

UNIVERSITÀ DEGLI STUDI DI MILANO

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[Andrea Cerase] CURRICULUM VITAE

Andrea Cerase

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I have dedicated my career to the study of X chromosome inactivation (XCI), a chromosome-wide epigenetic phenomenon. My most important contributions to the field have been:

- The discovery that Xist-RNA does not directly recruit PRC2 complex during XCI (Cerase et al., 2014), a study leading to a modification of the previously-accepted model (see also Almeida et al.)
- The discovery of three critical players in Xist mediated silencing by unbiased high-throughput genetic screen (Moindrot-Cerase et al., 2015).
- The identification of 37 bona fide Xist direct interactors (Cirillo et al., 2016) and their potential role in Xist function through phase-separation (Cerase et al, 2019).
- Defining the role of chromatin remodelers and LBR in XCI (Cerase et al.; *Young et al. 2021, Chen et al 2016*).

My long-term plan is to study the role of lncRNAs and chromatin architecture and granule formation, with a particular focus on brain development, in health and disease.

EDUCATION, TRAINING AND QUALIFICATIONS:

April 2017	Professorship qualification eligibility (habilitation) for the Italian University system (Level B, Abilitazione Scientifica Nazionale 2016, 05/E2, Molecular Biology). Peer-reviewed evaluation of scientific achievements and merit based on publications and experience.
Sept. 2014-Mar. 2015	Associate Fellowship of the Higher Education Academy – UK system (AFHEA, PR083643 -24 th March 2015). Qualification for teaching at university level.
Oct. 2003-Jan. 07	Ph.D in Advanced Biology with a thesis in Human Genetics at the University of Naples “Federico II”, Italy of which ~1 year spent at the Imperial College, London, UK (Italian XIX cycle, Biologia Avanzata). Advisors: Dr. Maurizio D’Esposito and Prof. Laura Fucci.
Nov. 1996-Mar. 2002	MSc in Molecular Biology (Honours, 110/110 <i>summa cum laude</i>) at University of Naples “Federico II”, Italy, with a thesis in molecular biology and biochemistry at the National Institute of Cancer Research – Fondazione Pascale (5-year course). Advisors: Prof. Rodolfo Frunzio and Dr. Nicola Normanno.
Sep. 1991-Jun. 1996	Second Level College of Science , Liceo Scientifico Statale A. Einstein, Ischia, Italy (5-year course).

PROFESSIONAL EXPERIENCE:

Oct. 2018-date	Lecturer in Epigenetics and Genomics (Assistant Professor) at the Blizard Institute, Centre for Genomics and Child Health, Queen Mary University of London, Barts and the London School of Medicine and Dentistry, London, UK.
July-Aug. 2018	Visiting Scientist in Biology and Biological engineering at the California Institute of Technology (CalTech), Division of Biology and Biological Engineer in the group of Prof. Mitchell Guttman, Pasadena, USA.
Jan. 2014-July 2018:	EMBL Fellow Research fellowship under the supervision of Prof. Phil Avner's (EMBL-Rome, Italy) – Research Project 1: <i>“Defining Xist RNA-direct interactors”</i> . Paper published. Research Project 2 <i>“Regulation of X chromosome inactivation by chromatin remodelers”</i> . Paper published.
Feb. 2007-Dec 2013	Post Doctoral Research Associate Research associate in Prof. Neil Brockdorff's group (Biochemistry Department, University of Oxford, Oxford*, UK - Research project 1: <i>“PRC2 recruitment and Xist/polycomb spatial organization in XCI”</i> . Paper published - Research project 2: <i>“Defining Xist-RNA protein partners by unbiased shRNA screening”</i> . Paper published. * First year spent at Imperial College London (UK).
Oct. 2003-Jan. 2007	Doctoral Research Ph.D. in Prof. Maurizio D'Esposito's (MDE†) group (IGB-National Research Council, CNR, Naples, Italy and CSC-MRC, Imperial College London, UK for one year) - Research Project: <i>“Structure and gene regulation of the human PAR2 region”</i> . Work published. † deceased.
Mar. 2002-Oct. 2003	Post-graduate training Telethon Fellowship in Prof. Maurizio D'Esposito's group (IGB-National Research Council, CNR – Research Project 1: <i>“Generation of a mouse 10k CpG islands array”</i> . Work completed – collaborations established. Technical assistance on research Project 2: <i>“High resolution DNA methylation analysis of hHMLH1 promoter in colon carcinomas”</i> . Work published.
Oct. 2000-Mar. 2002	Experimental thesis work Internship in Dr. Nicola Normanno's lab (National Institute of Cancer Research "Fondazione G. Pascale" Naples, Italy) – Research Project: <i>“Role of Cripto1 in human breast carcinoma”</i> . Thesis published <i>online</i> at the University's website.

TEACHING-MENTORING EXPERIENCE:

Teaching is one of my professional passions. Over the years I have accumulated noticeable teaching experience at practical and theoretical level. I am currently an associate member of the UK Higher Education Academy (HEA) and eligible as associate professor in the Italian system.

Teaching, staff management/supervision:

2019-2021	Academic laboratory demonstrator (1 session).
2019-2021	“Project Skills in the Life Sciences” 1:1 supervision for literature dissertation, with marking).
2019-2020	“Project Skills in the Life Sciences” 1:1 supervision for literature dissertation, with marking).
2020-2021	Problem-based learning (PBL) facilitator in Brain and Behaviour (Module I

	(BB1) and module 2 (BB2)) and Cardiorespiratory (Module I (CR1)), 4/5 classes/module + marking.
2019-2020	Problem-based learning (PBL) facilitator in Brain and Behaviour (Module I (BB1) and module 2 (BB2)); 5 classes/module + marking.
2018-2019	Problem-based learning (PBL) facilitator in Human Development (Module I, HD1), 5 classes/module + marking.
Feb. 2019-to date	Students admission at Queen Mary University – Barts and the London School of Medicine and Dentistry, London, UK.
2005-to date	Supervising undergraduates, postdocs and D.Phil students for their research programs (14 undergraduates, 1 D.Phil student (co-supervision), 1 rotation PhD student, 2 postdocs, 5 lab technicians, 1 postgraduate student). <u>This work includes students' seminars preparation and attendance and thesis/dissertations marking.</u>
2010-2013	College tutor at University of Oxford (>15 students, Merton and Wadham College, Oxford, UK).

Theoretical Preparation for teaching and supervising people in the lab:

Feb 2009 – to date	<p>PhD Supervision Training for New PIs – QMUL, London, UK (Sept 5th 2019).</p> <p>Problem-based learning (PBL) – facilitator course, QMUL, London (March 25th April 1st 2019).</p> <p>Medical Students admission (A100 interviews), QMUL, London (Feb. 5th-April 1st 2019)</p> <p>Teaching Portfolio Workshop, Part 3 - Preparing innovative teaching portfolios, University of Oxford, Oxford, UK (7th May. 2013).</p> <p>Teaching and Learning Skills Development, Part 2 - Lecturing and Large Class Teaching, University of Oxford, Oxford, UK (22nd Feb.- 1st Mar. 2013).</p> <p>Workshop on Learning and Teaching in Practical, Classes and Tutorials Part 1, University of Oxford, Oxford, UK (6/7th Jan. 2011).</p> <p>Tutor Training Course, University of Oxford, Oxford, UK (25th Feb. 2009).</p>
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GRANTS:

Funded

Jan. 2021-date	<p>BARTS Charity Seed grant - “<i>Analysis of phase-separated granules from the inactive X chromosome as a platform to study RNA-mediated phase separation in Amyotrophic Lateral Sclerosis: implications for drug discovery and therapy</i>”. <u>Awarded: £48,792.74 for one year.</u></p>
Apr. 2019-date	<p>BARTS Charity small grant (Proof of principle) – “<i>Functional analysis of novel lncRNAs role in brain development in health and disease</i>”. <u>Awarded: £23,900 for two years.</u></p>
March. 2017-to date	<p>Rett Syndrome Research Trust (RSRT) foundation – “<i>Ameliorating X-linked neurological disorders by X chromosome inactivation reversal</i>”. <u>Awarded \$351,021.22 granted for three years.</u>* partially reduced to COVID-19 pandemic.</p>
Mar. 2013	<p>“Rita Levi Montalcini” Italian Starting Grant -15th Nation-wide after funded projects (top-4 awarded, “Area 05 – Molecular Biology”) – <u>Fundable in principle (not funded).</u></p>

In progress

April 2021	EMBO New Investigator award. Application <i>in progress</i> .
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Sep. 2020-in progress **MRC NIRG** - Project title “*Determining the role of X chromosome inactivation and neuroinflammation in sex-biased neurological and psychiatric disorders*”. In progress.

AWARDS:

Feb. 2018 **RSRT** grant enabling to start an independent research career.

Jan. 2014-Jan. 2018 **EMBL fellowship** – EMBL-Rome, Monterotondo, Italy.

May 2010-Sep. 2012 **Fulford Junior Research Fellowship** - Somerville College, University of Oxford, Oxford, UK.

Mar. 2006-Jan. 2007 **Epigenome Network of excellence grant** – Visiting student MRC-CSC, Imperial College, London, UK.

Sep. 2006 **Conference travel grant** – 2nd International X Chromosome Inactivation Meeting, Paris, France.

Jun. 2003-Jan. 2004 **Telethon Foundation Fellowship** – IGB-Naples, Italy.

JOB-RELEVANT COURSES:

Mar.-Apr. 2019. **Animal work, UK Home Office (HO) and Royal Veterinary College (RVC), Module 1 and 3** (March 4th 2018), **module 5** (March 21-22nd 2019), London, UK **PPL: P64B83C45, PIL: IBE825E16**, validity 2019-2024).

Jan.- Mar. 2015 **The Effective Team Leader modules 1 and 2**, EMBL-Rome, Italy.

17th Mar. 2019 **Animal work Mouse Module 1/basic handling certificate**, EMBL-Rome, Italy.

4-8th Nov. 2013 **Advanced Microscopy Imaging Course**, University of Oxford, Oxford, UK.

2008-to date **Intermediate/advanced courses in statistics, Microsoft Excel, Adobe Photoshop/Illustrator, R language and bioinformatics**. University of Oxford, Oxford, UK, EMBL-Rome, Italy and QMUK, London, UK.

EDITORIAL - REFEREE WORK (Publons - Andrea Cerase):

June. 2020-date **Guest Editor** for *Non-coding RNA (MDPI)* for a Special Issue on the “*Role of lncRNAs in Brain Development and Disease*”. Dr. Aliperti, co-guest editor. In progress.

Aug. 2017-Aug 2018 **Associate Editor** of *Frontiers in Molecular Biosciences, Protein and RNA Networks* for a special issue entitled: **The RNA World**; A series of reviews on the most-studied lncRNA such as Xist, Malat1, Airn, Hotair etc.

Aug. 2016-date **Associate Editor** of *Journal of Translational Genetics and Genomics (JTGG)*. Special issue entitled: “*Reversing X Chromosome Inactivation as a New Therapeutic Treatment for X-linked Diseases*”.

Mar. 2015-Jul. 2016 **Associate Guest Editor** for *Seminars in Cell and Developmental Biology* for a special issue on X chromosome inactivation (**12 reviews**). Vol 56 (pp. 1-208, Aug. 2016).

Apr. 2008-to date **Co-Referee** for top-tier and widely read journals (i.e. Nature, Cell, Molecular Cell, Science, Genome Research, Dev. Cell, Epigenetics and Chromatin, etc.), and **referee** for Nature Methods, Nature Communications, Cell Reports, Briefings in Functional Genomics, Frontiers in Molecular Biosciences, WireRNA, Aging, Dove Medical, JTGG. **Referee for national (UK/Italy/France) and international grant proposals (USA)**.

SCIENCE COMMUNICATION (selected):

Nov. 2014-to date **Science writer/contributor for the EMBL magazine (*EMBL-Etc*) and Fondazione *TiAmo*, Autism Awareness (*Viareggio*), *LinkedIn*.**

ADVISORY CONSULTANCY - MEETING ORGANIZATION:

Sept 10th/11th 2020 **QMUL New Horizons in Genomics 2020** (international meeting), London, UK. Main organizer of the entire meeting with Prof. Vardhman Rakyen.

July 1st-5th 2019 **QMUL New Horizons in Genomics**, London, UK. Main organizer of the "Medical Genomics" day with Dr. Christopher Bell.

Jul. – Sep. 2016 1st EMBL-Sapienza Meeting, 26th/27th September 2016, Rome, Italy.

Mar. – May 2016 2nd Annual Epigenetics Discovery Congress, 8th September 2016, London, UK (consultant).

LANGUAGES:

English:	Fluent spoken and written.
Italian:	Mother tongue.
Spanish:	Basic spoken and written.

MEMBERSHIPS: Member of the Epigenetics Society (2014) and Cancer Epigenetics Society (2016).

IT/BIOINFORMATIC COMPETENCES:

Very good knowledge of Windows and MacOS X platforms and basic knowledge of UNIX systems. **Excellent Knowledge of MS Powerpoint, Word, Excel, Adobe Photoshop/Illustrator** and commonly used **bioinformatics tools** (e.g. BLAT/BLAST, UCSC/ENSEMBL Genome browsers, DNA/protein alignment software). **Basic data analysis in R of next generation seq. data, principles of BASH and Python.**

LIST OF PUBLICATIONS:

(**ORCID: 0000-0002-1985-2049**, Loop profile: 262780, Researcher ID: P-4741-2016, Scholar: Andrea

Total number of publications	25 (plus two in preparation and two under review)
Number of first-author publications	9 (5 research articles [<u>underlined</u>] [†] , 2 reviews*, 2 editorials)
Number of last-author publications	6 (3 research article, 2 reviews, 1 book chapter)
Total number of citations (Google Scholar)	1732
Number of citations from <u>first/last authorships</u>	409 (research articles only)
h-index	16
i10 index	16
[†] corr. author in 2 papers, *also correspondent author	

Cerase).

- Patrick Pallier, Evelyne Bichof, **Andrea Cerase***. *Precision medicine in brain disorders: the interplay of the X-chromosome and environmental impact*. **Manuscript draft ready for submission** (target: Progress in Neurobiology), IF 2017=14.163 * Correspondent author.
- Hierholzer A., Chureau C., Liverziani A., Simmler M.C., Cattanaach B.M., Rasberry C., Young A., Nerea Ruiz Blane, **Andrea Cerase**, Kumar M. and Phil Avner. *A novel long non-coding RNA influences the choice process in X chromosome inactivation and represents a candidate gene for the X controlling element*. **Manuscript draft ready for submission** (target Mol. Cell).
- Kumar M., Enright A., Hierholzer A., Bunes A., **Cerase A.**, Avner P. *Insights from transgressive traits in consomic mice: CCR7 links B cell with hyper-IgM phenotype*. **Cell Reports** (IF 2019=8.109), **at first revision stage**.

- Envervald E., Powell L.M., Boteva L., Foti R., Blanes Ruiz N., Kibar G., Piszczek A., Cavaleri F., Vingron M., **Cerase A.** and Sara B.C. Buonomo. "A RIF1/KAP1-based toggle switch stabilises the identities of the inactive and active X chromosomes during X inactivation". **EMBO Reports** (IF 2019=9.89), at first revision stage.
- 25) **Cerase A.***, Young A.N., Buess A., Ruiz-Blanes N., Sant G., Di Giacomo M., Arnold M., Liverziani A., Hierholzer A., Avner P.*, *The chromodomain helicase DNA binding protein 8 (Chd8) regulates X chromosome inactivation by competing with transcription factors at Xist regulatory regions. Accepted, in principle. Communications Biology* (Nature PG, IF: NA). **First and * co-correspondent author.**
- 24) Young A.N., Perlas E., Ruiz-Blanes N., Buess A., Hierholzer A., Pomella N., Martin-Martin B, Liverziani A., Joanna W. Jachowicz, Guttman M, Thomas Giannakouros, Avner P., **Cerase A***. *An N-terminal deletion of LBR Tudor and RS domains recapitulates Pelger-Huet anomaly phenotypes in mice without disrupting X chromosome inactivation. Accepted, in principle. Communications Biology* (Nature PG, IF: NA) *** Correspondent author.**
- 23) Lee H.M., Kuijter M.B, Ruiz-Blanes N., Ellen P.C., Aita M., Galliano L., Kokot A., Sciaky N., Simon J.M., Bhatnagar S, Philpot B., **Cerase A***. *A small-molecule screen reveals novel modulators of MeCP2 and X-chromosome inactivation maintenance. The Journal of Neurodevelopmental Disorders. 2020 Nov 10;12(1):29. doi: 10.1186/s11689-020-09332-3 (IF 2019/20=3.9)* Correspondent author.*
- 22) **Andrea Cerase*** and Gian Tartaglia*. *LncRNA-Polycomb intimate rendezvous*. Invited review for the Royal Society **Open Biology** 2020 Sep;10(9):200126 ***Correspondent author.** IF 2019= 4.93, Citations: 2
- 21) **Cerase A.***, Armaos A.*, Neumayer C., Avner P., Guttman^π, and Tartaglia G.^π. *Phase separation drives X chromosome Inactivation: a hypothesis* **πCorrespondent author.** First version of the manuscript deposited in BiorXiv (<https://www.biorxiv.org/content/early/2018/06/20/351015>, **Nat. Str. Mol. Bio.** 2019 May; 26(5):331-334. IF 2018=13.333; Citations:39
-In this paper, we suggest for the first time that Xist might use phase-separation to recruit repressive complexes on the inactive X chromosome. We support our claims using experimental data and bioinformatic analysis of existing and new datasets.
- 20) Gartler S.M, Goldaman M.A., **Cerase A.** *The Xist Locus*. Book chapter. Reference Module in Life Sciences, Elsevier. 2019, **Online.** IF N.A.; Citations: N.A.
- 19) **Cerase Andrea.** *Awakening the Sleeping Giant: methods to reactivate the inactive X Chromosome as clinical treatment for X-linked disorders. Journal of Translational Genetics and Genomics.* Editorial, March 1st 2018. IF N.A.; Citations: N.A.
- 18) Pintacuda G*, Young A.N. and **Cerase A***. *Function by structure: Spotlights on Xist RNA*. Review. Inaugural paper for **Frontiers in Molecular Biosciences (invited)**, Dec. 19th 2017. ***Correspondent author.** IF N.A. at time of publication (3.56 first IF); Citations: 42
- 17) Pintacuda G., Wei G., Roustan C., Anil-Kirmitzas B., Solcan N., **Cerase A.**, Castello A., Shabaz M., Moindrot B., Nesterova T., Brockdorff N. *hnRNPK recruits PCGF3/5-PRC1 to the Xist RNA B-repeat to establish Polycomb-mediated chromosomal silencing. Mol. Cell*, December 7th 2017. IF 2016/17=14.714; Citations: 116
- 16) Almeida M., Pintacuda G., Masui O., Koseki Y., Gdula M, **Cerase A.**, Brown D., Mould A., Innocent C., Nakayama M., Shermelleh L., Nesterova T., Koseki H, and Brockdorff N. *PCGF3/5-PRC1 initiates Polycomb recruitment in X chromosome inactivation. Science*, Jun 9 2017;356(6342). IF 2016/17=37.205; Citations: 119
-Project originating from my initial observation of Xist failing to recruit Polycomb2 complex in MG-132 treated cells (proteasome inhibitor). This treatment leads to H2A119 deubiquitination and failure to recruit PRC2 via non-canonical PRC1 pathways (proof of principle).

- 15) Cirillo D., Blanco M., Armaos A., Bunes A., Avner P., Gutmann M., **Cerase A*** and Tartaglia G.*, *Quantitative predictions of protein interactions with long non-coding RNA*. **Nature Methods**, 2016 Dec 29;14(1):5-6 * **Correspondent author**. IF 2016=25.062; Citations: 67
-Using a bioinformatics and experimental approach we define 37 bona fide Xist interacting proteins. We believe that these proteins are the most-important players in X chromosome inactivation.
- 14) Chen C.K., Blanco M., Jackson C., Aznauryan E., Ollikainen N., Surka C., Chow A., **Cerase A.**, McDonel P., Guttman M. *Xist recruits the X chromosome to the nuclear lamina to enable chromosome-wide silencing*. **Science**, 2016 Oct 28;354(6311):468-472. Epub 2016 Aug 4. IF 2016/17=37.205; Citations: 174
- 13) **Cerase A.** *X chromosome inactivation: The Importance of being inactive*. **Seminars in Cell and Developmental Biology**, Vol 56, Aug. 2016. Editorial for a special issue on X Chromosome Inactivation. ***Correspondent author**. IF 2016=5.30; Citations: 2
- 12) Pintacuta G. and **Cerase A.** * *X inactivation lessons from differentiating embryonic stem cells*. **Cell Reviews and Reports**, 2015 Oct;11(5):699-705 ***Correspondent author**. IF 2015=2.79; Citations: 6
- 11) **Cerase A.***, Pintacuta G., Tattermusch A. and Avner P. *Xist localization and function: New insights from multiple levels*. **Genome Biology**, 2015 Aug 15;16:166 * **Co-correspondent author**. IF 2015=11,313; Citations: 130
- 10) Moindrot B.*, **Cerase A.***, Coker H., Masui O., Grizenhout A., Pintacuda G., Schermelleh L., Nesterova T.B., Pintacuta G., Brockdorff N. *A pooled shRNA screen identifies Rbm15, Spen and Wtap as factors required for Xist RNA-mediated silencing*. **Cell Reports**, 2015 Jul 28. ***Co-first author**. IF 2016=7.87; Citations: 168
-In this paper we find 3 novel master genes involved in X chromosome inactivation such as Spen, Rbm15 and Wtap genes. In particular Spen via Hdac3 triggers the observed histone deacetylation of the inactive X chromosome while Rbm15 and Wtap are essential for Xist m6A methylation, which is in turn essential for gene-silencing.
- 9) Smeets D., Markaki Y., Volker J. Schmid, Felix Kraus, Tattermusch A., **Cerase A.**, Sterr, M., Fielder S., Demmerle J., Popken J., Leonhardt H., Brockdorff N., Cremer T., Schermelleh L., Cremer M. *Three-dimensional super-resolution microscopy of the inactive X chromosome territory reveals a collapse of its active nuclear compartment harboring distinct Xist RNA foci*. **Epigenetics&Chromatin**, 2014 Apr 28;7:8. IF 2014=5.333; Citations: 146
- 8) **Cerase A.**, Smeets D., Tang Y.A., Gdula M., Kraus F. Spivakov M., Moindrot B., Leleu M., Tattermusch A., Demmerle J., Nesterova T.B., Green C., Otte A.P., Schermelleh L. and Brockdorff N. *Spatial separation of Xist-RNA and Polycomb proteins revealed by super resolution microscopy*. **Proc Natl Acad Sci U S A**. 2014 Feb 11;111(6):2235-40. IF 2014=9.674; Citations: 90
-We published the first observation that Xist and Polycomb2 do not physically interact by means of super-resolution microscopy, suggesting that Xist indirectly recruits PRC2 through chromatin modifications.
- Commentary on this article by Janelle Weaver on **BioTechniques**: "X-inactivation seen in a New Light", March 2014 issue - online publication and one Wikipedia link: "Polycomb recruitment in X-chromosome inactivation".
- 7) Farcas A.M., Blackledge N.P., Sudbery I., Long H.K., McGouran J.F., Rose N.R., Lee S., Sims D., **Cerase A.**, Sheahan T., Koseki H., Brockdorff N., Ponting C., Kessler B.M., J Klose R.J. *KDM2B links the Polycomb Repressive Complex 1 (PRC1) to recognition of CpG islands*. **Elife**. 2012 Dec 18;1:e00205. IF 2012=N.A. (2013=8.519); Citations: 350
- 6) Casanova M. *, Preissner T. *, **Cerase A.#**, Poot R., Yamada D., Li X., Appanah R., Bezstarosti K.,

Demmers J., Koseki H. and Brockdorff N. *Polycomblike 2 facilitates recruitment of PRC2 Polycomb-group complexes to the inactive X chromosome and to target loci in ES cells*. **Development**. 2011 Apr;138(8):*equal contribution. #**Second author**. IF 2011=7.34; Citations: 92

- 5) Tang Y.A., Huntley D., Montana G., **Cerase A.**, Nesterova T.B., and Brockdorff N. *Xist mediated silencing on autosomes is linked to chromosomal domain organization*. **Epigenetics&Chromatin**. 2010 May;3(1):10. IF 2010=4.713; Citations: 64
- 4) Matarazzo M.R., **Cerase A.** and D'Esposito, M. *Building up the inactive X chromosome*. **Biol Cell**. 2008 Jan;100(1):63-70. IF 2008=N.A. (2009=3.506); Citations: 5
- 3) Matarazzo M.R.*, De Bonis M.L.*, Strazzullo M.*, **Cerase A.**#, Ferraro M., Vastarelli P., Ballestar E., Esteller M., Kudo S., and M. D'Esposito. *Multiple binding of methyl-CpG and polycomb proteins in long-term gene silencing events*. **Journal of Cell Physiology** 2007 Mar;2010(3):711-9. *Equal contribution, #**Second author**. IF 2007=1.70 (5yr≥4.5); Citations: 45
- 2) De Bonis M.L., **Cerase A.* (CA)**, Matarazzo M.R., Ferraro M., Strazzullo, M., Hansen R.S., Chiurazzi P., Neri G. and M. D'Esposito. *Maintenance of X-and Y-inactivation of the pseudoautosomal (PAR2) gene SPRY3 is independent from DNA methylation and associated to multiple layers of epigenetic modifications*. **Human Molecular Genetics** 2006 Apr 1;15(7):1123-32. ***Co-first author**. IF 2006= 9.49; Citations: 45
-All experiments presented in this paper, except data in Fig.2 (DBML) and Fig.6 (HRS) were performed and analysed by CA. DBML/MMR started the project. Allele-specific assays which were developed and successfully employed by CA.
- 1) Strazzullo M., Cossu A., Balduin P., Colombino M., Satta M.P., Tanda F., De Bonis M.L., **Cerase A.**, D'Urso M., D'Esposito M., Palmieri G. *High-resolution methylation analysis of the hMLH1 promoter in sporadic endometrial and colorectal carcinomas*. **Cancer** 2003 Oct 1;98(7):1540-6. IF 2003=4.017; Citations: 30

-Unpublished results/reagents and projects at : www.researchgate.net - Andrea Cerase

SELECTED MEETING ABSTRACTS:

- Cirillo D., Blanco M., Armaos A., Bunes A., Avner P., Gutmann M., Tartaglia G and **Cerase A.** *A computational approach for identification of protein-RNA interactions uncovers direct binders of Xist lncRNA*. EMBO workshop, RNA structure meets function, July 1st-5th 2018. Stockholm, Sweden.
- **Cerase A.**, Hierholzer A., Di Giacomo M., Arnold M., Liverziani A., Young A.N., Avner P. *"Regulation of X chromosome Inactivation by chromatin remodelers complexes"*. X chromosome inactivation – A tribute to Mary Lyon, Oct 4th /5th 2016, London, UK. Pag. 7 – Poster section, conference book.
- **Cerase A.**, Nesterova T., Tang Y., Brockdorff N. *"Identification of novel factors involved in establishment of X inactivation"*. 3rd X inactivation Conference. 20-24 July 2011, Oxford, UK. Pag. 68, conference book.
- **Cerase A.**, Tang Y.A., Leleu M., Spivakov M. and Brockdorff N. *"Defining Xist binding sites"*. Systems Biology Meeting, Cold Spring Harbor Laboratory, 27-30th March 2008 NY (USA) and 4th Epigenome NoE meeting, 26-29th June 2008, Madrid, Spain.
- **A. Cerase**, M.L. De Bonis, M.R. Matarazzo, M. Ferraro, M. Strazzullo, R.S. Hansen, P. Chiurazzi, G. Neri and M. D'Esposito. *"Maintenance of X- and Y-inactivation of the pseudoautosomal (PAR2) gene SPRY3 is independent from DNA methylation and associated to multiple layers of epigenetic modifications"*. Second International X-inactivation Meeting, 17th-23rd Sept. 2006, Paris, France. Pag. 66 conference book.

INVITED TALKS

- *A genetic approach to study X chromosome inactivation in vitro and in vivo*. XXIII Meeting of the Italian Society of Genetics. Trieste, Italy. 11-13th November 2020 (virtual event).

- *Studying X chromosome inactivation and reactivation through unbiased genetic and small molecule screening.* ICGEB, Trieste, Nov. 14th 2020 (virtual talk).
- *From Xist to lncRNAs regulating brain function and activity.* SISSA, Nov 25th 2019 Trieste, Italy.
- *Reversing X-Chromosome Inactivation as new therapeutic treatment for X-linked disorders.* Scuola Normale Superiore di Pisa (SNS), June 12th 2018, Pisa, Italy.
- *Regulation of X chromosome inactivation by Xist long non-coding RNA.* Institute of Genetics and Biophysics, Naples, Italy, April 16th 2018.
- *Characterization of Xist lncRNA functional interactome.* Helmholtz Zentrum Munich, Germany. March 23rd 2018.
- *Regulation of X chromosome inactivation by Xist long non-coding RNA.* University of Naples Federico II, Italy, 6th March 2018.
- *Understanding Xist-mediated gene-silencing.* Rett Syndrome Research Trust (RSRT) meeting. Boston, USA, June 14th-15th 2017.
- *Understanding Xist-mediated gene-silencing.* GReD Clermont-Ferrant (France). May 3rd 2017.
- *Ameliorating X-linked neurological disease by XCI reversal.* University of Southampton. Southampton, UK, Dec. 2nd 2015.
- *X chromosome Inactivation: How females get it even.* JRF Symposium, Oxford, UK, Nov. 24th 2010.

CONFERENCE/MEETING TALKS (selected)

- *Riattivazione del cromosoma X inattivo come potenziale approccio terapeutico per le sindromi di Rett e CDKL5.* Fondazione T.i.A.m.o, 2nd June 2018, Viareggio, Italy.
- *Regulation of X chromosome inactivation by chromatin remodeler complexes.* 1st EMBL-Sapienza meeting, 26th /27th September 2016, Rome, Italy.

COLLABORATIONS:

- Gian Tartaglia and Mitch Guttman – CRG Barcelona and CalTech Pasadena, *In silico* protein-RNA interaction prediction and eCLIP/RAP experiments, papers #14, #15, #21, #22, #24 and work *in progress*.
- Deanne Whithworth – University of Queensland – Exploring Tasmanian Devil (*Sarcophilus harrisii* Boitard) X inactivation strategies, *in progress*.
- Michael Sattler – Technische Universität München – Structural characterization of Xist interacting proteins, *in progress*.

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INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

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INSERIRE IL PROPRIO CURRICULUM
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Data

Londra

Luogo

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