Giulio Spinozzi

Curriculum Vitae

Researcher, PhD
Data Science, Bioinformatics

I don't know what I may appear to the world, but to myself I seem to have been only a boy playing on the sea-shore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me. [I. Newton]

Info

ORCID	0000-0002-4220-2474	Scopus ID	56414693700
ResearcherID	T-8085-2019		

Education

2014-2017 — **Ph.D. in Computer Science**, *University of Milano-Bicocca*, Milan, Italy.
Anti-Cancer Drug Resistance Causal Modeling from Lentiviral-Vector Integration Site Studies

2010-2012 — **M.Sc. in Computer and Automation Engineering**, *University of Perugia*, Perugia, Italy.
Dynamics and Modeling Tools for the Experimental Evaluation of the Behavior of EGFR-IGF1R Pathway for the H1650 Cell Line

2004-2009 — **B.Sc. in Computer and Electronic Engineering**, *University of Perugia*, Perugia, Italy.
Project of a Control System for a Robot based on CAN Bus

Job Positions

2019-Present — **Senior PostDoc** - San Raffaele Telethon Institute for Gene Therapy (SR-Tiget), Ospedale San Raffaele - Milan
In charge of the analyses of lentiviral vector integration sites on preclinical models and gene therapy patients
https://research.hsr.it/en/institutes/san-raffaele-telethon-institute-for-gene-therapy/safety-of-gene-therapy-and-insertional-mutagenesis.html

2021-Present — **Postdoctoral Researcher and Lecturer** - University of Perugia, Department of Medicine, Section of Hematology - Perugia
Bioinformatics Coordinator
AIRC Funded - AIRC_2019_MARTELLI

2017-2021 — *Postdoctoral Researcher and Lecturer* - University of Perugia, Department of Medicine, Section of Hematology - Perugia
ERC Funded - ERC-2016-COG - http://erc.martellilab.eu

2013-2018 — *Bioinformatics Engineer* - San Raffaele Telethon Institute for Gene Therapy (SR-Tiget), Ospedale San Raffaele - Milan

2011-2012 — Fellowship in Systems Biology, Santa Maria della Misericordia Hospital - Perugia

2008-2009 — Web Developer, Sintesi srl - Perugia

Research Interests

Bioinformatics and Informatics
Gene Therapy
Cancer
Hematopoietic Stem Cells
Systems Biology

Big Data and Machine Learning
Control Systems and Systems Theory

Conferences and Meetings

2021   *Bioinformatics Italian Society (BITS), Annual Meeting 2021*, Virtual for COVID-19, 1-2 July 2021

2021   *YoungEHA (European Hematology Association) Research Meeting 2021*, Virtual for COVID-19, 10 June 2021

2021   *European Hematology Association (EHA) 2021*, Virtual for COVID-19, 9-17 June 2021

2021   *American Society of Gene and Cell Therapy (ASGCT) 2021*, Virtual for COVID-19, 11-14 May 2021

2020   *YoungEHA (European Hematology Association) Research Meeting 2020*, Virtual for COVID-19, 11 June 2020

2020   *American Society of Gene and Cell Therapy (ASGCT) 2020*, Virtual for COVID-19, 12-15 May 2020

2019   *Network Tools and Applications in Biology and Bioinformatics and Computational Biology Conference (NETTAB/BBCC) 2019*, Fisciano (SA), 11-13 November 2019

2019   *SR-Tiget Retreat 2019*, Milano, 4-6 November 2019

2019   *Computational Intelligence methods for Bioinformatics and Biostatistics (CIBB) 2019*, Bergamo, 4-6 September 2019

2018   *Bioinformatics and Computational Biology Conference (BBCC) 2018*, Napoli, 19-21 November 2018

2018   *American Association for Cancer Research (AACR) 2018*, Chicago, USA 14-18 April 2018

2018   *Cancer Genetics, Yesterday, Today and Tomorrow*, Perugia, Italy 19-20 January 2018

2017   *American Society of Gene and Cell Therapy (ASGCT) 2017*, Washington, USA 9-13 May 2017

2017   *Telethon Convention*, Riva del Garda, Italy 13-15 March 2017

2016   *European Society of Gene and Cell Therapy (ESGCT) 2016*, Florence, Italy 18-21 October 2016

2016   *24th Annual International Conference on Intelligent Systems for Molecular Biology*, Orlando (USA, Florida) 7-13 July 2016

2016   *Bioinformatics Italian Society (BITS), Annual Meeting 2016*, Salerno 15-17 June 2016

2016   *Telethon Tri-Retreat*, Roma 26-28 May 2016

2016   *San Raffaele Scientific Retreat 2016*, Baveno 18-20 March 2016

2015   *2nd Workshop and School on Cancer, Systems and Complexity*, Como 29 September-3 October 2015

2015   *23rd Annual International Conference on Intelligent Systems for Molecular Biology and the 14th European Conference on Computational Biology*, Dublin 10-14 July 2015

2015   *Bioinformatics Italian Society (BITS), Annual Meeting 2015*, Milan 3-5 June 2015

2015   *San Raffaele Scientific Retreat 2015*, Stresa 13-15 March 2015

2014   *1st Workshop and School on Cancer, Systems and Complexity*, Como 28 September-2 October 2014

2014   *Bioinformatics Italian Society (BITS), Annual Meeting 2014*, Rome 26-28 February 2014

2013   *San Raffaele Scientific Retreat 2013*, Milan 29-30 November 2013

2009   Invited to the *XX National Congress AIP-ITCS* ("Associazione Informatici Professionisti - Italian Computer Society"), Assisi (PG) May 2009

Seminars and Teaching Activity

2018   *Seminar* (University of Perugia, Prof. Gianluca Vinti, Department of Mathematics and Informatics) "Functional genomics studies in acute myeloid leukemia with nucleophosmin mutation (NPM1)"

2017   *Seminar* (European Institute of Oncology, Prof. Giuseppe Testa, Laboratory of Stem Cell Epigenetics) "Anti-Cancer Drug Resistance Causal Modeling and Side Projects from Lentiviral-Vector Integration Site Studies"

2017   *Seminar* (Imperial College London, Prof. Andrea Crisanti, Crisanti Lab) "Anti-Cancer Drug Resistance Causal Modeling and Side Projects from Lentiviral-Vector Integration Site Studies"

2016   *Computational Biology* (Master of Science in Computer Science, 2nd year, University of Milano-Bicocca), "VISPA2: Faster and Extended Version of VISPA Tool for Integration Site Identification"

2016   *Bioinfo Club* (San Raffaele Hospital, Milan), "ISAnalytics: A tool to handle vector integration site data"

2016   *Bioinfo Club* (San Raffaele Hospital, Milan), "Faster and Extended Version of VISPA Tool for Integration Site Identification"

2015   *Bioinfo Club* (San Raffaele Hospital, Milan), "Anti-Cancer Drug Resistance Causal Modeling from Vector Integration Sites Studies"

2014   *Computational Biology* (Master of Science in Computer Science, 2nd year, University of Milano-Bicocca), "adLIMS: Integrated Laboratory Information Management System"

2012   Western Blot: a new way to quantify and elaborate, *University of Perugia*

Student/Fellow Supervision

2017-Present   *Valentina Tini* (PhD Student, UniPG) - Development of bioinformatics tools and analysis of data from microarray and RNAseq experiments in vivo and in vitro of acute myeloid leukemia with mutation of the NPM1 gene, treated with different drugs. Applications for analyzing the effect of individual drugs and their combinations. Applications and analysis of targeted genomic sequencing panels and exome data in leukemia studies.

2017   *Deepak Kumar Purusothaman* (UniPG) - Combined analysis on the genes considered essential for NPM1-mutated leukemia and drugs considered active (or inactive) specifically for this genetic subtype. A meta-analysis approach, from data available on the two different CRISPR screens drop out databases. The aim is to identify genes, or set of genes, belonging to pathways and cellular processes or known phenomena, which are essential only and specifically for NPM1-mutated AML cells, and can be druggable or represent sensitive targets to known drugs. These results could pave the way for the development of new research lines aimed at further understanding the biology of this particular subtype of leukemia.

2013 - 2016   *Stefano Brasca* (SR-Tiget) - Lentiviral vectors are very proficient tools for gene therapy, due to their ability to integrate in the host genome. This makes them also useful to genetically mark and follow cells in vivo, but poses safety concerns. Thus, the analysis of vector integration sites in target cells is extremely important to address both biological and safety issues. We have set up several state of the art and new techniques to study vector integration and its impact on gene transcript structure and expression levels. The setup of a core activity with validated Standard Operating Procedures, dedicated computational infrastructures and data analysis pipelines has enabled the high-throughput integration site monitoring in different clinical trials and several other scientific projects at SR-Tiget in a fast and cost-effective fashion. New wet-lab protocols for integration site retrieval and sequencing and bioinformatics research projects are being developed to approach the massive amount of samples and data generated, and to enable the correct interpretation of the physiological significance of differences detected in integration profiles.

Fellowships, Grants and Awards

2021-2023   *Research Fellowship* sponsored by AIRC_2019_MARTELLI - Prof. M. P. Martelli

2019   *ELIXIR-IIB 2020-2022* for Bioinformatics Meta-Analysis to Drive Precision Medicine in NPM1-mutated AML, UniPG. - 200000 on GALILEO - ELIX4_spinozzi - P.I. Giulio Spinozzi

2019   *SR-Tiget Retreat 2019* - Invited, Travel Grant

2019   *Italian SuperComputing Resource Allocation* sponsored by CINECA for Vector Integration Studies, SR-Tiget. - 200000 on GALILEO - TEL18_TIGET_0 - P.I. Ivan Merelli

2018   *Italian SuperComputing Resource Allocation* sponsored by CINECA for AML studies, UniPG. - 25000 on MARCON1 - HP10CZ1LLU - P.I. Giulio Spinozzi

2018   *Bioinformatics and Computational Biology Conference (BBCC) 2018* - Travel Grant

2017   *Ricerca Finalizzata, Giovani Ricercatori Theory Enhancing 2016*, Improving the safety and long term efficacy of hematopoietic stem cell based Gene Therapy and optimization of the treatment protocol through in vivo characterization of the stem cell proliferation stress during the hematopoietic reconstitution - GR-2016-02363681 - P.I. Eng. Andrea Calabria

2017-2021   *Research Fellowship* sponsored by ERC-2016-COG - Prof. M. P. Martelli

2016   *Bioinformatics Italian Society, Annual Meeting 2016* - Travel Grant

2015   *Italian SuperComputing Resource Allocation* sponsored by CINECA for VISPA pipeline, developed in SR-Tiget. - 50000 on PICO - P.I. Eng. Andrea Calabria

2014-2017	*PhD Fellowship* sponsored by University of Milano-Bicocca - Tutor: Prof. Giancarlo Mauri, Supervisors: Prof. Marco Antoniotti, Dr. Eugenio Montini
2013	*Fellowship* sponsored by San Raffaele Telethon Institute for Gene Therapy - P.I. Dr. Eugenio Montini

Editorial and Reviewer Activities

2021-Present	**Reviewer** - *JoVE, Journal of Visualized Experiments* (ISSN: 1940-087X)
2020-Present	**Reviewer** - *DATABASE, The Journal of Biological Databases and Curation* (ISSN: 1758-0463)
2019-Present	**Reviewer** - *International Journal of Genomics and Data Mining* (ISSN: 2577-0616)
2019	**Reviewer** - *Computational Intelligence methods for Bioinformatics and Biostatistics* (CIBB 2019)

Certificates

2020	*Immune Therapy: Corning's Solutions revolutionizing the cancer battle field e 3D Cell Culture: Moving from the 2D old school to more physiologically relevant 3D models (1 week)*, Corning and Sial s.r.l, Perugia (PG)
2017	*Cancer Cytogenetics in the era of Next Generation Sequencing (1 week)*, University of Perugia, Perugia (PG)
2017	*Good Laboratory Practice (GLP) Principles (1 week)*, San Raffaele Hospital, Milan (MI)
2015	*Advances in Genome Sequencing: Bringing Next Generation Sequencing to Your Clinical Lab (Illumina)*, San Raffaele Hospital, Milan (MI)
2015	*PhD English Course for the doctoral program. Advanced Level C1 (32 weeks)*, University of Milano-Bicocca, Milan (MI)
2013	*The environment 'R': theoretical and practical course.* November 4th, University of Insubria, Busto Arsizio (VA)
2004	*European Computer Driving Licence* released by AICA ("Italian Association for Informatics and Automatic Calculation") at ITC Capitini of Perugia

Affiliations

2017-Present	*University of Perugia*, Department of Medicine, Section of Hematology, Centro Ricerche Emato-Oncologiche (CREO), Piazzale Menghini 8/9, I-06132 Perugia (PG), Italy
2016-Present	*Bioinformatics Italian Society* (BITS), Associate Member
2013-Present	*San Raffaele Telethon Institute for Gene Therapy* (SR-Tiget), Via Olgettina 58, I-20132 Milan (MI), Italy
2014-2017	*Department of Informatics, Systems and Communication* (DISCo), University of Milano-Bicocca, Building U14, Viale Sarca 336, I-20126 Milan (MI), Italy
2010-2012	*Department of Electronic and Information Engineering, Faculty of Engineering* (DIEI), University of Perugia, Via G. Duranti 93, I-06125 Perugia (PG), Italy
2010-2012	*Service and Industrial Robotics and Automation Laboratory* (SIRALab), University of Perugia, Via G. Duranti 93, I-06125 Perugia (PG), Italy
2010-2012	*Società Italiana Docenti e Ricercatori in Automatica* (SIDRA)
2008-2010	*Linux Users Group Perugia* (LUG-PG)

Computational Skills

Programming	Java, JavaScript, C, C++, SQL, PL/pgSQL, PHP, HTML, CSS, Python, Perl, Ruby, Bash, LaTeX, R, MATLAB
Platforms	High Performance Computing (HPC), Unix, Linux, Windows, Windows Server, Apache, macOS
DBMS	Oracle, MySQL, Access, PostgreSQL, SQLite, Hypersonic
Data Mining	Machine Learning, Artificial Neural Network, Graph Theory, Graph-based Algorithms, Petri Net, Pattern Matching, Pattern Recognition, Support Vector Machines, Clustering
Bioinformatics	Systems Biology (signaling, bayesian networks, ODEs), DNA-seq (Illumina, Roche, Sanger, Ion Torrent and Pac Bio), RNA-seq, Hi-C/4C, Gene Expression, ChIP-Seq, and Gene Editing (CRISPR/Cas9)

Tools	Tableau, Visual Studio IDE, Eclipse IDE, Netbeans IDE, CMAKE Build System, ANT Build System, Git, SVN, Mercurial, GeoGebra, MATLAB, Mathematica, Maple, RStudio, G*Power, BEAST, Microsoft Office, Adobe Creative Suite, AutoCAD, MPLAB IDE, LabView, GraphPad Prism, VNC, CygWin, GnuPg, Dia, Inkscape, ImageJ, GanttProject, EndNote, SnapGene, Integrative Genomics Viewer, FileMaker Pro

Research Publications

2021 Cesana, D., Calabria, A.*, Rudilosso, L.*, Gallina, P., Benedicenti, F., Spinozzi, G., Schiroli, G., Magnani, A., Acquati, S., Fumagalli, F., Calbi, V., Witzel, M., Bushman, F., Cantore, A., Genovese, P., Klein, C., Fischer, A., Cavazzana, M., Six, E., Aiuti, A., Naldini, L., Montini, E. - *Retrieval of vector integrations sites from cell-free DNA*. **Nature Medicine** - 2021, In Press, https://doi.org/10.1038/s41591-021-01389-4

2021 Gionfriddo, I., Brunetti, L., Mezzasoma, F., Milano, F., Cardinali, V., Ranieri, R., Venanzi, A., Pierangeli, S., Vetro, C., Spinozzi, G., Dorillo, E., Wu, H., Berthier, C., Ciurnelli, R., Griffin, M., Jennings, C., Tiacci, E., Sportoletti, P., Falzetti, F., De The, H., Veal, G., Martelli, M.P., Falini, B. - *Dactinomycin induces complete remission associated with nucleolar stress response in relapsed/refractory NPM1-mutated AML*. **Leukemia** - 2021, In Press, https://doi.org/10.1038/s41375-021-01192-7

2021 Sportoletti, P., Sorcini, D., Guzman, A., Reyes. J., Stella, A., Marra, A., Sartori, S., Brunetti, L., Rossi, R., Del Papa, B., Adamo, F., Pianigiani, G., Betti, C., Scialdone, A., Guarente, V., Spinozzi, G., Tini, V., Martelli, M.P., Goodell, M., Falini, B. - *Bcor deficiency perturbs erythro-megakaryopoiesis and cooperates with Dnmt3a loss in acute erythroid leukemia onset in mice*. **Leukemia** - 2021, 35:7, 1949-1963, https://doi.org/10.1038/s41375-020-01075-3

2020 Spinozzi, G.[†], Tini, V., Adorni, A., Falini, B., Martelli, MP.[†] - *ARPIR: Automatic RNA-Seq Pipelines with Interactive Report*. **BMC Bioinformatics** - 2020, 21, 574, https://doi.org/10.1186/s12859-020-03846-2
† Corresponding Author

2020 Calabria, A.*, Beretta, S.*, Merelli, I.*, Spinozzi, G., Brasca, S., Pirola, Y., Benedicenti, F., Tenderini, E., Bonizzoni, P., Milanesi, L., Montini, E. - *γ-TRIS: a graph-algorithm for comprehensive identification of vector genomic insertion sites*. **Bioinformatics** - 2020, 36:5, 1622-1624, https://doi.org/10.1093/bioinformatics/btz747

2019 Petrillo, C., Calabria, A., Piras, F., Capotondo, A., Spinozzi, G., Cuccovillo, I., Benedicenti, F., Naldini, L., Montini, E., Biffi, A., Gentner, B., Kajaste-Rudnitski, A. - *Assessing the impact of Cyclosporine A on lentiviral transduction and preservation of human hematopoietic stem cells in clinically relevant ex-vivo gene therapy settings*. **Human Gene Therapy** - 2019, 30:9, 1133-1146 , https://doi.org/10.1089/hum.2019.016

2019 Sportoletti, P., Celani, L., Varasano, E., Rossi, R., Sorcini, D., Rompietti, C., Strozzini, F., Del Papa, B., Guarente, V., Spinozzi, G., Cecchini, D., Bereshchenko, O., Haferlach, T., Martelli, M.P., Falzetti, F., Falini, B. - *GATA1 epigenetic deregulation contributes to the development of AML with NPM1 and FLT3-ITD cooperating mutations*. **Leukemia** - 2019, 33:7, 1827–1832, https://doi.org/10.1038/s41375-019-0399-7

2019 Marktel, S., Scaramuzza, S., Cicalese, M.P., Giglio, F., Galimberti, S., Calbi, V., Assanelli, A., Bernardo, M.E., Lidonnici, M.R., Rossi, C., Calabria, A., Milani, R., Gattillo, S., Benedicenti, F., Spinozzi, G., Bergami, A., Casiraghi, M., Consiglieri, G., Masera, N., D'Angelo, E., Mirra, N., Origa, R., Winter, R., Coppola, M., Viarengo, G., Santoleri, L., Graziadei, G., Gabaldo, M., Valsecchi, M.G., Montini, E., Naldini, L., Cappellini, M.D., Ciceri, F., Aiuti, A., Ferrari, G. - *Intrabone hematopoietic stem-cell gene therapy for adult and pediatric patients affected by transfusion-dependent β-thalassemia*. **Nature Medicine** - 2019, 25:2, 234-241, https://doi.org/10.1038/s41591-018-0301-6

2018 Spinozzi, G., Tini, V., Mincarelli, L., Falini, B., Martelli, MP. - *A comprehensive RNA-Seq pipeline includes meta-analysis, interactivity and automatic reporting*. **PeerJ Preprints** - 2018, 6:e27317v1 https://doi.org/10.7287/peerj.preprints.27317v1

2017 Spinozzi, G.*, Calabria, A.*, Brasca, S., Beretta, S., Merelli, I., Milanesi, L., Montini, E. - *VISPA2: A Scalable Pipeline for High-Throughput Identification and Annotation of Vector Integration Sites*. **BMC Bioinformatics** - 2017, 18:1, 520 - https://doi.org/10.1186/s12859-017-1937-9

2017 Spinozzi, G. - *Anti-Cancer Drug Resistance Causal Modeling from Lentiviral-Vector Integration Site Studies*, **Bicocca Open Archive** - 2017, http://hdl.handle.net/10281/151647

2016 Visigalli, I., Delai, S., Ferro, F., Cecere, F., Vezzoli, M., Sanvito, F., Benedicenti, F., Spinozzi, G., Calabria, A., Naldini, L., Montini, E., Cristofori, P., Biffi, A. - *Preclinical testing of the safety and tolerability of LV-mediated above normal alpha-L-iduronidase expression in murine and human hematopoietic cells using toxicology and biodistribution GLP studies.* **Human Gene Therapy** - 2016, 27:10, 813-829 - https://doi.org/10.1089/hum.2016.068

2015 Calabria, A., Spinozzi, G., Benedicenti, F., Tenderini, E., Montini, E. - *adLIMS: a customized open source software that allows bridging clinical and basic molecular research studies.* **BMC Bioinformatics** - 2015, 16(Suppl 9):S5 - https://doi.org/10.1186/1471-2105-16-S9-S5

2014 Calabria, A.*, Leo, S.*, Benedicenti, F., Cesana, D., Spinozzi, G., Orsini, M., Merella, S., Stupka, E., Zanetti, G., Montini, E. - *VISPA: a Computational pipeline for the identification and analysis of genomic vector integration sites.* **Genome Medicine** - 2014, 6:67 - https://doi.org/10.1186/s13073-014-0067-5

2012 Spinozzi, G. - *Dynamic modeling and tools for the experimental evaluation of the behavior of EGFR-IGF1R via in the cell line H1650*, Tesionline

2010 Spinozzi, G. - *Design of a control system for a robot based on CAN bus*, Tesionline

Conference Proceedings

2021 Spinozzi, G.*, Tini, V.*, Ferrari, A.*, Gionfriddo, I., Milano, F., Mezzasoma, F., Falini, B., Martelli, M.P. - *SiCoDEA: a simple, fast and complete app for analyzing the effect of individual drugs and their combinations.* Bioinformatics Italian Society (BITS), Annual Meeting 2021

2021 Calabria, A., Spinozzi, G., Benedicenti, F., Cesana, D., Del Core, L., Scala, S., Scaramuzza, S., Lidonnici, M.R., Albertini, A., Esposito, S., De Mattia, F., Omrani, M., Calbi, V., Fumagalli, F., Grzegorczyk, M., Wit, E., Ferrari, G., Naldini, L., Aiuti, A., Montini, E. - *Hematopoietic Reconstitution and Lineage Commitment in HSC Gene Therapy Patients Are Influenced by the Disease Background.* American Society of Gene & Cell Therapy (ASGCT) 2021 - ORAL SESSION - *Molecular Therapy 29*

2021 Cesana, D., Calabria, A., Rudilosso, L., Gallina, P., Benedicenti, F., Spinozzi, G., Volpin, M., Schiroli, G., Magnani, A., Pouzolles, M., Fumagalli, F., Calbi, V., Witzel, M., Bushman, F., Cantore, A., Genovese, P., Taylor, N., Zimmermann, V., Klein, C., Fischer, A., Cavazzana, M., Six, E., Aiuti, A., Naldini, Montini, E. - *Liquid-Biopsy-Integration-Site- Sequencing Allows Safety Studies and Longitudinal Monitoring of Vector Integration Sites in LV and AAV-Based In-Vivo GT Applications.* American Society of Gene & Cell Therapy (ASGCT) 2021 - ORAL SESSION -*Molecular Therapy 29*

2021 Volpin, M., Merelli, I., Cittaro, D., Lim, M.C., Alfieri, R., Ormoli, L., Calabria, A., Cesana, D., Benedicenti, F., Spinozzi, G., Gallina, P., Fullwood, M., Stamatoyannopoulos, G., Montini, E. - *CTCF-Based Chromatin Insulators and Enhancers in Lentiviral Vectors Impact Genome Topology and Vector Safety.* American Society of Gene & Cell Therapy (ASGCT) 2021 - ORAL SESSION - *Molecular Therapy 29*

2021 Benedicenti, F., Calabria, A., Cesana, D., Albertini, A., Tenderini, E., Spinozzi, G., Neduva, V., Richard, A., Brugman, M.H., Dow, D.J., Magnani, C.F., Scaramuzza, S., Witzel, M., Klein, C., Zimmermann, V., Pouzolles, M., Taylor, N., Biondi, A., Howe, S.J., Ferrari, G., Naldini, L., Aiuti, A., Montini, E. - *Sonication Linker Mediated-PCR (SLiM- PCR), an Efficient Method for Quantitative Retrieval of Vector Integration Sites.* American Society of Gene & Cell Therapy (ASGCT) 2021 - *Molecular Therapy 29*

2021 Cicalese, M.P.*, Migliavacca, M.*, Cesana, D.*, Caruso, R., Calabria, A., Barzaghi, F., Dionisio, F., Giannelli, S., Spinozzi, G., Benedicenti, F., Rudilosso, L., Ciolfi, A., Bruselles, A., Pizzi, S., Casiraghi, M., Fossati, C., Zancan, S., Gabaldo, M., Tucci, F., Strocchio, L., Bernardo, M.E., Vinti, L., Ferrua, F., Calbi, V., Gallo, V., Carlucci, F., Guerra, A., Richardson, A., Kudari, M., Jones, R., Cancrini, C., Ciceri, F., Naldini, L., Tartaglia, M., Montini, E., Locatelli, F., Aiuti, A. - *Retroviral Gene Therapy For The Treatment Of Ada-Scid: Long-Term Follow Up And First Case Of T-Cell Acute Leukaemia Due To Insertional Mutagenesis.* European Hematology Association Congress (EHA) 2021

2020 Sportoletti, P., Sorcini, D., Guzman, A., Reyes. J., Stella, A., Marra, A., Sartori, S., Brunetti, L., Rossi, R., Del Papa, B., Adamo, F., Pianigiani, G., Betti, C., Scialdone, A., Guarente, V., Spinozzi, G., Tini, V., Martelli, M.P., Goodell, M., Falini, B. - *BCOR and DNMT3A loss cooperates in the pathogenesis of acute erythroid leukemia in mice.* Italian Society of Experimental Hematology (SIES) 2020 - *Haematologica 105*

2020 Cesana, D., Calabria, A., Rudilosso, L., Gallina, P., Benedicenti, F., Spinozzi, G., Schiroli, G., Magnani, A., Acquati, S., Fumagalli, F., Calbi, V., Witzel, M., Bushman, F., Cantore, A., Genovese, P., Taylor, N., Zimmermann, V., Klein, C., Fischer, A., Cavazzana, M., Six, E., Aiuti, A., Naldini, Montini, E. - *Liquid-Biopsy-Integration-Site-Sequencing for the Retrieval of Vector Integrations from Cell-Free DNA and Detection of Early Premalignant Expansions Hidden in Solid Tissues.* American Society of Gene & Cell Therapy (ASGCT) 2020 - *Molecular Therapy 28*

2020 Calabria, A., Spinozzi, G., Benedicenti, F., Cesana, D., Del Core, L., Tenderini, E., Albertini, A., Esposito, S., Canavesi, F., Calbi, V., Fumagalli, F., Grzegorczyk, M., Aiuti, A., Naldini, L., Montini, E. - *Late Phases of Hematopoietic Reconstitution in Metachromatic Leukodystrophy Gene Therapy Patients Are Characterized by Lineage Commitment of Individual HSC Clones.* American Society of Gene & Cell Therapy (ASGCT) 2020 - *Molecular Therapy 28*

2019 Benedicenti, F., Calabria, A., Cesana, D., Albertini, A., Tenderini, E., Spinozzi, G., Neduva, V., Richard, A., Brugman, M.H., Dow, D.J., Magnani, C.F., Scaramuzza, S., Taylor, N., Zimmermann, V., Biondi, A., Gentner, B., Howe, S.J., Ferrari, G., Naldini, L., Aiuti, A., Montini, E. - *Sonication Linker Mediated-PCR (SLiM-PCR), an efficient method for quantitative retrieval of vector integration sites.* European Society of Gene & Cell Therapy (ESGCT) 2019 - *Human Gene Therapy 30*

2019 Spinozzi, G., Tini, V., Adorni, A., Falini, B., Martelli, M.P. - *ARPIR: Automatic RNA-Seq Pipelines with Interactive Report.* NETTAB-BBCC 2019 Joint Meeting

2019 Volpin, M., Cittaro, D., Lim, M.C., Ormoli, L., Calabria, A., Cesana, D., Benedicenti, F., Spinozzi, G., Gallina, P., Fullwood, M., Stamatoyannopoulos, G., Montini, E. - *The Impact of Vector Integration on Chromatin Architecture.* American Society of Gene & Cell Therapy (ASGCT) 2019 - Oral Session - *Molecular Therapy 27*

2019 Calabria, A., Spinozzi, G., Rancoita, P., Benedicenti, F., Cesana, D., Acquati, S., Redaelli, D., Attanasio, V., Fumagalli, F., Aiuti, A., Biffi, A., Naldini, L., Di Serio, C., Montini, E. - *Characterization of hematopoietic system reconstitution in vivo in metachromatic leukodystrophy gene therapy patients.* American Society of Gene & Cell Therapy (ASGCT) 2019 - Oral Session - *Molecular Therapy 27*

2018 Spinozzi, G., Tini, V., Mincarelli, L., Falini, B., Martelli, M.P. - *A comprehensive RNA-Seq pipeline includes meta-analysis, interactivity and automatic reporting.* Bioinformatics and Computational Biology Conference (BBCC) 2018 - Oral Session

2018 Volpin, M., Cittaro, D., Lim, M.C., Calabria, A., Cesana, D., Spinozzi, G., Benedicenti, F., Gallina, P., Ormoli, L., Fullwood, M., Stamatoyannopoulos, G., Montini, E. - *The impact of vector integration on chromatin architecture.* European Society of Gene & Cell Therapy (ESGCT) 2018 - Oral Session - *Human Gene Therapy 29*

2018 Cesana, D., Calabria, A., Serina Secanechia, Y.N., Gallina, P., Rudilosso, L., Spinozzi, G., Montini, E. - *Addressing the impact of vector genotoxicity on the dynamics of hematopoietic reconstitution by integration site analyses.* European Society of Gene & Cell Therapy (ESGCT) 2018 - *Human Gene Therapy 29*

2018 Calabria, A., Spinozzi, G., Rancoita, P., Benedicenti, F., Cesana, D., Acquati, S., Redaelli, D., Attanasio, V., Fumagalli, F., Di Serio, C., Biffi, A., Aiuti, A., Naldini, L., Montini, E. - *Characterization of hematopoietic system reconstitution in vivo in metachromatic leukodystrophy gene therapy patients.* European Society of Gene & Cell Therapy (ESGCT) 2018 - *Human Gene Therapy 29*

2018 Calabria, A., Spinozzi, G., Merelli, I., Beretta, S., Rancoita, P., Benedicenti, F., Brasca, S., Tenderini, E., Cesana, D., Acquati, S., Redaelli, D., Attanasio, V., Fumagalli, F., Milanesi, L., Aiuti, A., Biffi, A., Naldini, L., Di Serio, C., Montini, E. - *Molecular Characterization of Hematopoietic System Reconstitution in Metachromatic Leukodystrophy Patients Following Hematopoietic Stem Cell Gene Therapy.* American Society of Gene & Cell Therapy (ASGCT) 2018 - *Molecular Therapy 26*

2018 Volpin, M., Cittaro, D., Lim, M.C., Calabria, A., Cesana, D., Spinozzi, G., Benedicenti, F., Gallina, P., Ormoli, L., Fullwood, M., Stamatoyannopoulos, G., Montini, E. - *Addressing the Impact of Vector Integration on Chromatin Architecture.* American Society of Gene & Cell Therapy (ASGCT) 2018 - Oral Session - *Molecular Therapy 26*

2018 Cesana, D., Serina Secanechia, Y.N., Rudilosso, L., Gallina, P., Calabria, A., Spinozzi, G., Montini, E. - *Studying Clonal Dynamics of Hematopoietic Reconstitution and Vector-Induced Oncogenesis in Mouse Models of Hematopoietic Stem Cell-Gene Therapy by Longitudinal Vector Integration Site Analyses.* American Society of Gene & Cell Therapy (ASGCT) 2018 - *Molecular Therapy 26*

2017   Calabria, A., Spinozzi, G., Rancoita, P., Benedicenti, F., Brasca, S., Tenderini, E., Cesana, D., Acquati, S., Redaelli, D., Attanasio, V., Fumagalli, F., Aiuti, A., Biffi, A., Naldini, L., Di Serio, C., Montini, E. - *Molecular Characterization of Hematopoietic System Reconstitution in 7 Metachromatic Leukodystrophy Patients Following Hematopoietic Stem Cell Gene Therapy.* European Society of Gene & Cell Therapy (ESGCT) 2017 - *Human Gene Therapy 28 (12)*

2017   Cesana, D., Serina Secanechia, Y.N., Gallina, P., Rudilosso, L., Calabria, A., Spinozzi, G., Brasca, S., Montini, E. - *Dynamics of haematopoietic reconstitution in a mouse model of haematopoietic stem cell-gene therapy by longitudinal integration site analyses.* European Society of Gene & Cell Therapy (ESGCT) 2017 - Oral Session - *Human Gene Therapy 28 (12)*

2017   Volpin, M., Calabria, A., Cesana, D., Spinozzi, G., Tenderini, E., Gallina, P., Benedicenti, F., Lenz, J., Stamatoyannopoulos, G., Montini, E. - *Improving the Safety of Lentiviral Vector integration with Chromatin Insulators.* European Society of Gene & Cell Therapy (ESGCT) 2017 - *Human Gene Therapy 28 (12)*

2017   Volpin, M., Cittaro, D., Lim, M.C., Calabria, A., Spinozzi, G., Benedicenti, F., Ormoli, L., Fullwood, M., Stamatoyannopoulos, G., Montini, E. - *Multidimensional Vector Interaction Capture to Study the Effects of SIN.LVs and Chromatin Insulators on the Cellular Genome.* European Society of Gene & Cell Therapy (ESGCT) 2017 - *Human Gene Therapy 28 (12)*

2017   Calabria, A., Spinozzi, G., Merelli, I., Beretta, S., Rancoita, P., Benedicenti, F., Brasca, S., Tenderini, E., Cesana, D., Di Serio, C., Milanesi, L., Biffi, A., Naldini, L., Montini, E. - *Molecular Characterization of Hematopoietic System Reconstitution in 7 Metachromatic Leukodystrophy Patients Following Hematopoietic Stem Cell Gene Therapy.* American Society of Gene & Cell Therapy (ASGCT) 2017 - Oral Session - *Molecular Therapy 25 (5)*

2017   Cesana, D., Serina Secanechia, Y.N., Gallina, P., Calabria, A., Spinozzi, G., Rudilosso, L., Brasca, S., Montini, E. - *Studying Clonal Dynamics of Hematopoietic Reconstitution and Vector-Induced Oncogenesis in Mouse Models of Hematopoietic Stem Cell-Gene Therapy by Longitudinal Vector Integration Site Analyses.* American Society of Gene & Cell Therapy (ASGCT) 2017 - *Molecular Therapy 25 (5)*

2017   Volpin, M., Calabria, A., Spinozzi, G., Cesana, D., Tenderini, E., Gallina, P., Benedicenti, F., Lenz, J., Stamatoyannopoulos, G., Montini, E. - *Improving the Safety of Lentiviral Vector Integration with Chromatin Insulators.* American Society of Gene & Cell Therapy (ASGCT) 2017 - *Molecular Therapy 25 (5)*

2017   Volpin, M., Cittaro, D., Lim, M.C., Calabria, A., Spinozzi, G., Stamatoyannopoulos, G., Fullwood, M., Montini, E. - *Multidimensional Vector Interaction Capture to Study the Effects of SIN.LVs and Chromatin Insulators on the Cellular Genome.* American Society of Gene & Cell Therapy (ASGCT) 2017 - Oral Session - *Molecular Therapy 25 (5)*

2017   Spinozzi, G., Calabria, A., Brasca, S., Beretta, S., Merelli, I., Milanesi, L., Montini, E. - *VISPA2: Faster and Extended Version of the Vector Integration Site Parallel Analysis Tool.* American Society of Gene & Cell Therapy (ASGCT) 2017 - *Molecular Therapy 25 (5)*

2017   Petrillo, C., Piras, F., Schiroli, G., Unali, G., Calabria, A., Cuccovillo, I., Spinozzi, G., Benedicenti, F., Biffi, A., Cittaro, D., Montini, E., Genovese, P., Naldini, L., Kajaste-Rudnitski, A. - *Novel molecular and functional insight into cyclosporine-mediated enhancement of human hematopoietic stem cell gene therapy.* American Society of Gene & Cell Therapy (ASGCT) 2017 - Oral Session - *Molecular Therapy 25 (5)*

2016   Spinozzi, G., Calabria, A., Beretta, S., Brasca, S., Merelli, I., Milanesi, L., Montini, E. - *VISPA2: Faster and Extended Version of Vector Integration Sites Parallel Analysis Tool.* European Society of Gene & Cell Therapy (ESGCT) 2016 - *Human Gene Therapy 27 (11)*

2016   Spinozzi, G., Calabria, A., Brasca, S., Benedicenti, F., Tenderini, E., Montini, E. - *Unraveling Lentiviral Vector Integration Machinery through the Analysis of Integration Sites Landing in Repetitive Elements from Gene Therapy Patients.* European Society of Gene & Cell Therapy (ESGCT) 2016 - *Human Gene Therapy 27 (11)*

2016   Spinozzi, G., Calabria, A., Caravagna, G., Graudenzi, A., Ramazzotti, D., Antoniotti, M., Mauri, G., Montini, E. - *Confirming and Investigating the Role of Breast Cancer PIK3CA-ERBB2 Genes in Anti-Cancer Drug-Resistance with a new Framework for the Inference of Cancer Progression Graphs using Vector Integration Sites Data.* Bioinformatics Italian Society, Annual Meeting 2016 - Oral Session

2016 Calabria, A., Beretta, S., Merelli, I., Spinozzi, G., Brasca, S., Benedicenti, F., Tenderini, E., Pirola, Y., Milanesi, L., Montini, E. - *New Graph-based Algorithm for Comprehensive Identification and Tracking of Retroviral Integration Sites.* 24th Annual International Conference on Intelligent Systems for Molecular Biology

2016 Spinozzi, G., Calabria, A., Brasca, S., Benedicenti, F., Tenderini, E., Montini, E. - *Unraveling Lentiviral Vector Integration Machinery through the Analysis of Integration Sites Landing in Repetitive Elements from Gene Therapy Patients.* 24th Annual International Conference on Intelligent Systems for Molecular Biology

2016 Spinozzi, G., Calabria, A., Brasca, S., Benedicenti, F., Tenderini, E., Montini, E. - *Repetitive Elements Analysis in Gene Therapy Patients.* OSR Scientific Retreat 2016

2016 Calabria, A., Beretta, S., Merelli, I., Spinozzi, G., Brasca, S., Benedicenti, F., Tenderini, E., Biffi, A., Montini, E. - *New Graph-based Algorithm for Comprehensive Identification and Tracking Retroviral Integration Sites.* American Society of Gene & Cell Therapy (ASGCT) 2016 - *Molecular Therapy 24*

2016 Pirazzoli, V., Spinozzi, G., Tenderini, E., Benedicenti, F., Calabria, A., Montini, E. - *Lentiviral insertional mutagenesis helps to uncover the mechanisms of resistance to AZD9291 and CO-1686 in EGFR-mutant lung cancer.* American Society of Gene & Cell Therapy (ASGCT) 2016 - *Molecular Therapy 24*

2016 Cesana, D., Gallina, P., Rudilosso, L., Calabria, A., Spinozzi, G., Merelli, I., Milanesi, L., Montini, E. - *Lentiviral Vectors with a Reduced Splicing Interference Potential Have a Significantly Improved Safety Profile In Vivo.* American Society of Gene & Cell Therapy (ASGCT) 2016 - *Molecular Therapy 24*

2016 Biavasco, R., Pirazzoli, V., Spinozzi, G., Calabria, A., Tenderini, E., Benedicenti, F., Zanella, E., Bertotti, A., Trusolino, L., Montini, E. - *Insertional mutagenesis to identify mechanisms of cetuximab resistance in colorectal cancer.* American Society of Gene & Cell Therapy (ASGCT) 2016 - *Molecular Therapy 24*

2016 Volpin, M., Calabria, A., Cesana, D., Tenderini, E., Benedicenti, F., Spinozzi, G., Lenz, J., Stamatoyannopoulos, G., Montini, E. - *Identification and ranking of different chromatin insulators to block vector-driven enhancer-mediated insertional mutagenesis in vivo.* American Society of Gene & Cell Therapy (ASGCT) 2016 - *Molecular Therapy 24*

2015 Spinozzi, G., Calabria, A., Caravagna, G., Graudenzi, A., Ramazzotti, D., Antoniotti, M., Mauri, G., Montini, E. - *Investigating Drug-Resistance in Cancer with a new Mathematical Framework for the Inference of Cancer Progression Models and Vector Integration Sites Data.* 23rd Annual International Conference on Intelligent Systems for Molecular Biology and the 14th European Conference on Computational Biology

2015 Calabria, A., Spinozzi, G., Brasca, S., Beretta, S., Merelli, I., Benedicenti, F., Tenderini, E., Milanesi, L., Montini, E. - *A New Bioinformatics Pipeline for Retroviral Integration Site Analysis in Hematopoietic Stem Cell Gene Therapy Applications.* Bioinformatics Italian Society, Annual Meeting 2015 - ORAL SESSION

2015 Spinozzi, G., Calabria, A., Caravagna, G., Graudenzi, A., Ramazzotti, D., Antoniotti, M., Mauri, G., Montini, E. - *A Novel Bioinformatics Framework for Studying Drug-Resistance Mechanisms with Cancer Progression using Vector Integration Sites Data.* Bioinformatics Italian Society, Annual Meeting 2015

2015 Spinozzi, G., Calabria, A., Caravagna, G., Graudenzi, A., Ramazzotti, D., Antoniotti, M., Mauri, G., Montini, E. - *Studying the Drug-Resistance Mechanisms with a new Mathematical Framework for Cancer Progression using Vector Integration Sites Data.* OSR Scientific Retreat 2015

2015 Cesana, D., Calabria, A., Gallina, P., Rudilosso, L., Spinozzi, G., Montini, E. - *Development of New Lentiviral Vectors with a Reduced Splicing Interference Potential and a Safer in Vivo Genotoxic Profile.* American Society of Gene & Cell Therapy (ASGCT) 2015 - *Molecular Therapy 23*

2015 Pirazzoli, V., Biavasco, R., Spinozzi, G., Bertotti, A., Trusolino, L., Montini, E. - *Uncovering Mechanisms of Resistance to Cetuximab by Insertional Mutagenesis in Heterotopically-Engrafted Human Colorectal Cancers.* American Society of Gene & Cell Therapy (ASGCT) 2015 - ORAL SESSION - *Molecular Therapy 23*

2015 Calabria, A., Brasca, S., Spinozzi, G., Benedicenti, F., Tenderini, E., Montini, E. - *Increasing accuracy and precision of integration site identification of aligned sequencing reads with a new bioinformatics framework.* American Society of Gene & Cell Therapy (ASGCT) 2015 - *Molecular Therapy 23*

2014 Calabria, A., Brasca, S., Spinozzi, G., Benedicenti, F., Tenderini, E., Neduva, V., Govani, F., Dow, D., Montini, E. - *A new bioinformatics tool to improve precision and quality of vector integration site identification after genomic alignment.* European Society of Gene & Cell Therapy (ESGCT) 2014 - Oral Session - *Human Gene Therapy 25 (11)*

2014 Calabria, A., Brasca, S., Spinozzi, G., Benedicenti, F., Tenderini, E., Montini, E. - *Density-based methods improve vector integration site identification quality.* 11th international meeting on Computational Intelligence methods for Bioinformatics and Biostatistics (CIBB) 2014 - Oral Session

2014 Calabria, A., Benedicenti, F., Brasca, S., Spinozzi, G., Tenderini, E., Neduva, V., Dow, D., Montini, E. - *Novel bioinformatic framework for quantification of retroviral integration sites from genomic DNA sonication-based PCR data.* American Society of Gene & Cell Therapy (ASGCT) 2014 - *Molecular Therapy 22*

2014 Calabria, A., Spinozzi, G., Benedicenti, F., Tenderini, E., Biasco, L., Montini, E. - *adLIMS: a customized open source software that allows bridging clinical and basic molecular research studies.* Bioinformatics Italian Society, Annual Meeting 2014

2014 Calabria, A., Brasca, S., Spinozzi, G., Stupka, E., Naldini, L., Montini, E. - *Vector Integration Site Identification through Density-based methods.* Bioinformatics Italian Society, Annual Meeting 2014 - Oral Session

2013 Spinozzi, G., Calabria, A., Benedicenti, F., Tenderini, E., Brasca, S., Naldini, L., Montini, E. - *adLIMS: a new open source software allows bridging clinical and basic molecular research studies.* OSR Scientific Retreat 2013

2013 Calabria, A., Brasca, S., Spinozzi, G., Benedicenti, F., Biasco, L., Stupka, E., Naldini, L., Montini, E. - *Bioinformatic Framework for Vector Integration Sites Analysis and Clonal Abundance Estimation.* European Society of Gene and Cell Therapy (ESGCT) 2013 - *Human Gene Therapy 24 (12)*

2013 Benedicenti, F., Calabria, A., Spinozzi, G., Brasca, S., Lazarevic, D., Tenderini, E., Govani, F., Stupka, E., Naldini, L., Doe, D., Montini, E. - *A quantitative method for vector integration site retrieval based on genomic DNA sonication and Illumina next generation sequencing.* European Society of Gene and Cell Therapy (ESGCT) 2013 - *Human Gene Therapy 24 (12)*

Other Interests

Listening Music
Italian Comedy Movies
Collecting rare old Italian stamps
Collecting Mechanical Watches
Automotive
Reading
Collecting Antiques
Art
Technology and Computers

Languages

| | | Comprehension | | Speaking | | Writing |
		Listening	Reading	Interaction	Production	
Italian	Mother Tongue	C2	C2	C2	C2	C2
English*	Advanced Level	C1	C1	C1	C1	C1

*PhD English Course for the doctoral program has certified a European level CEFR.

I authorize the use of my personal data in compliance with art.13 of D.lgs 196/03 and with art.13 of GDPR 679/16.

Perugia (Italy), July 27, 2021