DOGUS M. ALTINTAS, PhD

Molecular & Cellular Biology | Cellular Adaptation | Invasive Growth

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RESEARCH PROFILE

Molecular and cell biologist developing *SATURN*, an independent research programme investigating how environmental stress rewires protein synthesis and establishes persistent, maladaptive cell states. Research spans the integrated stress response (ISR), MET-dependent invasive growth, non-coding oncogene alterations, and cell-fate plasticity. Experimental approaches integrate yeast and human models, CRISPR-based engineering, functional genomics, and patient-derived datasets.

SELECTED SCIENTIFIC CONTRIBUTIONS

Oncogene expedience through stress-dependent translation. Defined a molecular basis for oncogene expedience by demonstrating that ISR activation selectively enhances MET translation, linking microenvironmental stress to invasive growth (*The EMBO Journal*, 2025; last and corresponding author).

Oncogene priming through untranslated region rewiring. Identified a new class of oncogenic fusions and defined oncogene priming as a mechanism whereby 5'UTR replacement bypasses translational constraints, increasing oncogene protein expression (*Cell Reports*, 2026; last and corresponding author).

From oncogene regulation to persistent invasive growth. Building on these discoveries, developed *SATURN* (ERC CoG 2026, Step 2) to investigate whether transient stress-induced translational rewiring can establish persistent invasive growth and altered cell identity, using a reversible, stress-independent genetic ISR switch.

RESEARCH FUNDING AND ERC STATUS

ERC Consolidator Grant 2026 (SATURN): advanced to Step 2; interview completed September 2026; funding decision pending.

AIRC multi-omics project: Principal Investigator; approximately €36,000 (2026).

Barts Charity: Co-PI on collaborative grant; £74,000 (2024).

Fondazione Umberto Veronesi: Individual research fellowships, 2023, 2024 and 2025.

AIRC Investigator Grant: Scientific coordination and reporting within a €1.4 million research programme (2021–2026; PI: P. M. Comoglio).

ACADEMIC APPOINTMENTS

2021–2026 | co- PI, Laboratory of Invasive Growth, IFOM – The AIRC Institute of Molecular Oncology, Milan, Italy (P. M. Comoglio). Research direction, coordination, mentoring and management of collaborative projects.

2018–2021 | Postdoctoral Researcher / Teaching Fellow, INSERM U955–IMRB, Université Paris-Est Créteil, France (G. Derumeaux).

2015–2018 | Documented career interruption (details available if relevant to formal evaluation).

2012–2015 | Postdoctoral Researcher, Department of Molecular Biology, University of Geneva, Switzerland (D. Shore).

EDUCATION

2010 | PhD in Life Sciences, École normale supérieure de Lyon / University of Lyon, France (supervisor: J. Samarut).

2006 | Research MSc, Cellular and Molecular Biology & Oncology, Université Claude Bernard Lyon 1 / ENS Lyon, France.

METHODS AND ANALYTICAL EXPERTISE

- Genome engineering: CRISPR/Cas9, prime editing, conditional degrons; human cell lines and yeast genetics.
- Translation and signalling: 5'UTR/uORF reporters, luciferase, polysome profiling, immunoblotting, MET/HGF and ISR functional studies.
- Cell biology: 2D/3D migration and invasion, wound healing, high-content imaging, epithelial-state markers, organoid-oriented experimental design.
- Functional genomics: RNA-seq, ATAC-seq, ribosome profiling; TCGA, AACR GENIE and DepMap/CCLE; R and Python.

SUPERVISION, TEACHING AND LEADERSHIP

Doctoral supervision: Direct scientific supervision of Marina Cerqua (IFOM, 2021–2026), contributing to three publications on which I am last author, including *The EMBO Journal* (2025) and *Cell Reports* (2026). Additional doctoral co-supervision at INSERM/UPEC and the University of Geneva.

University teaching: 76 contact hours, Université Paris-Est Créteil (2019–2020): cell biology, histology, molecular biology, physiology and microbiology.

Scientific leadership: Coordination of projects, international collaborations and grant reporting at IFOM; involvement in facilities, equipment procurement, recruitment and laboratory organisation.

PEER REVIEW, SERVICE AND SCIENTIFIC VISIBILITY

- Scientific reviewing for journals and research funding bodies.
- Invited seminar: Pamukkale University (2026); oral communication: Endoplasmic Reticulum Stress Symposium, Paris (2025).
- International meeting contributions including EACR (Lisbon, 2025) and EMBO events; scientific outreach and donor presentations.

PEER-REVIEWED PUBLICATIONS

12 original articles and 3 reviews / perspectives.

01. 2026 Cerqua M, Bigot E, Chaveroux C, Comoglio PM, Altintas DM. “Untranslated region rewiring defines a novel class of oncogene fusions.” Cell Reports 45(10):118145. ***[Last & corresponding author]***

02. 2025 Cerqua M, Foiani M, Boccaccio C, Comoglio PM, Altintas DM. “The integrated stress response drives MET oncogene overexpression in cancers.” The EMBO Journal 44(4):1107–1130. ***[Last & corresponding author]***

03. 2023 Sawaki D, Zhang Y, Mohamadi A, Pini M, Mezdari Z, Lipskaia L, Naushad S, Lamendour L, Altintas DM, et al. “Osteopontin promotes age-related adipose tissue remodeling through senescence-associated macrophage dysfunction.” JCI Insight 8(8).

04. 2023 Altintas DM, Cerqua M, De Laurentiis A, Trusolino L, Boccaccio C, Comoglio PM. “An mTOR feedback loop mediates the flare response to MET tyrosine kinase inhibition.” Scientific Reports 13:1378. ***[First & corresponding author]***

05. 2022 Altintas DM, Gallo S, Basilico C, Cerqua M, et al. “The PSI Domain of the MET Oncogene Encodes a Functional Disulfide Isomerase Essential for the Maturation of the Receptor Precursor.” International Journal of Molecular Sciences 23(20):12427. ***[First & corresponding author]***

06. 2022 Cerqua M, Botti O, Arigoni M, Gioelli N, et al., Altintas DM. “METΔ14 promotes a ligand-dependent, AKT-driven invasive growth.” Life Science Alliance 5(10):e202201409. ***[Last author]***

07. 2021 Czibik G, Mezdari Z, Altintas DM, et al. “Dysregulated Phenylalanine Catabolism Plays a Key Role in the Trajectory of Cardiac Aging.” Circulation 144(7):559–574. ***[Co-first author]***

08. 2016 Styles EB, Founk KJ, Zamparo LA, Sing TL, Altintas DM, et al. “Exploring Quantitative Yeast Phenomics with Single-Cell Analysis of DNA Damage Foci.” Cell Systems 3(3):264–277.e10.

09. 2014 Mattarocci S, Shyian M, Lemmens L, Damay P, Altintas DM, et al. “Rif1 controls DNA replication timing in yeast through the PP1 phosphatase Glc7.” Cell Reports 7(1):62–69.

10. 2013 Altintas DM, Allioli N, Decaussin M, et al. “Differentially expressed androgen-regulated genes in androgen-sensitive tissues reveal potential biomarkers of early prostate cancer.” PLoS ONE 8(6):e66278. ***[First author]***

11. 2012 Altintas DM, Shukla MS, Goutte-Gattat D, et al. “Direct cooperation between androgen receptor and E2F1 reveals a common regulation mechanism for androgen-responsive genes in prostate cells.” Molecular Endocrinology 26(9):1531–1541. ***[First author]***

12. 2011 Altintas DM, Vlaeminck V, Angelov D, et al. “Cell cycle regulated expression of NCoR might control cyclic expression of androgen responsive genes in an immortalized prostate cell line.” Molecular and Cellular Endocrinology 332(1–2):149–162. ***[First author]***

REVIEWS AND PERSPECTIVES

13. 2026 Altintas DM, Cerqua M, Comoglio PM, Chaveroux C. “The Janus framework of the integrated stress response: from homeostasis to maladaptation.” Life Science Alliance 9(3):e202503523. ***[First & corresponding author]***

14. 2026 Altintas DM, Comoglio PM. “Cancer progression as the chronic stabilization of invasive growth.” Trends Open. ***[First & corresponding author]***

15. 2023 Altintas DM, Comoglio PM. “An Observatory for the MET Oncogene: A Guide for Targeted Therapies.” Cancers 15(18). ***[First author]***