risk of disease progression in breast cancer patients treated with Docetaxel. *Scientific Reports*, 9, 14913, 2019.
- 393) Capdevila J, Arqués O, Hernandez Mora JR, Matito J, Caratu G, Mancuso F, Landolfi S, Barriuso J, Jimenez-Fonseca P, Lopez Lopez C, Garcia-Carbonero R, Hernando J, Matos I, Nuciforo P, Hernández-Losa J, **Esteller M**, Martínez-Cardús A, Tabernero J, Vivancos A, Palmer H. Epigenetic EGFR gene repression confers colon neuroendocrine carcinomas sensitivity to therapeutic BRAFV600E blockade. *Clinical Cancer Research*, doi: 10.1158/1078-0432.CCR-19-1266, 2019.

- 394) Jung H, Kim HS, Kim JY, Sun JM, Ahn JS, Ahn MJ, Park E, **Esteller M**, Lee SH, Choi JK. DNA methylation loss coupled to mitotic cell division promotes immune evasion of tumours with high mutation and copy number load. *Nature Communications*, 10, 4278, 2019.
- 395) Oliveira-Mateos C, Sánchez-Castillo A, Soler M, Obiols-Guardia A, Piñeyro D, Boque-Sastre R, Calleja-Cervantes ME, Castro de Moura M, Martínez-Cardús A, Rubio T, Pelletier J, Martínez-Iniesta M, Herrero-Martín D, Tirado OM, Gentilella A, Villanueva A, **Esteller M**, Farré L, Guil S. The transcribed pseudogene RPSAP52 enhances the oncofetal HMGA2-IGF2BP2-RAS axis through LIN28B-dependent and independent inhibition of let-7 miRNAs. *Nature Communications*, 10, 3979, 2019.
- 396) Ramos-Rodríguez M, Raurell-Vila H, Colli ML, Alvelos MI, Subirana M, Juan-Mateu J, Norris R, Turatsinze JV, Nakayasu ES, Webb-Robertson BJ, Inshaw JR, Piemonti L, **Esteller M**, Todd JA, Metz TO, Eizirik DL, Pasquali L. The impact of pro-inflammatory cytokines on the β -cell regulatory landscape provides new insights into the genetics of type 1 diabetes. *Nature Genetics*, doi.org/10.1038/s41588-019-0524-6, 2019.
- 397) Piqué L, Martínez de Paz A, Piñeyro D, Martínez-Cardús A, Castro de Moura M, Llinàs-Arias P, Setien F, Gomez-Miragaya J, Gonzalez-Suarez E, Sigurdsson S, Jonasson JG, Villanueva A, Vidal A, Davalos V, **Esteller M**. Epigenetic Inactivation of the Splicing RNA Binding Protein CELF2 in Human Breast Cancer. *Oncogene*, doi: 10.1038/s41388-019-0936-x, 2019.
- 398) Janin M, Ortiz-Barahona V, Castro de Moura M, Martínez-Cardús A, Llinàs-Arias P, Soler M, Nachmani D, Pelletier J, Schumann U, Calleja-Cervantes ME, Moran S, Guil S, Bueno-Costa A, Piñeyro D, Perez-Salvia M, Rosselló-Tortella M, Piqué L, Bech-Serra JJ, De La Torre C, Vidal A, Martínez-Iniesta M, Martín-Tejera JF, Villanueva A, Arias A, Cuartas I, Aransay AM, Morales La Madrid A, Carcaboso AM, Santa-Maria V, Mora J, Fernandez AF, Fraga MF, Aldecoa I, Pedrosa L, Graus F, Vidal N, Martínez-Soler F, Tortosa A, Carrato C, Balañá C, Boudreau MW, Hergenrother PJ, Kötter P, Entian KD, Hench J, Frank S, Mansouri S, Zadeh G, Dans PD, Orozco M, Thomas G, Blanco S, Seoane J, Preiss T, Pandolfi PP, **Esteller M**. Epigenetic Loss of RNA Methyltransferase NSUN5 in Glioma Target Ribosomes to Drive a Stress Adaptive Translational Program. *Acta Neuropathologica*, 138, 1053-74, 2019.

2020

- 399) Bueno-Costa A, Piñeyro D, Soler M, Javierre BM, Raurell-Vila H, Subirana-Granés M, Pasquali L, Martínez-Climent JA, **Esteller M**. B-cell Leukemia Transdifferentiation to Macrophage Involves Reconfiguration of DNA Methylation for Long-range Regulation. *Leukemia*, 34, 1158-62, 2020.
- 400) Ikemori R, Gabasa M, Duch P, Vizoso M, Bragado P, Arshakyan M, Iuliana-Cristiana L, Marín A, Morán S, Castro M, Fuster G, Gea-Sorli S, Jauset T, Soucek L, Montuenga L, **Esteller M**, Monsó E, Peinado VI, Gascón P, Fillat V, Hilberg F, Reguart N, Alcaraz J. Epigenetic SMAD3 repression in tumor-associated fibroblasts impairs fibrosis and response to the antifibrotic drug nintedanib in lung squamous cell carcinoma. *Cancer Research*, 80, 276-90, 2020.
- 401) Zhang R, Chen C, Dong X, Shen S, Lai L, He J, You D, Lin L, Zhu Y, Huang H, Chen J, Wei K, Chen X, Li Y, Guo Y, Duan W, Liu L, Su L, Shafer A, Fleischer T, Bjaanæs M, Karlsson A, Planck M, Wang R, Staaf J, Helland A, **Esteller M**, Wei Y, Chen F, Christiani D. Independent validation of early-stage NSCLC prognostic scores incorporating epigenetic and transcriptional biomarkers with gene-gene interactions and main effects. *CHEST*, 158, 808-19, 2020.
- 402) Gallego-Fabrega C, Cullell N, Soriano C, Carrera C, Torres Aguila N, Muiño E, Carcel Marquez J, Castro de Moura M, Fernandez Sanles A, **Esteller M**, Elosua R, Jimenez Conde J, Roquer J, Montaner J, Krupinski J, Fernandez-Cadenas I. DNA methylation of MMPs and TIMPs in Atherothrombosis Process in Carotid Plaques and Blood Tissues. *Oncotarget*, 11, 905-12, 2020.
- 403) Soriano-Tárraga C, Lazcano U, Giralt-Steinhauer E, Avellaneda-Gómez C, MD, ÁOis A, Rodríguez-Campello A, Cuadrado-Godia E, Gomez-Gonzalez A, Fernández-Sanlés A, Elosua R, Fernández-Cadenas I, Cullell N, Montaner J, Moran S, **Esteller M**, Jiménez-Conde J, Roquer J. Identification

- of 20 novel loci associated to ischemic stroke. Epigenome-Wide Association Study. *Epigenetics*, doi.org/10.1080/15592294.2020.1746507, 2020.
- 404) Caballero-Camino FJ, Rivilla I, Herraiz E, Briz O, Santos A, Izquierdo-Sanchez L, Lee-Law P, Rodrigues P, Munoz-Garrido P, Jin S, Peixoto E, Richard S, Gradilone SA, Perugorria M, **Esteller M**, Bujanda L, Marin J, Banales J, Cossio F. New synthetic conjugates of ursodeoxycholic acid inhibit cystogenesis in experimental models of polycystic liver disease. *Hepatology*, doi: 10.1002/hep.31216, 2020.
- 405) Ashour N, Angulo JC, González-Corpas A, Orea MJ, Lobo MVT, Colomer R, Colás B, **Esteller M**, Ropero S. Epigenetic Regulation of Gfi1 in Endocrine-Related Cancers: a Role Regulating Tumor Growth. *International Journal of Molecular Sciences*, 21, pii: E4687, 2020.
- 406) Kim-Wanner SZ, Assenov Y, Nair MB, Weichenhan D, Benner A, Becker N, Landwehr K, Kuner R, Sültmann H, **Esteller M**, Koch I, Lindne M, Meister M, Thomas M, Bieg M, Klingmueller U, Schlesner M, Warth A, Brors B, Seifried E, Bonig H, Plass C, Risch A, Muley T. Genome-wide DNA methylation profiling in early stage I lung adenocarcinoma reveals predictive aberrant methylation in the promoter region of the long non-coding RNA PLUT – an exploratory study. *Journal of Thoracic Oncology*, 15, 1338-50, 2020.
- 407) Chen C, Wei Y, Wei L, Chen J, Chen X, Dong X, He J, Lin L, Zhu Y, Huang H, You D, Lai L, Shen S, Duan W, Su L, Shafer A, Fleischer T, Bjaanæs MM, Karlsson A, Planck M, Wang R, Staaf J, Helland Å, **Esteller M**, Zhang R, Chen F, Christiani DC. Epigenome-wide gene-age interaction analysis reveals reversed effects of PRODH DNA methylation on survival between young and elderly early-stage NSCLC patients. *Aging* (Albany NY). 12, 10642-62., 2020.
- 408) Joshi R, Castro de Moura M, Piñeyro D, Alvarez-Errico D, Arribas C, **Esteller M**. The DNA Methylation Landscape of Human Cancer Organoids Available at the American Type Culture Collection. *Epigenetics*, DOI: 10.1080/15592294.2020.1762398, 2020.
- 409) Mattesen TB, Rasmussen MH, Sandoval J, Ongen H, Árnadóttir SS, Gladov J, Martinez-Cardus A, Castro de Moura M, Madsen AH, Laurberg S, Dermitzakis ET, **Esteller M**, Andersen CL, Bramsen JB. MethCORR Modelling of Methylomes from Formalin-fixed, Paraffin-embedded Tissue enable Characterization and Prognostication of Colorectal Cancer. *Nature Communications*, 11, 2025, 2020.
- 410) Pasculli B, Barbano R, Fontana A, Biagini T, Di Viesti MP, Rendina M, Valori VM, Morritti M, Bravaccini S, Ravaioli S, Maiello E, Graziano P, Murgo R, Copetti M, Mazza T, Fazio VM, **Esteller M**, Parrella P. hsa-miR155-5p up-regulation in Breast Cancer and its relevance for treatment with Poly [ADP-ribose] polymerase 1 (PARP-1) inhibitors. *Frontiers in Oncology*, doi.org/10.3389/fonc.2020.01415, 2020.
- 411) Vilor-Tejedor N, Operto G, Evans TE, Falcon C, Crous-Bou M, Minguillón C, Cacciaglia R, Milà-Alomà M, Grau-Rivera O, Suárez-Calvet M, Garrido-Martín D, Morán S, **Esteller M**, Adams HH, Molinuevo JL, Guigó R, Gispert JD; ALFA Study. Effect of BDNF Val66Met on hippocampal subfields volumes and compensatory interaction with APOE-ε4 in middle-age cognitively unimpaired individuals from the ALFA study. *Brain Struct Funct.*, doi: 10.1007/s00429-020-02125-3, 2020.
- 412) Moron-Lopez S, Urrea V, Dalmau J, Lopez M, Puertas MC, Ouchi D, Gómez A, Passaes C, Mothe B, Brander C, Saez-Cirion A, Clotet B, **Esteller M**, Berdasco M, Martinez-Picado J. The genome-wide methylation profile of CD4+ T cells from HIV-infected individuals identifies distinct patterns associated with disease progression. *Clinical Infectious Diseases*, ciaa1047, https://doi.org/10.1093/cid/ciaa1047, 2020.
- 413) Oriol-Tordera B, Berdasco M, Llano A, Mothe B, Galvez C, Martinez-Picado J, Carrillo J, Blanco J, Duran-Castells C, Ganoza C6, Sanchez J, Clotet B, Calle ML, Sanchez-Pla A, **Esteller M**, Brander C, Ruiz-Riol M. Methylation regulation of Antiviral host factors, Interferon Stimulated Genes (ISGs) and T-cell responses associated with natural HIV control. *PLOS Pathogens*, 16, e1008678, 2020.
- 414) Ji X, Lin L, Shen S, Dong X, Chen C, Li Y, Zhu Y, Huang H, Chen J, Chen X, Wei L, He J, Duan W, Su L, Jiang Y, Fan J, Guan J, You D, Shafer A, Moksnes-Bjaanæs M, Karlsson A, Planck M, Staaf J, Helland A, **Esteller M**, Wei Y, Zhang R, Chen F, Christiani DC. Epigenetic-

- smoking interaction reveals histologically heterogeneous effects of TRIM27 DNA methylation on overall survival among early-stage NSCLC patients. *Molecular Oncology*, doi.org/10.1002/1878-0261.12785, 2020.
- 415) Monteagudo-Sánchez A, Hernandez-Mora J, Simon C, Burton A, Tenorio J, Lapunzina P, Clark S, **Esteller M**, Kelsey G, López-Siguero P, Perez de Nanclares G; Torres-Padilla ME, Monk D. The role of ZFP57 and additional KRAB-Zinc Finger proteins in the maintenance of human imprinted methylation and multi-locus imprinting disturbances. *Nucleic Acids Research*, doi.org/10.1093/nar/gkaa837, 2020.
- 416) Cappetta M, Fernandez L, Brignoni L, Artagaveytia N, Bonilla C, López M, Esteller M, Bertoni B, Berdasco M. Discovery of novel DNA methylation biomarkers for non-invasive sporadic breast cancer detection in Latino population. *Molecular Oncology*, doi: 10.1002/1878-0261.12842, 2020.
- 417) Cuatrecasas M, Gorostiaga I, Riera C, Saperas E, Llord G, Costa I, Matias-Guiu X, Carrato C, Navarro M, Pineda M, Dueñas N, Brunet J, Marco V, Trias I, Busteros JI, Mateu G, Balaguer F, Fernández-Figueras MT, **Esteller M**, Musulén E. Complete Loss of EPCAM Immunoexpression Identifies EPCAM Deletion Carriers in MSH2-Negative Colorectal Neoplasia. *Cancers*, doi.org/10.3390/cancers12102803, 2020.
- 418) Ortega-Alarcon D, Claveria-Gimeno R, Vega S, Jorge-Torres OC, **Esteller M**, Abian O, Velazquez-Campoy A. Molecular Context-Dependent Effects Induced by Rett Syndrome-Associated Mutations in MeCP2. *Biomolecules*, doi.org/10.3390/biom10111533, 2020.
- 419) Hernandez-Meza G, von Felden J, Gonzalez-Kozlova EE, Garcia-Lezana T, Peix J, Portela A, Craig AJ, Sergi S, Schwartz M, Losic B, Mazzaferro V, **Esteller M**, Llovet JM, Villanueva A. DNA methylation profiling of human hepatocarcinogenesis. *Hepatology*, doi.org/10.1002/hep.31659, 2020.
- 420) Simonet NG, Thackray JK, Vazquez BN, Ianni A, Espinosa-Alcantud M, Morales-Sanfrutos J, SHurtado-Bagès S, Sabidó E, Buschbeck M., Tischfield J, De La Torre C, **Esteller M**, Braun T, Olivella M, Serrano L, Vaquero A. SirT7 auto-ADP-ribosylation regulates glucose starvation response through macroH2A1.1. *Science Advances*, 6, 30, eaaz2590, 2020.
- 421) Tottone L, Lancho O, Loh JW, Singh A, Kimura S, Roels J, Kuchmiy, Strubbe S, Lawlor MA, da Silva-Diz V, Luo S, Gachet S, Garcia-Prieto CA, Hagelaar R, **Esteller M**, Meijerink JPP, Soulier J, Taghon T, Van Vlierberghe P, Mullighan CG, Khiabani H, Rocha PP, Herranz D. A Tumor Suppressor Enhancer of PTEN in T-cell Development and Leukemia. *Blood Cancer Discovery*, doi: 10.1158/2643-3230.BCD-20-0201, 2020.
- 422) Rosselló-Tortella M, Llinàs-Arias P, Sakaguchi Y, Miyauchi K, Davalos V, Setien F, Calleja-Cervantes ME, Piñeyro D, Martínez-Gómez J, Guil S, Joshi R, Villanueva A, Suzuki T, **Esteller M**. Epigenetic Loss of the tRNA-Modifying Enzyme TYW2 Induces Ribosome Frameshifts in Colon Cancer. *Proc Natl Acad Sci USA*, 117, 20785-93, 2020.

2021

- 423) Wheeler DA, Takebe N, Hinoue T, Hoadley KA, Cardenas MF, Hamilton AM, Laird PW, Wang L, Johnson A, Dewal N, Miller V, Piñeyro D, Castro de Moura M, **Esteller M**, Shen H, Zenklusen JC, Tarnuzzer R, McShane LM, Tricoli JV, Williams PM, Lubensky I, O'Sullivan-Coyne G, Kohn EC, Little R, White J, Malik S, Harris L, Weil C, Chen AP, Karlovich C, Rodgers B, Shankar L, Jacobs P, Nolan T, Muzny DM, Doddapaneni H, Korchina V, Gastier-Foster J, Bowen J, Leraas K, Edmondson EF, Doroshov JH, Conley BA, S. Ivy P, Staudt LM. Molecular Features of Cancers Exhibiting Exceptional Responses to Treatment. *Cancer Cell*, 39, 38-53.e7, 2021.
- 424) Esteve-Puig R, Climent F, Piñeyro D, Domingo-Domènech E, Davalos V, Encuentra M, Rea A, Espejo-Herrera N, Soler M, Lopez M, Ortiz-Barahona V, Tapia G, Navarro T, Cid J, Farré L, Villanueva A, Casanova I, Manges R, Santamarina-Ojeda P, Fernández AF, Fraga MF, Piris MA, Kol N, Avrahami C, Moshitch-Moshkovitz S, Rechavi G, Sureda A, **Esteller M**. Epigenetic Loss of m1A RNA Demethylase ALKBH3 in Hodgkin Lymphoma Targets Collagen Conferring Poor Clinical Outcome. *Blood*, 137, 994-999, 2021.

- 425) Garcia-Gomez A, Li T, de la Calle-Fabregat C, Rodríguez-Ubreva J, Ciudad L, Català-Moll F, Godoy-Tena G, Martín-Sánchez M, San-Segundo L, Muntión S, Morales X, Ortiz de Solórzano C, Oyarzabal J, San-José Enériz E, **Esteller M**, Agirre X, Prosper F, Garayoa M, Ballestar E. Targeting aberrant DNA methylation in mesenchymal stromal cells as a treatment for myeloma bone disease. *Nature Communications*, 12, 421, 2021.
- 426) Koelsche C, Schrimpf D, Stichel D, Sill M, Sahn F, Reuss DE, Blattner M, Worst B, Heilig C, Beck K, Horak P, Kreutzfeldt S, Pfaff E, Stark S, Johann P, Selt F, Ecker J, Sturm D, Pajtler K, Reinhardt A, Wefers A, Sievers P, Ebrahimi A, Suwala A, Fernández-Klett F, Casalini B, Korshunov A, Hovestadt V, Kommos F, Kriegsmann M, Schick M, Bewerunge-Hudler M, Milde T, Witt O, Kulozik A, Kool M, Romero-Pérez L, Grünewald T, Kirchner T, Wick W, Platten M, Unterberg A, Uhl M, Abdollahi A, Debus J, Lehner B, Thomas C, Hasselblatt M, Paulus W, Hartmann C, Staszewski O, Prinz M, Hench J, Frank S, Versleijen-Jonkers YMH, Weidema M, Mentzel T, Griewank K, de Alava E, Diaz-Martin J, Idoate MA, Chang K, Low S, Cuevas-Bourdier A, Mittelbronn M, Mynarek M, Rutkowski S, Schüller U, Mautner V, Schittenhelm J, Serrano J, Snuderl M, Büttner R, Klingebiel T, Buslei R, Gessler M, Wesseling P, Dinjens W, Brandner S, Jaunmuktane Z, Lyskjær I, Schirmacher P, Stenzinger A, Brors B, Glimm H, Heining C, Tirado O, Sáinz-Jaspeado M, Mora J, Alonso J, Garcia del Muro X, Moran S, **Esteller M**, Benhamida J, Ladanyi M, Wardelmann E, Antonescu C, Flanagan A, Dirksen U, Hohenberger P, Baumhoer D, Hartmann W, Vokuhl C, Flucke U, Petersen I, Mechtersheimer G, Capper D, Jones D, Fröhling S, Pfister S, von Deimling A. Sarcoma classification by DNA methylation profiling. *Nature Communications*, 12, 498, 2021.
- 427) Ortega-Alarcon D, Claveria-Gimeno R, Vega S, Jorge-Torres OC, **Esteller M**, Abian O, Velazquez-Campoy A. Influence of the disordered domain structure of MeCP2 on its structural stability and dsDNA interaction. *International Journal of Biological Macromolecules*, S0141-8130(21)00254-3, 2021.
- 428) Fontana A, Barbano R, Dama E, Pasculli B, Rendina M, Morrilli MG, Melocchi V, Castelvete M, Valori VM, Ravaioli S, Bravaccini S, Ciuffreda L, Graziano P, Maiello E, Copetti M, Fazio VM, **Esteller M**, Bianchi F, Parrella P. Combined analysis of miR-200 family and its significance for breast cancer. *Scientific Reports*, 11, 2980, 2021.
- 429) Alvarez-Palomo AB, Requena-Osete J, Delgado-Morales R, Moran S, Tejera AM, Juan-Otero M, Grau-Bove C, Barrot C, Vaquero A, Santos-Barriopedro I, Moreno-Manzano V, Mezquita-Pla J, Hobeich-Naya C, Garcia-Martínez I, Vidal Pérez F, Blasco MA, **Esteller M**, Edel MJ. A Synthetic mRNA Cell Reprogramming Method Using CYCLIN D1 Promotes DNA Repair Generating Improved Genetically Stable Human iPSC. *Stem Cells*, doi: 10.1002/stem.3358, 2021.
- 430) Fernández-Sanlés A, Sayols-Baixeras S, Subirana I, Sentí M, Pérez-Fernández S, Manuel Castro de Moura M, **Esteller M**, Marrugat J, Elosua R. DNA methylation biomarkers of myocardial infarction and cardiovascular disease. *Clinical Epigenetics*, 13, 86, 2021.
- 431) Pescador-Tapia A, Silva-Martínez GA, Fragoso-Bargas N, Rodríguez-Ríos D, **Esteller M**, Moran S, Zaina S, Lund G. Distinct associations of BMI and fatty acids with DNA methylation in fasting and postprandial states in men. *Frontiers in Genetics*, doi.org/10.3389/fgene.2021.665769, 2021.
- 432) Garcia-Ruiz B, Castro de Moura M, Muntané G, Martorell L, Bosch E, **Esteller M**, Pomarol-Clotet E, Jiménez E, Vieta E, Vilella E. DDR1 methylation is associated with bipolar disorder and the isoform expression and methylation of myelin genes. *Epigenomics*, 10.2217/epi-2021-0006 C, 2021.
- 433) Carrato C, Sanz C, Muñoz-Mármol AM, Blanco I, Pineda M, Del Valle J, Damaso E, **Esteller M**, Musulen E. The challenge to diagnose Constitutional Mismatch Repair Deficiency syndrome in brain malignancies from young individuals. *International Journal of Molecular Sciences*, doi.org/10.3390/ijms22094629, 2021.
- 434) Ciampa I, Operto G, Falcon C, Minguillon C, Castro de Moura M, Piñeyro D, **Esteller M**, Molinuevo JL, Guigó R, Navarro A, Gispert JD, Vilor-Tejedor N. Genetic Predisposition to Alzheimer's disease is Associated with Enlargement of Perivascular Spaces in Centrum Semiovale Region. *Genes*, doi.org/10.3390/genes12060825, 2021.

- 435) Gómez A, Pato ML, Bujanda L, Sala N, Companioni O, Cosme A, Tufano M, Hanly DJ, Garcia N, Sanz JM, Gisbert JP, Lopez C, Elizalde JI, Cuatrecasas M, Andreu V, Paulés MJ, Martin-Arraz MD, Ortega-Medina L, Poves E, Barrio J, Torres MA, Muñoz G, Ferrández A, Ramírez-Lázaro MJ, Lario S, González CA, **Esteller M**, Berdasco M. Follow-up study confirms the presence of gastric cancer DNA methylation hallmarks in high-risk precursor lesions. *Cancers*, doi.org/10.3390/cancers13112760, 2021.
- 436) Kommos F, Stichel D, Mora J, **Esteller M**, Jones D, Pfister S, Sinn P, Schmidt D, Mentzel T, Sahn F, von Deimling A, Koelsche C. Clinicopathologic and molecular analysis of embryonal rhabdomyosarcoma of the genitourinary tract: evidence for a distinct DICER1-associated subgroup. *Modern Pathology*, doi.org/10.1038/s41379-021-00804-y, 2021.
- 437) Izquierdo AG, Boughanem H, Diaz-Lagares A, Arranz-Salas I, **Esteller M**, Tinahones FJ, Casanueva FF, Macias-Gonzalez M, Crujeiras AB. DNA methylome in visceral adipose tissue can discriminate patients with and without colorectal cancer. *Epigenetics*, 26, 1-12. doi: 10.1080/15592294.2021.1950991, 2021.
- 438) Ortega-Alarcon D, Claveria-Gimeno R, Vega S, Jorge-Torres OC, Esteller M, Abian O, Velazquez-Campoy A. Stabilization Effect of Intrinsically Disordered Regions on Multidomain Proteins: The Case of the Methyl-CpG Protein 2, MeCP2. *Biomolecules*, doi.org/10.3390/biom11081216, 2021.
- 439) Hernández R, Jiménez-Luna C, Ortiz R, Setién F, López M, Perazzoli G, **Esteller M**, Berdasco M, Prados J, Melguizo C. Impact of the Epigenetically Regulated Hoxa-5 Gene in Neural Differentiation from Human Adipose-Derived Stem Cells. *Biology*, doi.org/10.3390/biology10080802, 2021.
- 440) Farre L, Sanz G, Ruiz N, Castro de Moura M, Martin-Tejera JF, Goncalves-Ribeiro S, Martinez Iniesta M, Calaf M, Mosquera JL, Martin-Subero JI, Granada I, **Esteller M**, Domingo-Domenech E, Climent F, Villanueva A, Sureda A. Extramedullary multiple myeloma patient derived orthotopic xenograft with high disturbed genome: combined exhaustive molecular and therapeutic studies. *Disease Models & Mechanisms*, DOI: 10.1242/dmm.048223, 2021.
- 441) Masoumi F, Saraiva SM, Bouzo BL, López-López R, **Esteller M**, Díaz-Lagares Á, de la Fuente M. Modulation of Colorectal Tumor Behavior via lncRNA TP53TG1-Lipidic Nanosystem. *Pharmaceutics*. 13,1507, 2021.
- 442) Solanich X, Vargas-Parra G, van der Made CI, Simons A, Schuurs-Hoeijmakers J, Antolí A, del Valle J, Rocamora-Blanch G, Setién F, **Esteller M**, van Reijmersdal SV, Riera-Mestre A, Sabater-Riera J, Capellá G, van de Veerdonk FL, van der Hoven B, Corbella X, Hoischen A, Lázaro C. Genetic screening for TLR7 variants in young and previously healthy men with severe COVID-19. *Frontiers in Immunology*, doi.org/10.3389/fimmu.2021.719115, 2021.
- 443) Soler M, Davalos V, Sánchez-Castillo A, Mora-Martinez C, Setién F, Siqueira E, Castro de Moura M, **Esteller M**, Guil S. The transcribed ultraconserved region uc.160+ enhances processing and A-to-I editing of miR-376 cluster with an impact on glioma prognosis. *Molecular Oncology*, DOI: 10.1002/1878-0261.13121, 2021.
- 444) Lima-Ribeiro M, Reyes-Garau D, Vinyoles M, Profitos-Peleja N, Carvalho-Santos J, Armengol M, Fernández-Serrano M, Sedo-Mor A, Bech-Serra JJ, Bleuca P, Musulen E, De La Torre C, Miskin H, **Esteller M**, Bosch F, Menéndez P, Normant E, Roue G. Antitumor activity of the novel BTK inhibitor TG-1701 is associated with disruption of Ikaros signaling in B-cell non-Hodgkin lymphoma. *Clinical Cancer Research*, 27, 6591-601, 2021.
- 445) Ji X, Lin L, Fan J, Li Y, Wei Y, Shen S, Su L, Shafer A, Moksnes-Bjaanæs M, Karlsson A, Planck M, Staaf J, Helland A, Esteller M, Zhang R, Chen F, Christiani DC. Epigenome-wide three-way interaction study identifies a complex pattern between TRIM27, KIAA0226 and smoking associated with overall survival of early-stage NSCLC. *Molecular Oncology*, doi: 10.1002/1878-0261.13167, 2021.
- 446) Siqueira E, Obiols-Guardia A, Jorge-Torres OC, Oliveira-Mateos C, Soler M, Ramesh-Kumar D, Setién F, van Rossum D, Pascual-Alonso A, Xiol C, Ivan C, Shimizu M, Armstrong J, Calin GA, Pasterkamp RJ, **Esteller M**, Guil S. Analysis of the circRNA and T-UCR populations identifies convergent pathways in mouse and human models of Rett syndrome. *Molecular Therapy-Nucleic Acids*, doi: 10.1016/j.omtn.2021.12.030, 2021.

- 447) Llabata P, Torres-Diz M, Gomez A, Tomas-Daza L, A. Romero OA, Grego-Bessa J, Llinas-Arias P, Valencia A, Esteller M, Javierre BM, Zhang X, Sanchez-Cespedes M. MAX-mutant small cell lung cancers exhibit impaired activities of MGA-dependent non-canonical polycomb repressive complex. *Proc Natl Acad Sci USA*, 118(37):e2024824118, 2021.
- 448) Garcia P, Fernandez-Hernandez R, Cuadrado A, Coca I, Gomez A, Maqueda M, Latorre-Pellicer A, Puisac B, Ramos F, Sandoval J, **Esteller M**, Mosquera JL, Rodriguez J, Pié J, Losada A, Queralt E. Disruption of NIPBL/Scp2 in Cornelia de Lange Syndrome provokes cohesin genome-wide redistribution with an impact in the transcriptome. *Nature Communications*, 12, 4551, doi.org/10.1038/s41467-021-24808-z, 2021.
- 449) Coll-SanMartin L, Davalos V, Piñeyro D, Rosselló-Tortella M, Bueno-Costa A, Setien F, Villanueva A, Granada I, Ruiz-Xiviller N, Kotter A, Helm M, Yokota J, Kawabata-Iwakawa R, Kohno T, **Esteller M**. Gene Amplification-Associated Overexpression of the Selenoprotein tRNA Enzyme TRIT1 Confers Sensitivity to Arsenic Trioxide in Small-Cell Lung Cancer. *Cancers*, 13, 1869, 2021.
- 450) Castro de Moura M, Davalos V, Planas-Serra L, Alvarez-Errico D, Arribas C, Ruiz M, Aguilera-Albesa S, Troya J, Valencia-Ramos J, Vélez-Santamaria V, Rodríguez-Palmero A, Villar-Garcia J, Horcajada JP, Albu S, Casasnovas C, Rull A, Reverte L, Dietl B, Dalmau D, Arranz MJ, Lluçà-Carol L, Planas AM, Pérez-Tur J, Fernandez-Cadenas I, Villares P, Tenorio J, Colobran R, Martin-Nalda A, Soler-Palacin P, Vidal F, Pujol A, **Esteller M**. Epigenome-Wide Association Study of COVID-19 Severity with Respiratory Failure. *Lancet EBiomedicine*, 68, 103393, 2021.

2022

- 451) Garcia-Prieto CA, Villanueva L, Bueno-Costa A, Davalos V, González-Navarro EA, Juan M, MD, Urbano-Ispizua A, Delgado J, Ortíz-Maldonado V, del Bufalo F, Locatelli F, Quintarelli C, Sinibaldi M, Soler M, Castro de Moura M, Ferrer G, Urduñigo RG, Fernandez AF, Fraga MF, Bar D, Meir A, Itzhaki O, Besser MJ, Avigdor A, Jacoby E, **Esteller M**. Epigenetic profiling and response to CD19 chimeric antigen receptor T-cell therapy in B-cell malignancies. *The Journal of the National Cancer Institute*, 114, 436-445, 2022.
- 452) Rosselló-Tortella M, Bueno-Costa A, Martínez-Verbo L, Villanueva L, **Esteller M**. DNA methylation-associated dysregulation of transfer RNA expression in human cancer. *Molecular Cancer*, 21, 48, doi.org/10.1186/s12943-022-01532-w, 2022.
- 453) Bleuca P, Davalos V, de Villasante I, Merkel A, Musulen E, Coll-SanMartin L, **Esteller M**. Refinement of computational identification of somatic copy number alterations using DNA methylation microarrays illustrated in cancers of unknown primary. *Briefings in Bioinformatics*, doi.org/10.1093/bib/bbac161, 2022.
- 454) Oriol-Tordera B, Esteve-Codina A, Berdasco M, Rosás-Umbert M, Gonçalves E, Duran-Castells C, Català-Moll F, Llano A, Cedeño S, Puertas MC, Tolstrup M, Sjøgaard OS, Clotet B, Martínez-Picado J, Hanke T, Combadiere B, Paredes R, Hartigan-O'Connor D, **Esteller M**, Meulbroek M, Calle ML, Sanchez-Pla A, Moltó J, Mothe B, Brander C, Ruiz-Riol M. Epigenetic landscape in the kick-and-kill therapeutic vaccine BCN02 clinical trial is associated with antiretroviral treatment interruption (ATI) outcome. *Lancet EBiomedicine*, 78, 103956, 2022.
- 455) Arribas AJ, Napoli S, Cascione L, Sartori G, Gaudio E, Tarantelli C, Mensah AA, Spriano F, Zucchetto A, Rossi FM, Rinaldi A, Castro de Moura M, Jovic S, Pittau RB, Di Veroli A, Stathis A, Cruciani G, Stussi G, Gattei V, Brown JR, **Esteller M**, Zucca E, Rossi D, Bertoni F. Resistance to PI3Kδ inhibitors in marginal zone lymphoma can be reverted by targeting the IL-6/PDGFRα axis. *Haematologica*, doi.org/10.3324/haematol.2021.279957, 2022.
- 456) Garcia-Prieto CA, Álvarez-Errico D, Musulen E, Bueno-Costa A, Vazquez BN, Vaquero A, **Esteller M**. Validation of a DNA methylation microarray for 285,000 CpG sites in the mouse genome. *Epigenetics*, doi.org/10.1080/15592294.2022.2053816, 2022.
- 457) Cao X, Li W, Wang T, Ran D, Davalos V, Planas-Serra L, Pujol A, **Esteller M**, Wang X, Yu H. Accelerated biological aging in COVID-19 patients. *Nature Communications*, 13, 2135, 2022.

- 458) Pignata L, Cecere F, Verma A., Mele BH, Monticelli M, Acurzio B, Giaccari C, Sparago A, Hernandez-Mora JR, Monteagudo-Sánchez A, **Esteller M**, Pereda A, Tenorio-Castano J, Palumbo O, Carella M, Prontera P, Piscopo C, Accadia M, Lapunzina P, Cubellis MV, Perez de Nanclares G, Monk D, Riccio A, Cerrato F. Novel genetic variants of KHDC3L and other members of the subcortical maternal complex associated with Beckwith–Wiedemann syndrome or Pseudohypoparathyroidism 1B and multi-locus imprinting disturbances. *Clinical Epigenetics*, 14, 71, 2022.
- 459) Cristalli C, Manara MC, Valente S, Pellegrini E, Bavelloni A, De Feo A, Blalock W, Di Bello E, Piñeyro D, Merkel A, **Esteller M**, Tirado OM, Mai A, Scotlandi K. Novel targeting of DNA methyltransferase activity inhibits Ewing sarcoma cell proliferation and enhances tumor cell sensitivity to DNA damaging drugs by activating the DNA damage response. *Frontiers in Endocrinology*, 13, 876602, 2022.
- 460) Zaina S, **Esteller M**, Gonçalves I, Lund G. Dynamic epigenetic age mosaicism in the human atherosclerotic artery. *PLoS One*, 17, e0269501, 2022.
- 461) Bińkowski J, Taryma-Leśniak O, Łuczkowska K, Niedzwiedz A, Lechowicz K, Strapagiel D, Jarczak J, Davalos V, Pujol A, **Esteller M**, Kotfis K, Machaliński B, Parczewski M, Wojdacz TK. Epigenetic activation of antiviral sensors and effectors of interferon response pathways during SARS-CoV-2 infection. *Biomedicine & Pharmacotherapy*, 153, 113396, 2022.
- 462) Ruiz-Bañobre J, Rodríguez-Casanova A, Costa-Fraga N, Bao-Caamano A, Alvarez-Castro A, Carreras-Presas FLM, Brozos-Vazquez E, Vidal-Insua Y, Vazquez-Rivera F, Candamio-Folgar S, Mosquera-Preedo M, Lago-Lestón RM, Muínelo-Romay L, Vázquez-Bueno JA, Sanz-Pamplona R, Moreno V, Goel A, Castillo L, Martin AC, Arroyo R, **Esteller M**, Crujeiras AB, López-López R, Díaz-Lagares A. Non-invasive early detection of colorectal cancer by hypermethylation of the LINC00473 promoter in plasma cell-free DNA. *Clinical Epigenetics*, 14, 86, 2022.
- 463) Culléll N, Soriano-Tárraga C, Gallego-Fábrega C, Cárcel-Márquez J, Muiño E, Lluçia-Carol L, Lledós M, **Esteller M**, Castro de Moura M, Montaner J, Rosell A, Delgado P, Martí-Fàbregas J, Krupinski J, Roquer J, Jiménez-Conde J, Fernández-Cadenas I. Altered methylation pattern in EXOC4 is associated with stroke outcome: an Epigenome-Wide Association Study. *Clinical Epigenetics*, 14, 124, 2022.
- 464) Rodríguez-Fernández B, Vilor-Tejedor N, Arenaza-Urquijo EM, Sánchez-Benavides G, Suárez-Calvet M, Operto G, Minguillón C, Fauria K, Kollmorgen G, Suridjan I, de Moura MC, Piñeyro D, **Esteller M**, Blennow K, Zetterberg H, De Vivo I, Molinuevo JL, Navarro A, Gispert JD, Sala-Vila A, Crous-Bou M; ALFA study. Genetically predicted telomere length and Alzheimer's disease endophenotypes: a Mendelian randomization study. *Alzheimers Res Ther*. doi: 10.1186/s13195-022-01101-9, 2022.
- 465) Chen J, Song Y, Li Y, Wei Y, Shen S, Zhao Y, You D, Su L, Bjaanæs M, Karlsson A, Planck M, Staaf J, Helland Å, **Esteller M**, Shen H, Christiani D, Zhang R, Chen F. A trans-omics assessment of gene-gene interaction in early stage NSCLC. *Molecular Oncology*, doi: 10.1002/1878-0261.13345, 2022.
- 466) Pontel LB, Bueno-Costa A, Morellato AE, Carvalho-Santos J, Roué G, **Esteller M**. Acute lymphoblastic leukemia necessitates GSH-dependent ferroptosis defenses to overcome FSP1-epigenetic silencing. *Redox Biology*, 55, 102408, 2022.
- 467) Davalos V, García-Prieto CA, Ferrer G, Aguilera-Albesa S, Valencia-Ramos J, Rodríguez-Palmero A, Ruiz M, Planas-Serra L, Jordan I, Alegría I, Flores-Pérez P, Cantarín V, Fumadó V, Viadero MT, Rodrigo C, Méndez-Hernández M, López-Granados E, Colobran R, Rivière JG, Soler-Palacín P, Pujol A, **Esteller M**. Epigenetic Profiling Linked to Multisystem Inflammatory Syndrome in Children (MIS-C): A Multicenter, Retrospective Study. *Lancet EClinicalMedicine*, 50, 101515, 2022.
- 468) Bueno-Costa A, Piñeyro D, García-Prieto CA, Ortiz-Barahona V, Martínez-Verbo L, Webster NA, Andrews B, Kol N, Avrahami C, Moshitch-Moshkovitz S, Rechavi G, **Esteller M**. Remodelling of the m⁶A RNA landscape in the conversion of acute lymphoblastic leukemia cells to macrophages. *Leukemia*, 36, 2121-4, 2022.

- 469) Joshi RS, Rigau M, García-Prieto CA, Castro de Moura M, Piñeyro D, Moran S, Davalos V, Carrión P, Ferrando-Bernal M, Olalde I, Lalueza-Fox C, Navarro A, Fernández-Tena C, Aspandi D, Sukno FM, Binefa X, Valencia A, **Esteller M**. Look-alike humans identified by facial recognition algorithms show genetic similarities. *Cell Reports*, 40, 111257, 2022.

2023

- 470) Ortiz-Barahona V, Soler M, Davalos V, García-Prieto CA, Janin M, Setien F, Fernández-Rebollo I, Bech-Serra JJ, De La Torre C, Guil S, Villanueva A, Zhang PH, Yang L, Guarnacci M, Schumann U, Preiss T, Balaseviciute U, Montal R, Llovet JM, **Esteller M**. Epigenetic inactivation of the 5-methylcytosine RNA methyltransferase NSUN7 is associated with clinical outcome and therapeutic vulnerability in liver cancer. *Molecular Cancer*, 22, 83, 2023.
- 471) Noguera-Castells A, García-Prieto CA, Álvarez-Errico D, **Esteller M**. Validation of the new EPIC DNA methylation microarray (900K EPIC v2) for high-throughput profiling of the human DNA methylome. *Epigenetics*, DOI: 10.1080/15592294.2023.2185742, 2023.
- 472) Davalos V, Lovell C, Von Itter R, Dolgalev I, Agrawal P, Baptiste G, Kahler D, Sokolova E, Moran S, Pique L, Vega-Sáenz de Miera EC, Fontanals B, Karz A, Tsigos A, Yun C, Darvishian F, Etchevers H, Osman I, Schober M, **Esteller M**, Hernando-Monge E. An epigenetic switch controls the expression of an alternative NR2F2 isoform that unleashes a pro-metastatic program in melanoma. *Nature Communications*, 14, 1867, 2023.
- 473) Albuquerque-Bejar JJ, Navajas-Chocarro P, Saigi M, Ferrero-Andres A, Morillas JM, Vilarrubi A, Gomez A, Mate JL, Munoz-Marmol AM, Romero OA, Bleuca P, Davalos V, **Esteller M**, Pros E, Llabata P, Torres-Diz M, Esteve-Codina A, Sanchez-Cespedes M. MYC activation and other genetic defects drive cell-intrinsic dysregulation of IFN γ signaling in lung cancer. *Cell Reports Medicine*, DOI: 10.1016/j.xcrm.2023.101006, 2023.
- 474) Petazzi P, Jorge-Torres OC, Gomez A, Scognamiglio I, Serra-Musach J, Merkel A, Grases D, Xiol C, O'Callaghan M, Armstrong J, **Esteller M**, Guil S. Global impairment of immediate-early genes expression in Rett syndrome models and patients linked to myelination defects. *International Journal of Molecular Sciences*, 24, 2, 2023.
- 475) Ortega-Alarcon D, Claveria-Gimeno R, Vega S, Jorge-Torres OC, **Esteller M**, Abian O, Velazquez-Campoy A. Unexpected thermodynamic signature for the interaction of hydroxymethylated DNA with MeCP2. *International Journal of Biological Macromolecules*, 232, 123373, 2023.
- 476) Santamarina-García M, Brea-Iglesias J, Bramsen JB, Fuentes- Losada M, Caneiro-Gómez FJ, Vázquez-Bueno JA, Lázare-Iglesias H, Fernández-Díaz N, Sánchez-Rivadulla L, Betancor YZ, Ferreiro-Pantín M, Conesa-Zamora P, Antúnez-López JR, Kawazu M, **Esteller M**, Andersen CL, Tubio JMC, López-López R, Ruiz-Bañobre J. MSIMEP: predicting microsatellite instability from microarray DNA methylation tumor profiles. *iScience*, DOI 10.1016/j.isci.2023.106127, 2023.
- 477) Ribeiro ML, Profitós-Pelejà N, Santos JC, Bleuca O, Garau DR, Armengol M, Fernández-Serrano M, Miskin HP, Bosch F, **Esteller M**, Normant E, Roué G. G Protein-Coupled Receptor 183 mediates the sensitization of Burkitt lymphoma tumors to CD47 immune checkpoint blockade by anti-CD20/PI3K δ dual therapy. *Frontiers in Immunology*, doi: 10.3389/fimmu.2023.1130052, 2023.
- 478) Mellid S, García F, Leandro-García LJ, Díaz-Talavera A, Mario Martínez-Montes M, Gil E, Calsina B, Monteagudo M, Letón R, Roldán-Romero JM, Santos M, Lanillos J, Valdivia C, Martínez-Puente N, de Nicolás-Hernández J, Jiménez S, Pérez-Martínez M, Honrado E, Coloma E, Cerezo A, Santiveri CM, **Esteller M**, Campos-Olivas R, Caleiras E, Montero-Conde C, Rodríguez-Antona C, Muñoz J, Robledo M, Cascón A. DLST mutations in pheochromocytoma and paraganglioma cause proteome hyposuccinylation and metabolic remodeling. *Cancer Communications*, doi: 10.1002/cac2.12427, 2023.
- 479) Gené M, Cuatrecasas M, Amat I, Veiga JA, Fernández Aceñero MJ, Fusté Chimisana V, Tarragona J, Jurado I, Fernández-Victoria R, Martínez Ciarpaglini C, Alenda González C, Zac C, Ortega de la Obra P, Fernández-Figueras MT, **Esteller M**, Musulen E. Alterations in p53, microsatellite stability

- and lack of MUC5AC expression as molecular features of colorectal carcinoma associated with inflammatory bowel disease. *International Journal of Molecular Sciences*, 24, 8655, 2023.
- 480) Shen S, Li Z, Jiang Y, Duan W, Li H, Du S, **Esteller M**, Shen H, Hu Z, Zhao Y, Christiani DC, Chen F. A Large-Scale Exome-Wide Association Study Identifies Novel Germline Mutations in Lung Cancer. *American Journal of Respiratory and Critical Care Medicine*, doi: 10.1164/rccm.202212-2199OC, 2023.
- 481) Waryah C, Cursons J, Foroutan M, Pflueger C, Wang E, Molania R, Sorolla A, Wallis C, Moses C, Magalhaes L, Glas I, Thompson EW, Fearnley L, Bahlo M, Chaffer C, Davis M, Papenfuss T, Redfern A, Lister R, **Esteller M**, Blancafort P. Synthetic epigenetic reprogramming of mesenchymal to epithelial states using the CRISPR/dCas9 platform in triple negative breast cancer. *Advanced Science*, e2301802, 2023.
- 482) Salz L, Seitz A, Schäfer D, Franzen J, Holzer T, Garcia-Prieto CA, **Esteller M**, Bürger I, Hardt O, Wagner W. Culture expansion of CAR T cells inflicts aberrant DNA methylation that is associated with adverse clinical outcome. *Leukemia*, doi.org/10.1038/s41375-023-01966-1, 2023.
- 483) Llinàs-Arias P, Ensenyat-Méndez M, Orozco JIJ, Íñiguez-Muñoz S, Valdez B, Wang C, Mezger A, Choi E, Tran YZ, Yao L, Bonath F, Olsen RA, Ormestad M, **Esteller M**, Lupien M, Marzese DM. 3-D chromatin conformation, accessibility, and gene expression profiling of triple-negative breast cancer. *BMC Genomic Data*, doi: 10.1186/s12863-023-01166-x, 2023.
- 484) Solá P, Mereu E, Bonjoch J, Marta Casado-Pelaez, Prats N, Aguilera M, Reina O, Blanco E, **Esteller M**, Heyn H, DiCroce L, Solanas G, Aznar Benitah S. Local IL-17 orchestrates skin aging. *Nature Aging*, doi: 10.1038/s43587-023-00431-z, 2023.
- 485) Siqueira E, Kim BH, Reser L, Chow R, Delaney K, **Esteller M**, Ross MM, Shabanowitz J, Hunt DF, Guil S, Ausió J. Analysis of the interplay between MeCP2 and histone H1 during in vitro differentiation of human ReNCell neural progenitor cells. *Epigenetics*, 10.1080/15592294.2023.2276425, 2023.
- 486) Llinàs-Arias P, Ensenyat-Mendez M, Íñiguez-Muñoz S, Orozco JIJ, Valdez B, Salomon MP, Matsuba C, Solivellas-Pieras M, Bedoya-López AF, Sesé B, Mezger A, Ormestad M, Unzueta F, Strand SH, Boiko AD, Hwang ES, Cortés J, DiNome ML, **Esteller M**, Lupien M, Marzese DM. Chromatin insulation orchestrates matrix metalloproteinase gene cluster expression reprogramming in aggressive breast cancer tumors. *Molecular Cancer*, DOI: 10.1186/s12943-023-01906-8, 2023.
- 487) Musulen E, Gené M, Cuatrecasas M, Amat I, Veiga JA, Fernández-Aceñero MJ, Chimisana VF, Tarragona J, Jurado I, Fernández-Victoria R, Martínez-Ciarpaglini C, González CA, Zac C, Fernández-Figueras MT, **Esteller M**. Gastric metaplasia as precursor of nonconventional dysplasia in inflammatory bowel disease. *Human Pathology*, doi.org/10.1016/j.humpath.2023.11.011, 2023.
- 488) Arribas AJ, Napoli S, Cascione L, Barnabei L, Sartori G, Cannas E, Gaudio E, Tarantelli C, Mensah AA, Spriano F, Zucchetto A, Rossi FM, Rinaldi A, Castro de Moura M, Jovic S, Pittau RB, Stathis A, Stussi G, Gattei V, Brown JR, **Esteller M**, Zucca E, Rossi D, Bertoni F. ERBB4-driven signaling is a mediator of resistance to BTK and PI3K inhibitors in B cell lymphoid neoplasms. *Molecular Cancer Therapeutics*, doi.org/10.1158/1535-7163.MCT-23-0068, 2023.
- 489) Vilor-Tejedor N, Brugulat Serrat A, Suarez M, Genius Serra O; Rodríguez Fernández B, Minguiillón C, Sadeghi I, González Escalante A, Crous M, Sánchez Benavides G, **Esteller M**, Fauria K, Molinuevo Guix JL, Navarro A, Domingo Gispert López J, Grau Rivera O. Genetic characterization of the ALFA study: Uncovering genetic profiles in the Alzheimer's continuum. *Alzheimer's & Dementia: The Journal of the Alzheimer's Association*, DOI: 10.1002/alz.13537, 2023.
- 490) Gallardo-Gómez M, Costas-Ríos L, Bujanda L, Barrero M, Castells A, Balaguer F, Jover R, **Esteller M**, Tardío-Baiges A, González-Carreró Fojón J, Cubiella J, De Chiara L. Serum methylome of the colorectal cancer serrated pathway. *Molecular Oncology*, DOI: 10.1002/1878-0261.13573, 2023.
- 491) Noguera-Castells A, Parra J, Davalos V, García-Prieto CA, Veselinova Y, Pérez-Miés B, Caniego-Casas T, Palacios J, Saenz-Sardà X, Englund E, Musulen E, **Esteller M**. Epigenetic Fingerprint of the SARS-CoV-2 Infection in the Lung of Lethal COVID-19. *CHEST*, doi.org/10.1016/j.chest.2023.10.032, 2023.

- 492) Pham VN, Bruemmer KJ, Toh JDW, Ge EJ, Tenney L, Ward CC, Dingler FA, Millington CL, Garcia-Prieto CA, Pulos-Holmes MC, Ingolia NT, Pontel LB, **Esteller M**, Patel KJ, Nomura DK, Chang CJ. Formaldehyde regulates S-adenosylmethionine biosynthesis and one-carbon metabolism. *Science*. 382(6670):eabp9201, doi: 10.1126/science.abp9201, 2023.

2024

- 493) Campillo-Marcos I, Casado-Pelaez M, Davalos V, Ferrer G, Mata C, Mereu E, Roué G, Valcárcel D, Molero A, Zamora L, Xicoy B, Palomo L, Acha P, Manzanares A, Tobiasson M, Hellström-Lindberg E, Solé F, **Esteller M**. Single-Cell Multiomics Analysis of Myelodysplastic Syndromes and Clinical Response to Hypomethylating Therapy. *Cancer Research Communications*, doi: 10.1158/2767-9764.CRC-23-0389, 2024.
- 494) Noguera-Castells A, Campillo-Marcos I, Davalos V, García-Prieto CA, Valcárcel D, Molero A, Palomo L, Gattermann N, Wulfert M, Chaparro-González L, Solé F, Cabezón M, Jiménez-Lorenzo MJ, Xicoy B, Zamora L, De Stefano A, Casalin I, Finelli C, Follo MY, **Esteller M**. DNA methylation profiling of myelodysplastic syndromes and clinical response to azacitidine: A multicentre retrospective study. *British Journal of Haematology*, doi: 10.1111/bjh.19392, 2024.
- 495) Nieves-Vazquez B, Fernández-Duran I, García Y, Thackray JK, Kumari P, Ianni A, **Esteller M**, Tischfield J, Vaquero A, Serrano L. SIRT7 and p53 interaction in embryonic development and tumorigenesis. *Frontiers in Cell and Developmental Biology*, 11, 1281730, 2024.
- 496) Macias-Gómez A, Jiménez-Balado J, Fernández-Pérez I, Suárez-Pérez A, Vallverdú-Prats M, Guimaraens L, Vivas E, Saldaña J, Giralt-Steinhauer E, Guisado-Alonso D, Villalba G, Gracia MP, **Esteller M**, Rodríguez-Campello A, Jiménez-Conde J, Ois A, Cuadrado-Godia E. The influence of epigenetic biological age on key complications and outcomes in aneurysmal subarachnoid haemorrhage. *J Neurol Neurosurg Psychiatry*, doi: 10.1136/jnnp-2023-332889, 2024.
- 497) Ortega-Alarcon D, Claveria-Gimeno R, Vega S, Kalani L, Jorge-Torres OC, **Esteller M**, Ausio J, Abian O, Velazquez-Campoy A. Extending MeCP2 interactome: Canonical nucleosomal histones interact with MeCP2. *Nucleic Acids Research*, gkae051. doi: 10.1093/nar/gkae051, 2024.
- 498) Sánchez-Lafuente CL, Martínez-Verbo L, Johnston JN, Floyd J, **Esteller M**, Kalynchuk LE, Ausió J, Caruncho HJ. Chronic Corticosterone Exposure in Rats Induces Sex-Specific Alterations in Hypothalamic Reelin Fragments, MeCP2, and DNMT3a Protein Levels. *Neuroscience Letters*, DOI: 10.1016/j.neulet.2024.137770, 2024.
- 499) Fernández-Pérez I, Jiménez-Balado J, Macias-Gómez A, Suárez-Pérez A, Vallverdú-Prats M, Pérez-Giraldo A, Viles-García M, Peris-Subiza J, Vidal-Notari S, Giralt-Steinhauer E, Guisado-Alonso D, **Esteller M**, Rodríguez-Campello A, Jiménez-Conde J, Ois A, Cuadrado-Godia E. Blood DNA Methylation Analysis Reveals a Distinctive Epigenetic Signature of Vasospasm in Aneurysmal Subarachnoid Hemorrhage. *Transl Stroke Res*. doi: 10.1007/s12975-024-01252-x, 2024.
- 500) Ferreté-Bonastre AG, Martínez-Gallo M, Morante-Palacios O, Calvillo CL, Calafell-Segura J, Rodríguez-Ubreva J, **Esteller M**, Cortés-Hernández J, Ballestar E. Disease activity drives divergent epigenetic and transcriptomic reprogramming of monocyte subpopulations in systemic lupus erythematosus. *Annals of the Rheumatic Diseases*. ard-2023-225433, 2024.
- 501) Thambyrajah R, Maqueda M, Neo WH, Imbach K, Guillen Y, Grases D, Fadlullah Z, Gambera S, Matteini F, Wang X, Calero-Nieto FJ, **Esteller M**, Florian MC, Porta E, Benedito R, Göttgens B, Lacaud G, Espinosa L, Bigas A. Cis inhibition of NOTCH1 through JAGGED1 sustain embryonic hematopoietic stem cell fate. *Nature Communications*, 15, 1604, 2024.
- 502) Heald JS, Méndez López A, Pato ML, Ruiz-Xiville N, Cabezón M, Zamora L, Vives S, Coll Jorda R, Maluquer Artigal C, Granada I, Sole F, **Esteller M**, Berdasco M. Identification of novel NUP98 fusion partners and co-mutations in Acute Myeloid Leukemia: an adult cohort study. *Blood Advances*, doi: 10.1182/bloodadvances.2023012479, 2024.
- 503) Thambyrajah R, Maqueda M, Fadlullah MZ, Proffitt M, Neo WH, Guillén Y, Casado-Pelaez M, Herrero-Molinero P, Brujas C, Castelluccio N, González J, Iglesias A, Marruecos L, Ruiz-Herguido C, **Esteller M**, Mereu E, Lacaud G, Espinosa L, Bigas A. IκBα controls dormancy in hematopoietic

- stem cells via retinoic acid during embryonic development. *Nature Communications*, 15, 4673, 2024.
- 504) Ayllon-Hermida A, Nicolau-Fernandez M, Larrinaga AM, Herraiz IA, Tintó-Font E, Llorà-Batlle O, Orbanova A, Yasnot MF, Graupera M, **Esteller M**, Popovici J, Cortés A, Del Portillo HA, Fernandez-Becerra C. Plasmodium vivax spleen-dependent protein 1 and its role in extracellular vesicles-mediated intrasplenic infections. *Frontiers in Cellular and Infection Microbiology*, 14, 1408451, 2024.
- 505) Jiménez-Balado J, Fernández-Pérez I, Gallego-Fábrega C, Lazcano U, Soriano-Tárraga C, Vallverdú-Prats M, Mola-Caminal M, Rey-Álvarez L, Macias-Gómez A, Suárez-Pérez A, Giralt-Steinhauer E, Rodríguez-Campello A, Cuadrado-Godia E, Ois Á, **Esteller M**, Roquer J, Fernández-Cadenas I, Jiménez-Conde J. DNA methylation and stroke prognosis: an epigenome-wide association study. *Clinical Epigenetics*, 16, 75, 2024.
- 506) Alves LF, da Silva IN, de Mello DC, Fuziwara CS, Guil S, Esteller M, Geraldo MV. Epigenetic Regulation of the Transcription of DLK1-DIO3 Region in Thyroid Carcinoma. *Cells*, 13, 1001, 2024.
- 507) Chen L, Wang X, Xie N, Zhang Z, Xu X, Xue M, Yang Y, Liu L, Su L, Bjaanæs M, Karlsson A, Planck M, Staaf J, Helland Å, **Esteller M**, Christiani DC, Chen F, Zhang R. A two-phase epigenome-wide four-way gene-smoking interaction study of overall survival for early-stage non-small cell lung cancer. *Molecular Oncology*, doi: 10.1002/1878-0261.13766, 2024.
- 508) Anastasi F, Genius P, Rodríguez-Fernández B, Escalante AG, Hernández-Villamizar LF, Lorenzini L, Del Campo M, Sánchez-Benavides G, Yang C, Timsina J, Minguillón C, **Esteller M**, Navarro A, Cruchaga C, Suarez-Calvet M, Vilor-Tejedor N. Basic Science and Pathogenesis. Genetic proxies for predicting plasma protein levels reveal TIMP2 role in human cognitive performance. *Alzheimer's & Dementia*. 20 Suppl 1:e092194, 2024.
- 509) Lorenzo-Sanz, Lopez-Cerda M, da Silva-Diz V, Artés MH, Llop S, Penin RM, Bermejo JO, Gonzalez-Suarez E, **Esteller M**, Viñals F, Espinosa E, Oliva M, Piulats JM, Martin-Liberal J, Muñoz P. Cancer cell plasticity defines response to immunotherapy in cutaneous squamous cell carcinoma. *Nature Communications*, 15, 5352, 2024.
- 510) Malla S, Kumari K, García-Prieto CA, Caroli J, Nordin A, Phan TTT, Bhattarai DP, Martinez-Gamero C, Dorafshan E, Stransky S, Álvarez-Errico D, Saiki PA, Lai W, Lyu C, Lizana L, Gilthorpe JD, Wang H, Sidoli S, Mateus A, Lee DF, Cantú C, **Esteller M**, Mattevi A, Roman A, Aguilo F. The scaffolding function of LSD1 controls DNA methylation in mouse ESCs. *Nature Communications*, DOI: 10.1038/s41467-024-51966-7, 2024.
- 511) Gamez-Garcia A, Bueno-Costa A, Alari-Pahissa E, Thackray JK, Espinosa-Alcantud M, Ray C, Berenguer C, Kumari P, Bech JJ, Braun T, Ianni A, Tischfield JA, Sardina JL, Serrano L, **Esteller M**, De La Torre C, Sigvardsson M, Vazquez BN, Vaquero A. A SIRT7-dependent acetylation switch regulates early B-cell differentiation and lineage commitment through PAX5. *Nature Immunology*, <https://doi.org/10.1038/s41590-024-01995-7>, 2024.
- 512) Perron U, Grassi E, Chatzipli A, Viviani M, Karakoc E, Trastulla L, Brochier LM, Isella C, Zanella ER, Klett H, Molineris I, Schueler J, **Esteller M**, Medico E, Conte N, McDermott U, Trusolino L, Bertotti A, Iorio F. Integrative ensemble modelling of cetuximab sensitivity in colorectal cancer patient-derived xenografts. *Nature Communications*, doi: 10.1038/s41467-024-53163-y, 2024.
- 513) Martinez-Verbo L, Veselinova Y, Llinàs-Arias P, García-Prieto CA, Noguera-Castells A, Pato ML, Bueno-Costa A, Campillo-Marcos I, Villanueva L, Oliver-Caldes A, Cardus O, Salsench SV, García-Ortiz A, Valeri A, Rojas EA, Barrena N, Gutiérrez NC, Prósper F, Agirre X, Fernández de Larrea C, Martínez-López J, Ferrer G, **Esteller M**. PVR (CD155) Epigenetic Status Mediates Immunotherapy Response in Multiple Myeloma. *Leukemia*, DOI: 10.1038/s41375-024-02419-z, 2024.
- 514) Noguera-Castells A, García-Prieto CA, Ferrer G, Davalos V, Setien F, Genescà E, Ribera J, Ribera JM, **Esteller M**. A DNA methylation database of human and mouse hematological malignancy cell lines. *Leukemia*, doi: 10.1038/s41375-024-02478-2, 2024

- 515) Sibai M, Cervilla S, Grases D, Musulen E, Lazcano R, Mo CK, Davalos V, Fortian A, Bernat A, Romeo M, Tokheim C, Grande E, Real F, Barretina J, Lazar AJ, Ding K, **Esteller M***Co-Last Author, Bailey MH, Porta-Pardo E. The spatial landscape of Cancer Hallmarks reveals patterns of tumor ecology. *Cell Reports*, In Press, 2025.
- 516) Vasileva F, Font-Lladó R, López-Ros V, Barretina J, Noguera-Castells A, **Esteller M**, López-Bermejo A, Prats-Puig A. An Integrated Neuromuscular Training Intervention Applied in Primary School Induces Epigenetic Modifications in Disease-Related Genes: A Genome-Wide DNA Methylation Study. *Scandinavian Journal of Medicine & Science in Sports*, <https://doi.org/10.1111/sms.70012>, 2025.
- 517) Palma LG, Álvarez-Villanueva D, Maqueda M, Barrero M, Iglesias A, González J, Bertran J, Alvarez-Errico D, García-Prieto CA, Ballaré C, Rodríguez-Cortez V, Bueno C, Vidal A, Villanueva A, Menéndez P, Di Croce L, Payer B, **Esteller M**, Espinosa L, Bigas A. Epigenetic modifications driving ground state pluripotency exit require an NF- κ B-independent chromatin I κ B α function. *Science Advances*, In Press, 2025.

REVIEW ARTICLES:

1. **Esteller M**, Reventós J. Introduction to the molecular biology of endometrial cancer. *Medicina Clínica*, 107, 175-177, 1996.
2. **Esteller M**, Xercavins J, Reventos J. Advances in the molecular genetics of endometrial cancer. *Oncology Reports*, 6, 1377-82, 1999.
3. **Esteller M**, Baylin SB, Herman JG. Beyond the genetic lesions: gene inactivation by promoter hypermethylation in human cancer. *Revista de Oncología* 2, 61-66, 2000.
4. **Esteller M**. Epigenetic lesions causing genetic lesions in human cancer: hypermethylation of DNA repair genes. *European Journal of Cancer* 36, 2294-3000, 2000.
5. **Esteller M**, Sanchez-Cespedes M. Our current understanding of genetic alterations in colorectal cancer and implications for clinical use. *Oncology Spectrums* 2, 234-238, 2001.
6. Baylin SB, **Esteller M**, Rountree MR, Bachman KE, Schuebel KE, Herman JG. Aberrant patterns of DNA methylation, chromatin formation and gene expression in cancer. *Human Molecular Genetics* 10, 687-92, 2001.
7. **Esteller M**, Herman JG. Cancer as an epigenetic disease: DNA methylation and chromatin alterations in human tumours. *Journal of Pathology*, 196, 1-7, 2002.
8. Ballestar E, **Esteller M**. The impact of chromatin in human cancer: linking DNA methylation to gene silencing. *Carcinogenesis*, 23, 1103-9, 2002.
9. **Esteller M**. CpG Island Hypermethylation of Tumor Suppressor Genes: A Booming Present, A Brighter Future. *Oncogene*, 21, 5427-40, 2002.
10. Fraga MF, **Esteller M**. DNA Methylation: A Profile of Methods and Applications. *Biotechniques*, 33, 632-49, 2002.
11. Villar-Garea A, **Esteller M**. DNA Demethylating Agents and Chromatin-Remodelling Drugs: Which, How and Why? *Current Drug Metabolism*, 4, 11-31, 2003.
12. **Esteller M**. Relevance of DNA Methylation in the Management of Cancer. *The Lancet Oncology*, 4, 351-8, 2003.
13. **Esteller M**. Profiling aberrant DNA methylation in hematologic neoplasms : a view from the tip of the iceberg. *Clinical Immunology*, 109, 80-8, 2003.
14. **Esteller M**. Cancer epigenetics: DNA methylation and chromatin alterations in human cancer. *Adv Exp Med Biol*, 532, 39-49, 2003.
15. **Esteller M**, Herman JG. Generating mutations but providing chemosensitivity: the role of O6-methylguanine DNA methyltransferase in human cancer. *Oncogene*, 23, 1-8, 2004.
16. Galm O, **Esteller M**. Beyond genetics--the emerging role of epigenetic changes in hematopoietic malignancies. *International Journal of Hematology*, 80, 120-7, 2004.
17. Villar-Garea A, **Esteller M**. Histone deacetylase inhibitors: understanding a new wave of anticancer agents. *International Journal of Cancer*, 112, 171-8, 2004.

18. **Esteller M.** DNA methylation and cancer therapy: new developments and expectations. *Curr Opin Oncol.* 17, 55-60, 2005.
19. **Esteller M.** Dormant hypermethylated tumour suppressor genes: questions and answers. *J. Pathol.* 205, 172-80, 2005.
20. Ballestar E, **Esteller M.** The epigenetic breakdown of cancer cells: from DNA methylation to histone modifications. *Prog Mol Subcell Biol.* 38, 169-81, 2005.
21. Ballestar E, **Esteller M.** Methyl-CpG-binding proteins in cancer: blaming the DNA methylation messenger. *Biochem Cell Biol.* 83, 374-84, 2005.
22. **Esteller M.** Aberrant DNA methylation as a cancer-inducing mechanism. *Annual Review of Pharmacology and Toxicology.* 45, 629-656, 2005.
23. Fraga MF, **Esteller M.** Towards the Human Cancer Epigenome: A First Draft of Histone Modifications. *Cell Cycle.* 4, 1377-81, 2005.
24. Herranz M, **Esteller M.** New therapeutic targets in cancer: the epigenetic connection. *Clin Transl Oncol.* 8, 242-249, 2006.
25. Ballestar E, **Esteller M.** Richardson BC. The epigenetic face of systemic lupus erythematosus. *J Immunol.* 176, 7143-7147, 2006.
26. **Esteller M.** CpG island methylation and histone modifications: biology and clinical significance. *Ernst Schering Res Found Workshop.* 115-126, 2006.
27. **Esteller M.** Epigenetics provides a new generation of oncogenes and tumour-suppressor genes. *Br J Cancer.* 94, 179-83, 2006.
28. **Esteller M.** The necessity of a human epigenome project. *Carcinogenesis.* 27, 1121-1125, 2006.
29. Aguilera O, Munoz A, **Esteller M.** Fraga MF. Epigenetic alterations of the Wnt/beta-catenin pathway in human disease. *Endocr Metab Immune Disord Drug Targets.* 7, 13-21, 2007.
30. Poulsen P, **Esteller M.** Vaag A, Fraga MF. The epigenetic basis of twin discordance in age-related diseases. *Pediatr Res.* 61, 38R-42R, 2007.
31. Herranz M, **Esteller M.** DNA methylation and histone modifications in patients with cancer: potential prognostic and therapeutic targets. *Methods Mol Biol.* 361:25-62, 2007.
32. Lopez de Silanes I, Quesada MP, **Esteller M.** Aberrant regulation of messenger RNA 3'-untranslated region in human cancer. *Cell Oncol.* 29, 1-17, 2007.
33. Jacinto FV, **Esteller M.** MGMT hypermethylation: a prognostic foe, a predictive friend. *DNA Repair.* 6, 1155-60, 2007.
34. Fraga MF, Agrelo R, **Esteller M.** Cross-talk between aging and cancer: the epigenetic language. *Ann N Y Acad Sci.* 1100, 60-74, 2007.
35. Espada J, **Esteller M.** Epigenetic control of nuclear architecture. *Cell Mol Life Sci.* 64, 449-57, 2007.
36. Jacinto FV, **Esteller M.** Mutator pathways unleashed by epigenetic silencing in human cancer. *Mutagenesis.* 22, 247-53, 2007.
37. Lujambio A, **Esteller M.** CpG island hypermethylation of tumor suppressor microRNAs in human cancer. *Cell Cycle.* 6, 1455-9, 2007.
38. Fraga MF, **Esteller M.** Epigenetics and aging: the targets and the marks. *Trends in Genetics.* 23, 413-8, 2007.
39. **Esteller M.** Epigenetic Gene Silencing in Cancer: The DNA Hypermethylome. *Human Molecular Genetics.* 16, R50-R59, 2007.
40. **Esteller M.** Cancer epigenomics: DNA methylomes and histone modification maps. *Nature Reviews Genetics.* 8, 286-98, 2007.
41. Jacinto FV, Ballestar E, **Esteller M.** Methyl-DNA immunoprecipitation (MeDIP): hunting down the DNA methylome. *Biotechniques.* 44, 35-39 passim, 2008.
42. Ballestar E, **Esteller M.** Epigenetic gene regulation in cancer. *Advances in Genetics.* 61, 247-67, 2008.
43. Mulero S, **Esteller M.** Epigenetic biomarkers for human cancer: the time is now. *Critical Reviews in Oncology/Hematology.* 68, 1-11, 2008.

44. Javierre BM, **Esteller M**, Ballestar E. Epigenetic connections between autoimmune disorders and haematological malignancies. *Trends Immunol.* 29, 616-23, 2008.
45. Lopez-Serra L, **Esteller M**. Proteins that bind methylated DNA and human cancer: reading the wrong words. *British Journal of Cancer.* 98, 1881-5, 2008.
46. **Esteller M**. Epigenetics of cancer. *New England Journal of Medicine*, 358, 1148-59, 2008.
47. Berdasco M, Fraga MF, **Esteller M**. Quantification of global DNA methylation by capillary electrophoresis and mass spectrometry. *Methods Mol Biol.* 507, 23-34, 2009.
48. Guil S, **Esteller M**. DNA methylomes, histone codes and miRNAs: tying it all together. *Int J Biochem Cell Biol* 41, 87-95, 2009.
49. Lujambio A, **Esteller M**. How epigenetics can explain human metastasis: A new role for microRNAs. *Cell Cycle.* 8, 377-82, 2009.
50. Urdinguio RG, Sanchez-Mut JV, **Esteller M**. Epigenetic mechanisms in neurological diseases: genes, syndromes and therapies. *The Lancet Neurology*, 8, 1056-72, 2009.
51. Espada J, **Esteller M**. DNA methylation and the functional organization of the nuclear compartment. *Semin Cell Dev Biol.* 21, 238-46, 2010
52. Davalos V, **Esteller M**. MicroRNAs and cancer epigenetics: a macroevolution. *Curr Opin Oncol.* 22, 35-45, 2010.
53. Martinez R, **Esteller M**. The DNA methylome of glioblastoma multiforme. *Neurobiol Dis.* 39, 40-46, 2010.
54. Fernandez AF, **Esteller M**. Viral epigenomes in human tumorigenesis. *Oncogene.* 29, 1405-1420, 2010
55. Veeck J, **Esteller M**. Breast Cancer Epigenetics: From DNA Methylation to microRNAs. *J Mammary Gland Biol Neoplasia.* 15, 5-17, 2010.
56. Huang TH, **Esteller M**. Chromatin Remodeling in Mammary Gland Differentiation and Breast Tumorigenesis. *Cold Spring Harb Perspect Biol.* 2:a004515, 2010.
57. Carmona F.J., **Esteller M**. Epigenomics of human colon cancer. *Mutation Research*, 693, 53-60, 2010.
58. Portela A, **Esteller M**. Epigenetic modifications and their relevance to disease. *Nature Biotechnology*, 28, 1057-68, 2010.
59. Berdasco A, **Esteller M**. Aberrant epigenetic landscape in cancer: how cellular identity goes awry. *Developmental Cell*, 19, 698-711, 2010.
60. Melo SA, **Esteller M**. Dysregulation of microRNAs in cancer: playing with fire. *FEBS Letters*, 585:2087-99, 2011.
61. **Esteller M**. Epigenetic changes in cancer. *F1000 Biol Rep*, 3, 9, 2011.
62. Martín-Subero JI, **Esteller M**. Profiling epigenetic alterations in disease. *Adv Exp Med Biol.* 711, 162-77, 2011.
63. Carmona FJ, **Esteller M**. DNA methylation in early neoplasia. *Cancer Biomark.* 9, 101-11, 2011.
64. Rodríguez-Paredes M, **Esteller M**. Cancer epigenetics reaches mainstream oncology. *Nature Medicine*, 17, 330-9, 2011.
65. Lopez-Serra P, **Esteller M**. DNA methylation-associated silencing of tumor suppressor microRNAs in cancer. *Oncogene.* 31, 1609-1622, 2011.
66. Berdasco M, **Esteller M**. DNA methylation in stem cell renewal and multipotency. *Stem Cell Research & Therapy*, 2, 42, 2011.
67. **Esteller M**. Non-coding RNAs in human disease. *Nature Reviews Genetics*, 12, 861-74, 2011.
68. Sandoval J, **Esteller M**. Cancer epigenomics: beyond genomics. *Curr Opin Genet Dev.* 22, 50-5, 2012.
69. Muñoz P, Iliou MS, **Esteller M**. Epigenetic alterations involved in cancer stem cell reprogramming. *Mol Oncol.* 6, 620-36, 2012.
70. Heyn H, **Esteller M**. DNA methylation profiling in the clinic: Applications and challenges. *Nature Reviews Genetics*, 13, 679-92, 2012.
71. Guil S, **Esteller M**. Cis-acting noncoding RNAs: friends and foes. *Nature Structural & Molecular Biology*, 19, 1068-75, 2012.

72. Berdasco M, **Esteller M**. Genetic syndromes caused by mutations in epigenetic genes. *Human Genetics*, 132, 359-83, 2013.
73. Espada J, **Esteller M**. Mouse models in epigenetics: insights in development and disease. *Briefings in Functional Genomics*. 12, 279-87, 2013.
74. Heyn H, Méndez-González J, **Esteller M**. Epigenetic profiling joins personalized cancer medicine. *Expert Rev Mol Diagn*. 13, 473-9, 2013.
75. Stefansson OA, **Esteller M**. Epigenetic modifications in breast cancer and their role in personalized medicine. *American Journal of Pathology*, 183, 1052-63, 2013.
76. Simó-Riudalbas L, **Esteller M**. Cancer genomics identifies disrupted epigenetic genes. *Hum Genet*, 133,713-25, 2014
77. Ausio J, Martínez de Paz A, **Esteller M**. MeCP2: the long trip from a chromatin protein to neurological disorders. *Trends in Molecular Medicine*, 20, 487-98, 2014.
78. Guil S, **Esteller M**. RNA-RNA interactions in gene regulation: the coding and the noncoding players. *Trends in Biochemical Sciences*, 40, 248-256, 2015.
79. Simó-Riudalbas L, **Esteller M**. Targeting the histone orthography of cancer: drugs for writers, erasers and readers. *British Journal of Pharmacology*, 172, 2716-32, 2015.
80. Alizadeh AA, Aranda V, Bardelli A, Blanpain C, Bock C, Borowski C, Caldas C, Califano A, Doherty M, Elsner M, **Esteller M**, Fitzgerald R, Korbel JO, Lichter P, Mason CE, Navin N, Pe'er D, Polyak K, Roberts CW, Siu L, Snyder A, Stower H, Swanton C, Verhaak RG, Zenklusen JC, Zuber J, Zucman-Rossi J. Toward understanding and exploiting tumor heterogeneity. *Nature Medicine*, 21, 846-53, 2015.
81. Perez-Salvia M, **Esteller M**. Bromodomain Inhibitors and Cancer Therapy: From Structures to Applications. *Epigenetics*, doi: 10.1080/15592294.2016.1265710, PMID: 27911230, 2016.
82. Liz J, **Esteller M**. lncRNAs and microRNAs with a role in cancer development. *Biochim Biophys Acta*, 1859, 169-76, 2016.
83. Murtha M, **Esteller M**. Extraordinary Cancer Epigenomics: Thinking Outside the Classical Coding and Promoter Box. *Trends in Cancer*, 2, 72–584, 2016.
84. Delgado-Morales R, **Esteller M**. Opening up the DNA methylome of dementia. *Molecular Psychiatry*, 22, 485-96, 2017.
85. Delgado-Morales R, Agís-Balboa RC, **Esteller M**, Berdasco M. Epigenetic mechanisms during ageing and neurogenesis as novel therapeutic avenues in human brain disorders. *Clinical Epigenetics*, 9, 67, 2017.
86. Llinàs-Arias P, **Esteller M**. Epigenetic inactivation of tumour suppressor coding and non-coding genes in human cancer: an update. *Open Biology*, doi: 10.1098/rsob.170152, 2017.
87. Moutinho C, **Esteller M**. MicroRNAs and Epigenetics. *Advances in Cancer Research*. 135, 189-220, 2017.
88. Davalos V, Martínez-Cardus A, **Esteller M**. The Epigenomic Revolution in Breast Cancer: From Single-Gene to Genome-Wide Next-Generation Approaches. *American Journal of Pathology*, 187, 2163-74, 2017.
89. Duruisseaux M, **Esteller M**. Lung cancer epigenetics: from knowledge to applications. *Seminars in Cancer Biology*, 51, 116-128, 2017.
90. **Esteller M**, Pandolfi PP. The Epitranscriptome of Non-coding RNAs in Cancer. *Cancer Discovery*, 7, 359-68, 2017.
91. Moran S, Martínez-Cardus A, Boussios S, **Esteller M**. Precision Medicine Based in Epigenomics: The Paradigm of Carcinoma of Unknown Primary. *Nature Reviews Clinical Oncology*, 14, 682-94, 2017.
92. Riemens RJM, van den Hove DL, **Esteller M**, Delgado-Morales R. Directing neuronal cell fate in vitro: achievements and challenges. *Progress in Neurobiology*. 168, 42-68., 2018.
93. Hanly DJ, **Esteller M**, Berdasco M. Interplay between long non-coding RNAs and epigenetic machinery: emerging targets in cancer? *Philos Trans R Soc Lond B Biol Sci*. 373, 1748, 2018.
94. Ferreira HJ, **Esteller M**. CpG Islands in Cancer: Heads, Tails, and Sides. *Methods Molecular Biology*, 1766, 49-80, 2018.

95. Moran S, **Esteller M**. Infinium DNA Methylation Microarrays on Formalin-Fixed, Paraffin-Embedded Samples. *Methods Molecular Biology*, 1766, 83-107, 2018.
96. Ferreira HJ, **Esteller M**. Non-coding RNAs, epigenetics, and cancer: tying it all together. *Cancer and Metastasis Reviews*, 37, 55-73, 2018.
97. Berdasco M, **Esteller M**. Clinical Epigenetics: Seizing Opportunities for Translation. *Nature Reviews Genetics*, 20, 109-27, 2019.
98. Esteve-Puig R, Bueno-Costa A, **Esteller M**. Writers, Readers and Erasers of RNA Modifications in Cancer. *Cancer Letters*, 474, 127-37, 2020.
99. Janin M, Coll-SanMartin L, **Esteller M**. Disruption of the RNA Modifications that Target the Ribosome Translation Machinery in Human Cancer, *Molecular Cancer*, 19, 70, 2020.
100. Cossío FP, **Esteller M**, Berdasco M. Towards a more precise therapy in cancer: exploring epigenetic complexity. *Current Opinion in Chemical Biology*, 57, 41-49, 2020.
101. Sabit H, Cevik E, Tombuloglu H, Abdel-Ghany S, Tombuloglu G, **Esteller M**. Triple Negative Breast Cancer in the Era of miRNA. *Critical Reviews in Oncology/Hematology*. doi: 10.1016/j.critrevonc.2020.103196, 2020.
102. Ortiz-Barahona V, Joshi RS, **Esteller M**. Use of DNA Methylation Profiling in Translational Oncology. *Seminars in Cancer Biology*, doi: 10.1016/j.semcancer.2020.12.011, 2020.
103. Blecua P, Martinez-Verbo L, **Esteller M**. The DNA methylation landscape of hematological malignancies: an update. *Molecular Oncology*, 14, 1616-39., 2020.
104. Rosselló-Tortella, M, Ferrer G, **Esteller M**. Epitranscriptomics in hematopoiesis and hematological malignancies. *Blood Cancer Discovery*, 1, 26-31, 2020.
105. Villanueva L, Álvarez-Errico D, **Esteller M**. The Contribution of Epigenetics to Cancer Immunotherapy. *Trends in Immunology*, 41, 676-91, 2020.
106. Panagopoulou M, **Esteller M**, Chatzaki E. Circulating cell-free DNA in breast cancer: Searching for hidden information towards precision medicine. *Cancers*, 1092212, 2021.
107. Campillo-Marcos I, Alvarez-Errico D, Alandes RA, Mereu E, **Esteller M**. Single-Cell Technologies and Analyses in Hematopoiesis and Hematological Malignancies. *Experimental Hematology*, 98, 1-13, 2021.
108. Berdasco M, **Esteller M**. Towards a “druggable” epitranscriptome: Compounds that target RNA modifications in cancer. *British Journal of Pharmacology*, 179, 2868-89, 2021.
109. Merkel A, **Esteller M**. Experimental and bioinformatic approaches to study DNA methylation in cancer. *Cancers*, 14, 349, 2022.
110. Ferrer G, Alvarez-Errico A, **Esteller M**. Biological and molecular factors predicting response to adoptive cell therapies in cancer. *The Journal of the National Cancer Institute*, 114, 930-9, 2022.
111. Casado-Pelaez M, Bueno-Costa A, **Esteller M**. Single-Cell Cancer Epigenetics. *Trends in Cancer*, 8, 820-838, 2022.
112. Orsolich I, Carrier A, **Esteller M**. Genetic and epigenetic defects in the RNA modification machinery in cancer. *Trends in Genetics*, 39, 74-88, 2022.
113. Davalos V, **Esteller M**. Cancer Epigenetics in Clinical Practice. *CA: A Cancer Journal for Clinicians*, 73, 376-42, 2022.
114. Janin M, Davalos V, **Esteller M**. Cancer Metastasis Under the Magnifying Glass of Epigenetics and Epitranscriptomics. *Cancer Metastasis Reviews*, doi: 10.1007/s10555-023-10120-3, 2023.
115. Crespo-García E, Bueno-Costa A, **Esteller M**. Single-Cell Analysis of the Epitranscriptome: RNA Modifications Under the Microscope. *RNA Biology*, 21, 1-8, 2023.
116. Santos-Pujol E, Quero-Dotor C, **Esteller M**. Clinical Perspectives in Epitranscriptomics. *Current Opinion in Genetics and Development*, 87, 102209, 2024.
117. Galassi C, **Esteller M**, Vitale I, Galluzzi L. Epigenetic control of immunoevasion in cancer stem cells. *Trends in Cancer*, DOI: 10.1016/j.trecan.2024.08.004, 2024.
118. Galassi C, **Esteller M**, Galluzzi L, Vitale I. Epigenetic regulation of cancer stemness. *Trends in Cancer*, In Press, 2024.

PERSPECTIVES AND EDITORIALS:

- 1) **Esteller M.** The coming of age of DNA methylation in medicine in the genomics and postgenomic era. *Clinical Immunology*, 103, 213-6, 2002.
- 2) **Esteller M.** Low-penetrance genes: the democratization of genetics. *Revista de Oncologia*, 4, 347-8, 2002.
- 3) Martin-Subero JI, Ballestar E, **Esteller M**, Siebert R. Towards defining the lymphoma methylome. *Leukemia* 20, 1658-60, 2006.
- 4) **Esteller M.** Rett Syndrome: The First Forty Years 1966-2006. *Epigenetics*, 2, 1, 2007.
- 5) Jones PA, Archer TK, Baylin SB, Beck S, Berger S, Bernstein BE, Carpten JD, Clark SJ, Costello JF, Doerge RW, **Esteller M**, Feinberg AP, Gingeras TR, Grealley JM, Henikoff S, Herman JG, Jackson-Grusby L, Jenuwein T, Jirtle RL, Kim YJ, Laird PW, Lim B, Martienssen R, Polyak K, Stunnenberg H, Tlsty TD, Tycko B, Ushijima T, Zhu J, Pirrotta V, Allis CD, Elgin SC, Jones PA, Martienssen R, Rine J, Wu C. Moving AHEAD with an international human epigenome project. *Nature*, 454, 711-5, 2008.
- 6) **Esteller M.** Epigenetics in Human Evolution and Disease. *The Lancet*, 372, S90-S96, 2008.
- 7) Ballestar E, **Esteller M**. SnapShot: the human DNA methylome in health and disease. *Cell*, 135, 1144-1144e1, 2008.
- 8) Davalos V, **Esteller M**. Opening the treasure chest of miR-200s family members. *Cell Cycle*, 8, 2141-2, 2009.
- 9) Jeronimo C, **Esteller M**. DNA methylation markers for prostate cancer with a stem cell twist. *Cancer Prevention Research*, 3, 1053-5, 2010.
- 10) Melo SA, **Esteller M**. A precursor microRNA in a cancer cell nucleus: Get me out of here! *Cell Cycle*, 10, 922-5, 2011.
- 11) Carmona FJ, **Esteller M**. Moving closer to a prognostic DNA methylation signature in colon cancer. *Clinical Cancer Research*, 17, 1215-7, 2011.
- 12) Stefansson OA, **Esteller M**. EZH2-mediated epigenetic repression of DNA repair in promoting breast tumor initiating cells. *Breast Cancer Research*, 13, 309, 2011.
- 13) **Esteller M.** Cancer Epigenetics for the 21st Century: What's Next? *Genes & Cancer*, 2, 604-606, 2011.
- 14) Rodriguez-Paredes M, **Esteller M**. A combined epigenetic therapy equals the efficacy of conventional chemotherapy in refractory advanced non-small cell lung cancer. *Cancer Discovery*, 1, 557-9, 2011.
- 15) Berdasco M, **Esteller M**. Hot topics in epigenetic mechanisms of aging: 2011. *Aging Cell*, 11, 181-6, 2012.
- 16) Stefansson OA, **Esteller M**. BRCA1 as a tumor suppressor linked to the regulation of epigenetic states: keeping oncomiR's under control. *Breast Cancer Research*, 14, 304, 2012.
- 17) Adams D, Altucci L, Antonarakis SE, Ballesteros J, Beck S, Bird A, Bock C, Boehm B, Campo E, Caricasole A, Dahl F, Dermitzakis ET, Enver T, **Esteller M**, Estivill X, Ferguson-Smith A, Fitzgibbon J, Flicek P, Giehl C, Graf T, Grosveld F, Guigo R, Gut I, Helin K, Jarvius J, Küppers R, Lehrach H, Lengauer T, Lernmark A, Leslie D, Loeffler M, Macintyre E, Mai A, Martens JHA, Minucci S, Ouwehand WH, Pelicci PG, Penderville H, Porse B, Rakyen V, Reik W, Schrappe M, Schübeler D, Seifert M, Siebert R, Simmons D, Soranzo N, Spicuglia S, Stratton M, Stunnenberg HG, Tanay A, Torrents D, Valencia A, Vellenga E, Vingron M, Walter J, Willcocks S. BLUEPRINT to decode the epigenetic signature written in blood. *Nature Biotechnology*, 30, 225-6, 2012.
- 18) Vizoso M, **Esteller M**. The activatory long non-coding RNA DBE-T reveals the epigenetic etiology of facioscapulohumeral muscular dystrophy. *Cell Research*, 22(10):1413-5, 2012.
- 19) **Esteller M.** Cancer, Epigenetics and the Nobel Prizes. *Mol Oncol*, 6, 565-6, 2012.
- 20) Davalos V, **Esteller M**. Rolling the dice to discover the role of DICER in tumorigenesis. *Cancer Cell*, 21, 717-9, 2012.
- 21) Heyn H, **Esteller M**. EZH2: An Epigenetic Gatekeeper Promoting Lymphomagenesis. *Cancer Cell*, 23, 563-5, 2013.

- 22) Stefansson OA, **Esteller M**. CARM1 and BAF155: an example of how chromatin remodeling factors can be relocalized and contribute to cancer. *Breast Cancer Research*, 16, 307, 2014.
- 23) Andersen GS, Thybo T, Cederberg H, Orešič M, **Esteller M**, Zorzano A, Carr B, Walker M, Cobb J, Clissmann C, O'Gorman DJ, Nolan JJ; on behalf of the DEXLIFE Consortium. The DEXLIFE study methods: Identifying novel candidate biomarkers that predict progression to type 2 diabetes in high risk individuals. *Diabetes Research Clinical Practice*, 106, 383-9, 2014.
- 24) Heyn H, **Esteller M**. An Adenine Code for DNA: A Second Life for N6-Methyladenine. *Cell*, 161, 710-3, 2015.
- 25) Stunnenberg HG, International Human Epigenome Consortium*Including **Esteller M**, Hirst M. The International Human Epigenome Consortium: A Blueprint for Scientific Collaboration and Discovery. *Cell*, 167, 1145-9, 2016.
- 26) Janin M, **Esteller M**. Oncometabolite Accumulation and Epithelial-to-Mesenchymal Transition: The Turn of Fumarate. *Cell Metabolism*, 24, 529-30, 2016.
- 27) **Esteller M**. Epigenetic drugs: More than meets the eye. *Epigenetics*, 12, 307, 2017.
- 28) Rosenquist R, **Esteller M**, Plass C. Introduction: Epigenetics in cancer. *Seminars in Cancer Biology*, 51, iv-v, doi: 10.1016/j.semcancer.2018.07.002, 2018.
- 29) Davalos V, Blanco S, **Esteller M**. SnapShot: Messenger RNA modifications. *Cell*, 174, 498, 2018.
- 30) Davalos V, **Esteller M**. Disruption of Long Non-coding RNAs Targets Cancer Hallmark Pathways in Lung Tumorigenesis. *Cancer Research*, 79, 3028-3030, 2019.
- 31) Davalos V, **Esteller M**. Insights from the Genetic and Transcriptional Characterization of a Cancer of Unknown Primary (CUP). *EMBO Molecular Medicine*, 12, e12685, 2020.
- 32) Janin M, **Esteller M**. Epigenetic awakening of viral mimicry in cancer. *Cancer Discovery*. DOI:10.1158/2159-8290.CD-20-0947, 2020.
- 33) Conley BA, Staudt L, Takebe N, Wheeler DA, Wang L, Cardenas MF, Zenklusen JC, McShane LM, Tricoli JV, Williams PM, Lubensky I, O'Sullivan-Coyne G, Kohn E, Little R, White J, Malik S, Harris LN, Mann B, Weil CJD, Tarnuzzer R, Karlovich C, Rodgers B, Shankar L, Jacobs PM, Nolan T, Gastier-Foster J, Bowen J, Leraas K, Shen H, Laird PW, **Esteller M**, Miller V, Johnson A, Edmondson EF, Ivy SP. The Exceptional Responders Initiative: A National Cancer Institute Pilot Study. *The Journal of the National Cancer Institute*, 113, 27-37, 2021.
- 34) **Esteller M**. DNA methylation in cancer: from mouse to human and back again. *Lancet EBioMedicine*, doi.org/10.1016/j.ebiom.2021.103393, 2021.
- 35) **Esteller M**. A timely, user-friendly analysis of the mouse DNA methylome. *Cell Genomics*, 2, 100153, 2022.
- 36) van der Strate I, Kazemzadeh F, Nagtegaal ID, Robbrecht D, van de Wouw A, Padilla CS, Duijts S, Esteller M, Greco FA, Pavlidis N, Qaseem A, Snaebjornsson P, Veldhuijzen van Zanten S, Loeff C. International Consensus on the Initial Diagnostic Workup of Cancer of Unknown Primary. *Critical Reviews in Oncology/Hematology*, 103868, 2022.
- 37) Guil S, **Esteller M**. PRC2 loss and DNMT inhibition boost viral mimicry in cancer. *Cancer Discovery*, 12, 2020-2022, 2022.
- 38) Janin M, **Esteller M**. Global shift in alternative splicing and therapeutic susceptibilities in leukemia driven by METTL3 overexpression. *Blood Cancer Discovery*, DOI: 10.1158/2643-3230.BCD-23-0035, 2023.
- 39) Garcia-Prieto CA, Davalos V, **Esteller M**. Epigenetic profiling and response to CD19 chimeric antigen receptor T-cell therapy in B-cell malignancies: Reply to Kang et al. *The Journal of the National Cancer Institute*, 115, 1234-1235, 2023.
- 40) ESMO/ASCO Recommendations for a Global Curriculum in Medical Oncology Edition 2023. Cufer T, Kosty MP; on behalf of the Curriculum Development Subgroup—ESMO/ASCO Global Curriculum Working Group.*Including **Esteller M** *JCO Global Oncology*, doi.org/10.1200/GO.23.0027, 2023.
- 41) **Esteller M**. Targeting RNA modifications in leukaemia: Epitranscriptomic drugs are the new kids on the block. *British Journal of Haematology*, doi: 10.1111/bjh.19894, 2024.

- 42) **Esteller M**, Dawson MA, Kadoch C, Rassool FV, Jones PA, Baylin SB. The Epigenetic Hallmarks of Cancer. *Cancer Discovery*, 14, 1783–1809, 2024.

MEETING REPORTS:

- 1) **Esteller M**, Almouzni G. How epigenetics integrates nuclear functions. Workshop on epigenetics and chromatin: transcriptional regulation and beyond. *EMBO Reports*, 624-628, 2005.
- 2) Mostoslavsky R, **Esteller M**, Vaquero A. At the crossroad of lifespan, calorie restriction, chromatin and disease: meeting on Sirtuins. *Cell Cycle*, 9, 1907-12, 2010.
- 3) Hoppe R, Brauch H, Kroetz DL, **Esteller M**. Exploiting the complexity of the genome and transcriptome using pharmacogenomics towards personalized medicine. *Genome Biology*, 12, 301, 2011.
- 4) Carmona FJ, **Esteller M**. IDIBELL Cancer Conference on Metastasis and Angiogenesis. *Cancer Research*, 71, 6097-101, 2011.
- 5) Vizoso M, **Esteller M**. German-Catalan Workshop on Epigenetics and Cancer. *Epigenetics*, 8, 998-1003, 2013.
- 6) Muñoz-Pinedo C, González-Suárez E, Portela A, Gentilella A, **Esteller M**. Exploiting tumor vulnerabilities: epigenetics, cancer metabolism and the mTOR pathway in the era of Personalized Medicine. *Cancer Research*, 73, 4185-9, 2013.
- 7) Palau A, Perucho M, **Esteller M**, Buschbeck M. First Barcelona Conference on Epigenetics and Cancer. *Epigenetics*, 9:468-75, 2014.
- 8) Perez-Salvia M, Simó-Riudalbas L, Ausió J, **Esteller M**. Barcelona conference on epigenetics and cancer: 50 years of histone acetylation. *Epigenetics*, 10, 446-51, 2015.
- 9) Adams BD, Anastasiadou E, **Esteller M**, He L, Slack FJ. The Inescapable Influence of Noncoding RNAs in Cancer. *Cancer Research*, 75, 5206-10, 2015.
- 10) Parra M, Baptista MJ, Genescà E, Llinàs-Arias P, **Esteller M**. Genetics and Epigenetics of Leukemia and Lymphoma: From Knowledge to Applications, Meeting Report of the Josep Carreras Leukaemia Research Institute. *Hematological Oncology*, 38, 432-8, 2020.
- 11) Oldoni E, Saunders G, Bietrix F, García Bermejo ML, Niehues A, Hoen PAC, Nordlund J, Hajdúch M, Scherer A, Kivinen K, Pitkänen E, Mäkelä TP, Gut I, Scollen S, Kozera L, **Esteller M**, Shi L, Ussi AE, Andreu AL, Van Gool AJ. Tackling the translational challenges of multi-omics research in the realm of European personalised medicine: A workshop report. *Frontiers in Molecular Biosciences*, 9, 974799, 2022.

BOOK CHAPTERS:

- 1) **Esteller M**. Gene inactivation by promoter hypermethylation: a new line of research in human cancer. In: “Genetic Diagnosis in Medicine“, Pages 65-70. Ed. Slide Print, Pamplona, Spain. 1999.
- 2) **Esteller M**, Reventos J. Tumor suppressor genes and cancer. In: “Clinical and Molecular Oncology”, Pages 67-78. Ed. Aran, Barcelona, Spain. 2000.
- 3) Herranz M, **Esteller M**. CpG island hypermethylation of tumor suppressor genes in cancer: concepts and methodologies. In: “DNA Methylation and Cancer Therapy. Landes Biosciences, 2002.
- 4) Ballestar E, **Esteller M**. Methylated DNA-binding proteins. In: “Encyclopedia of the Human Genome”. Nature Publishers, 903-907, 2003.
- 5) Ballestar E, **Esteller M**. DNA methylation and histone acetylation. In: “Encyclopedia of the Human Genome”. Nature Publishers, 114-118, 2003.
- 6) **Esteller, M.** and Ballestar, E. (2004) Biologic and Clinical Significance of DNA Gene Methylation and Epigenetics Events in Breast Cancer Molecular. In: Ross, J.S. (ed.). Oncology of Breast Cancer. Jones and Bartlett Publishers. 2004.

- 7) Fraga MF, **Esteller M.** Quantitative Determination of 5-methylcytosine DNA Content: HPCE and HPLC. In: Esteller M. ed. DNA Methylation: Approaches, Methods and Applications. CRC Press. 2004.
- 8) Ballestar, E. and **Esteller, M.** The Epigenetic Breakdown of Cancer Cells: From DNA methylation to Histone Modifications. In: Jeanteur, P. (ed.) Epigenetics and Chromatin. Progress in Molecular and Subcellular Biology, Vol. 38. Springer-Verlag. 2005.
- 9) Ballestar, E. and **Esteller, M.** ChIP-on-chip: searching for novel transcription factor targets. In: Nuber, U. (ed.) DNA microarrays. Advanced Methods. Garland Science Publishing, Taylor & Francis Group. 2005.
- 10) Fraga MF, **Esteller M.** Use of PCR for DNA methylation analyses. In: Hughes S. and Moody A. eds., PCR - Methods Express, Scion Publishing Ltd., Oxfordshire, UK. 2007.
- 11) Ballestar, E. and **Esteller, M.** The Role of Epigenetic Alterations in Cancer. In: Alison, M.R. (ed.) The Cancer Handbook 2nd Edition. John Wiley & Sons, Ltd. 2007.
- 12) **Esteller M.** Epigenetica y Enfermedad. In: Farreras Rozman eds., Medicina Interna, Elsevier 2008.
- 13) Agrelo R, **Esteller M.** Longevity, Epigenetics and Cancer. In: Jorg Trost ed. Epigenetics, Caister Academic Press, 2008.
- 14) Lopez de Silanes I, **Esteller M.** Epigenomics and Cancer. In: Bronchud M, Foote MA, Giaccone G, Olopade O, Workman P (eds.), Humana Press, 2008.
- 15) Berdasco M, Fraga MF, **Esteller M.** Quantification of Global DNA Methylation by Capillary Electrophoresis and Mass Spectrometry. In: Jorg Trost ed. DNA methylation: Methods and Protocols, Humana Press, 2009.
- 16) Davalos V, **Esteller M.** Contribución de la epigenética al manejo personalizado del cancer. In: Medicina Personalizada Genómica, Elsevier Masson 2010.
- 17) Carmona FJ, **Esteller M.** Epigenetics of colorectal cancer. In: Metastasis of Colorectal Cancer, Springer, 2010.
- 18) Ballestar E, **Esteller M.** Examining DNA-Protein Interactions with Genome-Wide Chromatin Immunoprecipitation. In: Applied Bioinformatics and Biostatistics in Cancer Research, Springer Science+Business Media, LLC, 2010.
- 19) Huang THM, **Esteller M.** Chromatin Remodeling in Mammary Gland Differentiation and Breast Tumorigenesis. In: The Mammary Gland as an Experimental Model, Cold Spring Harbor Laboratory Press, 2010.
- 20) Rosales C, **Esteller M.** Epigenetic Mouse Models. In: Genetically Engineered Mice for Cancer Research, Springer, 2011.
- 21) Carmona FJ, **Esteller M.** Human Cancer Epigenetics. In: Environmental Epigenomics in Health and Disease, Springer, 2013.
- 22) Murtha M, **Esteller M.** Mod Squad: Altered Histone Modifications in Cancer. In: Encyclopedia of Cancer, Springer, 2017.
- 23) Hanly D, **Esteller M.**, Berdasco M. Altered Long Non-coding RNA Expression in Cancer: Potential Biomarkers and Therapeutic Targets? In: Chemical Epigenetics, Springer, 2020.

BOOKS EDITED:

- 1) **Esteller M.** DNA Methylation: Approaches, Methods and Applications. CRC Press, Catalog Number 2050, c. 232 pp. ISBN:0-8493-2050-X. September 2004.
- 2) **Esteller M.** DNA Methylation, Epigenetics and Metastasis. Springer, Springer Science+Business Media, 305 pp. January 2005.
- 3) **Esteller M.** Epigenetics in Biology and Medicine. CRC Press-Taylor and Francis Group, LLC. September 2007.

COMUNICATIONS IN INTERNATIONAL MEETINGS: 401

INVITED LECTURES IN INTERNATIONAL MEETINGS: 556

CHAired SESSIONS IN INTERNATIONAL MEETINGS: 109

TRAINED PhD STUDENTS: 39

CHAIRMAN AND ORGANIZER OF INTERNATIONAL MEETINGS:

1. "Cancer Epigenetics: DNA Methylation and Chromatin." CNIO-CCC, Madrid, December 2002.
2. "Molecular Biology of Brain Tumors" CNIO-IVO, Madrid, December 2004.
3. "Epigenetics and Chromatin: Transcriptional Regulation and Beyond." Foundation Juan March, Madrid, February 2005.
4. "Cancer Epigenetics: from Knowledge to Therapy", CNIO-Lilly Foundation, Madrid, March 2006.
5. "Epigenetics and New Therapies in Cancer". European School of Oncology-CNIO, Madrid, November 2007.
6. "The Role of Epigenetics in Hematological Malignancies", European Hematology Association, Mandelieu, France, February 2007.
7. "Ruth Sager Memorial Symposium on Cancer Genetics and Epigenetics". AACR, San Diego, April 2008.
8. "Interplay among Genetics, Epigenetics and non-coding RNAs". European Union-Marie Curie MC-GARD, Madrid, May 2008.
9. "Cancer Epigenetics and Biology Symposium". PEBC-IDIBELL, Barcelona, May 2009.
10. "DNA Methylomes in Health and Disease". European Union-CANCERDIP, Barcelona, June 2009.
11. "IDIBELL Cancer Conference on Sirtuins". PEBC-IDIBELL, Barcelona, October 2009.
12. Major Symposium "DNA Methylation in Cancer", American Association for Cancer Research Annual Meeting, Orlando, USA, April 2011.
13. "IDIBELL Cancer Conference on Metastasis and Angiogenesis". PEBC-IDIBELL, Barcelona, May 2011.
14. "IDIBELL Cancer Conference on Personalized Cancer Medicine". PEBC-IDIBELL, Barcelona, December 3-4 2012.
15. Cell Symposia on "Cancer Epigenomics", Sitges, Barcelona, October 6-8, 2013.
16. "50 Years of Histone Acetylation". Barcelona Conference on Epigenetics and Cancer, October 1-2, 2014.
17. "Keystone Symposia on MicroRNAs and Noncoding RNAs in Cancer", Keystone Resort, Colorado, USA, June 7-12, 2015.
18. The 2017 Human Genome Meeting (HGM2017), Human Genome Organization (HUGO), Barcelona, February 5-7, 2017.
19. 2nd International Symposium on Frontiers in Molecular Science "Non-Coding RNAs and Epigenetics in Cancer", University of Basel, Switzerland, June 21-23, 2017.
20. Opening Symposium of the Josep Carreras Leukaemia Research Institute "Genetics and Epigenetics of Leukemia and Lymphoma: From Knowledge to Applications", Badalona, Barcelona, September 19-20, 2019.
21. Personalized and Precision Medicine International Conference – PEMED 2021, Badalona, Barcelona, April 7-9, 2021.
22. Symposium "Updates on Genetics and Epigenetics of Haematological Malignancies: From Knowledge to Applications", Badalona, Barcelona, November 20-22, 2024.

SCIENTIFIC ADVISORY POSITIONS:

Associate Editor

Cancer Research (2005), Oncogene (2005), The Lancet Oncology (2004), International Journal of Cancer (2004), Cellular Oncology (2004), Critical Reviews in Oncogenesis (2004), Clinical and Translational Oncology (2005), Journal of Gastroenterology and Hepatology (2004), Current Cancer Drug Targets

(2005), Carcinogenesis (2005), Epigenetics (2005), Biotechniques (2006), PLoS Medicine (2006), Journal of Pathology (2008), Molecular Cancer Therapeutics (2008), European Journal of Clinical Investigation (2009), Clinical Epigenetics (2009), Genes, Chromosomes and Cancer (2009), Cell Cycle (2009). Molecular Cancer (2010), The Journal of the National Cancer Institute (2012), Genome Research (2014), RNA Biology (2018) and Molecular Oncology (2021).

Editor-in-Chief

Epigenetics (2007-present)

Manuscript reviewer:

50 Journals in the Area of Life Sciences including Nature, Cell, Science, Nature Genetics, Cancer Cell, Cancer Discovery, New England Journal of Medicine, Nature Medicine, Nature Cancer, Nature Review Genetics, Nature Review Cancer, PNAS, The Lancet, JAMA, The Lancet Oncology, Oncogene, Nucleic Acids Research, Cancer Research, Nature Communications, Journal of Biological Chemistry, Blood, Leukemia, Blood Cancer Discovery, PLoS Biology, Nature Methods, Nature Biotechnology, European Journal of Cancer, BMC Cancer, Carcinogenesis, Clinical Cancer Research, Gastroenterology, Biotechniques, Molecular Cancer Therapeutics, Journal of Medical Genetics, Nature Clinical Practice Oncology, Genome Medicine, PLoS Computational Biology, Nature Machine Intelligence, Human Molecular Genetics...

Grant and Award reviewer:

- ✓ 22 National and International Agencies including the American Association for Cancer Research (AACR), German, Swiss, Austrian, Italian, Dutch, Belgian, Portuguese, Luxembourg, Irish, Australian, Canadian and Spanish National Associations for Cancer Research (AECC), the Spanish Departments of Health and Science, Cancer Research UK (CRUK), Wellcome Trust, National Institutes of Health USA (NIH), European Union F.P. Programmes and the European Research Council (ERC).
- ✓ Coordinator of The Cancer Genome Atlas (TCGA) Project "Cancers of Unknown Primary Project." (2018-2022), National Cancer Institute (NCI), USA.
- ✓ Coordinator of The International Proteogenome Consortium (ICPC) Project "Proteogenomics of B-Cell Acute Lymphoblastic Leukemia" (2022-2023), National Cancer Institute (NCI), USA.
- ✓ Advisor Nobel Committee for Physiology or Medicine, Karolinska Institute, Sweden.