
BIOGRAPHICAL SKETCH

NAME: GALY, Anne

POSITION TITLE: Director of the ART-TG (Accelerator of Technological Research in Genomic Therapy), Inserm DR

EDUCATION/TRAINING:

DNAX research Institute, Palo Alto, CA USA	Post doctorate	1990-1992	Immunology
University C. Bernard, Lyon, France	Ph.D.	1989	Immunology
Hospices Civils de Lyon, Lyon, France	Residency	1983-1989	Medical Biology
University of South Florida, Tampa, FL, USA	Undergraduate (visiting)	1987-1988	Immunopharmacology
University C. Bernard, Lyon, France	Pharm.D.	1985	Pharmacy

A. PERSONAL STATEMENT

For the past 20+ years, my research has been centered around gene therapy and the immune system. While at Genethon (a laboratory focused on the gene therapy of rare genetic diseases), I developed a translational program of hematopoietic stem cell-based gene therapies using lentiviral vectors that led to several successful international phase I/II clinical trials in primary immune deficiencies or blood disorders (e.g. Net4CGD network); a work recognized by several prizes and honors. I also studied unwanted immune responses to gene therapy viral vectors and developed endogenized vectors expected to have low immunogenicity. Subsequently, I founded a new Inserm laboratory, the “accelerator of technological research” in gene therapy (ART-TG) (www.art-tg.com), to innovate in the field of immunotherapy and to accelerate the transfer of new cell and gene therapies to the clinic. This laboratory has received the label “Integrator in Biotherapy bioproduction” and its preclinical activities in gene therapy are certified ISO9001. Author of 140+ articles (i10 index 127) and inventor of several patents, my research is actively funded and connected to international networks. I currently sit on the board of the European Society of Cell and Gene Therapy.

B. POSITIONS AND HONORS
Positions

2025-present Adjunct Professor, University of Paris-Saclay, Faculty of Pharmacy, Orsay, France
 2023-present Member of the Vaccine Research Institute (VRI) Inst. Mondor for Biomedical Res., U955, Créteil, France
 2018-present Director of the ART-TG (Inserm unit US35), Corbeil-Essonnes, France
 2013- 2023 Head of the Therapeutic Program “Blood and Immune Disorders”, Genethon, Evry, France
 2012-present Inserm Director of Research level 1
 2009-2023 Director of the Inserm research unit UMR_S951 at Genethon, Evry, France
 2001-2006 Team leader Inserm unit U362/U790, Institut Gustave Roussy Cancer Center, Villejuif, France
 2001-2012 Inserm Director of Research level 2
 2000-2001 Technical Director, Cell Lab, Karmanos Cancer Institute, Detroit, MI USA
 1995-2001 Assistant professor, promoted in 2001 to tenured associate professor, Department of Immunology Microbiology and Department of Cancer Institute Wayne State University School of Medicine, Detroit, MI USA
 1992-1995 Scientist, Experimental Cellular Therapy, SySTEMix Inc., Palo Alto, CA USA

Honors

2023 Laureate Grand prize National Academy of Pharmacy
 2022 Callahan outstanding service award, Wiskott Foundation
 2014 Decorated as “Chevalier de la Légion d’Honneur”, a national merit recognition in France
 2009 Prize “Biothérapie” ThermoFisher Scientific, France

C. CONTRIBUTIONS TO SCIENCE

Publications since 2009

1. Perian, S., Castellano, E., Costa, C., Martinello, C., **Galy, A.**, Froment, G., Orentas, R., Valeri, A., and Verhoeyen, E. (2026). Baboon endogenous retrovirus (ERV) envelope pseudotyped lentiviral vectors outperform human ERV lentivectors for transduction of T, B, NK and HSPCs. **Gene Ther.** 10.1038/s41434-025-00587-w.
2. Ammar, D., Sanges, C., Henderson, D., Schapitz, I., Hudecek, M., Luu, M., Schussler-Lenz, M., Buchholz, C., Franz, P., Reiche, K., Kohl, U., Ifrah, N., Quesnel, B., Thermeli, M., Kersten, M.J., Locatelli, F., D'Amore, M.L., Bonini, C., Casucci, M., Philippar, U., Doeswijk, R., Thielen, F., Uyl-de Groot, C., Theelen, J., Schroder, B., Kremer, A., Quaranta, M., Prosper, F., Van den Brulle, J., Grawunder, U., Donnadiou, E., **Galy, A.**, Ferrand, C., Worel, N., Busch, D., Briones, J., Sellner, L., Kuball, J., Sureda, A., and Awigena-Cook, J. (2026). Call for preserving specialized knowledge and contributions of the CAT to advancing ATMPs in Europe. **Cytotherapy** 28, 101984. 10.1016/j.jcyt.2025.09.007.
3. Chartral, U., Galaine, J., Giverne, C., Auxenfans, C., Reppel, L., Marton, C., Thiant, S., Clemenceau, B., Derenne, S., Sabatier, F., Veran, J., Moisan, A., Rouard, H., Tertrais, K., Dachy, G., Demerle, C., Calmels, B., Chabannon, C., Forcade, E., Viel, S., Bensoussan, D., de Vos, J., **Galy, A.**, De Oliveira, C., Boucher, H., et al. (2025). Securing raw materials, reagents, and consumable supplies in the academic bioproduction UNITC network: because the chain is only as strong as its weakest link. **Bone Marrow Transplant.** 10.1038/s41409-025-02756-2.
4. Dewannieux, M., Fofana, F., Hamon, K., Mormin, M., and **Galy, A.** (2025). Combined effects of restriction factors and transduction adjuvants on lentiviral vector gene transfer efficacy. **Sci Rep** 15, 38643. 10.1038/s41598-025-22470-9.
5. Ferrand, M., Rocca, C.J., Corre, G., Buffa, V., Frin, S., Garnache-Ottou, F., Bole-Richard, E., Albini, S., Richard, I., and **Galy, A.** (2025). FAP-CAR-T cells reduce dystrophic muscle fibrosis, improving adeno-associated virus gene transfer efficacy. **Mol Ther Methods Clin Dev** 33, 101545. 10.1016/j.omtm.2025.101545.
6. Marton C, Cl  menceau B, Dachy G, Demerle C, Derenne S, Ferrand C, Giverne C, Latouche JB, Lem  e L, Martinet J, Bonig H, Bensoussan D, Chabannon C, K  hl U, Deschamps M, De Vos J, Diana JS, Doug   A, Forcade E, Galaine J, Thiant S, **Galy A**, Larghero J, Reppel L, Viel S, Boyer O, Yakoub-Agha I. Harmonisation of quality control tests for academic production of CAR-T cells: a position paper from the WP-bioproduction of the UNITC consortium. **Bone Marrow Transplant.** 2025 May 29. doi: 10.1038/s41409-025-02637-8. Online ahead of print. PMID: 40442256
7. De Angelis B, D'Amore ML, Lecot P, Neininger K, Lorrain M, Gambotti L, Dreuillet C, Courcault E, Chatterjee S, Delgado J, **Galy A**, Franz P, Rodriguez-Madoz JR, Cabrerizo Y, Richter A, Girvalaki C, Noviello M, Tassi E, Sanges C, Luu M, Hudecek M, Kremer A, Locatelli F, Negre H, Quintarelli C. European survey on CAR T-Cell analytical methods from apheresis to post-infusion immunomonitoring. **Front Immunol.** 2025 Apr 24;16:1567582. doi: 10.3389/fimmu.2025.1567582. eCollection 2025. PMID: 40342422
8. Boyer, O., D. Bensoussan, H. Bonig, C. Chabannon, B. Clemenceau, A. Cuffel, G. Dachy, J. de Vos, S. Derenne, J. S. Diana, A. Douge, L. Deramoudt, C. Ferrand, E. Forcade, J. Galaine, **A. Galy**, C. Giverne, J. Martinet, C. Marton, J. Larghero, L. Reppel, S. Viel, I. Yakoub-Agha, and M. Deschamps. 2025. 'Identification of the conditions and minimum requirements necessary for the release of autologous fresh CAR T-cell products under hospital exemption: a position paper from the WP-bioproduction of the UNITC consortium', **Bone Marrow Transplant.** 2025 Apr;60(4):431-438. doi: 10.1038/s41409-024-02504-y. Epub 2025 Jan 25. PMID: 39863732 PMID: 39863732
9. R  o P, Zubicaray J, Navarro S, G  lvez E, S  nchez-Dom  nguez R, Nicoletti E, Sebasti  n E, Rothe M, Pujol R, Bogliolo M, John-Neek P, Bastone AL, Schambach A, Wang W, Schmidt M, Larcher L, Segovia JC, Y  n  ez RM, Alberquilla O, D  ez B, Fern  ndez-Garc  a M, Garc  a-Garc  a L, Ram  rez M, **Galy A**, Lefrere F, Cavazzana M, Leblanc T, Garc  a de Andoin N, L  pez-Almaraz R, Catal  a A, Barquinero J, Rodr  guez-Perales S, Rao G, Surrall  s J, Soulier J, D  az-de-Heredia C, Schwartz JD, Sevilla J, Bueren JA; FANCOLEN-1 gene therapy investigators. Haematopoietic gene therapy of non-conditioned patients with Fanconi anaemia-A: results from open-label phase 1/2 (FANCOLEN-1) and long-term clinical trials. **The Lancet.** 2024 Dec 3;S0140-6736(24)01880-4. doi: 10.1016/S0140-6736(24)01880-4. PMID: 39642902
10. Mormin M, Rigonnot L, Chalumeau A, Miccio A, Fournier C, Pajanissamy S, Dewannieux M, **Galy A.** Cyclosporin H Improves the Transduction of CD34+ Cells with an Anti-Sickling Globin Vector, a Possible

- Therapeutic Approach for Sickle Cell Disease. **Hum Gene Ther.** 2024 Nov;35(21-22):896-903. doi: 10.1089/hum.2024.098. Epub 2024 Nov 6. PMID: 39504955
11. Ueda N, Cahen M, Leonard J, Deleurme L, Dreano S, Sirac C, **Galy A**, Moreaux J, Danger Y, Cogné M. Single-hit genome editing optimized for maturation in B cells redirects their specificity toward tumor antigens. **Sci Rep.** 2024 Sep 28;14(1):22432. doi: 10.1038/s41598-024-74005-3. PMID: 39342013
 12. Vendomele, J., Chauveau, G.A., Dalkara, D., **Galy, A.**, and Fisson, S. (2024). Peripheral Cellular Immune Responses Induced by Subretinal AAV Gene Transfer can be Restrained by the Subretinal Associated Immune Inhibition Mechanism. **Hum Gene Ther.** 10.1089/hum.2023.191.
 13. Das, S., Rruga, F., Montepeloso, A., Dimartino, A., Spadini, S., Corre, G., Patel, J., Cavalca, E., Ferro, F., Gatti, A., Milazzo, R., **Galy, A.**, Politi, L.S., Rizzardi, G.P., Vallanti, G., Poletti, V., and Biffi, A. (2024). An empowered, clinically viable hematopoietic stem cell gene therapy for the treatment of multisystemic mucopolysaccharidosis type II. **Mol Ther** 32, 619-636. 10.1016/j.ymthe.2024.01.034
 14. **Galy, A.**, and Dewannieux, M. (2023). Recent advances in hematopoietic gene therapy for genetic disorders. **Arch Pediatr** 30, 8S24-28S31. 10.1016/S0929-693X(23)00224-5.
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 16. Labrosse, R., J. Chu, M. Armant, J. K. Everett, D. Pellin, N. Kareddy, A. L. Frelinger, L. A. Henderson, A. E. O'Connell, A. Biswas, J. Coenen-van der Spek, A. M. Miggelbrink, C. Fiorini, H. Adhikari, C. C. Berry, V. A. Cantu, J. Fong, J. R. Jaroslavsky, D. F. Karadeniz, Q. Z. Li, S. Reddy, A. M. Roche, C. Zhu, J. S. Whangbo, C. Dansereau, B. L. Mackinnon, E. Morris, S. M. Koo, W. B. London, S. Baris, A. Ozen, E. Karakoc-Aydiner, J. M. Despotovic, L. R. Forbes Satter, A. Saitoh, Y. Aizawa, A. King, M. A. T. Nguyen, V. D. U. Vu, S. B. Snapper, **A. Galy**, L. D. Notarangelo, F. D. Bushman, D. A. Williams and S. Y. Pai (2023). "Outcomes of Hematopoietic Stem Cell Gene Therapy for Wiskott-Aldrich Syndrome." **Blood.** 2023 Oct 12;142(15):1281-1296. doi: 10.1182/blood.2022019117.
 17. Corre, G. and **A. Galy** (2023). "Evaluation of diversity indices to estimate clonal dominance in gene therapy studies." **Mol Ther Methods Clin Dev** 29: 418-425.
 18. Sobrino, S., A. Magnani, M. Semeraro, L. Martignetti, A. Cortal, A. Denis, C. Couzin, C. Picard, J. Bustamante, E. Magrin, L. Joseph, C. Roudaut, A. Gabrion, T. Soheili, C. Cordier, O. Lortholary, F. Lefrere, F. Rieux-Laucat, J. L. Casanova, S. Bodard, N. Boddaert, A. J. Thrasher, F. Touzot, S. Taque, F. Suarez, A. Marcais, A. Guilloux, C. Lagresle-Peyrou, **A. Galy**, A. Rausell, S. Blanche, M. Cavazzana, and E. Six. 2023. 'Severe hematopoietic stem cell inflammation compromises chronic granulomatous disease gene therapy', **Cell Rep Med**: 100919.
 19. Buffa, V., J. R. Alvarez Vargas, **A. Galy**, S. Spinozzi, and C. J. Rocca. 2022. 'Hematopoietic stem and progenitors cells gene editing: Beyond blood disorders', **Front Genome Ed**, 4: 997142.
 20. Magnani, A, Semeraro, M, Adam, F, Booth, C, Dupre, L, Morris, EC, Gabrion, A, Roudaut, C, Borgel, D, Toubert, A, Clave, E, Abdo, C, Gorochoy, G, Petermann, R, Guiot, M, Miyara, M, Moshous, D, Magrin, E, Denis, A, Suarez, F, Lagresle, C, Roche, AM, Everett, J, Trinquand, A, Guisset, M, Bayford, JX, Hacein-Bey-Abina, S, Kauskot, A, Elfeky, R, Rivat, C, Abbas, S, Gaspar, HB, Macintyre, E, Picard, C, Bushman, FD, **Galy, A**, Fischer, A, Six, E, Thrasher, AJ, and Cavazzana, M (2022). Long-term safety and efficacy of lentiviral hematopoietic stem/progenitor cell gene therapy for Wiskott-Aldrich syndrome. **Nat Med** 28: 71-80.
 21. Donnadiou, E, Luu, M, Alb, M, Anliker, B, Arcangeli, S, Bonini, C, De Angelis, B, Choudhary, R, Espie, D, **Galy, A**, Holland, C, Ivics, Z, Kantari-Mimoun, C, Kersten, MJ, Kohl, U, Kuhn, C, Laugel, B, Locatelli, F, Marchiq, I, Markman, J, Moresco, MA, Morris, E, Negre, H, Quintarelli, C, Rade, M, Reiche, K, Renner, M, Ruggiero, E, Sanges, C, Stauss, H, Themeli, M, Van den Brulle, J, Hudecek, M, and Casucci, M (2022). Time to evolve: predicting engineered T cell-associated toxicity with next-generation models. **J Immunother Cancer** 10.
 22. Corre, G, Seye, A, Frin, S, Ferrand, M, Winkler, K, Luc, C, Dorange, F, Rocca, CJ, and **Galy, A** (2022). Lentiviral standards to determine the sensitivity of assays that quantify lentiviral vector copy numbers and genomic insertion sites in cells. **Gene Ther.** doi: 10.1038/s41434-022-00315-8
 23. Six, E, Guilloux, A, Denis, A, Lecoules, A, Magnani, A, Vilette, R, Male, F, Cagnard, N, Delville, M, Magrin, E, Caccavelli, L, Roudaut, C, Plantier, C, Sobrino, S, Gregg, J, Nobles, CL, Everett, JK, Hacein-Bey-Abina, S, **Galy, A**,

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24. Munoz, P, Tristan-Manzano, M, Sanchez-Gilabert, A, Santilli, G, **Galy, A**, Thrasher, AJ, and Martin, F (2020). WAS Promoter-Driven Lentiviral Vectors Mimic Closely the Lopsided WASP Expression during Megakaryocytic Differentiation. **Mol Ther Methods Clin Dev** 19: 220-235.
 25. Kohn, DB, Booth, C, Kang, EM, Pai, SY, Shaw, KL, Santilli, G, Armant, M, Buckland, KF, Choi, U, De Ravin, SS, Dorsey, MJ, Kuo, CY, Leon-Rico, D, Rivat, C, Izotova, N, Gilmour, K, Snell, K, Dip, JX, Darwish, J, Morris, EC, Terrazas, D, Wang, LD, Bauser, CA, Paprotka, T, Kuhns, DB, Gregg, J, Raymond, HE, Everett, JK, Honnet, G, Biasco, L, Newburger, PE, Bushman, FD, Grez, M, Gaspar, HB, Williams, DA, Malech, HL, **Galy, A**, Thrasher, AJ, and Net4CGD (2020). Lentiviral gene therapy for X-linked chronic granulomatous disease. **Nat Med** 26: 200-206.
 26. Coquin, Y, Ferrand, M, Seye, A, Menu, L, and **Galy, A** (2020). Syncytins enable novel possibilities to transduce human or mouse primary B cells and to achieve well-tolerated in vivo gene transfer. **bioRxiv** 816223; doi: <https://doi.org/10.1101/816223>.
 27. Rio, P, Navarro, S, Wang, W, Sanchez-Dominguez, R, Pujol, RM, Segovia, JC, Bogliolo, M, Merino, E, Wu, N, Salgado, R, Lamana, ML, Yanez, RM, Casado, JA, Gimenez, Y, Roman-Rodriguez, FJ, Alvarez, L, Alberquilla, O, Raimbault, A, Guenechea, G, Lozano, ML, Cerrato, L, Hernando, M, Galvez, E, Hladun, R, Giralt, I, Barquinero, J, **Galy, A**, Garcia de Andoin, N, Lopez, R, Catala, A, Schwartz, JD, Surralles, J, Soulier, J, Schmidt, M, Diaz de Heredia, C, Sevilla, J, and Bueren, JA (2019). Successful engraftment of gene-corrected hematopoietic stem cells in non-conditioned patients with Fanconi anemia. **Nat Med** 25: 1396-1401.
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 29. Da Rocha, S, Bigot, J, Onodi, F, Cosette, J, Corre, G, Poupiot, J, Fenard, D, Gjata, B, **Galy, A**, and Neildez-Nguyen, TMA (2019). Temporary Reduction of Membrane CD4 with the Antioxidant MnTBAP Is Sufficient to Prevent Immune Responses Induced by Gene Transfer. **Mol Ther Methods Clin Dev** 14: 285-299.
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 34. Vermeer, LS, Hamon, L, Schirer, A, Schoup, M, Cosette, J, Majdoul, S, Pastre, D, Stockholm, D, Holic, N, Hellwig, P, **Galy, A**, Fenard, D, and Bechinger, B (2017). Vectofusin-1, a potent peptidic enhancer of viral gene transfer forms pH-dependent alpha-helical nanofibrils, concentrating viral particles. **Acta Biomater** 64: 259-268.
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 36. Piovan, C, Marin, V, Scavullo, C, Corna, S, Giuliani, E, Bossi, S, **Galy, A**, Fenard, D, Bordignon, C, Rizzardi, GP, and Bovolenta, C (2017). Vectofusin-1 Promotes RD114-TR-Pseudotyped Lentiviral Vector Transduction of Human HSPCs and T Lymphocytes. **Mol Ther Methods Clin Dev** 5: 22-30.

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Service activities (extracts)

2023-present	Member of the scientific committee of Genopole
2022-present	Member of the board of ESGCT.
2022-present	Member of the executive committee of the DIM BioConvS network Ile de France Region
2022-2024	Chair of ESGCT Vaccine & infectious Diseases committee
2019- 2024	Member of the scientific counsel of the IBISA infrastructure for scientific platforms
2019-2024	Co-pilot of the biotherapy axis of the HEALTHI interdisciplinary object of university Paris-Saclay
2020-2023	Member of the scientific counsel of the faculty of medicine of the university Paris-Saclay
2018-2023	Member of the International committee of ASGCT
2009-present	Editorial member of several journals (HGT, Frontiers in Medicine, Gene Therapy)
2018	Missioned by the French Ministry of Research as co-lead for the Research axis of the French “Plan National Maladies Rares III”
2014-2015	Member of the scientific counsel of the LOEWE Center for Cell and Gene Therapy, Frankfurt
2011-2015	Member of the scientific evaluation committee of E-Rare
2011-2016	Member of the scientific counsel of the DIM Biotherapy – Région Ile-de-France
2012-2016	President of the scientific study section CSS8 of Inserm

Patents (recent)

PCT/EP2023/077925 A. Galy, I. Richard, M. Ferrand, C. Rocca, S. Albini « IMMUNOTHERAPY OF SKELETAL MYOPATHIES USING ANTI-FAP CAR-T CELLS » Publication 09 October 2023

PCT/EP2018/078809 A. Galy, M. Ferrand, Y. Coquin inventors, « USE OF SYNCYTIN FOR TARGETING DRUG AND GENE DELIVERY TO LUNG TISSUE» *Publication date* 25.04.2019

PCT/EP2017/059465 A. Galy inventor « *STABLE PSEUDOTYPED LENTIVIRAL PARTICLES AND USES THEREOF* » *Publication date* 26.10.2017. Delivered Japon (n° 7078547), South Korea (n°10-2445700), Europe (EP 3445774 B1 delivered 28 mai 2025).