

Nicolas Grillet

Edwards, room R113B
300 Pasteur Drive
Stanford, CA 94305
Phone: 650-497-9393
ngrillet@stanford.edu
<http://grilletlab.stanford.edu>

Career

- Apr 2014-present **Assistant Professor**, Stanford University, School of Medicine, Stanford, CA, USA
Otolaryngology department
- Jun 2010-Mar 2014 **Senior Research Associate**, The Scripps Research Institute, La Jolla, CA, USA
Department of Cell Biology and Dorris Neuroscience Center
Advisor: Ulrich Müller
- Jul 2005-May 2010 **Research Associate**, The Scripps Research Institute, La Jolla, CA, USA
Department of Cell Biology and Dorris Neuroscience Center
Advisor: Ulrich Müller
- Jul 1999-Nov 2004 **Graduate Student**, The Institute for Developmental Biology of Marseilles, then
moved to the Ecole Normale Supérieure, Paris, France
CNRS/ENS “Development and Evolution of the Nervous System”
Advisor: Jean-François Brunet
- Jul 1998-Jun 1999 **Undergraduate Student**, The Institute for Developmental Biology of Marseilles,
France
INSERM “Development and Pathology of Spinal Motoneuron”
Advisors: Christopher E Henderson, Keith Dudley
- Aug 1997-Jun 1998 **Scientist**, Military duty, The Institute of Tropical Medicine of the French Army,
Marseilles, France
Department of Parasitology
Advisor: Daniel Parsy

Education

- Jul 1999-Nov 2004 **PhD** in Developmental Neurobiology
University Aix-Marseilles II, Luminy, France
- Jul 1998-Jun 1999 **DEA** (First level doctoral degree) in Cellular Biology and Genetics University Aix-
Marseilles II, Luminy, France
- Sep 1995-Jun 1997 **Master degree** of Cellular Biology, Physiology and Neurobiology
University Aix-Marseilles II, Luminy, France

Other Experience and Professional memberships

2010-2014	Associate Faculty member of Faculty of 1000, Animal Genetics
2013-present	Member, Association for Research in Otolaryngology
2015-present	Member, American Society for Human Genetics
2016-present	Reviewer, Laryngoscope, Clinical Genetics, Molecular and Cellular Probes, Human Frontier

Honors

1999-2002	French Research and Technology Ministry fellowship
2002	Cancer Research Association (ARC) fellowship
2006	Foundation for the Medical Research (FRM) fellowship
2011	NIDCD, NIH Travel award grant No. 1R13DC012023-01 8 th Molecular Biology of Hearing and Deafness Conference

Research Articles

1. Wu Z*, Grillet N*, Zhao B, Cunningham C, Harkins-Perry S, Coste B, Ranade S, Zebarjadi N, Beurg M, Fettiplace R, Patapoutian A, Müller U.
Mechanosensory hair cells express two molecularly distinct mechanotransduction channels.
Nat. Neurosci. 2017 Jan;20(1):24-33. *Shared first-authorship
2. Zeng WZ*, Grillet N*, Dewey JB, Trouillet A, Krey JF, Barr-Gillespie PG, Oghalai JS, Müller U.
Neuroplastin Isoform Np55 Is Expressed in the Stereocilia of Outer Hair Cells and Required for Normal Outer Hair Cell Function.
J Neurosci. 2016 Aug 31;36(35):9201-16. * Shared first-authorship
3. Lee HY, Raphael PD, Xia A, Kim J, Grillet N, Applegate BE, Ellerbee Bowden AK, Oghalai JS.
Two-Dimensional Cochlear Micromechanics Measured In Vivo Demonstrate Radial Tuning within the Mouse Organ of Corti.
J Neurosci. 2016; 36(31):8160-73.
4. Zhao B, Wu Z, Grillet N, Yan L, Xiong W, Harkins-Perry S, Müller U.
TMIE Is an Essential Component of the Mechanotransduction Machinery of Cochlear Hair Cells.
Neuron. 2014 Dec 3;84(5):954-67.
Highlighted in a Preview in the same issue by Liedtke W.
5. Xiong W, Wagner TF, Linxuan Y, Grillet N, Müller U.
Injectoporation: an efficient gene delivery method for the annotation of gene function in mechanosensory hair cells.
Nat Methods. 2014 Oct;9(10):2438-49
6. Mendus D, Sundaresan S, Grillet N, Wangsawihardja F, Leu R, Müller U, Jones SM, Mustapha M.
Thrombospondins 1 and 2 are important for afferent synapse formation and function in the inner ear.
Eur J Neurosci. 2014 Apr;39(8):1256-67.
7. Xiong W, Grillet N, Elledge HM, Wagner TF, Zhao B, Johnson KR, Kazmierczak P, Müller U.
TMHS is an integral component of the mechanotransduction machinery of cochlear hair cells.
Cell. 2012 Dec 7;151(6):1283-95.

8. Webb SW, Grillet N, Andrade LR, Xiong W, Swarthout L, Della Santina CC, Kachar B, Müller U. Regulation of PCDH15 function in mechanosensory hair cells by alternative splicing of the cytoplasmic domain.
Development. 2011 Apr;138(8):1607-17.
9. Borck G, Rehman AU, Lee K, Pogoda HM, Kakar N, von Ameln S, Grillet N, Hildebrand MS, Ahmed ZM, Nürnberg G, Ansar M, Basit S, Javed Q, Morell RJ, Nasreen N, Shearer AE, Ahmad A, Kahrizi K, Shaikh RS, Ali RA, Khan SN, Goebel I, Meyer NC, Kimberling WJ, Webster JA, Stephan DA, Schiller MR, Bahlo M, Najmabadi H, Gillespie PG, Nürnberg P, Wollnik B, Riazuddin S, Smith RJ, Ahmad W, Müller U, Hammerschmidt M, Friedman TB, Riazuddin S, Leal SM, Ahmad J, Kubisch C. Loss-of-Function Mutations of ILDR1 Cause Autosomal-Recessive Hearing Impairment DFNB42.
Am J Hum Genet. 2011 Jan 19.
10. Grillet N*, Schwander M*, Hildebrand MS, Sczaniecka A, Kolatkar A, Velasco J, Webster JA, Kahrizi K, Najmabadi H, Kimberling WJ, Stephan D, Bahlo M, Wiltshire T, Tarantino LM, Kuhn P, Smith RJ, Müller U. Mutations in LOXHD1, an evolutionarily conserved stereociliary protein, disrupt hair cell function in mice and cause progressive hearing loss in humans.
Am J Hum Genet. 2009 Sep;85(3):328-37.
Highlighted in the "Editor's corner" of the same issue; *Shared first-authorship (Featured as Video Presentation in the American Museum of Natural History, New York, NY; The Frank H. McClung Museum, Knoxville, TN; Museum of Science and Industry, Chicago, IL; Great Lakes Science Center, Cleveland, OH; Estimated Audience: 6.650.000).
11. Grillet N*, Xiong W*, Reynolds A*, Kazmierczak P, Sato T, Lillo C, Dumont RA, Hintermann E, Sczaniecka A, Schwander M, Williams D, Kachar B, Gillespie PG, Müller U. Harmonin mutations cause mechanotransduction defects in cochlear hair cells.
Neuron. 2009 May 14;62(3):375-87.
Cover Article; highlighted in a Preview in the same issue; * Shared first-authorship
12. Iankova I, Chavey C, Clapé C, Colomer C, Guérineau NC, Grillet N, Brunet JF, Annicotte JS, Fajas L. Regulator of G protein signaling-4 controls fatty acid and glucose homeostasis.
Endocrinology. 2008 Nov;149(11):5706-12
13. Schwander M, Sczaniecka A, Grillet N, Bailey JS, Avenarius M, Najmabadi H, Steffy BM, Federe GC, Lagler EA, Banan R, Hice R, Grabowski-Boase L, Keithley EM, Ryan AF, Housley GD, Wiltshire T, Smith RJ, Tarantino LM, Müller U. A forward genetics screen in mice identifies recessive deafness traits and reveals that pejvakin is essential for outer hair cell function.
J Neurosci. 2007 Feb 28;27(9):2163-75
14. Herr DR, Grillet N, Schwander M, Rivera R, Müller U, Chun J. Sphingosine 1-phosphate (S1P) signaling is required for maintenance of hair cells mainly via activation of S1P2.
J Neurosci. 2007 Feb 7;27(6):1474-8.
15. Grillet N, Pattyn A, Contet C, Kieffer BL, Goridis C, Brunet JF. Generation and characterization of Rgs4 mutant mice.
Mol Cell Biol. 2005 May; 25(10):4221-8.
16. Grillet N, Dubreuil V, Dufour HD, Brunet JF. Dynamic expression of RGS4 in the developing nervous system and regulation by the neural type-specific transcription factor Phox2b.
J Neurosci. 2003 Nov 19; 23(33):10613-21.

17. Garcès A, Livet J Grillet N, Henderson CE, Delapeyrière O.
Responsiveness to neurturin of subpopulations of embryonic rat spinal motoneuron does not correlate with expression of GFR alpha 1 or GFR alpha 2.
Dev Dyn. 2001 Mar; 220(3):189-97.

Reviews Articles

1. Grillet N^{**}, Müller U.
The genetics of progressive hearing loss: a link between hearing impairment and dysfunction of the mechanosensory hair cells (Editorial)
Future of Neurology, 2010 Jan;5(1):9-12
^{**} Corresponding author
2. Grillet N.
[Harmonin is a component of the auditory mechanotransduction apparatus]
Med Sci (Paris), 2009 Nov 25(11):903-6. French
3. Grillet N, Kazmierczak P, Xiong W, Schwander M, Reynolds A, Sakaguchi H, Tokita J, Kachar B, Müller U.
The mechanotransduction machinery of hair cells.
Sci Signal. 2009 Aug 25;2(85):pt5.