



PERSONAL INFORMATION

NICOLE GRANDI

Associate Professor in Microbiology
University of Cagliari, Dept. of Life and Environmental Sciences

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Gender Female

Nationality Italian

Date of birth 23/07/1987

WORK EXPERIENCE

From 2025 to present

- **Associate Professor in Microbiology**
- Dept. of Life and Environmental Sciences, University of Cagliari

From 2023 to present

- **Member of the Doctoral College**
- PhD programme in Life, Environmental and Drug Sciences, University of Cagliari

From 2021 to present

- **Lecturer in Bioinformatics**
- Master Course in Cellular and Molecular Biology, curriculum Advanced Cellular Studies - Faculty of Biology, University of Cagliari

From 2019 to present

- **Leader of the Bioinformatics Research Unit**
- Laboratory of Molecular Virology, PI Prof. Enzo Tramontano
- Dept. of Life and Environmental Sciences, University of Cagliari

From 2019 to present

- **Lecturer in Microbial Biology**
- Master Courses in Cellular and Molecular Biology and in Marine Bio-Ecology - Faculty of Biology, University of Cagliari

From 2022 to 2025

- **Assistant Professor in Microbiology (RTDB)**
- Dept. of Life and Environmental Sciences, University of Cagliari

From 2019 to 2022

- **Assistant Professor in Microbiology (RTDA)**
- Dept. of Life and Environmental Sciences, University of Cagliari

From 2017 to 2019

- **Post-Doc Research Fellow**
- Dept. of Life and Environmental Sciences, University of Cagliari

EDUCATION AND TRAINING

September 2021

National Scientific Abilitation (ASN) – Associate Professor
Competition sector 05/I2 – Microbiology
Valid until 15 September 2030

From 2014 to 2017

- **PhD in Life, Environmental, and Drug Sciences**
- Dept. of Life and Environmental Sciences, University of Cagliari

From 2010 to 2012

- **Master's degree in health biology**
- Dept. of Experimental Evolutionary Biology, University of Bologna

From 2006 to 2010

- **Bachelor Degree in Biological Sciences**
- Dept. of Experimental Evolutionary Biology, University of Bologna

- **Awards**

Luria Award 2022 for the outstanding work presented at the 6th National Congress of the Italian Society for Virology

- **Editorial activity**

- Editorial board member for Biology (special issue guest editor) and Pathogens since 2020
- Reviewer board member for The Lancet Microbe and PNEXUS (since 2025), Journal of Molecular Evolution and Frontiers in Neurology (since 2024); Microorganisms (since 2020); Frontiers in Genetics, Molecular Biology Reports, and Viruses (since 2019); Frontiers in Immunology, Retrovirology, Virus Research, International Journal of Microbiology Research (since 2018); Frontiers in Microbiology (since 2017).

- **Invited Speaker**

1. “*Study of HERV expression in RNAseq data: a potential source of innovative biomarkers and therapeutic targets*” 3rd Interdisciplinary Insights in Antiviral Research Workshop & Mini Symposium on Drug Development, 13-14/05/2025, Cagliari (Italy)
2. “*HERV and cancer: harmless bystanders or pathological contributors?*” Advanced School in Microbiology and Host Microbe Interaction, Italian Society for General Microbiology and Microbial Biotechnology (SIMGBM), 25/02/2025 (online)
3. “*Human endogenous retroviruses - domesticated but unpredictable genome colonizers*” 8th National Congress of the Italian Society for Virology (SIV-ISV), 07-09/07/2024, Bologna (Italy)
4. “*Friends or Foes? Human Endogenous Retroviruses: physiological roles and transcriptional modulation in diseased conditions*” Dip. di Area Medica, Università degli Studi di Udine, 22/06/2023, Udine (Italy)
5. “*Characterization of HERV integrations in the human genome and analysis of their differential expression in high throughput RNA-sequencing data*”. Virology colloquium of the Institute of Medical Virology and Epidemiology of Viral Diseases, 05/05/2021 - University Klinik Tübingen, Tübingen (Germany);
6. “*Contribution of individual HERV loci to the human transcription and their differential expression in multiple sclerosis samples*”. 3rd International Workshop on Human Endogenous Retroviruses and disease, 5-6/11/2019, Lyon (France).

- **Grants**

- **July 2025 – June 2026: Scientific Responsible**, project " Exploration of upregulated HERV loci in Multiple Sclerosis as diagnostic biomarkers and

potential therapeutic targets" Proof of Concept 2024, Sardegna Ricerche and Regione Sardegna

- **March 2025 – June 2027: Scientific Responsible**, project "Metagenomic and metatranscriptomic characterization of structural and functional microbial diversity in a hyperhaline anthropogenic environment - META-SALT". Fondazione di Sardegna 2023
- **June 2024 – June 2025: Unit member**, project "Antiviral DiscoVery Initiatives: Educating Next-Gen Scientists (ADVISE)". PNRR ECS_00000024 ROME TECHNOPOLE, Spoke 3 - University education, industrial PhD courses, internationalization grant
- **December 2023 – February 2026: Scientific Responsible**, project "Identification of HERVs with prognostic and diagnostic value for preeclampsia – PRE-HERV" PRIN PNRR 2022
- **October 2023 – February 2026: Unit responsible**, project "Neglected microbial diversity of coastal hypersaline environments and marine transition areas - Maricostems" PRIN 2022
- **October 2022 – February 2026: Unit member**, project "INF-ACT, One Health Basic and Translational Research Actions addressing Unmet Needs on Emerging Infectious Diseases" PNRR PE13 MUR
- **October 2022 – December 2024: Unit member**, project "Implementation of a Sardinian platform in anticipation of virus emergencies with epidemic/pandemic potential (VIR-UNICA)". Regione Autonoma della Sardegna (RAS)
- **July 2022 – June 2023: Scientific Responsible**, project "Validation of specific endogenous retroviral sequences (HERV) as innovative biomarkers for the diagnosis of Multiple Sclerosis - HERV4SM". Proof of Concept 2022, Sardegna Ricerche and Regione Sardegna
- **March 2021 – June 2023: Unit member**, project "Identification of single differentially expressed HERV-W loci in multiple sclerosis patients as specific biomarkers and innovative therapeutic targets". Fondazione Italiana Sclerosi Multipla (FISM)
- **January 2021 - January 2023: Scientific Responsible**, project "Study of the intra-individual genetic variability of SARS-CoV-2 along the infection and in the different biological samples (Varia4CoV)". SR4CoVid call, Sardegna Ricerche and Regione Sardegna
- **September 2020 – September 2022: Unit member**, project "CarGen4CoV: Genetic Characterization of SARS-CoV-2 circulating in Sardinia". SR4CoVid call, Sardegna Ricerche and Regione Sardegna

- **Patents**

Grandi N, Pisano MP, Tramontano E. Diagnosi in vitro della Sclerosi Multipla, Patent n. 102020000017113 for University of Cagliari (22/09/2022)

PERSONAL SKILLS

- **Language skills**

Italian (mother tongue)
English (C1 level)

- **Job related skills**

- Main techniques of molecular biology (nucleic acids and protein purification, electrophoresis, PCR and RT-PCR, qPCR, NGS, etc.)
- Management of cell cultures and viral infections (BSL2 and BSL3)

- **Digital skills**
 - Creation and application of bioinformatics workflow and pipelines for the processing and analysis of omic datasets
 - Genome assembly and transcript *de novo* reconstruction
 - Clustering and differential expression analyses
 - Basic skills in programming
- **Other skills**

Organization and management of scientific events including summer schools (Innovative Approaches for Antiviral Agents Summer School – IAAASS, from 3rd to 7th edition, 2016 to 2024), scientific congresses (XXXIV^o Microbiology congress of the Italian Society for General Microbiology and Microbial Biotechnology – SIMGBM, 21-24/09/2023) and other educational initiatives (ADVISE educational network)

OTHER INFORMATION

- **Research statement**

My research activity as leader of the Bioinformatic Team of the Lab. of Molecular Virology is based on the use of omics approaches (primarily genomics and transcriptomics, integrated with proteomics, lipidomics, and metabolomics) for the characterization of microbial and viral genomes and the analysis of their expression in extreme environments and pathological conditions. Accordingly, my main research lines are:

 - the genomic characterization of Human Endogenous Retroviruses, to identify specific elements that are modulated in the transcriptome of pathological contexts and explore them as biomarkers and therapeutic targets
 - the metagenomic and metatranscriptomic analysis of archaea, bacteria, protist, and virus diversity in hypersaline environments and the study of their adaptive mechanisms
 - the analysis of host-virus interplay during infections, to identify relevant molecular interactions and characterize their impact on cellular transcriptome and proteome as well as on its metabolic pathways, to unveil their interactome and find new antiviral targets
 - the genomic diversity of SARS-CoV-2 and its evolution along the pandemics
- **Oral presentations at national and international congresses**
 - 1) *Preliminary characterization of the microbial community living in a multi-pond solar saltern located in south Sardinia.* Metta E, Muñoz-Palazon B, Mastio C, Lai F, Gorrasi S, Tramontano E, Pusceddu A, **Grandi N.** Microbiology 2025: XXXV Congress of the Italian Society of General Microbiology and Microbial Biotechnology (SIMGBM), 17-20/09/2025, University Roma Tre, Rome (Italy)
 - 2) *Identification of specific HERV loci differentially expressed in Multiple Sclerosis patients as potential biomarkers and therapeutic targets.* Cabiddu C, Caredda A, Frau J, Cocco E, Tramontano E, **Grandi N.** 9th European Congress of Virology (ECV), 27-30/04/2025, Cavtat-Dubrovnik (Croatia);
 - 3) *Human endogenous retroviruses (HERVs) transcriptome in PBMC is modulated during SARS-CoV-2 infection and allows to discriminate COVID19 clinical stages.* **Grandi N,** Erbi MC, Tramontano E. 6^o Congresso Nazionale SIV-ISV – One Virology One Health (Società Italiana Virologia-Italian Society for Virology), 3-5/07/2022, Naples, Italy (awarded with the Luria Award 2022)

- 4) *Early diffusion of SARS-CoV-2 infection in the inner area of the Italian Sardinia island.* **Grandi N**, Piras G, Monne M, Asproni R, Fancello T, Fiamma M, Mameli G, Casu G, lo Maglio I, Palmas AD, and Tramontano E. 5° Congresso Nazionale SIV-ISV – One Virology One Health (Società Italiana Virologia-Italian Society for Virology), 5-6/07/2021;
- 5) *Identification, comprehensive characterization and comparative genomics of the HERV-K(HML8) integrations in the human genome.* **Grandi N**, Pisano MP, Scognamiglio S, Pessiu E, and Tramontano E. 46th meeting on Retroviruses – Cold Spring Harbor Laboratory, 25 – 28/05/2021, Cold Spring Harbor, NY (USA);
- 6) *HERV-W group evolutionary history: characterization of the group in non-human primates and identification of highly related sequences in New World Monkeys.* **Grandi N**, Cadeddu M, Blomberg J, Mayer J, Tramontano E. 6th European Congress of Virology (ECV), 19-22/10/2016, Congress Center Hamburg (CCH), Hamburg (Germany);
- 7) *HERV-W group characterization provides insights for potential innovative therapeutic targets for Multiple Sclerosis and other human diseases.* **Grandi N**, Cadeddu M, Blomberg J, Tramontano E. 3rd Innovative Approaches for novel Antiviral Agents Summer School (IAAASS), 28/09–3/10/2016, Pula (CA) (Italy);
- 8) *Phylogenic analysis of human MMTV sequences.* **Grandi N**, Bevilacqua G, Tramontano E. II International Workshop on MMTV and Human Diseases, 22-23/09/2016, Auditorium di Palazzo Blu, Pisa (Italy);
- 9) *HERV-W presence and evolution within the primates lineage: characterization of the group in non-human primates and identification of highly related elements in New World Monkeys.* **Grandi N**, Cadeddu M, Blomberg J, Mayer J, Tramontano E. XIV Congresso della Federazione Italiana Scienze della Vita (FISV), 20 – 23/09/2016, Università La Sapienza, Roma (Italy);
- 10) *Human Endogenous Retrovirus type w distribution in the human genome: identification and characterization of a new set of proviral sequences in GRCh37/hg19 assembly.* **Grandi N**, Cadeddu M, Blomberg J, Tramontano E. 12° Congresso della Società Italiana di Virologia (SIV), 22 – 24/09/2014, Orvieto (Italy);
- 11) *Determination of HIV-1 tropism on cellular DNA: use in clinical practice.* **Grandi N**, Bon I, Clò A, Morini S, Miserocchi A, Gibellini D, Re MC. 40° congresso nazionale della Società Italiana Microbiologia (SIM), 10-12/10/2012, Riccione (Italy).

- **Publications**

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Scopus ID: 55486470000

47 publications in international, peer-reviewed journals; h-index = 20

- 1) Corona A., Cagno V., **Grandi N**, Fanunza E., Esposito F., Seley-Radtke K.L., Tramontano E. Meeting report: Seventh summer school on innovative approaches for identification of antiviral agents (IAAASS) (2025) Antiviral Research, DOI: 10.1016/j.antiviral.2025.106170
- 2) **Grandi N**, Liu C-H., Chabukswar S., Carta D., Yen Y., Lin L-T., Tramontano E. HERV modulation in colorectal carcinoma patients: a snapshot of endogenous retroviral transcriptome (2025) Journal of Medical Virology, DOI: 10.1002/jmv.70249
- 3) Pichiri G., Piludu M., Congiu T., **Grandi N**, Coni P., Piras M., Jaremko M., Lachowicz J.I. Kojic Acid Derivative as an Antimitotic Agent That Selectively Kills Tumour Cells (2025) Pharmaceuticals, DOI: 10.3390/ph18010011

- 4) Di Giorgio E., Xodo S., Orsaria M., Mariuzzi L., Picco R., Tolotto V., Cortolezzis Y., D'Este F., **Grandi N.**, Driul L., Londero A., Xodo L.E. The central role of creatine and polyamines in fetal growth restriction (2024) *FASEB Journal*, DOI: 10.1096/fj.202401946R
- 5) **Grandi N.**, Cusano R., Piras G., Fiamma M., Monne M.I., [...], Palmas A.D., Rubino S., Tramontano E. The impact of insularity on SARS-CoV-2 diffusion: Recapitulating three years of COVID-19 pandemic in the island of Sardinia (2024) *Journal of Infection and Public Health*, DOI: 10.1016/j.jiph.2024.102496
- 6) Vickos U., Camasta M., **Grandi N.**, Scognamiglio S., [...], Perno C.F., Zinzula L., Rafai C.D. COVID-19 Genomic Surveillance in Bangui (Central African Republic) Reveals a Landscape of Circulating Variants Linked to Validated Antiviral Targets of SARS-CoV-2 Proteome (2023) *Viruses*, DOI: 10.3390/v15122309
- 7) Chabukswar S., **Grandi N.**, Lin L.-T., Tramontano E. Envelope Recombination: A Major Driver in Shaping Retroviral Diversification and Evolution within the Host Genome (2023) *Viruses*, DOI: 10.3390/v15091856
- 8) Scognamiglio, S., **Grandi, N.**, Pessiu, E., Tramontano, E. Identification, comprehensive characterization, and comparative genomics of the HERV-K(HML8) integrations in the human genome (2023) *Virus Research*, DOI: 10.1016/j.virusres.2022.198976
- 9) **Grandi, N.**, Erbi, M.C., Scognamiglio, S., Tramontano, E. Human Endogenous Retrovirus (HERV) Transcriptome Is Dynamically Modulated during SARS-CoV-2 Infection and Allows Discrimination of COVID-19 Clinical Stages (2023) *Microbiology Spectrum*, DOI: 10.1128/spectrum.02516-22
- 10) Chabukswar, S., **Grandi, N.**, Tramontano, E. Prolonged activity of HERV-K(HML2) in Old World Monkeys accounts for recent integrations and novel recombinant variants (2022) *Frontiers in Microbiology*, DOI: 10.3389/fmicb.2022.1040792
- 11) **Grandi, N.**, Paglietti, B., Cusano, R., Ibba, G., Lai, V., Piu, C., Angioj, F., Serra, C., Kelvin, D.J., Tramontano, E., Rubino, S. Genomic Snapshot of SARS-CoV-2 in Migrants Entering Through Mediterranean Sea Routes (2022) *Frontiers in Public Health*, DOI: 10.3389/fpubh.2022.846115
- 12) Fanunza, E., **Grandi, N.**, Quartu, M., Carletti, F., Ermellino, L., Milia, J., Corona, A., Capobianchi, M.R., Ippolito, G., Tramontano, E. INM11 zika virus NS4B antagonizes the interferon signaling by suppressing STAT1 phosphorylation (2021) *Viruses*, DOI: 10.3390/v13122448
- 13) **Grandi, N.**, Tramontano, E., Berkhout, B. Integration of SARS-CoV-2 RNA in infected human cells by retrotransposons: an unlikely hypothesis and old viral relationships (2021) *Retrovirology*, DOI: 10.1186/s12977-021-00578-w
- 14) Díaz-Carballo, D., Saka, S., Acikelli, A.H., Homp, E., Erwes, J., Demmig, R., Klein, J., [...], Tannapfel, A., **Grandi, N.**, Tramontano, E., Ochsenfarth, C., Strumberg, D. Enhanced antitumoral activity of TLR7 agonists via activation of human endogenous retroviruses by HDAC inhibitors (2021) *Communications Biology*, DOI: 10.1038/s42003-021-01800-3
- 15) Messore, A., Corona, A., Madia, V.N., Saccoliti, F., [...], Andreola, M.-L., Esposito, F., **Grandi, N.**, Tramontano, E., Costi, R., Di Santo, R. Quinolinonyl Non-Diketo Acid Derivatives as Inhibitors of HIV-1 Ribonuclease H and Polymerase Functions of Reverse Transcriptase (2021) *Journal of Medicinal Chemistry*, 64 (12), pp. 8579-8598. DOI: 10.1021/acs.jmedchem.1c00535
- 16) **Grandi, N.**, Pisano, M.P., Pessiu, E., Scognamiglio, S., Tramontano, E. HERV-K(HML7) integrations in the human genome: Comprehensive

- characterization and comparative analysis in non-human primates (2021) *Biology*, 10 (5), art. no. 439. DOI: 10.3390/biology10050439
- 17) Pisano, M.P., **Grandi, N.**, Tramontano, E. Human endogenous retroviruses (HERVs) and mammalian apparent Ltrs retrotransposons (MALRs) are dynamically modulated in different stages of immunity (2021) *Biology*, 10 (5), art. no. 405. DOI: 10.3390/biology10050405
 - 18) Ferrari, R., **Grandi, N.**, Tramontano, E., Dieci, G. Retrotransposons as drivers of Mammalian brain evolution (2021) *Life*, DOI: 10.3390/life11050376
 - 19) Piras, G., **Grandi, N.**, Monne, M., Asproni, R., Fancello, T., Fiamma, M., Mamei, G., Casu, G., lo Maglio, I., Palmas, A.D., Tramontano, E. Early Diffusion of SARS-CoV-2 Infection in the Inner Area of the Italian Sardinia Island (2021) *Frontiers in Microbiology*, DOI: 10.3389/fmicb.2020.628194
 - 20) Fanunza, E., Carletti, F., Quartu, M., **Grandi, N.**, Ermellino, L., Milia, J., Corona, A., Capobianchi, M.R., Ippolito, G., Tramontano, E. Zika virus NS2A inhibits interferon signaling by degradation of STAT1 and STAT2 (2021) *Virulence*, DOI: 10.1080/21505594.2021.1935613
 - 21) Pisano, M.P., Tabone, O., Bodinier, M., **Grandi, N.**, Textoris, J., Mallet, F., Tramontano, E. RNA-seq transcriptome analysis reveals long terminal repeat retrotransposon modulation in human peripheral blood mononuclear cells after in vivo lipopolysaccharide injection (2020) *Journal of Virology*, DOI: 10.1128/JVI.00587-20
 - 22) Lessi, F., **Grandi, N.**, Mazzanti, C.M., Civita, P., Scatena, C., Aretini, P., Bandiera, P., Fornaciari, A., Giuffra, V., Fornaciari, G., Naccarato, A.G., Tramontano, E., Bevilacqua, G. A human MMTV-like betaretrovirus linked to breast cancer has been present in humans at least since the copper age (2020) *Aging*, DOI: 10.18632/aging.103780
 - 23) Liu, C.-H., **Grandi, N.**, Palanivelu, L., Tramontano, E., Lin, L.-T. Contribution of human retroviruses to disease development-A focus on the HIV- And HERV-cancer relationships and treatment strategies (2020) *Viruses*, DOI: 10.3390/v12080852
 - 24) Corona, A., Ballana, E., Distinto, S., Rogolino, D., Del Vecchio, C., Carcelli, M., Badia, R., Esposito, F., Parolin, C., Esté, J.A., Riveira-Muñoz, E., **Grandi, N.**, Tramontano, E. Targeting HIV-1 RNase H: N'-(2-Hydroxybenzylidene)-3,4,5-Trihydroxybenzoylhydrazone as Selective Inhibitor Active against NNRTIs-Resistant Variants (2020) *Viruses*, DOI: 10.3390/v12070729
 - 25) Pisano, M.P., **Grandi, N.**, Tramontano, E. High-throughput sequencing is a crucial tool to investigate the contribution of human endogenous retroviruses (HERVs) to human biology and development (2020) *Viruses*, DOI: 10.3390/v12060633
 - 26) Messore, A., Corona, A., Madia, V.N., Saccoliti, F., Tudino, V., [...], Valenti, P., Esposito, F., **Grandi, N.**, Tramontano, E., Costi, R., Di Santo, R. Pyrrolyl pyrazoles as non-diketo acid inhibitors of the HIV'1 ribonuclease H function of reverse transcriptase (2020) *ACS Medicinal Chemistry Letters*, DOI: 10.1021/acsmchemlett.9b00617
 - 27) **Grandi, N.**, Pisano, M.P., Scognamiglio, S., Pessiu, E., Tramontano, E. Comprehensive analysis of HERV transcriptome in HIV+ cells: Absence of HML2 activation and general downregulation of individual HERV loci (2020) *Viruses*, DOI: 10.3390/v12040481
 - 28) **Grandi, N.**, Pisano, M.P., Demurtas, M., Blomberg, J., Magiorkinis, G., Mayer, J., Tramontano, E. Identification and characterization of ERV-W-like sequences in Platyrrhini species provides new insights into the evolutionary history of ERV-W in primates (2020) *Mobile DNA*, DOI: 10.1186/s13100-020-0203-2
 - 29) Esposito, F., Sechi, M., Pala, N., Sanna, A., Koneru, P.C., Kvaratskhelia, M., Naesens, L., Corona, A., **Grandi, N.**, di Santo, R., D'Amore, V.M., Di

- Leva, F.S., Novellino, E., Cosconati, S., Tramontano, E. Discovery of dihydroxyindole-2-carboxylic acid derivatives as dual allosteric HIV-1 Integrase and Reverse Transcriptase associated Ribonuclease H inhibitors (2020) *Antiviral Research*, DOI: 10.1016/j.antiviral.2019.104671
- 30) **Grandi, N.**, Pisano, M.P., Tramontano, E. The emerging field of human endogenous retroviruses: Understanding their physiological role and contribution to diseases (2019) *Future Virology*, DOI: 10.2217/fvl-2019-0061
- 31) Pisano, M.P., **Grandi, N.**, Cadeddu, M., Blomberg, J., Tramontano, E. Comprehensive characterization of the human endogenous retrovirus HERV-K(HML-6) Group: Overview of structure, phylogeny, and contribution to the human genome (2019) *Journal of Virology*, DOI: 10.1128/JVI.00110-19
- 32) Costa, G., Rocca, R., Corona, A., **Grandi, N.**, Moraca, F., Romeo, I., Talarico, C., Gagliardi, M.G., Ambrosio, F.A., Ortuso, F., Alcaro, S., Distinto, S., Maccioni, E., Tramontano, E., Artese, A. Novel natural non-nucleoside inhibitors of HIV-1 reverse transcriptase identified by shape- and structure-based virtual screening techniques (2019) *European Journal of Medicinal Chemistry*, DOI: 10.1016/j.ejmech.2018.10.029
- 33) Virgilio, A., Amato, T., Petraccone, L., Esposito, F., **Grandi, N.**, Tramontano, E., Romero, R., Haider, S., Gomez-Monterrey, I., Novellino, E., Mayol, L., Esposito, V., Galeone, A. Improvement of the activity of the anti-HIV-1 integrase aptamer T30175 by introducing a modified thymidine into the loops (2018) *Scientific Reports*, DOI: 10.1038/s41598-018-25720-1
- 34) **Grandi, N.**, Tramontano, E. Human endogenous retroviruses are ancient acquired elements still shaping innate immune responses (2018) *Frontiers in Immunology*, DOI: 10.3389/fimmu.2018.02039
- 35) **Grandi, N.**, Tramontano, E. HERV envelope proteins: Physiological role and pathogenic potential in cancer and autoimmunity (2018) *Frontiers in Microbiology*, DOI: 10.3389/fmicb.2018.00462
- 36) **Grandi, N.**, Cadeddu, M., Blomberg, J., Mayer, J., Tramontano, E. HERV-W group evolutionary history in non-human primates: Characterization of ERV-W orthologs in Catarrhini and related ERV groups in Platyrrhini (2018) *BMC Evolutionary Biology*, DOI: 10.1186/s12862-018-1125-1
- 37) Poongavanam, V., Corona, A., Steinmann, C., Scipione, L., **Grandi, N.**, Pandolfi, F., Di Santo, R., Costi, R., Esposito, F., Tramontano, E., Kongsted, J. Structure-guided approach identifies a novel class of HIV-1 ribonuclease H inhibitors: Binding mode insights through magnesium complexation and site-directed mutagenesis studies (2018) *MedChemComm*, DOI: 10.1039/c7md00600d
- 38) **Grandi, N.**, Cadeddu, M., Pisano, M.P., Esposito, F., Blomberg, J., Tramontano, E. Identification of a novel HERV-K(HML10): Comprehensive characterization and comparative analysis in non-human primates provide insights about HML10 proviruses structure and diffusion (2017) *Mobile DNA*, DOI: 10.1186/s13100-017-0099-7
- 39) **Grandi, N.**, Tramontano, E. Type W human endogenous retrovirus (HERV-W) integrations and their mobilization by L1 machinery: Contribution to the human transcriptome and impact on the host physiopathology (2017) *Viruses*, DOI: 10.3390/v9070162
- 40) Esposito, F., Carli, I., Del Vecchio, C., Xu, L., Corona, A., **Grandi, N.**, Piano, D., Maccioni, E., Distinto, S., Parolin, C., Tramontano, E. Sennoside A, derived from the traditional chinese medicine plant *Rheum L.*, is a new dual HIV-1 inhibitor effective on HIV-1 replication (2016) *Phytomedicine*, DOI: 10.1016/j.phymed.2016.08.001
- 41) **Grandi, N.**, Cadeddu, M., Blomberg, J., Tramontano, E. Contribution of type W human endogenous retroviruses to the human genome:

- Characterization of HERV-W proviral insertions and processed pseudogenes (2016) *Retrovirology*, DOI: 10.1186/s12977-016-0301-x
- 42) Pala, N., Esposito, F., Rogolino, D., Carcelli, M., Sanna, V., Palomba, M., Naesens, L., Corona, A., **Grandi, N.**, Tramontano, E., Sechi, M. Inhibitory effect of 2,3,5,6-tetrafluoro-4-[4-(Aryl)-1H-1,2,3-triazol-1-yl]benzenesulfonamide derivatives on HIV reverse transcriptase associated RNase H activities (2016) *International Journal of Molecular Sciences*, DOI: 10.3390/ijms17081371
- 43) Tintori, C., Corona, A., Esposito, F., Brai, A., **Grandi, N.**, Ceresola, E.R., Clementi, M., Canducci, F., Tramontano, E., Botta, M. Inhibition of HIV-1 Reverse Transcriptase Dimerization by Small Molecules (2016) *ChemBioChem*, DOI: 10.1002/cbic.201500668
- 44) Vargiu, L., Rodriguez-Tomé, P., Sperber, G.O., Cadeddu, M., **Grandi, N.**, Blikstad, V., Tramontano, E., Blomberg, J. Classification and characterization of human endogenous retroviruses mosaic forms are common (2016) *Retrovirology*, DOI: 10.1186/s12977-015-0232-y
- 45) Xu, L., **Grandi, N.**, Del Vecchio, C., Mandas, D., Corona, A., Piano, D., Esposito, F., Parolin, C., Tramontano, E. From the traditional Chinese medicine plant *Schisandra chinensis* new scaffolds effective on HIV-1 reverse transcriptase resistant to non-nucleoside inhibitors (2015) *Journal of Microbiology*, DOI: 10.1007/s12275-015-4652-0
- 46) Carcelli, M., Rogolino, D., Sechi, M., Rispoli, G., Fiscaro, E., Compari, C., **Grandi, N.**, Corona, A., Tramontano, E., Pannecouque, C., Naesens, L. Antiretroviral activity of metal-chelating HIV-1 integrase inhibitors (2014) *European Journal of Medicinal Chemistry*, DOI: 10.1016/j.ejmech.2014.06.055
- 47) Re, M.C., Bon, I., **Grandi, N.**, Miserocchi, A., Morini, S., Clo, A., Furlini, G., Gibellini, D. Recent and long-lasting infections: The need for avidity testing in HIV-1 infected subjects (2012) *New Microbiologica*

Cagliari, 13th October 2025

