

BIOGRAPHICAL SKETCH

NAME Gouze, Jean-Noel		POSITION TITLE Delegate General Director	
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Paul Sabatier Toulouse III, France	B.S.	1995	Biochemistry
University of Paul Sabatier Toulouse III, France	B.S.	1995	Cellular Biology and Physiology
University of Henri Poincare-Nancy I, France	M.S.	1996	Pharmacology
University of Henri Poincare-Nancy I, France	Ph.D.	1998-2001	Pharmacological Sciences
Harvard University, Boston, MA	Post-Doc	2001-2004	Gene Therapy
Massachusetts Institute of Technology, Cambridge, MA			
University of Var, Toulon-Sud, La Garde, France	HDR (Res. lead)	2009	Gene Therapy

A. Positions and Employment

1996-1997	Officer of the Special Military School Of Saint Cyr, France
1997-2000	Graduate Research Assistant, University of Henri Poincare-Nancy I, France
2000	Visitor Scientist, Center for Biomedical Engineering, Massachusetts Institute of Technology
2001-2004	Post-doctoral Associate, Orthopedic Surgery, Harvard University and Center for Biomedical Engineering, Massachusetts Institute of Technology
2004-2008	Assistant Research Professor in Orthopaedics and Rehabilitation, University of Florida
2008-2013	Biotechnology Dept Director, Member of the Directional Committee, Laboratoires GENEVRIER, Sophia Antipolis, France
2013-present	Delegate General Director, Operational Director, GenBiotech, Sophia Antipolis, France Member of the Directional Committee, Laboratoires GENEVRIER, Sophia Antipolis, France

Honors and Awards

1997	Bronze Medal of the National Defense, France
1998	Ministère de la Recherche et de l'Enseignement supérieur, France, Research Fellowship
2001	University of Henri Poincaré-Nancy I, France, Graduated with Honors
2002	Sigma Xi, Massachusetts Institute of Technology
2006	Lauréat du concours Initiative Post-Doc (Ministère des affaires étrangères, Académie des Sciences, France)
2007	Who's who in America. https://cgi.marquiswhoswho.com/OnDemand/Default.aspx?last_name=gouze&first_name=jean

Professional membership and committee activities

Société Française de Thérapie Cellulaire et Génique, 2009 ; Orthopaedic Research Society, 2007 ; European Society of Gene and Cell Therapy, 2007 ; American Society of Gene and Cell Therapy, 2005 ; American Scientist, sigma Xi, 2002

Ed Board : "The Open Gene Therapy Journal" 2009

Ad Hoc reviewer 2004-present " Current Stem Cell & Therapy ", " Biomarker Insights ", " Arthritis and Rheumatism ", " Osteoarthritis and Cartilage ", " FEBS Letters ", " Arthritis Research and Therapy ", " BMC Biotechnology ".

Paper report "Arthritis Research and Therapy" 2002-2004

« reviewer » abstracts 54rd international meeting 'Orthopaedic Research Society (ORS), San Francisco, Mars 2008.

B. Publications

1. Watson RS, Broome TA, Levings PP, Rice BL, Kay JD, Smith AD, Gouze E, Gouze JN, Dacanay EA, Hauswirth WW, Nickerson DM, Dark MJ, Colahan PT, Ghivizzani SC. scAAV-mediated gene transfer of interleukin-1-receptor antagonist to synovium and articular cartilage in large mammalian joints. *Gene therapy*. 2012.
2. Salles JP, Edouard T, Gouze J-N, Conte-Auriol F, Molinas-Casals C, Raynal P, Yart A, Tauber M, Gouze E. (Translational studies in children). *Arch Pediatr*. 2009; 16(6): 664-6.
3. Kay JD, Gouze E, Oligino TJ, Gouze J-N, Watson RS, Levings PP, Bush ML, Dacanay A, Nickerson DM, Robbins PD, Evans CH, Ghivizzani SC. Intra-articular gene delivery and expression of interleukin-1 Ra mediated by self-complementary adeno-associated virus. *J Gene Med*. 2009; Apr 21.
4. Prevot-D'Alvise N, Pierre S, Gaillard S, Gouze E, Gouze J-N, Aubert J, Richard S, Grillasca JP. cDNA sequencing and expression analysis of *Dicentrarchus labrax* heme oxygenase-1. *Cell Mol Biol (Noisy-le-grand)*. 2008; 17 (54 suppl): OL1046-54.
5. Ghivizzani SC, Gouze E, Gouze J-N, Kay JD, Bush ML, Watson RS, Levings PP, Nickerson DM, Colahan PT, Robbins PD, Evans CH. Perspective on the use of gene therapy for chronic joint diseases. *Curr Gene Ther*. 2008; 8(4): 273-86.
6. Palmer GD, Stoddart M, Gouze E, Gouze J-N, Ghivizzani SC, Porter RM, Evans CH. A simple, lanthanide-based method to enhance the transduction efficiency of adenovirus vectors. *Gene Ther*. 2008; 15 (5): 357-63.
7. Gouze J-N, Evans CH, Ghivizzani SC, Gouze E. Gene Therapy for Osteoarticular Disorders. *Med Sci (Paris)*. 2007; 23(3):303-309.
8. Ghivizzani SC, Gouze E, Watson RS, Saran JP, Kay JS, Bush ML, and J-N Gouze. Interleukin-1 in rheumatoid arthritis: its inhibition by IL-1Ra and Anakinra. *J Pharm Toxicology. J Pharm Toxicol*; 2007; 23:86-94.
9. Evans CH, Palmer GD, Pascher A, Porter R, Kwang F, Gouze E, Gouze J-N, Liu F, Steinert A, Betz O, Betz V, Vrahas M, Ghivizzani SC. Facilitated endogenous repair : Making Tissue Engineering Simple, Practical and Economical. *Tissue engineering. Tissue engineering*. 2007; 13 (8) : 1987-93.
10. Gouze E, Gouze J-N, Palmer GD, Pilapil C, Evans CH, Ghivizzani SC. Transgene persistence and cell turnover in the diarthrodial joint: implications for the intra-articular gene therapy of chronic joint diseases. *Mol. Ther* 2007; 15:1114-1120.
11. Gouze J-N, Gouze E, Popp MP, Bush ML, Dacanay EA, Kay JD, Leving PP, Patel KR, Saran JS, Watson RS, Ghivizzani SC. Exogenous Glucosamine Globally Protects Chondrocytes from the Arthritogenic Effects of IL-1 β . *Arthritis Res. Ther*. 2006; 8(6):R173.
12. Evans CH, Gouze E, Gouze J-N, Robbins PD, Ghivizzani SC. Gene therapeutic approaches-Transfer in vivo. *Advanced Drug Delivery Reviews*. 2006; 20;58(2):243-58.
13. Palmer GD, Steiner A, Pasher A, Gouze E, Gouze J-N, Betz O, Johnstone B, Evans CH, Ghivizzani SC. Gene-Induced Chondrogenesis of Primary Mesenchymal Stem Cells in vitro. *Mol Ther*. 2005; 12(2):219-28.
14. Ghivizzani SC, Gouze E, and J-N Gouze. Targets for apoptotic intervention in rheumatoid arthritis. In *Apoptotic pathways as targets for novel therapies in cancer and other diseases* (Marek Los and Spencer Gibson, Klower press).2005; XXVI, Chapter 9, pp 197-212.
15. Pascher A, Palmer GD, Steinert A, Oligino T, Gouze E, Gouze J-N, Betz O, Spector M, Robbins PD, Evans CH, Ghivizzani SC. Gene delivery to cartilage defects using coagulated bone marrow aspirate. *Gene Ther*. 2004; 11(2):133-141.
16. Evans CH, Gouze J-N, Gouze E, Robbins PD, Ghivizzani SC. Osteoarthritis gene therapy. *Gene Ther*. 2004; 11(4):379-389.
17. Gouze J-N, Stoddart MJ, Gouze E, Palmer GD, Ghivizzani SC, Grodzinsky AJ, Evans CH. In vitro gene transfer to chondrocyte and synovial fibroblasts by adenoviral vectors. *Methods Mol. Med*. 2004; 100:147-164.
18. Gouze J-N, Gouze E, Palmer GD, Kaneto H, Ghivizzani SC, Grodzinsky AJ, Evans CH. Adenovirus-mediated gene transfer of glutamine/fructose-6-phosphate amidotransferase antagonizes the effects of interleukin-1 β on bovine chondrocytes. *Osteoarthritis Cart*. 2004; 12(3):217-224.
19. Pasher A, Steinert AF, Palmer GD, Betz O, Gouze E, Gouze J-N, Pilapil C, Ghivizzani SC, Evans CH, Murray MM. Enhanced repair of the anterior cruciate ligament by in situ gene transfer: evaluation in an in vitro model. *Mol. Biol*. 2004; 10(2):327-36.
20. Gaillard S, Antonini F, Joly N, Gouze J-N, Grillasca JP. Sequence protein alignment with composition new evolutions (SPACne): a program for the identification of polypeptides using amino acid composition. A user friendly modification of SPAC. *Cell. Mol. Biol*. 2004; 50(7): 801-803.

21. Gouze E, Pawliuk R, Gouze J-N, Pilapil C, Fleet C, Palmer GD, Evans CH, Leboulch P, Ghivizzani SC. Lentiviral Mediated gene delivery to synovium: potent intra-articular expression with amplification by inflammation. *Mol. Ther.* 2003;7(4):460-466.
22. Gouze J-N, Gouze E, Palmer GD, Liew VS, Pascher A, Betz OB, Thornhill TS, Evans CH, Grodzinsky AJ, Ghivizzani SC. A comparative study of the inhibitory effects of IL-1Ra following administration as a recombinant protein or by gene transfer. *Arthritis Res. Ther.* 2003; 5:R301-R309.
23. Palmer GD, Gouze E, Gouze J-N, Betz O, Evans CH, Ghivizzani SC. Gene transfer to articular chondrocytes with recombinant adenovirus. *Methods Mol. Biol.* 2003;215:235-246.
24. Gouze J-N, Bianchi A, Becuwe P, Dauca M, Netter P, Magdalou J, Terlain B, Bordji K. Glucosamine modulates IL-1-induced activation of rat chondrocytes at a receptor level, and by inhibiting the NF-kappa B pathway. *FEBS Lett.* 2002;510(3) :166-70.
25. Gouze E, Pawliuk R, Pilapil C, Gouze J-N, Fleet C, Palmer GD, Evans CH, Leboulch P, Ghivizzani SC. In vivo gene delivery to synovium by lentiviral vectors. *Mol. Ther.* 2002;5(4) :397-404.
26. Palmer G, Pascher A, Gouze E, Gouze J-N, Betz O, Spector M, Robbins PD, Evans CH, Ghivizzani SC. Development of gene-based therapies for cartilage repair. *Crit. Rev. Eukaryot. Gene Expr.* 2002;12(4):259-273.
27. Gouze J-N, Bordji K, Gulberti S, Terlain B, Netter P, Magdalou J, Fournel-Gigleux S, Ouzine M. Interleukin-1beta down-regulates the expression of glucuronosyltransferase I, a key enzyme priming glycosaminoglycan biosynthesis: influence of glucosamine on interleukin-1beta-mediated effects in rat chondrocytes. *Arthritis Rheum.* 2001;44(2):351-60.
28. Gouze E., Ghivizzani SC, Palmer GD, Gouze J-N, Robbins PD, Evans CH. Gene therapy for rheumatoid arthritis. *Expert Opin. Biol. Ther.* 2001;1(6) :971-78.
29. Gouze J-N, Ghivizzani SC, Gouze E, Palmer GD, Betz OD, Robbins PD, Evans CH, Herndon JH. Gene therapy for rheumatoid arthritis. *Hand Surg.* 2001;6(2) :211-9.
30. Bordji K, Grillasca JP, Gouze J-N, Magdalou J, Schohn H, Keller JM, Bianchi A, Dauca M, Netter P, Terlain B. Evidence for the presence of peroxisome proliferator-activated receptor (PPAR) alpha and gamma and retinoid Z receptor in cartilage. PPARgamma activation modulates the effects of interleukin-1beta on rat chondrocytes. *J. Biol. Chem.* 2000;275(16):12243-50.
31. Pless D, Gouze J-N, Senay C, Herber R, Leroy P, Barberousse V, Fournel-Gigleux S, Magdalou J. Characterization of the UDP glucuronosyltransferases involved in the glucuronidation of an antithrombotic thioxyloside in rat and humans. *Drug Metab. Dispo.* 1999;7(5) :588-95.

United States Provisional Patent Application Number: 60/814,468

Entitled: Self-complementary adeno-associated viral vectors and methods for treating articular dysfunction or disease.

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