Curriculum vitae

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SUMMARY

My Ph.D. work involved using Molecular Dynamics simulations to study protein folding and unfolding under the supervision of Profs. Karplus, Oliva and Avilés. This led to a postdoctoral fellowship at The Rockefeller University, where I later became a Research Assistant at the Sali Lab. Next, I moved to San Francisco where I was Assistant Adjunct Professor at the UCSF. There, my research focused on using statistics and evolution to study proteins and their complexes, and I contributed to the development of the MODELLER program and the Integrative Modeling Platform (IMP). My time at UCSF also included being a key member of three NIH research grants for the Structural Genomics Initiative and co-initiating the Tropical Disease Initiative, an open-source drug discovery project for tropical diseases. My experiences at the UCSF helped me develop leadership skills and a broader understanding of structural computational biology.

Since 2006, I have led my own research group starting at the CIPF in Valencia (Spain) and currently at the National Center for Genomic Analysis (CNAG) and the Centre for Genomic Regulation (CRG) in Barcelona. My group uses experimental and computational approaches to study the molecular regulation of cells, specifically focusing on the genome. Our research has resulted in over 135 peer-reviewed articles and 165 oral presentations. I have also been involved in several EU funded projects and currently serve as co-PI on the ChromDesign, PerMed, and 3D'Omics projects funded by the European Commission. In 2021, I became co-PI of the Center for Genome Imaging at the National Human Genome Research Institute of the NIH.

Additionally, I have been involved in promoting 4DNucleomics research in Europe as Chair and Vice-Chair of the INC COST Action, coordinator of the INC Spain, and co-coordinator of the EpiGene3Sys networks.

EDUCATION

1994 –1999	PhD, Molecular Biophysics	Universitat Autònoma de Barcelona, Spain.
1989 –1994	BSc, General Biology, Genetics	Universitat Autònoma de Barcelona, Spain.

PROFESSIONAL POSITIONS

2013 – to date	ICREA Research Professor. Barcelona, Spain.
2012 – to date	Structural Genomics Group Leader. National Center for Genomic Analysis - Centre for Genomic Regulation (CNAG-CRG). Barcelona, Spain.
2011 – 2012	Senior Head of the Structural Genomics Laboratory. Centro de Investigación Príncipe Felipe, Valencia. Spain.
2006 – 2011	Head of the Structural Genomics Unit at the Bioinformatics and Genomics Department. Centro de Investigación Príncipe Felipe, Valencia. Spain.
2003 – 2006	Assistant Adjunct Professor at the Department of Biopharmaceutical Sciences. University of California at San Francisco. San Francisco, California USA
2002 – 2003	Research Associate at the Laboratory of Biophysics, The Rockefeller University, New York, US. Mentor: Prof. Andrej Sali.

1999 – 2002 Research Postdoctoral Fellow at the Laboratory of Biophysics, The Rockefeller University, New York, USA. Mentor: Prof. Andrej Sali.

1994 – 1999 PhD student at the IBB, Universitat Autònoma de Barcelona, Spain. Mentors: Profs. Martin Karplus, Frances Xavier Avilés and Baldomero Oliva.

PERSONAL AWARDS & FELLOWSHIPS

2011 One of the 55 finalists to the 2011 HHMI International Early Career Competition. *This grant was awarded by the HHMI to 28 researchers worldwide.*

2011 Life Sciences IDEA Award by the City of Arts and Sciences Foundation. *This prize is considered the most important for young (under 40 years old) researchers in the Valencia region of Spain.*

2006 –2009 Positively evaluated by the Spanish I3 program. *The Spanish government provides financial support to the hiring institution of individuals with outstanding research trajectories.*

2002 –2003 The Rockefeller University Presidential Fellowship. *Awarded twice a year to postdoctoral applicants by a committee of professors at The Rockefeller University.*

1999 –2001 Burroughs Wellcome Fund fellowship. *The Burroughs Wellcome Fund encourages the interdisciplinary training of graduate and postdoctoral students from the physical, chemical, and computational.*

1994 –1998 Universitat Autònoma de Barcelona graduate fellowship. *The Universitat Autònoma de Barcelona awards a limited number of students with a fellowship to carry out their Doctoral studies. In 1994 the university awarded ~50 students.*

1994 –1998 Three-time recipient of Universitat Autònoma de Barcelona travel fellowship. *The Universitat Autònoma de Barcelona financially helps students on their expenses for traveling.*

RESEARCH AWARDS AND GRANTS.

Amounts are for entire consortium when applicable with specific funds for our group indicated in parenthesis.

Active:

2024-2027 REVTRANSLOC. Reversing the effect of t(9;11) translocation in Acute Myeloid Leukemia (AML)
Ministerio de Ciencia e Innovación. Spain.
PI: M.A. Marti-Renom. ***327,500€***

2024-2028 HoloGen. *Advancing the development and implementation of hologenomics in biological sciences.*
H2020 Program. European Commission.
PI-Coordinator: T. Hvidsten, Co-PI: M.A. Marti-Renom (260K€) ***2,880,914€***

2023-2025 InSituMicroSeq.
The VELUX Foundations (Denmark).
PI-Coordinator: A. Alberdi, Co-IP: M.A. Marti-Renom (1M DDK) ***1,999,548DDK***

2022-2026 Moving Epigenetics Towards Systems Biology – EpiGene3Sys.
International Research Network from the CNRS.
PI-Coordinator: G.Almouzni, Co-IP: M.A. Marti-Renom ***75,000€***

2021-2026 Center for Genome Imaging.
NIH. USA
PI-Coordinator: T. Wu, Co-PI: M.A. Marti-Renom (US$1.6M) ***US$14,210,230***

2021-2025 3D'Omics. Three-dimensional holo'omic landscapes to unveil host-microbiota interactions shaping animal production.
H2020 Program. European Commission.
PI-Coordinator: A. Alberdi, Co-PI: M.A. Marti-Renom (670K€) ***9,994,415€***

Expired:

2021-2024 Tissue Aware GWAS to study genetic cancer predisposition (TAGWAS).
Ministerio de Ciencia e Innovación. Spain.
PI: M.A. Marti-Renom. ***302,500€***

2022-2023 An omnigenic view of genetic susceptibility to severe COVID19.
La Marató de TV3. Catalan Private Foundation.
PI-Coordinator: M.A. Marti-Renom (160K€) ***391,250€***

2021-2023 vPDX. Virtual patient derived xenografts for tumor treatment.
La Caixa Health Research 2020.
PI-Coordinator: L. Di Croce, Co-PI: M.A. Marti-Renom (330K€) ***980,000€***

2022-2022 Deciphering the role of host genome structural variation in modulating the gut microbiome.
Lundbeck Fund. Denmark.
PI-Coordinator: T. Gilbert, Co-PI: M.A. Marti-Renom ***370,000DDK***

2020-2023 PerMed CoE.
H2020 Center of Excellence. European Commission.
PI-Coordinator: A. Valencia, Co-PI: M.A. Marti-Renom (25K€) ***4,577,992€***

2020-2023 ITN-ChromDesign.
H2020 Program. European Commission.
PI-Coordinator: L. Di Croce, Co-PI: M.A. Marti-Renom (268K€) ***3,430,220€***

2020-2023 INC Spain.
Ministerio de Economia y Competitvidad. Spain.
PI-Coordinator: M.A. Marti-Renom. ***25,000€***

2019-2023 INC COST Action.
COST. H2020. EU
PI-Coordinator: M.A. Marti-Renom. ***400,000€***

2017-2020 Analyzing the structure of genomes and genomic domains.
Ministerio de Economia y Competitvidad. Spain.
PI: M.A. Marti-Renom. ***170,000€***

2017-2019 Hybrid Methods for Structural Determination of Genomes and Genomic Domains.
SGR-2017 AGAUR. Generalitat de Catalunya. Spain.
PI: M.A. Marti-Renom. ***42,000€***

2017-2018 Hybrid Methods for Structural Determination of Genomes and Genomic Domains.
Ministerio de Economia y Competitvidad. Spain.
PI: M.A. Marti-Renom. ***24,000€***

2017-2019 Modeling three-dimensional chromosomal structure in beta cells to identify genetic mechanisms underlying type 2 diabetes.
La Marató de TV3. Catalan Private Foundation.
PI-Coordinator: J. Ferrer, Co-PI: M.A. Marti-Renom (120K€) ***340,000€***

2015-2018 *Multi-Scale Complex Genomics – MuG.*
H2020 Program. European Commission.
PI-Coordinator: M. Orozco, Co-PI: M.A. Marti-Renom (300K€) ***2,961,163€***

2015-2018 *Modeling SNPs in cancer resistance.*
Maradiaga Grant for traveling. Ministerio de Educación. Spain.
PI: M.A. Marti-Renom. ***12,000€***

2014-2016 Structure determination of genomes and genomic domains.
Ministerio de Economia y Competitvidad. Spain.
PI: M.A. Marti-Renom. ***204,000€***

2014-2019 4DGenome. Dynamics of human genome architecture in stable and transient gene expression changes.
European Research Council Synergy Grant.
PI-Coordinator: M. Beato. Co-PI: M.A. Marti-Renom (1.4M€) ***12,272,645€***

2011-2014	Chromosome structural changes during cell cycle. *Human Frontiers Science Program Grant.* *PI-Coordinator: M.A. Marti-Renom (US$305K)*	***US$1,050,000***
2011	Complementary grant to Plan Nacional. *Generalitat Valenciana.* *PI: M.A. Marti-Renom.*	***12,000€***
2011-2013	Genome-wide approach for characterizing the mode of action of novel compounds against Tuberculosis. *Era-Net Pathogenomics. European Union.* *PI-Coordinator: M.A. Marti-Renom (198K€)*	***916,000€***
2011-2013	Comparative docking of small molecules. *Ministerio de Ciencia e Innovación. Spain.* *PI: M.A. Marti-Renom.*	***90,000€***
2010	Geronimo Forteza Grant. *Generalitat Valenciana.* *PI: M.A. Marti-Renom.*	***9,000€***
2010	Integrated grant with Italy. *Ministerio de Ciencia e Innovación. Spain.* *PI: M.A. Marti-Renom.*	***9,000€***
2009	Complementary grant to Plan Nacional. *Generalitat Valenciana.* *PI: M.A. Marti-Renom.*	***8,000€***
2007-2009	Comparative docking of small molecules. *Ministerio de Educación y Ciencia. Spain.* *PI: M.A. Marti-Renom.*	***104,000€***
2007-2008	RNA structural space characterization. *Generalitat Valenciana.* *PI: M.A. Marti-Renom.*	***24,000€***
2006-2009	Chemical Genomics by Activity Monitoring Proteases (CAMP). *FP6-2004-LIFESCIHEALTH-1 European Union.* *PI: Prof. F.X. Avilés. co-PI: M.A. Marti-Renom (90K€)*	***2,708,275€***
2006-2008	RNA comparative structure prediction. *Marie Curie Reintegration Grant. European Union.* *PI: M.A. Marti-Renom.*	***80,000€***

PROFESSIONAL ACTIVITIES

- President of the Catalan Society for Biology.
- Grant review panels:
  - 2025 ERC-CoG panel member.
  - 2024 Biomedicine area coordinator of the AGAUR agency.
  - 2023 ERC-CoG panel member.
  - 2022 DGF German Funding Agency Expert for 4DNucleome program.
  - 2021 AGAUR Expert for FI program.
  - 2019 DGF German Funding Agency Expert for 4DNucleome program.
  - 2016 MINECO Expert for the BFU-BMC panel program.
  - 2015 ANEP panel member of the Ramon y Cajal program.
  - 2015 Member of the Scientific Advisory Board for the SysMo ERA-NET.
- Editorial membership
  - 2014-2018 Editorial Member. BMC Structural Biology.
  - 2012-2018 Associate Editor. PLOS Computational Biology.
- Other memberships
  - 2004 Funding member of the TDI.
  - 2005 Member and SA of The Synaptic Leap.

- Meeting organizer:
  - Sep. 2023 INC-COST Conference, Corfu, Greece.
  - Mar. 2023 BIZVI. Heidelberg, Germany.
  - Oct 2022 EPiC meeting. Granada, Spain.
  - July 2019 LifeTime UnConference. Barcelona, Spain.
  - May 2018 3DGenomics. Barcelona, Spain.
  - Nov. 2017 3D/4D Genome. Barcelona, Spain.
  - Sept. 2016 The dynamics of the genome. Barcelona, Spain.
  - Dec. 2014 II Jornades de Bioinformàtica of the SCB-BiB. Barcelona, Spain.
  - Sept. 2012 Modeling 3D-Structure of Chromosomes. Barcelona, Spain.
  - Sept. 2012 Chromosomes, Stem Cells and Disease. Barcelona, Spain.
  - Jul 2012 Special Session. 3D Genomics. ISMB12. Long Beach, USA.
  - Jan. 2012 XI Jornadas de Bioinformática. Barcelona, Spain.
- Reviewer for Amino Acids, BioEssays, Bioinformatics, Biophysics Journal, BMC bioinformatics, BMC Genomics, BMC MCF, BMC Structural Biology, **Cell**, Current Bioinformatics, FEBS Journal, FEBS Letters, Gene, **Genome Biology**, **Genome Research**, Human Mutation, In Silicon Biology, Journal of Functional and Structural Genetics, Journal of Molecular Biology, **Nature**, Nature Communications, **Nature Genetics, Nature Methods, Nature Neurobiology, Nature NSMB, Nucleic Acids Research**, PLOS Computational Biology, **PLOS Genetics**, PLOS ONE, **PNAS**, Protein Science, Proteins, **Science**, and Structure.
- *Ad hoc* reviewer for NIH (USA), DoE (USA), EC (Europe), ANEP (Spain), ANR (France), German, Danish, Norway, Holland and Argentinean agencies.
- 2022-2023 Consulting for Acuity Spatial Genomics Inc (USA).
- Scientific collaborations:
  - 2023-to date Prof. Bru Cormand (UB). 3D Genome and drug addiction.
  - 2022-to date Dr. Dario Lupiañez (MDC). Sex determination and 3D Genome.
  - 2021-to date Dr. Eduard Batlle (IRB). Colorectal cancer.
  - 2021-2023 Prof. Pablo Lapunzina (H. La Paz). COVID19 and 3D genome.
  - 2021-2023 Prof. Angel Carracedo (USC). COVID19 and 3D genome.
  - 2021-to date Dr. Antton Alberdi (U. Copenhagen). Gut bacterial organization.
  - 2020-to date Dr. Ralph Stadhouders (MC Utrech). Asthma and 3D genome.
  - 2019-to date Dr. Jaume Mora (HSJD). DIGP paediatric cancer.
  - 2019-2022 Dr. Albert Jordan (IBMB). H1 histone and 3D genome.
  - 2019-to date Dr. Pere Roca-Causach, (IBEC). Nuclear forces and 3D genome.
  - 2019-2021 Dr. Brian Dynlacht (NYU) pcHiC and 3D genome.
  - 2019-to date Prof. Tom Gilbert, (U Copenhagen). 3D genome of ancient DNA.
  - 2018-to date Dr. Paco Real & Dr. Núria Malats, (CNIO). 3D genome of cancer.
  - 2017-2022 Prof. Jorge Ferrer, (UCL). 3D genome of diabetes.
  - 2017-to date Prof. Ting Wu, (Harvard). 3D genome and imaging.
  - 2016-2018 Prof. Peter Fraser, (UF). 3D genome.
  - 2016-2019 Dr. Ana Losada, (CNIO). 3D genome.
  - 2016-2019 Prof. Marcelo Nollmann, (CNRS/INSERM). 3D genome.
  - 2016-2019 Prof. Sandra Peiró (VIHO). Genome organization.
  - 2015-to date Prof. Luciano di Croce (CRG). Genome organization.
  - 2014-2022 Prof. Thomas Graf (CRG). Genome organization.
  - 2011-2021 Prof. Giacomo Cavalli (IGH). 3D fly genome.
  - 2011-2018 Dr. Manuel Mendoza (CRG). 3D yeast genome.
  - 2011-2018 Prof. Luís Serrano (CRG). 3D Mycoplasma genome.
  - 2011-2016 Prof. Mark Groudine (FHCRC). 3D b-globin domain.
  - 2011-2020 Dr. Kerstin Bystricky (IPBS). 3D determination of genomes.
  - 2010-2020 Prof. Miguel Beato (CRG). 3D human genome.
  - 2010-2022 Prof. George Church (Harvard). 3D Caulobacter genome.

- 2008-2020 Prof. Job Dekker (UMASS). 3D determination of genomes.
- 2008-2015 Prof. Ana Tramontano (U. Roma). Ligand-Protein space.
- 2007-2014 Prof. Hernán Dopazo (CIPF). SNP analysis.
- 2007-2014 Prof. Mathias Wilmanns (EMBL), comparative modeling and analysis of *Mycobacterium* proteins.
- 2004-2005 Prof. Partho Gosh (UC), fold assignment of C-type Lectin proteins
- 2003-2015 Prof. F. Melo (UPC). Statistical potentials for model assessment.
- 2002-2017 Prof. B. Oliva (UPF). Remote homology detection, protein interaction networks analysis.
- 2001-2002 Prof. A. Ortiz (CBM). Implementation of the MAMMOTH program in DBAli.
- 2001-2009 Prof. S. Krilis (UA). Modeling of the ß(2)-Glycoprotein I protein.
- 2001 Profs. J. Friedman and J. Hudsped (UR). Characterization of a new osmotic receptor in mouse.
- 2000-2009 Profs. B. Rost (UC) and A. Valencia (CNIO). Automatic evaluation of protein structure predictions.
- 1994-2002 Prof. M. Karplus (Harvard). Protein Folding.

INSTITUTIONAL COMMITTEES

- 2016-to date Graduate Committee. CRG. Barcelona, Spain.
- 2015-to date Director's Committee. SCB. Barcelona, Spain.
- 2012-to date Management Committee. CNAG. Barcelona, Spain.
- 2012-2016 Coordinator of the CNAG Seminar Series. CNAG. Barcelona, Spain.
- 2010-2012 Education Program Coordinator. CIPF, Valencia. Spain.
- 2010-2012 Web Site Coordinator. CIPF, Valencia. Spain.
- 2007-2012 Coordinator of the CIPF Seminar Series. CIPF, Valencia. Spain.
- 2004-2006. School of Pharmacy Admissions Committee. UCSF. San Francisco. U.S.
- 2003-2005 Coordinator of the Computational Biology Seminar Series. UCSF/QB3, San Francisco. U.S.

THESIS DEFENSES

- March 2023 David Castillo, *Cum Laude.*
- June. 2022 Aleksandra Sparavier, *Cum Laude* (with Dr. Di Croce, CNAG-CRG).
- June. 2022 Francesca Mugianesi, *Cum Laude & Extraordinary Prize.*
- Nov. 2020 Julen Mendieta, *Cum Laude* (with Dr. Farabella, CNAG-CRG).
- Oct. 2020 Silvia Galan, *Cum Laude* (with Dr. Serra, CNAG-CRG).
- Dec. 2019 Paula Soler Vila, *Cum Laude.*
- Sept. 2017 Carlos Baeza-Delgado (with Prof. Mingarro, UV).
- Jan. 2017 Gireesh K. Bogu, *Cum Laude,* (with Prof. Roderic Guigó, CRG).
- Dec. 2016 Francisco Martínez, *Cum Laude.*
- Nov. 2016 Francesca di Giovanni (with Prof. Manuel Mendoza, CRG).
- Oct. 2015 Marie Trussart, *Cum Laude* (with Prof. Serrano, CRG).

In course:

- 2025-to date Elena Bulbulovska (HSJD fellow).
- 2025-to date Ana Nikolovska (MCI-FPI fellow).
- 2022-to date Alexander Barclay (MCI-FPI-Severo Ochoa fellow).
- 2022-to date Leo Zuber (MCI-FPI fellow).
- 2021-to date Meritxell Novillo (MCI-FPU fellow).

MENTORING

- 2025-to date Elena Bulbulovska, PhD student.
- 2025-to date Ana Nikolovska, PhD student.

- 2024-to date Anne Lee, Specialized Technician, Programmer.
- 2023-to date Peter Hobot, Specialized Technician, Microscopist.
- 2023-to date Mireia Novell, Lab technician.
- 2023-to date John Markham, Specialized Technician, Programmer.
- 2023-to date Aleksandra Sparavier, Postdoctoral Fellow (with Dr. Luciano di Croce).
- 2022-to date Nikolai Bykov, Specialized Technician, Programmer.
- 2022-to date Alexander Braclay, PhD student.
- 2022-to date Leo Zuber, PhD student.
- 2021-to date Iago Maceda, Postdoctoral Fellow.
- 2021-2023 François Le Dily, Postdoctoral Fellow.
- 2021-to date Meritxell Novillo, PhD Student.
- 2021-2023 Roman Duschesne, Postdoctoral Fellow.
- 2021-2022 Irene Farabella, Postdoctoral Fellow.
- 2020-to date Iana Kim, Postdoctoral Fellow (with Dr. Arnau Sabé-Padrós).
- 2020-2023 Alicia Hernández, Programmer.
- 2019-2020 Rodrigo Jara, Ph.D. Student.
- 2018-to date Maria Marti-Marimon, Specialized Technician, Lab Manager.
- 2017-2022 Francesca Mugianesi, Ph.D. Student (with Dr. Luciano di Croce).
- 2017-2022 Aleksandra Sparavier, Ph.D. Student (with Dr. Luciano di Croce).
- 2017-2020 Julen Mendieta, Ph.D. Student.
- 2017-2020 Juan Rodríguez, Postdoctoral Fellow.
- 2016-2022 David Castillo, Software Engineer.
- 2015-2020 Silvia Galan, Ph.D. Student.
- 2015-2020 Yasmina Cuartero, Lab Technician.
- 2015-2020 Irene Farabella, Postdoctoral Fellow.
- 2015-2019 Paula Soler, PhD student.
- 2014-2020 Marco di Stefano, Postdoctoral Fellow.
- 2014-2017 Yannick Spill, Postdoctoral Fellow.
- 2013-2020 Michael Goodstadt, Software Engineer.
- 2012-2014 François le Dily, Postdoctoral Fellow.
- 2012-2018 François Serra, Postdoctoral Fellow.
- 2012-2016 Francisco Martínez, Ph.D. student.
- 2012-2017 Gireesh K. Bogu. Ph.D. student.
- 2011-2016 David Dufour. Ph.D. student.
- 2010-2010 Rubén Sánchez. Technician (Bioinformatician).
- 2009-2017 Carlos Baeza, Ph.D. student (with Prof. Ismael Mingarro).
- 2008-2010 Stefania Bosi, Visiting student (with Prof. Anna Tramontano).
- 2008-2016 Davide Baù. Staff Scientists.
- 2007-2008 Giulia Gentile. Visiting student (with Prof. Anna Tramontano).
- 2007-2011 Leticia Ortí. Ph.D. student (with Dr. Pineda-Lucena).
- 2007-2008 Peio Ziarsolo. Technician (Bioinformatician).
- 2006-2009 Emidio Capriotti. Postdoctoral fellow.
- 2004-2006 Jordi Espadaler. Visiting Ph D. student (with Profs. Oliva and Avilés).
- 2004-2007 Ramon Aragüés. Visiting Ph D. student (with Prof. Oliva).
- 2003-2007 Alejandro Panjkovich. Visiting graduate student (with Prof. Melo).
- 2004-2005 David Eramian. Ph.D. student (rotation project).
- Summer 2004 Mark E. Peterson. Ph. D. student (rotation project).
- Spring 2004 Brian Tuch. Ph. D. student (rotation project).
- Summer 2002 David Katz. Visiting student.

INVITED ORAL PRESENTATIONS

- Sept. 2024 Invited speaker, Cancer Chromatin Workshop, Madrid, Spain.
- Sept. 2024 Genetics Master Inaugural Seminar at UB. Barcelona, Spain.
- Sept. 2024 Invited speaker, Advance CompBio Workshop, Barcelona, Spain.
- Jun. 2024 Seminar at the BSC. Barcelona, Spain.
- Jun. 2024 Seminar at the IRB. Barcelona, Spain.
- May. 2024 Invited speaker, Genome Regulation Meeting, Madrid, Spain.
- May. 2024 Invited speaker, Genome Organization CSHL, Cold Spring, US.
- Mar. 2024 Invited speaker, 19th Epigenetics Course, Paris, France.
- Sep. 2023 Invited speaker, INC-COST Conference, Corfu, Greece.
- May. 2023 Invited speaker, Chromatin Meeting SCB, Barcelona, Spain
- Apr. 2023 Seminar at UVic, Vic, Spain
- Apr. 2023 Seminar at SPP20022, Germany
- Mar. 2023 Seminar at CNIO, Madrid. Spain
- Nov. 2022 Invited speaker, Barcelona Chromatin Club, Webminar.
- Sept. 2022 Invited speaker, ECCB22, Sitges, Spain.
- Jun. 2022 Invited speaker, INC Meeting, Toulouse, France.
- May. 2022 Gordon Research Seminar, Keynote, Castelldefels, Spain.
- May. 2022 CABIMER Seminar, Sevilla, Spain.
- May. 2021 XI Chromatin Meeting SCB, Zoom.
- Mar. 2021 VIZBI-EMBL 2021, Zoom.
- Nov. 2020 ICG Cellomics 2020, Zoom.
- Nov. 2020 PRBB Seminar Series, Zoom.
- Oct. 2020 INC-Academy Seminar, Zoom.
- Feb. 2020 Seminar at IBB, Cerdanyola, Spain.
- Dec. 2019 Seminar at BRIC, Copenhagen, Denmark.
- Dec. 2019 IMB Chromosome meeting, Mainz, Germany.
- Sep. 2019 Seminar at GLOBE Institut, Copenhagen, Denmark.
- Sep. 2019 Lecturer at ChromDesign school, Copenhagen, Denmark.
- Aug. 2019 Lecturer at CSH, USA.
- May. 2019 Seminar at EMBO-3DGenomics, Greece.
- Feb. 2019 Seminar at PRBB, Barcelona, Spain.
- Feb. 2019 KeyNote at the SMPGD19, Barcelona, Spain.
- Oct. 2018 Seminar at IRB, Barcelona, Spain.
- Aug. 2018 Lecturer at CSH, USA.
- Mar. 2018 Keystone Symposia, British Columbia, Canada.
- Dec. 2017 CHAINS'17, Rotterdam, Holland.
- Sep. 2017 FEBS'17, Jerusalem, Israel.
- Aug. 2017 Lecturer at CSH, USA.
- Mar. 2017 ISMDC'17, Hiroshima, Japan.
- Feb. 2017 HUGO'17, Barcelona, Spain.
- Jan. 2017 Seminar at Imperial Collage, London, UK.
- Dec. 2016 Seminar at MPIP, Cologne, Germany.
- Nov. 2016 Seminar at CiC-CSIC, Salamanca, Spain.
- Jul. 2016 Seminar at QB3-UCSF, San Francisco, USA.
- Apr. 2016 Seminar at CNIO, Madrid, Spain.
- Mar. 2016 Seminar at IDIBELL, Barcelona, Spain.
- Oct. 2015 EMBO Nucleus 2015, Isle sur le Sourgue, France.
- Sep. 2015 Illumina Users Group Meeting, Valencia, Spain.
- Sep. 2015 Seminar at IBEC, Barcelona, Spain.
- Sep. 2015 Seminar at ICR, London, UK.
- Jul. 2015 ISMB-ECCB15, Dublin, Ireland.

- May. 2015 EPIGEN, Napoli, Italy.
- Mar. 2015 VIZBI Meeting 2015. BROAD Institute, Boston, USA.
- Mar. 2015 V Chromatin and Epigenomics meeting of the SCB. Barcelona, Spain.
- Sep. 2014 JBI2014. Sevilla, Spain.
- Sep. 2014 ICTP. Trieste, Italy.
- Jul. 2014 14th HFSP Awardees Meeting. Lugano, Switzerland.
- Jun. 2014 Emerging Trends in Computational Biology. Biopolis, Singapore.
- May. 2014 Seminar at the CRAG center. Bellaterra, Spain.
- Apr. 2014 EMBO Structural Biology Workshop, EBI, UK.
- Mar. 2014 Era-Net Pathogenomics Meeting, Vienna, Austria.
- Mar. 2014 EMBO VIZBI Meeting, Heidelberg, Germany.
- Feb. 2014 2nd CNAG Symposium, Barcelona, Spain.
- Feb. 2014 PRBB Group Leader Talk, Barcelona, Spain.
- Dec. 2013 Seminar at the IRL, London, UK.
- Nov. 2013 II Barcelona Chromatin Meeting, Barcelona, Spain.
- Jul. 2013 SEB Meeting, Valencia, Spain.
- May 2013 Chromatin, epigenetics and Cancer meeting, Barcelona, Spain.
- May 2013 INSTRUCT Biennial, Heidelberg, Germany.
- Mar. 2013 Seminar at IRB, Barcelona, Spain.
- Mar. 2013 BCC Meeting on Chromatin Organization, Barcelona, Spain.
- Nov. 2012 Jornada Red Valenciana de Genómica y Proteómica. Valencia, Spain.
- Oct. 2012 Seminar at IDIBAPS. Barcelona, Spain.
- Sep. 2012 3rd READNA meeting. Barcelona, Spain.
- Sep. 2012 Seminar at the BioGUNE. Bilbao, Spain.
- Sep. 2012 SHIPREC. Barcelona, Spain.
- Jul. 2012 ISMB12. Long Beach (CA), USA.
- Jul. 2012 Biophysics Spanish Society. Barcelona, Spain.
- Apr. 2012 RECOMB12. Barcelona, Spain.
- Feb. 2012 Seminar at the CSC-MRC. London, UK.
- Feb. 2012 Seminar at the CNIO. Madrid, Spain.
- Jan. 2012 Jornadas de Bioinformática 2012. Barcelona, Spain.
- Dec. 2011 Seminar at the IBMB-IRB. Barcelona, Spain.
- Nov. 2011 Seminar at the UMASS Medical School. Worcester (MA), USA.
- Nov. 2011 Seminar at the MIT. Boston (MA), USA.
- Oct. 2011 Seminar at the BIOZENTRUM. Basel, Switzerland.
- Sept. 2011 EMBO Workshop. Isle sur Le Sourge. France.
- Sept. 2011 SEQT2011. Valencia. Spain.
- Jul. 2011 ISMB-ECCB11. Vienna. Austria.
- Jul. 2011 XXIII National Meeting in Microbiology. Salamanca. Spain.
- Apr. 2011 EMBO Workshop. Prague. Check Republic.
- Dec. 2010 Seminar at the LBME-CNRS. Toulouse. France.
- Nov. 2010 Jornadas de Bioinformática 2010. Malaga. Spain.
- Nov. 2010 Seminar at the NIMR-MRC, London, UK.
- Oct. 2010 Barcelona Innovation workshop. Barcelona. Spain.
- Sept. 2010 Seminar at the IGC. Lisbon, Portugal.
- Apr. 2010 Seminar at the CiB-CSIC, Madrid, Spain.
- Mar. 2010 ISCB-Latin America. Montevieo, Uruguay.
- Jan. 2010 Seminar at the Birbeck College, London, UK.
- Nov. 2009 ISCB-ASBCB'09. Bamako, Mali.
- Nov. 2009 UNIA Workshop in Biomedicine. Baeza, Spain.
- Nov. 2009 Seminar at the IBMCP, Valencia, Spain.
- Oct. 2009 Seminar at the IMPPC, Badalona, Spain.

- Jul. 2009 Seminar at the DUKE-NUS, Singapore.
- Jul. 2009 Seminar at the Bioinformatics Institute of Singapore, Singapore.
- Feb. 2009 Seminar at the IBV-CSIC, Valencia, Spain.
- Feb. 2009 Seminar at the GSK Tres Cantos, Spain.
- Sep. 2008 XXXI Congreso de la SEBBM. Bilbao, Spain.
- Apr. 2008 New Medicines Research Collaborations. VUB. Brussels, Belgium.
- Feb. 2008 VIII Spanish conference in Bioinformatics. CIPF. Valencia, Spain.
- Sep. 2007 II Jornadas de Automática e Informática Industrial en la Biotecnología y Biomedicina. ai2. UPV. Valencia, Spain.
- Sep. 2007 XII meeting of the Spanish Neurobiology Society. Valencia, Spain.
- July. 2007 ISMB/ECCB 2007. Vienna, Austria.
- Feb. 2007 Semana Informática. Valencia, Spain.
- Nov. 2006 7th Spanish Conference on Bioinformatics. Zaragoza, Spain.
- Nov. 2006 2a Reunion del la red Valenciana de Proteomica y Genomica, CIPF, Valencia, Spain.
- Oct. 2006 The Added Value of Medication in a Patient-centered Health Care. The Vrije Universiteit Brussel. Brussels, Belgium.
- Sep. 2006 II Automated Function Prediction Meeting. UCSD. San Diego, CA, USA
- Apr. 2006 Google talk serie. Googleplex. Mountainview, CA, U.S.
- Feb. 2006 Neglected Disease Series. Stanford University, Palo Alto, CA, U.S.
- Dec. 2005 Neglected Disease Symposium. QB3-UCSF, San Francisco. CA, U.S.
- May. 2005 Collective Computational Biology for Infectious Disease. Research Triangle Park, NC., U.S.
- Nov. 2004 5th Conference in Bioinformatics. Barcelona, Spain.
- Oct. 2004 Frontiers in Computational Biophysics and Drug Design. Howard University, Washington D.C., U.S.
- Jun. 2004 Symposium in protein structure at the German R&D site of Boehringer Ingelheim. Biberach, Germany.
- Sep. 2003 XXVI Annual meeting of the Molecular Biology Society of Chile. Santiago de Chile, Chile.
- Sep. 2003 BIOPHEX conference. San Jose, CA. U.S.
- Mar. 2003 New approaches in drug design and discovery. Marburg, Germany.
- Feb. 2003 Protein Domains: Identification, Classification and Evolution. DIMACS, Piscataway, NJ U.S.
- Jun. 2002 11th Bioinformatics and Genome Research. CHI. San Diego, CA U.S.

TEACHING & LECTURES

- Oct. 2024 Lectures at the UPF-CRG Master, Barcelona. Spain.
- Oct. 2024 Lectures at the UB Master, Barcelona. Spain.
- Oct. 2023 Lectures at the UPF-CRG Master, Barcelona. Spain.
- Oct. 2023 Lectures at the UB Master, Barcelona. Spain.
- Mar. 2023 Lectures at Curso Nacional Genetic. Madrid, Spain.
- Nov. 2022 Lectures at The Gulbenkian Training in Bioinformatics. Oeiras. Portugal.
- Oct. 2022 Lectures at the UB Master, Barcelona. Spain.
- Feb. 2022 Lectures at the UPF-Bioinformatics Master, Barcelona. Spain.
- Oct. 2021 Lectures at the UB Master, Barcelona. Spain.
- Feb. 2021 Lectures at the UPF-Bioinformatics Master, Barcelona. Spain.
- Oct. 2020 Lectures at the UB Master, Barcelona. Spain.
- Feb. 2020 Lectures at the UPF-Bioinformatics Master, Barcelona. Spain.
- Oct. 2019 Lectures at the UB Master, Barcelona. Spain.
- Feb. 2019 Lectures at the UPF-Bioinformatics Master, Barcelona. Spain.
- Oct. 2018 Lectures at the UB Master, Barcelona. Spain.

- Oct. 2018 Lectures at the UPF-CRG Master, Barcelona. Spain.
- Sep. 2018 Lectures at The Gulbenkian Training in Bioinformatics. Oeiras. Portugal.
- Feb. 2018 Lectures at the UFP Bioinformatics Bachelor, Barcelona. Spain.
- Oct. 2017 Lectures at the UB Master, Barcelona. Spain.
- Oct. 2017 Lectures at the UPF-CRG Master, Barcelona. Spain.
- Oct. 2016 Lectures at the UB Master, Barcelona. Spain.
- Oct. 2016 Lectures at The Gulbenkian Training in Bioinformatics. Oeiras. Portugal.
- Oct. 2016 Lectures at the UPF-CRG Master, Barcelona. Spain.
- Apr. 2016 Lecture at the UAM Master. Barcelona, Spain.
- Oct. 2015 Lecture at the UAB Master. Barcelona, Spain.
- Oct. 2015 Lectures at the UB Master, Barcelona. Spain.
- Oct. 2015 Lectures at the UPF-CRG Master, Barcelona. Spain.
- Feb. 2015 Lectures at the Bioinformatics Master of the UV, Valencia, Spain.
- Nov. 2014 Lectures at The Gulbenkian Training in Bioinformatics. Oeiras. Portugal.
- Nov. 2014 Lecture at the UAB Master. Barcelona, Spain.
- Oct. 2014 Lecture at the CRG-UPF Master. Barcelona, Spain.
- Dec. 2013 Lectures at the UPF Master, Barcelona. Spain.
- Oct. 2013 Lectures at the UPF-CRG Master, Barcelona. Spain.
- Feb. 2013 Lectures at the Bioinformatics Master of the UV, Valencia, Spain.
- Jan. 2013 Lectures at the UPF-CRG Master, Barcelona. Spain.
- Dec. 2012 Lectures at the Pharmacogenomics Master of the UPF, Barcelona, Spain.
- Jun. 2012 Lectures at the Genetics Spanish Society School. Sevilla, Spain.
- Dec. 2011 Lectures at UCM. Madrid, Spain.
- Sep. 2011 Lectures at Centro de Investigación Príncipe Felipe. Valencia, Spain.
- Sep. 2010 Lectures at The Gulbenkian Training in Bioinformatics. Oeiras. Portugal.
- Jul. 2009 Lectures at The Gulbenkian Training in Bioinformatics. Oeiras. Portugal.
- Apr. 2009 Graduate Program class at the UAB, Bellaterra, Spain.
- Nov. 2008 Lectures at The Gulbenkian Training in Bioinformatics. Oeiras. Portugal.
- Oct. 2008 Series of lectures at the UBA, Buenos Aires. Argentina.
- Apr. 2008 Graduate Program class at the UAB, Bellaterra, Spain.
- Dec. 2007 II Course in Bioinformatucs. Universitat de Alacant, Alacant, Spain.
- May 2007 Master on Molecular, Cellular and Genetic Biology. UV, Valencia, Spain.
- Apr. 2007 6th European School in Bioinformatics. CIPF. Valencia, Spain.
- Apr. 2007 Graduate Program class at the UAB, Bellaterra, Spain.
- Feb. 2007 8th Winter School in Bioinformatics. Bologna, Italy.
- Feb. 2006. Instructor at the Graduate Program in BioMed Informatics. UCSF, CA U.S.
- Jun. 2005. Guest lecturer at the Master in Bioinformatics for Health Sciences. Universitat Pompeu Fabra and Universitat de Barcelona, Barcelona, Spain.
- May 2005 Instructor at the Pharm. D. program in the School of Pharmacy. UCSF, San Francisco, CA. U.S.
- Feb. 2005. Instructor at the Graduate Program in Biological and Medical Informatics. UCSF, San Francisco, CA U.S.
- Jun. 2004. Instructor and co-organizer of the 12th annual workshop on molecular modeling. BMC, Uppsala, Sweden.
- Mar. 2004. Guest lecturer at the BayGenomics Workshop. UCSF, San Francisco, CA U.S.
- Feb. 2004. Instructor at the Graduate Program in Biological and Medical Informatics. UCSF, San Francisco, CA U.S.
- Aug. 2003. Guest lecturer at the BayGenomics Workshop. UCSF, San Francisco, CA U.S.
- Feb. 2002. Guest lecturer at the 3rd winter school Bologna, Italy.

SOFTWARE DEVELOPMENT

- METALoci. Main contributor to concept, design, and development. *METALoci relies on spatial autocorrelation analysis to describe how the variation of a variable depends on space at a global and local scales* http://www.3DGenomes.org
- TADdyn. Main contributor to concept, design, and development. *TADdyn is a molecular dynamics software for simulating genome dynamics* http://www.3DGenomes.org
- TADkit. Main contributor to concept, design, and development. Co-contributor to implementation. *TADkit is a JavaScript genome 3D browser* http://www.3DGenomes.org
- TADbit. Main contributor to concept, design, and development. Co-contributor to implementation. *TADbit is a python library for modeling genomes and genomic domains*. http://www.3DGenomes.org
- Integrative Modeling Platform (IMP). Co-contributor to development and implementation. *IMP, a program to integrate experimental data to solve structure models*. http://www.integrativemodeling.org
- SARA server. Main contributor to concept, design, and development. Implemented by Dr. Emidio Capriotti in our group. SARA is a web server for structure superimposition of two RNA molecules.
- TDI kernel. Main contributor to concept, design, development, and implementation. TDI models server stores our predictions of binding sites to drugs for 10 tropical disease genomes.
- MODELLER program. Co-contributor to development and implementation. *MODELLER, a program for comparative protein structure modeling by satisfaction of spatial restraints; licensed to Accelrys Inc. since 1994. http://salilab.org/modeller*
- DBAli database/server. Main contributor to concept, design, development, implementation and maintenance. *DBAli, a comprehensive database of structure/structure alignments.*
- OMIDIOS server. Main contributor to concept, design, and development. Implemented by Dr. Emidio Capriotti in our group. *OMIDIOS is a web server for disease annotation of single nucleotide polymorphisms.*
- Eva-CM server. Main contributor to concept, design, development, implementation and maintenance. *Eva-CM, a web server for continuous and automated evaluation of comparative protein structure prediction servers.*
- MODBASE database/server. Co-contributor to development and implementation. *MODBASE is a comprehensive database of comparative protein structure models; licensed to Structural Genomix Inc.*
- MODPIPE program. Co-contributor to design, development and implementation. *MODPIPE, a program for large-scale comparative protein structure modeling; licensed to Accelrys Inc. and Structural Genomix Inc. (2000-2004)*
- ASAP server. Main contributor to concept, design, development, implementation and maintenance. *The ASAP server (Analysis of Sequence and Aminoacid Probabilities), a program package to calculate expected and real aminoacid probabilities in a database of sequences (this server was discontinued in 2007).*

PUBLICATIONS

Total publications 127. Current H-index of 60 with ~18K total citations (Google Scholar).
A star "" indicates MAM-R was corresponding/senior author of the article.*

1. Sandoval-Velasco, M., Dudchenko, O., Rodríguez, J.A., Pérez Estrada, C., Dehasque, M., Fontsere, C., Mak, Sara S.T., Khan, R., Contessoto, V.G., Oliveira Junior, A.B., Kalluchi, A., Zubillaga Herrera, B.J., Jeong, J., Roy, R.P., Christopher, I., Weisz, D., Omer, A.D., Batra, S.S., Shamim, M.S., Durand, N.C., O'Connell, B., Roca, A.L., Plikus, M.V., Kusliy, M.A., Romanenko, S.A., Lemskaya, N.A., Serdyukova, N.A., Modina, S.A., Perelman, P.L., Kizilova, E.K.,

Baiborodin, S.I., Rubtsov, N.B., Machol, G., Rath, K., Mahajan, R., Kaur, P., Gnirke, A., Garcia-Treviño, I., Coke, R., Flanagan, J.P., Pletch, K., Ruiz-Herrera, A., Plotnikov, V., Pavlov, I.S., Pavlova, N.I., Protopopov, A.V., Di Pierro, M., Graphodatsky, A.S., Lander, E.S., Rowley, M.J., Wolynes, P., Onuchic, J.N., Dalén, L., **Marti-Renom, M.A.*,** Gilbert, M.T.P. and Lieberman Aiden, E. "Three-dimensional genome architecture persists in a 52,000-year-old woolly mammoth skin sample" Cell (2024) **187** 3541-3562**.**

This article has appeared in multiple news outlets including The Economist, CNN, The New York Times, and others. It has been chosen as News for Science (https://doi.org/10.1126/science.z843s21) and Nature (https://doi.org/10.1038/d41586-024-02253-4). It has also been highlighted in Nature Genetics (https://doi.org/10.1038/s41588-024-01889-2).

2. Wernersson, E., Gelali, E., Girelli, G., Wang, S., Castillo, D., Langseth, C.M., Nguyen, H.Q., Chattoraj, S., Martinez-Casals, A., Blom, H., Lundberg, E., Nilsson, M., **Marti-Renom, M.A.,** Wu, C-t., Crosetto, N. and Bienko, M. "Deconwolf enables high-performance deconvolution of widefield fluorescence microscopy images". Nature Methods (2024) **21** 1245-1256**.**

3. Ramírez-Cuéllar J., Ferrari, R., Sanz R.T., Valverde-Santiago, M., García-García, J., Nacht, S., Castillo, D., Le Dily, F., Neguembor, M.V., Malatesta, M., Bonnin,, S., **Marti-Renom, M.A.,** Beato, M. and Vicent, G.P. "LATS1 controls CTCF chromatin occupancy and hormonal response of 3D-grown breast cancer cells" EMBO Journal (2024) **43(9)** 1770-1798.

4. Kocanova, S., Raynal, F., Goiffon, I., Oksuz, B.A., Baù, D., Kamgoué, A., Cantaloube, S., Zhan, Y., Lajoie, B., **Marti-Renom, M.A.*,** Dekker, J. and Bystricky, K. "Enhancer-driven local 3D chromatin domain folding modulates transcription in human mammary tumor cells" Life Science Alliance (2023) **7(2)** e202302154

5. Yeh, SH., Strilets, T., Tan, W-L., Castillo, D., Medkour, H., Rey-Cadilhac, F., Serrato-Pomar, I.M., Rachenne, F., Chowdhury, A., Chuo, V., Azar, S.R., Singh, M.K., Hamel, M., Missé, D., Kini, R.M., Kenney, L.J., Vasilakis, N., **Marti-Renom, M.A.,** Nir, G., Pompon, J. and Garcia-Blanco, M.A. "The anti-immune dengue subgenomic flaviviral RNA is present in vesicles in mosquito saliva and is associated with increased infectivity" PLOS Pathogens (2023) **19(3)** e1011224

6. Álvarez-González, L., Arias-Sardá, C., Montes-Espuña, L., Marín-Gual, L., Vara, C., Lister, N.C., Cuartero, Y., Garcia, F., Deakin, J., Renfree, M., Robinson, T.J., **Marti-Renom, M.A.,** Waters, P.D., Farré, M. and Ruiz-Herrera, A. "Principles of 3D chromosome folding and evolutionary genome reshuffling in mammals" Cell Reports (2022) **41(12)** 111839

7. Mas, G., Santoro, F., Blanco, E., Gamarra Figueroa, G., Le Dily, F., Frigè, G, Vidal, E., Mugianesi, F., Ballaré, C., Gutierrez, A., Sparavier, A., **Marti-Renom, M.A.,** Minucci, S. and Di Croce, L. "In vivo temporal resolution of acute promyelocytic leukemia progression reveals a role of Klf4 in suppressing early leukemic transformation" Genes & Development (2022) **36** 451-467

8. Galan, S., Serra, F. and **Marti-Renom, M.A.*** "Identification of chromatin loops from Hi-C interaction matrices by CTCF-CTCF topology classification" NAR Genomics and Bioinformatics (2022) **4(1)** lqac021.

9. Serna-Pujol, N., Salinas-Pena, M.S., Mugianesi, F., Le Dily, F., **Marti-Renom, M.A.** and Jordan, A. "Coordinated changes in gene expression, H1 variant distribution and genome 3D conformation in response to H1 depletion" Nucleic Acids Research (2022) **50 (7)** 3892–3910

10. Vilarrasa-Blasi, R., Verdaguer-Dot, N., Belver, L., Soler-Vila, P., Beekman, R., Chapaprieta, V., Kulis, M., Queirós, A.C., Parra, M., Calasanz, M.J., Agirre, X., Prosper, F., Beà, S., Colomer, D., **Marti-Renom, M.A.**, Ferrando, A., Campo, E. and Martin-Subero, J.I. "Insights into the mechanisms underlying aberrant SOX11 oncogene expression in mantle cell lymphoma" Leukemia (2022) **36(2)** 583-587

11. Farabella, I., Di Stefano, M., Soler-Vila, P., Marti-Marimon, M. and **Marti-Renom, M.A.*** "Three-dimensional genome organization via triplex forming RNAs" Nature Structural and Molecular Biology (2021) **28(11)** 945-954

12. Gines, L.R., Lapi, E., Pancaldi, V., Cuenca, M., Castillo de Santa Pau, E., Madrid, M., Neyret-Kahn, H., Radvanyi, F., Rodriguez, J.A., Cuartero, Y., Serra, F., Le Dily, F., Valencia, A., **Marti-Renom, M.A.*** and Real, F.X. "STAG2 loss-of-function affects short-range genomic contacts and modulates urothelial differentiation in bladder cancer cells" Nucleic Acids Research (2021) **49(19)** 11005–11021

13. Di Stefano, M., Paulsen, J., Jost, D. and **Marti-Renom, M.A.*** "4D nucleome modeling" Current Opinion in Genetics & Development (2021) **67** 25-32

14. Mendieta-Esteban, J., Di Stefano, M., Castillo, D., Farabella, I. and **Marti-Renom, M.A.*** "3D reconstruction of genomic regions from sparse interaction data" NAR Genomics and Bioinformatics (2021) **3(1)** lqab017

15. Di Stefano, M., Nuetzmann, H-W., **Marti-Renom, M.A.** and Jost, D. "Polymer modelling unveils the roles of heterochromatin and nucleolar organizing regions in shaping 3D genome organization in Arabidopsis thaliana" Nucleic Acids Research (2021) **4** 1840–1858

16. Di Stefano, M., Castillo, D., Serra, F., Farabella, I., Goodstadt, M. and **Marti-Renom, M.A.*** "Analysis, Modeling, and Visualization of Chromosome Conformation Capture Experiments." Methods Mol Biol (2021) **2157** 35-63

17. **Marti-Renom, M.A.*** "Benchmarking experiments with polymer modeling." Nature Methods (2021) **18** 456-457

18. Lopez de Maturana, E., Rodriguez, J.A., .../..., **Marti-Renom, M.A.,** Real, F.X. and Malats, N. "A multilayered post-GWAS assessment on genetic susceptibility to pancreatic cancer" Genome Medicine (2021) **13(1)** 15

19. Vilarrasa-Blasi, R., Soler-Vila, P., Verdaguer-Dot, N., Russinol, N., Di Stefano, M., Chapaprieta, V., Clot, G., Farabella, I., Cusco, P., Agirre, X., Prosper, F., Beekman, R., Bea, S., Colomer, D., Gut, I., Stunnenberg, H., Campo, E., **Marti-Renom, M.A.*** and Martin-Subero, J.I. "Dynamics of genome architecture and chromatin function during human B cell differentiation and neoplastic transformation" Nature Communications (2021) **12(1)** 651-667

20. Vara,C., Paytuví-Gallart, A., Cuartero, Y,, Álvarez-González, A., Garcia, F., Florit-Sabater, B., Marín-Gual, L., Capilla, L., Albert-Lizandra, A., Sanchéz-Guillén, R.A., Sarrate, Z., Cigliano, R.A., Sanseverino, W., Ventura, J., **Marti-Renom, M.A.,** Le Dily, F. and Ruiz-Herrera, A. "The Impact of Chromosomal Fusions on 3D Genome Folding and Recombination in the Germ Line" Nature Communications (2021) **12** 2981

21. Zhang, N., Mendieta-Esteban, J., Magli, A., Lilja, K.C., Perlingeiro, R.C.R., **Marti-Renom, M.A.**, Tsirigos, A. and Dynlacht, B.D. " Muscle progenitor specification and myogenic differentiation are associated with changes in chromatin topology" Nature Communications (2020) **11** 6222

22. Galan, S., Machnik, N., Kruse, K., Díaz, N., **Marti-Renom, M.A.** and Vaquerizas, J.M. "Quantitative comparison and feature extraction for chromatin contact data using structural similarity" Nature Genetics (2020) doi:10.1038/s41588-020-00712-y

23. Nguyen, H.Q., Chattoraj, S., Castillo, D., Nguyen, S.C., Nir, G., Martins, N.M.C., Reginato, P.R., Hannan, M., Church, G.M., Daugharthy, E.R., **Marti-Renom, M.A.*** and Wu, C.T. "3D mapping and accelerated super-resolution imaging of the human genome using in situ sequencing" Nature Methods (2020) **17** 822–832

24. Rajewsky, N., Almouzni, G., Gorski, S., .../..., **Marti-Renom, M.A.,** .../... and LifeTime Community "LifeTime and improving European healthcare through cell-based interceptive medicine" Nature (2020) doi:/10.1038/s41586

25. Farabella, I. and **Marti-Renom, M.A.*** "TADs without borders" Nature Genetics (2020) 52 752–753

26. Sandoval-Velasco, M., Rodriguez, J.A., Perez-Estrada, C., Zhang, G., Lieberman-Aiden, E., **Marti-Renom, M.A.,** Gilbert, M.T.P and Smith, O "Hi-C chromosome conformation capture sequencing of avian genomes using the BGISEQ-500 platform" GigaScience (2020) 9(8) giaa087

27. Di Stefano, M., Stadhouders, R., Farabella, I., Castillo, D., Serra, F., Graf, T. and **Marti-Renom, M.A.*** " Transcriptional activation during cell reprogramming correlates with the formation of 3D open chromatin hubs." Nature Communications (2020) **11** 2564

28. Serna-Pujol, N., Salinas-Pena, M., Mugianesi, F., Lopez-Anguita, N., Torrent-Llagostera, F., Izquierdo-Bouldstridge, A., **Marti-Renom, M.A.** and Jordan, A. "TADs enriched in histone H1.2 strongly overlap with the B compartment, inaccessible chromatin and AT-rich Giemsa bands" FEBS Journal (2020) 10.1111/febs.15549

29. Stik, G., Vidal, V., Barrero, M., Cuartero, S., Vila-Casadesús, M., Mendieta-Esteban, J., Tian, T.V., Choi, J., Berenguer, C., le Dily, F., Cramer, P., **Marti-Renom, M.A.**, Stadhouders, R. and Graf, R. "CTCF is dispensable for cell fate conversion but facilitates acute cellular responses" Nature Genetics (2020) **52** 655-661

30. Soler-Vila, P., Cusco Pons, P., Farabella, I., Di Stefano, M. and **Marti-Renom, M.A.*** "Hierarchical chromatin organization detected by TADpole." Nucleic Acids Research (2020) **48 (7)** e39

31. Sati, S., Bonev, B., Szabo, Q., Jost, D., Bensadoun, P., Serra, F., Loubiere, V., Papadopoulos, G.L., Rivera-Mulia, J.C., Fritsch, L., Bouret, P., Castillo, D., Gelpi, J.LL., Orozco, M., Vaillant, C., Pellestor, F., Bantignies, F., **Marti-Renom, M.A.,** Gilbert, D., Lemaitre, J.L. and Cavalli, G. "4D genome rewiring during oncogene induced and replicative senescence" Molecular Cell (2020) **78** 1–17

32. Di Stefano, M., Di Giovanni, F., Pozharskaia, V., Gomar-Alba, M., Baù, D., Carey, L.B., **Marti-Renom, M.A.*** and Mendoza, M. "Impact of chromosome fusions on 3D genome organization and gene expression in budding yeast." Genetics (2020) **214 (3)** 651-667

33. Vara, C., Paytuví-Gallart, A., Cuartero, Y., Le Dily, F., Garcia, F., Salvà-Castro, J., Gómez-H, L., Julià, E., Moutinho, C., Aiese-Cigliano, R., Sanseverino, W., Fornas, O., Pendàs, A.M., Heyn, H., Waters, P.D., **Marti-Renom, M.A.*** and Ruiz-Herrera, A. "Three-dimensional genomic structure and cohesin occupancy correlates with transcriptional activity during spermatogenesis." Cell Reports (2019) **28(2)**:352-367

34. Miguel-Escalada, I., Bonàs-Guarch, S., Cebola, I., Ponsa-Cobas, J., Mendieta-Esteban, J. , Rolando, D., Javierre, B.M., Atla, G., Farabella, I., Morgan, C.C., García-Hurtado, J., Beucher, A., Morán, I., Pasquali, L., Ramos, M., Appel, E.V.R., Linneberg, L., Gjesing, A.P., Witte, D.R., Pedersen, O., Grarup, N., Ravassard, P., Mercader, J.M., Torrents, D., Piemonti, L., Berney, T., de Koning E., Kerr-Conte, J., Pattou, F., Hansen, T., **Marti-Renom, M.A.,** Fraser, P. and Ferrer, J. "Human pancreatic islet 3D chromatin architecture provides insights into the genetics of type 2 diabetes" Nature Genetics (2019) **51** 1137–1148

35. Morf, J., Wingett, S.W., Farabella, I., Cairns, J., Furlan-Magaril, M., Jiménez-García, L.F., Liu, X., Craig, F.F., Walker, S., Segons-Pichon, A., Andrews, S., **Marti-Renom, M.A.** and Fraser, P. "RNA proximity sequencing reveals properties of spatial transcriptome organization in the nucleus." Nature Biotechnology (2019) **37** 793–802

This article has been highlighted in Nature Methods (https://doi.org/10.1038/s41592-019-0555-z).

36. Cuadrado, A., Giménez-Llorente, D., Kojic, A., Rodríguez-Corsino, M., Cuartero, Y., Martín-Serrano, G., Gómez-López, G., **Marti-Renom, M.A.** and Losada, A. "Specific contributions of cohesin-SA1 and cohesin-SA2 to TADs and Polycomb domains in embryonic stem cells." Cell Reports (2019) **27** 3500–3510

37. Spill, Y.G., Castillo, D., Vidal, E. and **Marti-Renom, M.A.*** "Binless normalization of Hi-C data provides significant interaction and difference detection independently of resolution." Nature Communications (2019) **10(1)** 1938

38. Nir, G., Farabella, I., Pérez Estrada, C., Ebeling, C.G., Beliveau, B.J., Sasaki, H.M., Lee, S.H., Nguyen, S.C., McCole, R.B., Chattoraj, S., Erceg, J., Abed, J.A., Martins, N.M.C., Nguyen, H.Q., Hannan, M.A., Russell, S., Durand, N.C., Rao, S.S.P., Kishi, J.Y., Soler-Vila, P., Di Pierro, M., Onuchic, J.N., Callahan, S., Schreiner, J., Stuckey, J., Yin, P., Lieberman Aiden, E., **Marti-Renom, M.A.*** and Wu, C.T. "Walking along chromosomes with super-resolution imaging, contact maps, and integrative modelling" PLOS Genetics (2018) **14(12)**:e1007872

This article has been featured in a "Technology Feature" for Nature (http://dx.doi.org/10.1038/d41586-019-01426-w).

39. Goodstadt, M. and **Marti-Renom, M.A.*** "Biovisualization of the Genome, from Data Analysis and Hypothesis Generation to Communication and Learning" JMB (2018) **431** 1071–1087

40. **Marti-Renom, M.A.*,** Almouzni, G., Bickmore, W.A., Bystricky, K., Cavalli, G., Fraser, P., Gasser, S.M., Heard, E., Nicodemi, M., Orozco, M., Pombo, A. and Torres-Padilla, M-E. "4D Nucleome: challenges and guidelines towards data and model standards" Nature Genetics (2018) **50**:1352

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