ARTEM SMIRNOV - Curriculum Vitae

PERSONAL INFORMATION

First name / Surname	Artem Smirnov
Address	Via Montpellier 1, 00133 Rome (RM)
Telephone	+39 06 7259 6469
E-mail	artem.smirnov@uniroma2.it
Date of birth	23 May 1992
Gender	Male
Research area	Biochemistry and Molecular Biology
Scientific interests	My research activity has been mainly focused on the understanding of molecular mechanisms of cellular homeostasis and differentiation, as well as alteration of these pathways in tumours. Specifically, I have been studying the role of transcriptional regulation in epithelial homeostasis and epithelial cancer tumorigenesis.

RESEARCH EXPERIENCE

Dates	2024-present
Position held	**Assistant Professor** in molecular biology (tenure-track)
Research topic	p63 in urothelial cancer
Institution	University of Rome Tor Vergata (Rome, Italy)
Dates	2022-2024
Position held	**Postdoctoral researcher** (RTDa)
Research topic	p63 in urothelial cancer
Head of the laboratory | Institution	Professor Eleonora Candi | University of Rome Tor Vergata (Rome, Italy)
Dates	2019-2022
Position held	**Postdoctoral researcher**
Research topic	p53 in EBV-associated epithelial cancer
Head of the laboratory | Institution	Professor Xin Lu | University of Oxford (Oxford, UK)
Dates	2014-2019
Position held	**MSc, PhD student, and Postdoctoral researcher**
Research topic	p53&p63 in epithelial biology
Head of the laboratory | Institution	Professor Gerry Melino | University of Rome Tor Vergata (Rome, Italy)
Dates	2013-2014
Position held	**BSc and MSc student**
Research topic	Cancer therapy via p53 reactivation
Head of the laboratory | Institution	Professor Nick Barlev | St. Petersburg Institute of Technology (St. Petersburg, Russia)
Dates	2012-2013
Position held	**BSc student**
Research topic	Visualisation of p53 in tumour cells
Head of the laboratory | Institution	Professor Nick Barlev | St. Petersburg Institute of Technology (St. Petersburg, Russia)

EDUCATION

Date	2017
Title of qualification awarded	**PhD in Biochemistry & Molecular Biology**
University or Institution	University of Rome Tor Vergata (Rome, Italy)
Thesis title	ZNF185 is a novel target of p63 and p53 involved in keratinocyte differentiation and DNA damage response
Date	2015
Title of qualification awarded	**MSc in Biotechnology**
University or Institution	St. Petersburg Institute of Technology (St. Petersburg, Russia)
GPA	Major GPA: 5.0/5.0; Overall GPA: 5.0/5.0 cum laude
Date	2013
Title of qualification awarded	**BSc in Chemical Technology and Biotechnology**

University or Institution	St. Petersburg Institute of Technology (St. Petersburg, Russia)
GPA	Overall GPA: 4.8/5.0

FUNDING

2026-2029	**Ricerca Finalizzata grant** of Ministry of Health, Italy Project title: Targeting p63 transcriptional program in inflammatory skin disorders (450.000 euro)
2025-2026	**RSA fund** University of Rome Tor Vergata, Italy Project title: "AI-assisted identification of p63 targetome in skin cancer" (9.800 euro)

PERSONAL SKILLS AND COMPETENCES

Languages	English (fluent), Italian (fluent), Spanish (intermediate), Russian (native)
Research techniques	DNA purification, preparation and electrophoresis, molecular cloning, PCR, ChIP, luciferase assay RNA purification, preparation and electrophoresis, RT-PCR, qPCR Protein electrophoresis and western blotting, co-immunoprecipitation, proximity ligation assay Human tumour and primary cell culture work, RNAi and DNA transfection in vitro Preparation and analysis of samples by FACS, cell sorting Human samples processing, IHC on Fr/FFPE human tissue sections, ICC/IF and confocal microscopy; AKOYA spatial proteomics and analysis; High-throughput screening of therapeutic compounds in vitro; Basics of animal work (mouse) and tumour xenograft models Analysis of genomics, proteomics, and transcriptomics data Omics data visualisation in R and genome browsers
Computer skills	MS Word, Excel, PowerPoint Adobe Illustrator, Photoshop, InDesign GraphPad, FlowJo, RStudio

EDITORIAL EXPERIENCE	**Associate Editor** for *Genes, Chromosomes and Cancer* (Wiley) **Editorial Board member** for *Discover Oncology* (Springer Nature) **Peer reviewer** for international journals: *PNAS, Cell Death & Differentiation, Cell Cycle, Molecular Oncology, Cell Death & Disease, Cell Death Discovery, and FEBS journal*
NATIONAL SCIENTIFIC QUALIFICATION	National Scientific qualification as associate professor for the disciplinary field of 05/E2 - Molecular biology | 12/2023 – 12/2034
LEARNED SOCIETIES	Royal society of Biology (LONDON) – Member (MRSB) since 2022 Biochemical Society (LONDON) – ECR Member since 2022 Società Italiana di Biofisica e Biologia Mol. (ROME) – Junior Member since 2023 American Association for Cancer Research (Philadelphia) – Assoc. member since 2025
TEACHING EXPERIENCE	Teaching at University of Rome Tor Vergata:
2024-present	Molecular Biology for BSc students (Dentistry) (1 CFU)
2022-present	Molecular Biology for MSc students (Medical Biotechnologies) (2 CFU)
2023-present	Nutrigenomics (Farmacy) (0.5 CFU)
2023-present	Research and Development of Cosmetics for Master I livello in "Nutrizione e Cosmesi" (4h)
2023-present	Transcriptomics for Master II livello in "Nutrizione Personalizzata" (6h)
Supervision of PhD students	2025-2028 | Alessia Petrilli | University of Rome Tor Vergata 2024-2027 | Damiano Barnaba | University of Rome Tor Vergata 2023-2026 | Mariacristina Franzese Canonico | University of Rome Tor Vergata 2019-2020 | Co-supervision of 1 DPhil student | University of Oxford
Supervision of MSc students	2026-2027 | Alireza Hamadi | University of Rome Tor Vergata 2023-2024 | Damiano Barnaba | University of Rome Tor Vergata 2019-2020 | Co-supervision of 1 MSc student | University of Oxford 2016-2017 | Co-supervision of 1 MSc student | University of Rome Tor Vergata
AWARDS	05/2023 Travel grant Biochemical Society, UK (350 euro)
COURSES	02/2024 | Pisa, IT | School on super-resolution microscopy 07/2021 | Oxford, UK | Introduction to Bioinformatics at the CCB 03/2020 | Oxford, UK | Experimental design and Statistics in Preclinical Research: the Good, the Bad and the Ugly

01/2020 | Oxford, UK | Research techniques day
07/2019 | Oxford, UK | Oxford FELASA accredited course 030/10 for carrying out procedures on animals (Function A) as per Directive 2010/63/EU
07/2019 | Oxford, UK | Animals (Scientific Procedures) Act 1986: Personal License Category B training Course
06/2019 | Oxford, UK | R: Data handling
05/2019 | Oxford, UK | R: Kick-off
10/2017 | Rome, Italy | Corso per l'accesso all'utilizzo delle strutture di servizio alla sperimentazione animale

PUBLICATIONS

Published **36 papers**, including:
First/co-first author – 13 papers (36%)
Co/corresponding – 2 papers
H-index = 15 (source: Scopus)
Citations = 1304 (source: Scopus)
Cumulative IF = 224 (source: JCR Clarivate)

Research articles and reviews

Petrilli A, Barnaba D, Mancini M, Fania L, Ricci F, Dellambra E, Melino G, Candi E, **Smirnov** A. Solute carrier family (SLC) amino acid transporters are upregulated in cutaneous squamous cell carcinoma. Biol Direct. 2026 Jan 12;21(1):17

Lena* AM., **Smirnov*** A., Mancini M., […], Candi E. Deletion of the p63 exon 13 in mice reveals C-terminal isoform-specific functions in epithelial development (2025) Proc Natl Acad Sci U S A. 122(29):e2503866122. *Contributed equally

Pecorari* R., Mancini* M., **Smirnov*** A., Corleone G., […] Candi E. p63 and ZNF148 cooperate to regulate head and neck squamous cell carcinoma. (2025) Proc Natl Acad Sci U S A. 122(28):e2500579122. *Contributed equally

Fierro C., Giovannini S., Panatta E., Corigliano F., […] **Smirnov** A, […]Bernassola F. The WWP1-JARID1B axis sustains acute myeloid leukemia chemoresistance (2025) Proc Natl Acad Sci U S A. 122(28):e2421159122.

Barnaba D., Franzese Canonico M., Helmer-Citterich M., Gandellini P., Melino G., **Smirnov#** A., Candi# E. LEADR, a p63 target, dampens interferon signalling in bladder cancer. (2025) Cell Death Discov. 11(1):264.. #Co-corresponding.

Cao L., Li Y., Ou M., **Smirnov** A., Liu R., Wang T., Su X., Li P., Mancini M., Candi E., Melino G., Shi Y., Zheng Z., Shao C. Mesenchymal Stromal Cells Highly Expressing Sca-1 Promote Breast Cancer Lung Metastasis through Recruiting Myeloid Cells. (2025) Cell Death & Disease. Accepted for publication.

Giacobbi E., Bonfiglio R., Rotondaro G., Servadei F., **Smirnov** A., Palumbo V., Scioli M.P., Bonanno E., Buonomo C.O., Vanni G., Candi E., Mauriello A., Scimeca M. Implications of Mineralization Biomarkers in Breast Cancer Outcomes Beyond Calcifications. (2025) International Journal of Molecular Sciences. 26 (2).

Giovannini S., Li Y., Pecorari R., Fierro C., Fiorilli C., Corigliano F., Moriconi V., Zhou J., De Antoni A., **Smirnov** A., Rinalducci S., Timperio A.M., Agostini M., Zhang J., Shi Y., Candi E., Melino G., Bernassola F. Thioredoxin-interacting protein (TXNIP) is a substrate of the NEDD4-like E3 ubiquitin-protein ligase WWP1 in cellular redox state regulation of acute myeloid leukemia cells. (2025). Molecular Oncology. 19 (1).

Croce D., **Smirnov** A., Tiburzi L., Travaglini S., Costa R., Calabrese A., Basili R., Levialdi Ghiron N., Melino G. AI-driven transcriptomic encoders: From explainable models to accurate, sample-independent cancer diagnostics. (2024). Expert Systems with Applications. 258.

Giovannini S., **Smirnov** A., Concetti L., Scimeca M., Mauriello A., Bischof J., Rovella V., Melino G., Buonomo C.O., Candi E., Bernassola F. (2024). Biology Direct. 19 (1).

Piro M.C., Pecorari R., **Smirnov** A., Cappello A., Foffi E., Lena A.M., Shi Y., Melino G., Candi E. p63 affects distinct metabolic pathways during keratinocyte senescence, evaluated by metabolomic profile and gene expression analysis. (2024). Cell Death & Disease. 15 (11).

Smirnov A., Lena A.M., Tosetti G., Yang X., Cappello A., Helmer-Citterich M, Melino G., Candi E. Epigenetic priming of an epithelial enhancer by p63 and CTCF controls expression of a skin-restricted gene XP33. (2023) Cell Death Discovery, 9 (1)

Cappello A., Tosetti G., **Smirnov** A., Ganini C., Yang X., Shi Y., Wang Y., Melino G., Bernassola F., Candi E. p63 orchestrates serine and one carbon metabolism enzymes expression in head and neck cancer. (2023) Biology Direct, 18 (1), 73.

Yang X., **Smirnov** A., Buonomo O.C., Mauriello A., Shi Y., Bischof J., Woodsmith J., Bove P., Rovella V., Scimeca M., Sica G., Tisone G., Wang Y., Servadei F., Melino G., Candi E., Bernassola F. A primary luminal/HER2 negative breast cancer patient with mismatch repair deficiency. (2023) Cell Death Discovery, 9 (1), 365.

Han Y., Rovella V., **Smirnov** A., Buonomo O.C., Mauriello A., Perretta T., Shi Y., Woodmsith J., Bischof J., Bove P., Juhl H., Scimeca M., Sica G., Tisone G., Wang Y., Giacobbi E., Materazzo M., Melino G., Candi E., Bernassola F. A BRCA2 germline mutation and high expression of immune checkpoints in a TNBC patient. (2023) Cell Death Discovery, 9 (1), 370.

Yang X., Zong C., Feng C., Zhang C., **Smirnov** A., Sun G., Shao C., Zhang L., Hou X., Liu W., Meng Y., Zhang L., Shao C., Wei L., Melino G., Shi Y. Hippo Pathway Activation in Aged Mesenchymal Stem Cells Contributes to the Dysregulation of Hepatic Inflammation in Aged Mice. (2023) Advanced Science, 10 (27), 2300424.

Smirnov A, Magri A, Lotz R, Han X., Yin C., Harris M., Osterburg C., Dötsch V., McKeating J.A., Lu X. ASPP2 binds to hepatitis C virus NS5A protein via an SH3 domain/PxxP motif-mediated interaction and potentiates infection. (2023) Journal of General Virology, 104 (9), 001895.

Smirnov A, Melino G and Candi E. Gene expression in organoids: an expanding horizon. (2023) Biology Direct. 18.

Smirnov A. and Candi E. Take a breath. (2023) The FEBS Journal.

Al Moussawi* K, Chung* K, Carroll* TM, Osterburg* C, **Smirnov*** A, Lotz R, Miller P, Dedeic Z, Zhong S, Oti M, Kouwenhoven EN, Asher R, Goldin R, Tellier M, Murphy S, Zhou H, Dotsch V, Lu X. Mutant Ras and inflammation-driven skin tumorigenesis is suppressed via a JNK-iASPP-AP1 axis. Cell Reports. 2022. 41. *contributed equally

Barbaglia MN, Harris JM, **Smirnov** A, Burlone ME, Rigamonti C, Pirisi M, Minisini R, Magri A. 17ß-Oestradiol Protects from Hepatitis C Virus Infection through Induction of Type I Interferon. Viruses. 2022. 14.

Lena AM, Rossi V, Osterburg S, **Smirnov** A, Osterburg C, Tuppi M, Cappello A, Amelio I, Dötsch V, De Felici M, Klinger FG, Annicchiarico-Petruzzelli M, Valensise H, Melino G, Candi E. The p63 C-terminus is essential for murine oocyte integrity. Nature Communications. 2021;12(1).

Montanaro M, Meloni M, Anemona L, Giurato L, Scimeca M, Izzo V, Servadei F, **Smirnov** A, Candi E, Mauriello A, Uccioli L. Macrophage Activation and M2 Polarization in Wound Bed of Diabetic Patients Treated by Dermal/Epidermal Substitute Nevelia. The International Journal of Lower Extremity Wounds. 2020.

Panatta E, Lena AM, Mancini M, **Smirnov** A, […] Candi E. Long non-coding RNA uc.291 controls epithelial differentiation by interfering with the ACTL6A/BAF complex. EMBO reports. 2020;21(3).

*Nicolai S, *Pieraccioli M, ***Smirnov** A, Pitolli C, […] Raschellà G. ZNF281/Zfp281 is a target of miR-1 and counteracts muscle differentiation. Molecular Oncology. 2019;14(2):294-308. *contributed equally.

Piro M, Ventura A, **Smirnov** A, Saggini A, Lena A, Mauriello A, Bianchi L, Melino G, Candi E. Transglutaminase 3 Reduces the Severity of Psoriasis in Imiquimod-Treated Mouse Skin. International Journal of Molecular Sciences. 2020;21(5).

Michaletti A, Mancini M, **Smirnov** A, Candi E, Melino G, Zolla L. Multi-omics profiling of calcium-induced human keratinocytes differentiation reveals modulation of unfolded protein response signaling pathways. Cell Cycle. 2019;18(17):2124-40.

Smirnov A, Anemona L, Novelli F, Piro CM, Annicchiarico-Petruzzelli M, Melino G, Candi E. p63 Is a Promising Marker in the Diagnosis of Unusual Skin Cancer. International Journal of Molecular Sciences. 2019;20(22).

Smirnov A, Anemona L, Montanaro M, Mauriello A, Annicchiarico-Petruzzelli M, Campione E, Melino G, Candi E. Transglutaminase 3 is expressed in basal cell carcinoma of the skin. European Journal of Dermatology. 2019;29(5):477-83.

Smirnov A, Cappello A, Lena AM, Anemona L, Mauriello A, Di Daniele N, Annicchiarico-Petruzzelli M, Melino G, Candi E. ZNF185 is a p53 target gene following DNA damage. Aging. 2018;10(11):3308-26.

Smirnov A, Lena AM, Cappello A, Panatta E, Anemona L, Bischetti S, Annicchiarico-Petruzzelli M, Mauriello A, Melino G, Candi E. ZNF185 is a p63 target gene critical for epidermal differentiation and squamous cell carcinoma development. Oncogene. 2018;38(10):1625-38.

Panatta E, Lena AM, Mancini M, Affinati M, **Smirnov** A, Annicchiarico-Petruzzelli M, Piro MC, Campione E, Bianchi L, Mazzanti C, Melino G, Candi E. Kruppel-like factor 4 regulates keratinocyte senescence. Biochemical and Biophysical Research Communications. 2018;499(2):389-95.

Cassandri M, **Smirnov** A, Novelli F, Pitolli C, Agostini M, Malewicz M, Melino G, Raschellà G. Zinc-finger proteins in health and disease. Cell Death Discovery. 2017;3(1).

Candi E, **Smirnov** A, Panatta E, Lena AM, Novelli F, Mancini M, Viticchiè G, Piro MC, Di Daniele N, Annicchiarico-Petruzzelli M, Melino G. Metabolic pathways regulated by p63. Biochemical and Biophysical Research Communications. 2017;482(3):440-4.

Smirnov A, Panatta E, Lena A, Castiglia D, Di Daniele N, Melino G, Candi E. FOXM1 regulates proliferation, senescence and oxidative stress in keratinocytes and cancer cells. Aging. 2016;8(7):1384-97.

Peintner L, Novelli F, **Smirnov** A, Maurer U, Borner C, von Karstedt S. 9th Tuscany Retreat on Cancer Research: genetic profiling, resistance mechanisms and novel treatment concepts in cancer. Cell Death & Differentiation. 2015;23(1):183-4.

CONFERENCES

Organisation

09/2026 | CDDis and 32nd ECDO conference | Favignana, Italy (secretariat)
03/2026 | Symposium "From sequencing to discovery" | Rome, Italy (organiser)
12/2024 | Host-microbe co-evolution: symbiosis, infection & autophagy | Rome, Italy (secretariat)

Oral presentations

08/2025 | 13th Tuscany Retreat on Cancer Research and Apoptosis | Chiusi, Italy
06/2025 | p53/p63/p73 workshop | Dundee, UK
11/2024 | p53 family members mini-workshop | Rome, Italy
05/2024 | Symposium on Cancer Challenges | Frascati, Italy
10/2023 | Inflammation and cancer international conference | Kazan, Russia
06/2023 | SIBBM Conference | Bari, Italy
08/2017 | 10th Tuscany Retreat on Cancer Research | Sarteano-Siena, Italy
08/2015 | 9th Tuscany Retreat on Cancer Research | Sarteano-Siena, Italy

Posters

04/2025 | AACR Annual meeting 2025 | Chicago, USA
11/2024 | CSHL meeting on Epigenetics | Cold Spring Harbor, New York, USA
06/2024 | PNRR HEAL ITALIA annual meeting | Palermo, USA
05/2025 | 19th p53 meeting | Trieste, Italy
12/2019 | Ludwig Retreat | Oxford, UK
03/2014 | Biotechnology and quality of life | Moscow, Russia