

Curriculum Vitae

- **PERSONAL INFORMATION**


Family name, First name: Fachinetti, Daniele

Date of birth:

Nationality: Italian;

ORCID: 0000-0002-8795-6771

URL for web site: <https://institut-curie.org/team/fachinetti>

 @FachinettiLab

- **RESEARCH OBJECTIVES**

My team and I are studying what we believe to be the most pressing questions in chromosome biology:

- Genetic and epigenetic mechanisms that control faithful transmission of our genetic material
- DNA architecture of certain chromosomal regions such as centromeres
- Identification of the key enzymes protecting the integrity of our genome

We use molecular and cell biology approaches combined with genetics, physics and biochemistry.

- **EDUCATION**

2020 Italian national habilitation for both associate and full professorship

2019 French national habilitation to supervise PhD students (HDR), Paris Descartes

2008 PhD Molecular Biology, University of Milano, Italy

Advisor: *Prof. Marco Foiani*. Title: *“Topological processes mediating termination of chromosome replication”*

2003 Master Degree in Molecular Biology, University of Milano, Italy

Advisor: *Prof. Marco Foiani*. Title: *“Exo1 nuclease processed stalled replication forks in the absence of a functional S-checkpoint”*.

2002 Erasmus project at “Stockholm Universitet”, Stockholm, Sweden

- **CURRENT POSITION(S)**

07/2022 – present Senior Group Leader, Institut Curie, UMR144 (tenure)

2021 – present Director de Research (DR2)

- **PREVIOUS POSITIONS**

2017 – 2021 Charge de Recherche 1ere classe (CR1), CNRS

11/2015 – Junior Group Leader, Institut Curie, UMR144 (Department of Cell Biology), Paris France

06/2022 *Recruitment following an international call for group leader (80 applications received)*

2010 – 2015 Post-doctoral fellow at Ludwig Institute for Cancer Research (LICR), San Diego, USA

Advisor: *Prof. Don W. Cleveland*

2009 Post-doctoral fellow at FIRC Institute of Molecular Oncology (IFOM), Milan, Italy

Advisor: *Prof. Marco Foiani and Dana Brnzei*

2004 – 2008 PhD at IFOM, Milan, Italy

Advisor: *Prof. Marco Foiani*

2002 – 2004 Internship at the Institute FIRC Institute of Molecular Oncology, Milan, Italy

Advisor: *Prof. Marco Foiani*

- **AWARDS**

2019 EMBO Young Investigator (EMBO YIP award)

2018 Emergences for Junior Group leaders (from the city of Paris)

2015 CNRS and INSERM chargé de recherche 1 (first ranked in Cell Biology in France)

2013 Kerr Award for Research Excellence, Ludwig Institute for Cancer Research, San Diego

- **GRANTS and FELLOWSHIPS**

As a group leader, I obtained 15 competitive grants (13 as leader PI) and 5 internal I. Curie grants for collaborative projects for a total of ~5 M€ (below, SR = success rate).

2023 Worldwide Cancer Research

Emerging projects (lead PI -I. Curie internal grant)

	ANR PRC – French National Research Agency Collaborative Grant (Lead PI)
	Ligue “labelled” team
2021	ANR PRC – French National Research Agency Collaborative Grant (partner)
	INCa Plbio- Institut National du cancer (lead PI)
	ANR PRC – French National Research Agency Collaborative Grant (lead PI)
	Emerging projects (partner-I. Curie internal grant)
2020	Emerging projects (lead PI -I. Curie internal grant)
2019	ANR PRC – French National Research Agency Collaborative Grant (partner) (15.7% SR)
	HFSP (Human Frontiers Science Programme) Research Grant (lead PI) (5.6% SR)
	ARC (French Association for Cancer Research) “labelled” team (~10% SR)
2018	ATIP-Avenir plus (national grant for young independent group leaders)
	Emergences, Ville Paris for junior team (from the city of Paris)
	Tremplin ERC (T-ERC) from ANR (as I obtained A at interview step for ERC CoG 2017)
2017	ANR PRC (lead PI; 13,3% SR)
	ITMO- Cancer (Thematic Multi-Organism Institute) (lead PI) –for large equipment
	Labex Celtisphybio (I. Curie internal grant) for ground-breaking projects
2016	PSL (Paris Sciences et Lettres University) Grant for junior teams
2015	ATIP-Avenir grant for young independent group leaders (13,7% SR)
	PIC3i (I. Curie internal grant) for collaborative interdisciplinary projects
2010	Long-term fellowship <u>E</u> uropean <u>M</u> olecular <u>B</u> iology <u>O</u> rganization (EMBO)
2008	Fellowship <u>A</u> ssociazione <u>I</u> taliana per la <u>R</u> icerca sul <u>C</u> ancro (AIRC)

- **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

Current members: I lead an interdisciplinary research group composed of 1 research engineer, 3 engineers, 2 PhD students and 4 postdocs.

Former members: 2 PhD students, 3 post-docs, 2 shared post-docs, 2 technician and 8 master students. One post-doc now holds a tenure track position in Italy (University of Palermo) and one become a CRCN CNRS.

- **TEACHING ACTIVITIES**

2023 Teaching at University of Utrecht (NL).

2022 Teaching at Instituto Gulbenkian de Ciência (Portugal).

2021 Visiting professor for the Advanced Molecular Biology Course at U. Pavia (Italy): 12 hours

2016-2024 ABCD course (PSL), Epigenetics Course (I. Curie) 5X, Cell Biology Course (ENS/I. Curie/Pasteur) 5X, Cell Biology and Cancer (I. Curie), Advanced course in cellular dynamics (Curie-Monod) 5X, Cell proliferation and cell death (Sorbonne Université) 4X, Genome Instability and Human Disease (I. Curie) 1X

- **ORGANIZATION OF SCIENTIFIC MEETINGS**

2025 Aneuploidy meeting, Italy. Approx. 150 participants, 4 days (in progress)

2022 EMBO YIP genome integrity (sectoral meeting), Paris. 43 participants, 3 days

2020 16th Course on Epigenetics (I. Curie). Approx. 70 participants, 5 days (online due to pandemic)

2019 Kinetochore Dynamics Workshop. Paris. Approx. 100 participants, 3 days

15th Course on Epigenetics (I. Curie). Approx. 70 participants, 5 days

2017 Young PI Retreat with I. Curie, European Institutes (EU-LIFE) and American YPI members (Newport, USA). Approx. 50 participants, 3 days

2016 Multi-scale Physics-Biology-Chemistry and cancer: The three eyes of science (I. Curie, Paris). Approx. 150 participants, 1 day

2008 Second EU-IP International DNA Repair Workshop for young scientists (Porto, Portugal). Approx. 80 participants, 3 days

- **COMMISSIONS OF TRUST**

2023 PhD Defense Jury Panel Member, Edinburgh, UK

PhD Defense Jury Panel Member, Gustave Roussy, Paris

PhD Defense Jury Panel Member, I. Curie, Paris

External reviewer for BBSRC grant (UK)

2022 PhD Defense Jury Panel Member, Oxford, UK

PhD Defense Jury Panel Member, Paris

	External reviewer for Wellcome Trust (UK) Member of EMBO Catalyst group (5 years term)
2021	External reviewer for Ligue
2020	External reviewer for ERC (Starting Grant) and Swiss Cancer Research foundation PhD Defense Jury Panel Member, CRBM, Montpellier HDR Panel Member, CRBM, Montpellier
2019	Invited editor of a special issue on Experimental Cell Research (ECR) and Journal of Biochemistry External reviewer for Wellcome Trust grant (UK) External evaluator of a Research Unit at the I. of Genetics and Development of Rennes, France
2018	PhD Defense Jury Panel Member, IFOM, Italy External reviewer for BBSRC grant (UK)
2017	External reviewer for the ERC (Advanced Grant) and BBSRC grant (UK) PhD Defense Jury Panel Member, I. Gulbekian, Portugal
2016	PhD thesis external Evaluator, University of Melbourne, Australia
2011 to date	Peer reviewer for international journals (<i>Journal of Cell Biology</i> , <i>Science</i> , <i>Developmental Cell</i> , <i>Genome Research</i> , <i>Cell Reports</i> , <i>Genes and Development</i> , <i>Plos Genetics</i> , <i>NAR</i> , <i>EMBO</i> , <i>Nature Communications</i> and <i>Plos One</i>)

• INSTITUTIONAL RESPONSIBILITIES

Current: Member of Curie Commission scientifique; Selection committee for junior group leader recruitment for I. Curie (UMR144); Organizer of “course for preparing post-docs for group leader interview”.

Previous: Co-responsible of PhD doctoral missions; PhD selection committee of the International Institut Curie PhD program (x2); Co-representative for Scientific Integrity of I. Curie; Co-organizer of the weekly departmental seminars of the Cell Biology Department (UMR144) member of I. Curie thesis committees (3X).

• PUBLISHING RECORD

Total articles: 55 publications; 27 as main author (either first or last)

Total citations: >4200 citations **h-index:** 29 (excluding self-citations) **i10-index:** 41 (Google Scholar)

Published manuscripts (in blue the ones as first or last author)

- Hanthi YW, Ramirez-Otero MA, Appleby R, De Antoni A, Joudeh L, Sannino V, Waked S, Ardizzoia A, Barra V, **Fachinetti D**, Pellegrini L, Costanzo V. RAD51 protects abasic sites to prevent replication fork breakage. **Mol Cell**. 2024 Aug 22;84(16):3026-3043.e11..
- Salinas-Luypaert C, **Fachinetti D**. Canonical and noncanonical regulators of centromere assembly and maintenance. **Curr Opin Cell Biol**. 2024 Aug;89:102396..
- Yamaguchi K, Chen X, Rodgers B, Miura F, Bashtrykov P, Bonhomme F, Salinas-Luypaert C, Haxholli D, Gutekunst N, Aygenli BÖ, Ferry L, Kirsh O, Laisné M, Scelfo A, Ugur E, Arimondo PB, Leonhardt H, Kanemaki MT, Bartke T, **Fachinetti D**, Jeltsch A, Ito T, Defossez PA. Non-canonical functions of UHRF1 maintain DNA methylation homeostasis in cancer cells. **Nat Commun**. 2024 Apr 5;15(1):2960.
- Scelfo A, Barra V, Abdennur N, Spracklin G, Busato F, Salinas-Luypaert C, Bonaiti E, Velasco G, Bonhomme F, Chipont A, Tjihuis AE, Spierings DCJ, Guérin C, Arimondo P, Francastel C, Foijer F, Tost J, Mirny L, **Fachinetti D**. Tunable DNMT1 degradation reveals DNMT1/DNMT3B synergy in DNA methylation and genome organization. **J Cell Biol**. 2024 Apr 1;223(4):e202307026. doi: 10.1083/jcb.202307026.
- Scelfo A, Angrisani A, Grillo M, Barnes BM, Muyas F, Sauer CM, Leung CWB, Dumont M, Grison M, Mazaud D, Garnier M, Guintini L, Nelson L, Esashi F, Cortés-Ciriano I, Taylor SS, Déjardin J, Wilhelm T, **Fachinetti D**. Specialized replication mechanisms maintain genome stability at human centromeres. **Mol Cell**. 2024 Feb 14;S1097-2765(24)00054-6. doi: 10.1016/j.molcel.2024.01.018.
- Lin YF, Hu Q, Guyer A, **Fachinetti D**, Ly P. Induction of chromosome-specific micronuclei and chromothripsis by centromere inactivation. **Methods Cell Biol**. 2024; 182:1-20. doi: 10.1016/bs.mcb.2022.10.009.
- Scelfo A, **Fachinetti D**. Centromere: A Trojan horse for genome stability. **DNA Repair (Amst)**. 2023 Oct;130:103569. doi: 10.1016/j.dnarep.2023.103569.
- Angrisani A, **Fachinetti D**. The KaryoCreate technology generates specific aneuploid karyotypes on demand. **Cell Rep Methods**. 2023 Jun 26;3(6):100514. doi: 10.1016/j.crmeth.2023.100514.
- Garrriba L, De Feudis G, Martis V, Galli M, Dumont M, Eliezer Y, Wardenaar R, Ippolito MR, Iyer DR, Tjihuis AE, Spierings DCJ, Schubert M, Taglietti S, Soriani C, Gemble S, Basto R, Rhind N, Foijer F, Ben-

- David U, **Fachinetti D**, Doksani Y, Santaguida S. Short-term molecular consequences of chromosome mis-segregation for genome stability (2023) **Nat Commun** Mar 11;14(1):1353.
10. Carlier-Grynkorn F, **Fachinetti D**, Tran PT. Kinesin-14 HSET may not oppose kinesin-5 Eg5 activity in RPE-1 cells. *MicroPubl Biol.* 2022 Aug 6;2022:10.17912/micropub.biology.000623
 11. Keizer, V., Grosse-Holz, S., Woringer, M., Zambon, L., Aizel, K., Bongaerts, M., Kolar-Znika, L., Scolari, V., Hoffmann, S., Banigan, E., Mirny, L.A., Dahan, M., **Fachinetti, D.*** and Coulon, A. * (*Co-corresponding authors). Live-cell micromanipulation of a genomic locus reveals interphase chromatin mechanics. **Science** Jul 29;377(6605):489-495.
 12. Gamba, R., Mazzucco, G., Wilhelm, T., Chardon, F., Velikovskiy, L., Picotto, J., Doksani, Y. and **Fachinetti, D.** Enrichment of centromeric DNA from human cells. *PLoS Genet.* 2022 Jul 19;18(7):e1010306.
 13. Gnan S, Josephides JM, Wu X, Spagnuolo M, Saulebekova D, Bohec M, Dumont M, Baudrin LG, **Fachinetti D**, Baulande S, Chen CL. Kronos scRT: a uniform framework for single-cell replication timing analysis (2022) **Nat Commun.** Apr 28;13(1):2329.
 14. Chardon F, Japaridze A, Witt H, Velikovskiy L, Chakraborty C, Wilhelm T, Dumont M, Yang W, Kikuti C, Gangnard S, Mace AS, Wuite G, Dekker C, **Fachinetti D.** CENP-B-mediated DNA loops regulate activity and stability of human centromeres. (2022) **Mol Cell**, May 5;82(9):1751-1767.e8
 15. Mellone, B* and Fachinetti, D*. (*Co-corresponding authors). Diverse mechanisms of centromere specification. (2021) **Curr Biol.** Nov 22;31(22):R1491-R1504.
 16. Salinas-Luybaert, C., Allu, P.K., Logsdon, G. A., Dawicki-McKenn², J. M. Gambogi, C. W., **Fachinetti, D.*** and Black*. B. E. (*Co-corresponding authors). Gene replacement strategies validate the use of functional tags on centromeric chromatin and invalidate an essential role for CENP-AK124ub. (2021) **Cell Reports**, 37(5):109924.
 17. Ippolito, MR, Martis, V, Martin, S, Tijhuis, AE, Hong, C, Wardenaar, R, Dumont, M, Zerbib, J, Spierings, DCJ, **Fachinetti, D**, Ben-David, U, Foijer, F, Santaguida S. Gene copy-number changes and chromosomal instability induced by aneuploidy confer resistance to chemotherapy (2021). **Dev Cell.** Sep 13;56(17):2440-2454.e6.
 18. Jeffery, D., Gatto, A., Podsypanina, K., Renaud-Pageot, C., Landete, R., Bonneville, L., Dumont, M., **Fachinetti, D.** and Almouzni G. CENP-A overexpression promotes distinct fates in human cells, depending on p53 status. (2021). **Communications Biology**, 26;4(1):417
 19. Giunta, S.*,# Herve, S.*, White, R., Wilhelm, T., Dumont, M., Scelfo, A., Gamba, R., Wong, C., Rancati, G., Smogorzewska, A., Funabiki, H.# and **Fachinetti, D.#** (#Co-corresponding authors). CENP-A chromatin prevents replication stress at centromeres to avoid structural aneuploidy (2021) **PNAS** Mar 9;118(10):e2015634118. highlighted in preLights.
 20. Shrestha, R.L., Rossi, A., Wangsa, D., Hogan, A.N., Zaldana, K.S., Suva, E., Chung, Y.J., Sanders, C.L., Difilippantonio, S., Karpova, T.S., Karim, B., Foltz, D.R., **Fachinetti, D.**, Aplan, P.D., Ried, T. and Basrai, M.A. CENP-A overexpression promotes aneuploidy with karyotypic heterogeneity (2021). **Journal of Cell Biology**, Apr 5;220(4):e202007195.
 21. Murillo-Pineda, M., Valente, L.P., Dumont, M., Mata, J.F., **Fachinetti, D.** and Jansen, L.E.T. Induction of spontaneous human neocentromere formation and long-term maturation (2021). **Journal of Cell Biology**, Mar 1;220(3):e202007210.
 22. **Fachinetti, D. ***, Masumoto H. * and Kouprina N. * (*Co-corresponding authors) (2020) Artificial chromosome. Editorial in **Exp Cell Res**, Sep 25:112302.
 23. Hoffmann, S., Izquierdo, H., Gamba, R., Chardon, F., Keizer, V., Dumont, M., Herve, S., McNulty, S., Sullivan B., Manel, N. and **Fachinetti, D.** A genetic memory initiates the epigenetic loop necessary to preserve centromere position. (2020) **EMBO Journal**, Sep 18:e105505.
“News and Views” section by Van de berg S.J.W. and Jansen L.E.T.
 24. Dumont, M and **Fachinetti, D.** Centromere strength: just a sense of proportion (2020) **Perspective, Molecular & Cellular Oncology** 7:4, 1742063.
 25. Gamba, R. and **Fachinetti, D.** From evolution to function: two sides of the same CENP-B coin? (2020) **Exp Cell Res.** May 15;390(2):111959.
 26. Dumont, M.*, Gamba, R.*, Gestraud, P., Klaasen, S., Worrall, J.T., De Vries, S.G., Boudreau, V., Salinas-Luybaert, C., Maddox, P.S., Lens, S.M.A., Kops, G.J.P.L., McClelland, S. E., Miga, K.H. & **Fachinetti, D.** (2020). Human chromosome-specific aneuploidy is driven by DNA-dependent centromeric features. **EMBO Journal**, Jan 15;39(2):e102924.

27. Watanabe, R., Hara, M., Okumura, E., Herve, S., **Fachinetti, D.**, Ariyoshi, M., Fukagawa, T. Phosphorylation of CENP-C by CDK1 is required for CENP-A nucleosome binding on mitotic kinetochores (2019). **Journal of Cell Biology**, Dec 2;218(12):4042-4062.
28. Gemble, S., Anthony, S., Carole, P., Dumont, M., Hervé, S., Meitinger, F., Oegema, K., Rodriguez, R., Almouzni, G., **Fachinetti D.*** & Basto, R*. (*Co-corresponding authors) (2019) Centromere dysfunction compromises mitotic spindle pole integrity. **Current Biology**, Sep 23;29(18):3072-3080.e5
29. Lera, R.F., Norman, R.X.*, Dumont, M.*, Dennee, A., Martin-Koob, J., **Fachinetti, D.** and Burkard, M.E. (2019) Plk1 protects kinetochore-centromere architecture against microtubule pulling forces. **EMBO Reports**, Aug 30:e48711
30. Scelfo, A. and **Fachinetti, D.** (2019). Keeping the centromere under control: a promising role for DNA methylation. **Cells**, 16;8(8)
31. Nechemia-Arbely, Y., Miga, K., Shoshani, O., Aslanian, A., McMahon, M.A., Young Lee, A., **Fachinetti, D.**, Yates, J.R., Ren, B. and Cleveland, D.W. (2019). DNA replication-mediated error correction of ectopic CENP-A deposition maintains centromere identity. **Nature Cell Biology**, 21(6):743-754
32. Gentili, M., Lahaye, X., Nadalin, F., Nader, G., Lombardi, E.P., Herve, S., De Silva, N., Rookhuizen, D. C., Zueva, E., Goudot, C., Maurin, M., Bochnakian, A., Amigorena, S., Piel, M., **Fachinetti, D.**, Londoño-Vallejo, A. and Manel, N. (2019). The N-terminal domain of cGAS determines preferential association with centromeric DNA and activation in the nucleus. **Cell Reports**, 26(9):2377-2393
33. Barra, V., Logsdon, G.A., Scelfo, A., Hoffmann, S., Hervé, S., Aslanian, A., Nechemia-Arbely, Y., Cleveland, D.W., Black, B.E. and **Fachinetti, D.** (2019) Phosphorylation of CENP-A on serine 7 does not control centromere function. **Nature Communications**, 10(1):175.
34. Barra, V. and **Fachinetti, D.** (2018). The dark side of the centromeres: types, causes and consequences of structural abnormalities implicating centromeric DNA. **Nature Communications**, 9(1):4340.
35. Hoffmann, S and **Fachinetti, D** (2018). Real-Time De Novo Deposition of Centromeric Histone-Associated Proteins Using the Auxin-Inducible Degradation System. Book chapter, **Methods Mol Biol**. 2018;1832:223-241.
36. Dumont, M and **Fachinetti, D** (2017). DNA sequences in centromere formation and function. Book chapter Springer, Centromeres and Kinetochores. **Prog Mol Subcell Biol**. 56:305-336.
37. Guo, L.Y., Allu, P.K., Zandarashvili, L., McKinley, K.L., Sekulic, N., Dawicki-McKenna, J.M., **Fachinetti, D.**, Jamiolkowski, R.M., Cleveland, D.W., Cheeseman, I.M. and Black, B. E. (2017). Centromere maintenance requires an arginine anchor-dependent nucleosome structural transition by CENP-C and tethering of CENP-A to DNA by CENP-N. **Nature Communications**, 8:15776.
38. Hoffmann, S and **Fachinetti, D** (2017). A time-out for CENP-A. **Molecular & Cellular Oncology**, 4:3, e1293596.
39. Sathyan, K., **Fachinetti, D.**, Foltz, D. (2017). α -amino trimethylation of CENP-A by NRMT is required for full recruitment of the centromere. **Nature Communications**. 8:14678.
40. Nechemia-Arbely, Y., **Fachinetti, D.**, Miga, K., Sekulic, N., Soni, G., Karwei Wong, A., Young Lee, A., Nguyen, K., Ren, B., Black, B.E. and Cleveland, D.W. (2017). Human centromeric CENP-A chromatin is a homotypic, octameric nucleosome at all cell cycle points. **Journal of Cell Biology**, 216(3):607-621.
41. **Fachinetti, D.***, Logsdon, G.*, Abdullah, A., Cleveland, D.W., Black B.E. (* Co-first authorship). (2017). CENP-A post-translational modifications on Ser68 and Lys124 are dispensable for establishment, maintenance, and long-term function of human centromeres. **Developmental Cell**, 40, 104-113.
42. Ly, P., Teitz, L. S., Kim, D. H., Shoshani, O., Skaletsky, H., **Fachinetti, D.**, Page, D and Cleveland, D.W. (2017). Selective Y centromere inactivation triggers chromosome shattering in micronuclei and repair by non-homologous end joining. **Nature Cell Biology**, 19, 1–17.
“News and Views” section of **Nature Cell Biology** by Hatch, E.M.
43. Hoffmann, S., Dumont, M., Barra, V., Ly, P., Nechemia-Arbely, Y., McMahon, M.A., Herve, S., Cleveland, D.W. and **Fachinetti, D.** # (2016) CENP-A is dispensable for mitotic centromere function after initial centromere/kinetochore assembly. **Cell Reports** 17, 2394–2404.
44. **Fachinetti, D.** #, Han, J.S., McMahon, M.A., Ly, P., Abdullah, A., Wong, A.J., and Cleveland, D.W. #. (2015). DNA Sequence-Specific Binding of CENP-B Enhances the Fidelity of Human Centromere Function. **Developmental Cell**, 33, 314–327. (# Co-corresponding authorship). Recommended article by Faculty of 1000 (F1000Prime)

45. Han, J.S., Vitre, B.*, **Fachinetti, D.*** and Cleveland, D.W. (* **Co-second authorship**). (2014). Bub3 promotes two spatially distinct BubR1-Cdc20 interactions to ensure functional mitotic checkpoint. *PNAS* *111*, E4185-93.
46. **Fachinetti, D.**, Folco, D., Nechemia-Arbely, Y., Valente, L., Nguyen, K., Zou, Q., Holland, A.J., Desai, A., Jansen, L.E.T., Cleveland, D.W. (2013). A two-step mechanism for epigenetic specification of centromere identity and function. *Nat Cell Biol*, *15*, 1056-66. [“News and Views” section of Nature Cell Biology by French, B.T. and Straight, A.F](#)
47. Han, J.S., Holland, A.J., **Fachinetti, D.**, Kulukian A., Cetin, B. and Cleveland, D.W. (2013). Catalytic Assembly of the Mitotic Checkpoint Inhibitor BubR1-Cdc20 by a Mad2-Induced Functional Switch in Cdc20. *Mol Cell* *51*, 92-104.
48. **Holland, A.J.***, **Fachinetti, D.***, Han, J.S., and Cleveland, D.W. (2012). (* **Co-first authorship**). Inducible, reversible system for the rapid and complete degradation of proteins in mammalian cells. *PNAS*, *109*, E3350-7.
49. Holland, A.J., **Fachinetti, D.**, Zhu, Q., Bauer, M., Verma, I.M., Nigg, E.A., and Cleveland, D.W. (2012). The autoregulated instability of Polo-like kinase 4 limits centrosome duplication to once per cell cycle. *Genes Dev* *26*, 2684-2689.
50. Nechemia-Arbely*, **Fachinetti, D.***, Y., and Cleveland, D.W. (2012). (***Co-first authorship**). Replicating centromeric chromatin: spatial and temporal control of CENP-A assembly. *Exp Cell Res* *318*, 1353-1360.
51. Holland, A.J., **Fachinetti, D.**, Da Cruz, S., Zhu, Q., Vitre, B., Lince-Faria, M., Chen, D., Parish, N., Verma, I.M., Bettencourt-Dias, M., Cleveland, D.W. (2012). Polo-like kinase 4 controls centriole duplication but does not directly regulate cytokinesis. *Mol Biol Cell* *23*, 1838-1845.
52. Ray Chaudhuri, A., Hashimoto, Y., Herrador, R., Neelsen, K.J., **Fachinetti, D.**, Bermejo, R., Cocito, A., Costanzo, V., and Lopes, M. (2012). Topoisomerase I poisoning results in PARP-mediated replication fork reversal. *Nat Struct Mol Biol* *19*, 417-423.
53. **Fachinetti, D.**, Bermejo, R., Cocito, A., Minardi, S., Katou, Y., Kanoh, Y., Shirahige, K., Azvolinsky, A., Zakian, V.A., and Foiani, M. (2010). Replication termination at eukaryotic chromosomes is mediated by Top2 and occurs at genomic loci containing pausing elements. *Mol Cell* *39*, 595-605. “Previews” section of *Mol Cell* by Alver RC and Bielinsky AK: “Termination at sTop2”. *Mol Cell* *39*, 487-9.
54. Bermejo, R., Capra, T., Gonzalez-Huici, V., **Fachinetti, D.**, Cocito, A., Natoli, G., Katou, Y., Mori, H., Kurokawa, K., Shirahige, K., Foiani, M. (2009). Genome-organizing factors Top2 and Hmo1 prevent chromosome fragility at sites of S phase transcription. *Cell* *138*, 870-884.
55. Cotta-Ramusino, C., **Fachinetti, D.**, Lucca, C., Doksani, Y., Lopes, M., Sogo, J., and Foiani, M. (2005). Exo1 processes stalled replication forks and counteracts fork reversal in checkpoint-defective cells. *Mol Cell* *17*, 153-159.

- **INVITED PRESENTATIONS:**

- Invited Seminars (29):

- University of Madrid, Spain, December 2024
- Naples university, IT, November 2024
- Cambridge, UK, February 2024
- U. Utrecht, NL, January 2024
- Institut Pasteur, France, February 2023
- Social DNAing Webinar from Columbia University, January 2023
- Paris Diderot, France, January 2023
- University of Galway (Ireland), November 2022
- Instituto Gulbenkian de Ciência (Portugal), September, 2022
- Gustave Roussy (FR), July 2022
- University of Edinburgh (UK), June 2022
- San Raffaele (IT), May 2022
- NIH (US), April 2021
- Oxford (UK), March 2021
- Institute Human Genomic (IGH) (Montpellier, France), Feb, 2020
- University of Sussex (UK), May, 2019;
- University of Geneva (Swiss), November, 2018;

Université Paul Sabatier (Toulouse, France), Oct, 2018;
Muséum National d'Histoire Naturelle, (Paris, France), September, 2018;
CEA (Paris, France), October, 2017;
I. Gulbenkian (Lisbon, Portugal), Apr. 2017;
IFOM (Milan, Italy), Feb. 2017;
Osaka University (Osaka, JP) and Nagoya University (Nagoya, JP), Jan 2017;
Barts Cancer Institute (London, UK) Oct 2016;
JSM, Institut Curie (Paris, France), Apr. 2016;
Gustave Roussy (Paris, France) Nov. 2015;
Wistar Institute (Philadelphia, USA), Dec 2014;
Synthetic Genomics (La Jolla, CA, USA), Aug. 2014;
IFOM (Milan, Italy), Jun. 2013;
Institut Curie (Paris, France), Jul. 2013.

Presentations at International meetings (25):

EMBO conference "The DNA damage response in cell physiology and disease" in Greece, Oct. 2024;
Gordon conference: "Centromere Biology", at Mount Snow (VT, USA), Aug. 2024;
International Workshop on Chromosomal Instability, Cambridge (UK), June 2024;
EMBO Workshop "Dynamic Kinetochores", in Montreux, Switzerland, June 2024;
Fusion conference: 3rd Chromosomal Instability as a Driver of Human Disease Conference, Croatia, Oct 2023
EMBO Young Scientists' Forum, at iMM, Portugal, October 2023;
EMBO Cell cycle meeting (Konstanz, Germany), October 2022;
Gordon conference: "Centromere Biology", at Mount Snow (VT, USA), Jul. 2022;
EMBO 7th Dynamic Kinetochores Workshop, Oslo (NO), June 2022;
Single molecule symposium, I. Pasteur (Paris, FR), May 2022;
EMBO Chromosome segregation and Aneuploidy (Vienna, AS), May 2022;
ASCB (USA), Dec. 2021 (on-line);
EMBO chromosome dynamics and nuclear organization in genome maintenance, Dec 2020 (on-line);
ASCB (Philadelphia, USA), Dec. 2020 (on-line);
Conference Jacques Monod: "Genome instability: when RNA meets chromatin", Roscoff (FR), Sep. 2019;
EMBO Aneuploidy Meeting, Cascais (PT), May 2019;
Gordon conference: "Centromere Biology", at Mount Snow (VT, USA), Aug. 2018;
ASCB (Philadelphia, USA), Dec. 2017;
13 Cancéropôle Grand Sud-Ouest (Poitiers, FR), Nov. 2017;
EMBO "Dynamic Kinetochores Workshop", (Edinburgh, Scotland), 6-9 June 2017;
Gordon conference: "Centromere Biology", at Mount Snow (VT, USA), Jul. 2016;
EMBO workshop: Chromosome segregation and Aneuploidy (Galway, Ireland), Jun. 2016;
Causes and Consequences of Aneuploidy (Les Treilles, France), Jun. 2016;
Gordon conference: "Centromere Biology", at Bentley University (Waltham, MA, USA), Aug. 2014;
European EMBO meeting (Heidelberg, Germany), Jun. 2013.