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## BIOGRAPHICAL SKETCH

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NAME: Alessandra Recchia

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POSITION TITLE: Assistant Professor of Molecular Biology

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### EDUCATION/TRAINING

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INSTITUTION AND LOCATION	DEGREE	Completion Date MM/YYYY	FIELD OF STUDY
University of Rome "Tor Vergata", Rome, Italy	Biology	03/1994	Neuropharmacology
University of L' Aquila, Italy and McMaster University, Hamilton, CANADA	PhD	11/1999	Molecular Biology/Virology
TIGET-DIBIT, H.S. Raffaele, Milan, Italy	Postdoctoral	12/2002	Molecular Biology/Virology

### A. Positions, Honors, and Memberships

#### Positions and Employment

1992-1994 Student Fellow, Division of Pharmacology, University of Rome "Tor Vergata"  
1994-1995 Fellow, IRBM (Merck Institute) Pomezia, Rome, Italy  
1995-1999 PhD student, IRBM (Merck Institute) Pomezia, Rome, Italy  
1997 Visiting scientist, Department of Department of Biology and Pathology, McMaster University, Hamilton, Ontario CANADA  
1999-2002 Postdoc fellow, TIGET DIBIT H. S. Raffaele Milan, Italy  
2003-2005 young researcher at DIBIT H. S. Raffaele Milan, Italy  
2005- to date Assistant Professor of Molecular Biology, Department of Life Sciences, University of Modena and Reggio Emilia, Italy

#### Honors and patent

- 1998 patent: "Recombinant vectors derived from Adeno-associated virus suitable for Gene Therapy"  
G. Ciliberto, S. Colloca, E. Fattori, C. Fipaldini, N. La Monica, A. Monciotti, F. Palombo, L. Pieroni, A. Recchia, G. Rizzuto  
International Patent: C12N 15/86, 5/12, A61K 48/00  
International publication number: WO 98/45462 (15 october 1998)  
- 2004 Outstanding Young Investigation Award. European Society of Gene Therapy. published on J Gene Med 2004; 6:1170

#### Memberships

2003 to present: Active member of the American Society of Gene and Cell Therapy (ASGCT)  
2007 to present: Active member of the European Society of Gene and Cell Therapy (ESGCT)

### B. Contribution to science.

I have a broad background in gene therapy, with specific training and expertise in gene correction and gene expression.

As a postdoctoral fellow at TIGET in Milan, I developed new gene transfer methodology based on Adeno-Associated and Adenoviral vectors. After the postdoc, as young researcher at DIBIT, I expanded my interest to other viral vectors (retrovirus and HIV-based) and to cytotoxic and genotoxic effects of therapeutic viral vector employed in several clinical trial for rare genetic disorders.

As PI or co-Investigator on funded grants, I generated gene transfer vectors for monogenic disorders, I addressed safety issues related to vector-related insertional mutagenesis and developed stable gene transfer technologies based on DNA transposons (Sleeping Beauty) and engineered nucleases (ZFN, TALEN and CRISPR/Cas9) tailored to specific genes.

### C. Selected publication in the last 5 years

1. Duarte B., Miselli F., Murillas R., Espinosa-Hevia L., Cigudosa JC3, Recchia A., Del Río M., Larcher F. (2014) Long-term skin regeneration from a gene-targeted human epidermal stem cell clone. *Mol Ther*. 2014 Nov; 22(11):1878-80. doi: 10.1038/mt.2014.187
2. Turchiano G, Latella MC, Gogol-Döring A, Cattoglio C, Mavilio F, Izsvák Z, Ivics Z, Recchia A. (2014) Genomic analysis of sleeping beauty transposon integration in human somatic cells. *PLoS One*. 2014 Nov 12; 9(11):e112712. doi: 10.1371/journal.pone.0112712.
3. Marini B, Kertesz-Farkas A, Ali H, Lucic B, Lisek K, Manganaro L, Pongor S, Luzzati R, Recchia A, Mavilio F, Giacca M, Lusic M. (2015) Nuclear architecture dictates HIV-1 integration site selection. *Nature*. 2015 May 14;521(7551):227-31.
4. Cocchiarella F, Latella MC, Basile V, Miselli F, Galla M, Imbriano C, Recchia A. (2016) Transcriptionally regulated and non-toxic delivery of the hyperactive *Sleeping Beauty* Transposase. *Mol Ther Methods Clin Dev*. 2016 Jun 15;3:16038. doi:10.1038/mtm.2016.38.
5. Latella MC, Di Salvo MT, Cocchiarella F, Benati D, Grisendi G, Comitato A, Marigo V, Recchia A (2016) *In vivo* editing of the human mutant *Rhodopsin* gene by electroporation of plasmid-based CRISPR/Cas9 in the mouse retina. *Mol Ther Nucleic Acids*. 2016 Nov 22;5(11):e389. doi: 10.1038/mtna.2016.92.
6. Latella MC, Cocchiarella F, De Rosa L, Turchiano G, Gonçalves MA, Larcher F, De Luca M, Recchia A. (2016) Correction of recessive dystrophic epidermolysis bullosa by transposon-mediated integration of COL7A1 in transplantable patient-derived primary keratinocytes. *J Invest Dermatol*. 2017 Apr;137(4):836-844. doi: 10.1016/j.jid.2016.11.038. Epub 2016 Dec 24.
7. Benati D, Miselli F, Cocchiarella F, Patrizi C, Carretero M, Baldassarri S, Ammendola V, Has C, Colloca S, Del Rio M, Larcher F, Recchia A. CRISPR/Cas9-Mediated In Situ Correction of LAMB3 Gene in Keratinocytes Derived from a Junctional Epidermolysis Bullosa Patient. *Mol Ther*. 2018 Nov 7;26(11):2592-2603.
8. Benati D, Marigo V, Recchia A. CRISPR/Cas9 Gene Editing In Vitro and in Retinal Cells In Vivo. *Methods Mol Biol*. 2019;1834:59-74
9. Spano C, Grisendi G, Golinelli G, Rossignoli F, Prapa M, Bestagno M, Candini O, Petrachi T, Recchia A, Miselli F, Rovesti G, Orsi G, Maiorana A, Manni P, Veronesi E, Piccinno MS, Murgia A, Pinelli M, Horwitz EM, Cascinu S, Conte P, Dominici M. Soluble TRAIL Armed Human MSC As Gene Therapy For Pancreatic Cancer. *Sci Rep*. 2019 Feb 11;9(1):1788.