



<b>INSERM U781</b>	PARIS	<b>ASMA SMAHI</b>	Study of molecular mechanisms underlying the inflammatory reaction in patients with generalised pustular psoriasis (von Zumbusch)	*Marrakchi S, Guigue P, Renshaw BR, Puel A, Pei XY, Fraitag S, Zribi E, Cluzeau C, Chrabieh M, Towne JJ, Douangpanya L, Pons C, Mansour S, Serre V, Makhi H, Mahfoudh N, Fakhfakh F, Bodemer C, Feingold J, Hadj-Rabia S, Favre M, Genin E, Sahbatou M, Munnich A, Casanova JL, Sims JE, Turki H, Bacheke H and SMAHI A. Interleukin-36-receptor antagonist deficiency and generalized pustular psoriasis. <b>N Engl J Med.</b> 2011 Aug 18;365(7):620-8. *Viguer M, Guigue P, Pages C, SMAHI A and Bacheke H. Successful treatment of generalized pustular psoriasis with the recombinant interleukin-1 receptor antagonist Anakinra: lack of correlation with IL1RN mutations. <b>Ann Intern Med.</b> 2010 Jun 6;151(11):666-7. *Zhang SY, Jouanguy E, Ugolini S, SMAHI A, Elain G, Romero P, Segal D, Sancho-Simizu V, Lorenzo L, Picard C, Chaglier A, Plancozaine S, Titeau M, Cognet C, von Bernuth H, Ku Cl, Casroque A, Barreiro L, Leonard J, Hamilton C, Lebon P, Héron B, Vallee L, Quintana-Murci J, Hovnanian A, Rozenberg F, Vivier E, Gessmann F, Tardieu M, Abel L and Casanova JL. TR3 deficiency in patients with herpes simplex encephalitis. <b>Science.</b> 2007 Sep 14;317(5844):1522-7	Genetic and immunological characterization of autosomal recessive generalized pustular psoriasis in four multiplex consanguineous families.	molecular and cellular biologist	1	immunologist, cellular biologist	<a href="mailto:asma.smahi@inserm.fr">asma.smahi@inserm.fr</a>		Important to support	
<b>INSERM U787</b>	Paris	<b>Edgar GOMES</b>	In our lab we are interested in understanding how the cytoskeleton regulates nuclear positioning and what is the role of nuclear positioning during cell migration and myofiber formation. We are also curious to know how mutations in proteins associated with muscular dystrophies interfere with nuclear position during myofiber formation. We use different molecular and cellular approaches in combination with time-lapse imaging analysis to address these questions. More information in <a href="http://www.myologygroup.net/">http://www.myologygroup.net/</a>	Luston GW*, Gomes ER*, Folker ES, Vintinner E, Gundersen GG. Linear arrays of nuclear envelope proteins harness retrograde actin flow for nuclear movement. <i>Science.</i> 2010 Aug 20;329(5994):956-9. *co-first author Kathryn J. Mitchell Alice Pannérec, Bruno Cadot, Ara Parkikian, Vanessa Besson, Edgar R. Gomes, Giovanna Marazzi, and David A. Saxson. "Identification and characterisation of a non-satellite cell resident muscle progenitor during postnatal development". 2010. <i>Nature Cell Biology.</i> 2010 Mar 12;12(3):257-66 Cecilia Ostlund, Eric S. Folker, Jason C. Choi, Edgar R. Gomes, Gregg G. Gundersen, Howard J. Workman, "Dynamics and Molecular Interactions of Linker of Nucleoskeleton and Cytoskeleton (LINC) Complex Proteins", <i>Journal of Cell Science.</i> 2009 :122:4099-108. E.R. Gomes, S. Jani, G.G. Gundersen "Nuclear movement regulated by Cdc42, MRCK, myosin, and actin flow establishes MTOC polarization in migrating cells", <i>Cell,</i> 2005, 121: 451-63 K.J. Evans, E.R. Gomes, S.M. Reisenweber, G.G. Gundersen, B.P. Lauring "Linking axonal degeneration to microtubule remodeling by Spastin-mediated microtubule severing", <i>J. Cell Biology.</i> 2005, 168: 599-606 D.L. Dujardin, L.E. Barnhart, S.A. Stehman, E.R. Gomes, G.G. Gundersen, R.V. Vallee "A role for cytoplasmic dynein and LIS1 in directed cell movement" <i>J. Cell Biology.</i> 2003, 22:163:1205-11	We have identified multiple unknown nuclear envelope proteins and we will understand how these proteins connect to the actin and microtubule cytoskeleton and how they are involved in nuclear positioning during cell migration	cell biology, molecular biology, microscopy, biochemistry	1	cell biology, molecular biology, microscopy, biochemistry	<a href="mailto:edgar.gomes@inserm.fr">edgar.gomes@inserm.fr</a>	<a href="http://musclab.gongaga.sages.com/">http://musclab.gongaga.sages.com/</a>		
<b>INSERM U787</b>	Paris	<b>Edgar GOMES</b>	In our lab we are interested in understanding how the cytoskeleton regulates nuclear positioning and what is the role of nuclear positioning during cell migration and myofiber formation. We are also curious to know how mutations in proteins associated with muscular dystrophies interfere with nuclear position during myofiber formation. We use different molecular and cellular approaches in combination with time-lapse imaging analysis to address these questions. More information in <a href="http://www.myologygroup.net/">http://www.myologygroup.net/</a>	Luston GW*, Gomes ER*, Folker ES, Vintinner E, Gundersen GG. Linear arrays of nuclear envelope proteins harness retrograde actin flow for nuclear movement. <i>Science.</i> 2010 Aug 20;329(5994):956-9. *co-first author Kathryn J. Mitchell Alice Pannérec, Bruno Cadot, Ara Parkikian, Vanessa Besson, Edgar R. Gomes, Giovanna Marazzi, and David A. Saxson. "Identification and characterisation of a non-satellite cell resident muscle progenitor during postnatal development". 2010. <i>Nature Cell Biology.</i> 2010 Mar 12;12(3):257-66 Cecilia Ostlund, Eric S. Folker, Jason C. Choi, Edgar R. Gomes, Gregg G. Gundersen, Howard J. Workman, "Dynamics and Molecular Interactions of Linker of Nucleoskeleton and Cytoskeleton (LINC) Complex Proteins", <i>Journal of Cell Science.</i> 2009 :122:4099-108. E.R. Gomes, S. Jani, G.G. Gundersen "Nuclear movement regulated by Cdc42, MRCK, myosin, and actin flow establishes MTOC polarization in migrating cells", <i>Cell,</i> 2005, 121: 451-63 K.J. Evans, E.R. Gomes, S.M. Reisenweber, G.G. Gundersen, B.P. Lauring "Linking axonal degeneration to microtubule remodeling by Spastin-mediated microtubule severing", <i>J. Cell Biology.</i> 2005, 168: 599-606 D.L. Dujardin, L.E. Barnhart, S.A. Stehman, E.R. Gomes, G.G. Gundersen, R.V. Vallee "A role for cytoplasmic dynein and LIS1 in directed cell movement" <i>J. Cell Biology.</i> 2003, 22:163:1205-11	multiple muscle disorders originate mispositioned nuclei in skeletal muscle. We are studying how mutations associated with these disorders, in particular centronuclear myopathies, give rise to these phenotypes and how are these mutations associated with changes within the muscle fibers	cell biology, molecular biology, microscopy, biochemistry	1	cell biology, molecular biology, microscopy, biochemistry	<a href="mailto:edgar.gomes@inserm.fr">edgar.gomes@inserm.fr</a>	<a href="http://musclab.gongaga.sages.com/">http://musclab.gongaga.sages.com/</a>		
<b>INSERM U-788</b>	Le Kremlin-Bicêtre	<b>Judith MELKI</b>	Genetic basis of motor neuron diseases and arthrogryposis, the fetal expression of neuromuscular diseases. Based on a national cohort of patients, we are applying new genomic technologies to identify new genes having a critical function on the development and maintenance of the neuromuscular system.	LEFEVRE S, BÜRGLIN L, REBOULLET S, CLERMONT O, BURLET P, VIOLETTE L, BENICHOUCHE B, CHUAUD C, MILLASSEAU P, ZEVIANI M, LE PASLIER D, FRÉZAL J, COHEN D, WEISSENBACH J, MUNNICH A, and MELKI J. Identification and characterization of a spinal muscular atrophy determining gene. <i>Cell</i> 1995; 80: 155-165 BÜRGLIN L, ANEEL L, VIOLETTE L, LEFEVRE S, BURLET P, CLERMONT O, RACLIN V, LANDRIEU P, VERLOES A, MUNNICH A, and MELKI J. SMN gene deletion in the arthrogryposis multiplex congenita-spinal muscular atrophy association. <i>J. Clin. Invest.</i> 1996; 98: 1130-1132 LEFEVRE S, BURLET P, LIU Q, BERTRANDY S, CLERMONT O, MUNNICH A, DREYFUS O, and MELKI J. Correlation of severity with the SMN protein level in spinal muscular atrophy. <i>Nature Genetics.</i> 1995, 265-269 CIFUENTES-DIAZ C, FRUGIER T, TIZIANO FD, LACRNE E, ROBLDT N, JOSHI V, MORLAU MH, MELKI J. Deletion of murine SMN exon 7 directed to skeletal muscle leads to severe muscular dystrophy. <i>J. Cell Biol.</i> 2001 152: 1107-1114 CIFUENTES-DIAZ C, NICOLE S, VELASCO ME, ROSA-CEDRON C, PANZOZO C, FRUGIER T, MILLET G, ROBLDT N, JOSHI V, MELKI J. Neurofilament accumulation at the motor endplate and lack of axonal sprouting in a spinal muscular atrophy mouse model. <i>Hum Mol Genet.</i> 2002 11:1439-47. NICOLE S, DESFORGES B, MILLET G, LESBORDES J, CIFUENTES-DIAZ C, VERTES D, CAD M, DE BACKER F, LANGUILLE L, ROBLDT N, JOSHI V, GILLIS JM, and MELKI J. Intact satellite cells lead to remarkable protection against Smn gene defect in differentiated skeletal muscle <i>J Cell Biol.</i> 2003; 161:371-82. TARRADE S, FASSHER C, COURAGOT S, CHARBON D, VITTE J, PENIS L, THOREL A, MOUSSEL E, FONKNECHTEN N, ROBLDT N, SELHEAN D, DIRICH A, HAUIW JJ and MELKI J. A mutation of spastin is responsible for swellings and impairment of transport in a region of axon characterized by changes in microtubule composition. <i>Hum Mol Genet.</i> 2006 15:3544-58. VITTE J, FASSHER C, TIZIANO FD, DALARD C, SOAVE S, ROBLDT N, BRAHE C, SAUGIER-YEBER P, BONNEFONT JP, MELKI J. Refined characterization of the expression and stability of the SMN gene products. <i>Am J Pathol.</i> 2007 171:1269-80. LANDERS JE, MELKI J, MEININGER V, et al. Reduced expression of the Kinesin-Associated Protein 3 (KIFAP3) gene increases survival in sporadic amyotrophic lateral sclerosis. <i>Proc Natl Acad Sci U S A.</i> 2009 106:9004-9. ATTALI R, WARWAR N, ISRAEL A, GURT I, MCNALY E, PUCKELWARTZ M, GLICK B, NEVO Y, BEN-NEHAZH Z, MELKI J. Mutation of SYNE-1, encoding an essential component of the nuclear lamina, is responsible for autosomal recessive arthrogryposis. <i>Hum Mol Genet.</i> 2009 18:3462-9.	Genetic investigation of arthrogryposis multiplex congenita of neuromuscular origin	Molecular genetics, molecular biologist	1	molecular biologist	<a href="mailto:judith.melki@inserm.fr">judith.melki@inserm.fr</a>		To support in priority, in the frame of the Network Brazil-France "stem cells and Rare Diseases"	
<b>INSERM U823</b>	Grenoble	<b>Stefan DIMITROV</b>	Our research is focused on chromatin and epigenetics. We are interested in the epigenetic roles of histone posttranslational modifications, chromatin remodeling machines and histone variants under normal and pathological conditions.	*1. Angelov, D. et al.(2003) Molecular Cell 11, 1033-1041 2. Vincent et al. (2004) Molecular Cell, 16(3), 439-452 3. Angelov, D. et al.(2004) The EMBO J, 23, 3815-3824 4. Angelov et al. (2006) The EMBO J, 25, 1669-1679 5. Doyen et al (2006) The EMBO J 25, 4234-4244* 6. Ouarrhachi et al. (2006) Genes&Dev, 20 (23), 3324-3336 7. Meitton et al. (2008) Mol. Cell. Biol. 29:150-156 8. Shukla et al. (2010) Proc. Natl. Acad. Sci. USA 107(15):1936-41 9. Shaub et al. (2010) Proc. Natl. Acad. Sci. USA 107(14):1349-54 10. Syed et al. (2010) Proc. Natl. Acad. Sci. USA 107, 9620-9625	Epigenetic roles of histone posttranslational modifications, chromatin remodeling machines and histone variants under normal and pathological conditions.	2 Ph.D. students,	(1) Chromatin biology (2) Cell biology (3) Molecular biology	2 Post docs	(1) Chromatin biology (2) Cell biology (3) Molecular biology	<a href="mailto:dimitrov@uj-grenoble.fr">dimitrov@uj-grenoble.fr</a>		
<b>INSERM U823</b>	Grenoble	<b>Saad Khochbin</b>	This team develops highly interconnected basic and translational research programs in the field of male genome programming and somatic cancers	1- Tan et al., Identification of 67 histone marks and histone lysine crotonylation as a new type of histone modification. 2011, Cell, 2011 Sep 16;146(6):1016-28 2- Reynold et al., Oncogenesis by sequestration of CBP/p300 in transcriptionally inactive hyperacetylated chromatin domains. EMBO J. 2010 Sep 1;29(17):2943-52. 3- Govin et al., Systematic screen reveals new functional dynamics of histones H3 and H4 during gametogenesis. Genes Dev. 2010 Aug 15;24(16):1772-86. 4- Morinère et al., Cooperative binding of two acetylation marks on a histone tail by a single bromodomain. Nature. 2009 Oct 1;461(7264):664-8. 5- Sasaki et al., Real-time imaging of histone H4 hyperacetylation in living cells. Proc Natl Acad Sci U S A. 2009 Sep 22;106(38):16257-62. 6- Bouyault et al., HDACs controls major cell response pathways to cytotoxic accumulation of protein aggregates. Genes Dev. 2007 Sep 1;21(17):2172-81 7- Delaval et al., Differential histone modifications mark mouse imprinting control regions during spermatogenesis. EMBO J. 2007 Feb 7;26(3):720-9. 8- Govin et al., Pericentric heterochromatin reprogramming by new histone variants during mouse spermiogenesis. J Cell Biol. 2007 Jan 29;176(3):283-94. 9- Bouyault et al., HDACs-p97/NCP controlled polyubiquitin chain turnover. EMBO J. 2006 Jul 26;25(14):3357-66 10- Col et al., HIV-1 Tat targets Tip60 to impair the apoptotic cell response to genotoxic stresses.EMBO J. 2005 Jul 20;24(14):2634-45 1- Tan et al., Identification of 67 histone marks and histone lysine crotonylation as a new type of histone modification. 2011, Cell, 2011 Sep 16;146(6):1016-28 2- Reynold et al., Oncogenesis by sequestration of CBP/p300 in transcriptionally inactive hyperacetylated chromatin domains. EMBO J. 2010 Sep 1;29(17):2943-52. 3- Govin et al., Systematic screen reveals new functional dynamics of histones H3 and H4 during gametogenesis. Genes Dev. 2010 Aug 15;24(16):1772-86. 4- Morinère et al., Cooperative binding of two acetylation marks on a histone tail by a single bromodomain. Nature. 2009 Oct 1;461(7264):664-8. 5- Sasaki et al., Real-time imaging of histone H4 hyperacetylation in living cells. Proc Natl Acad Sci U S A. 2009 Sep 22;106(38):16257-62. 6- Bouyault et al., HDACs controls major cell response pathways to cytotoxic accumulation of protein aggregates. Genes Dev. 2007 Sep 1;21(17):2172-81 7- Delaval et al., Differential histone modifications mark mouse imprinting control regions during spermatogenesis. EMBO J. 2007 Feb 7;26(3):720-9. 8- Govin et al., Pericentric heterochromatin reprogramming by new histone variants during mouse spermiogenesis. J Cell Biol. 2007 Jan 29;176(3):283-94. 9- Bouyault et al., HDACs-p97/NCP controlled polyubiquitin chain turnover. EMBO J. 2006 Jul 26;25(14):3357-66 10- Col et al., HIV-1 Tat targets Tip60 to impair the apoptotic cell response to genotoxic stresses.EMBO J. 2005 Jul 20;24(14):2634-45	The candidate will work on specific strategies to use our knowledge of male-specific epigenetic factors, which are aberrantly expressed in somatic cancers, as a mean to specifically target the malignant cells.	Molecular and cell biology with a knowledge of chromatin and epigenetic processes	0	Chromatin biology, acetylation biology, molecular and cellular biology and bioinformatics	<a href="mailto:khochbin@uj-grenoble.fr">khochbin@uj-grenoble.fr</a>			
<b>Inserm U 827</b>	Montpellier	<b>Mireille Claustrès</b>	Our team investigates molecular mechanisms responsible for rare genetic diseases (i.e. Abnormal splicing or transcription, micro RNAs, epigenetic marks); it also develops dedicated bioinformatic tools and locus specific databases.	1. Functional analysis of a promoter variant identified in the CFTR gene in cis of a frameshift mutation. Varti V, et al. Eur J Hum Genet. [Epub ahead of print] (2011) 2. Pure intronic rearrangements leading to aberrant pseudoxon inclusion in dystrophinopathy: a new class of mutations? Kheiff MM, et al., Hum Mutat. 32(4):467-75. (2011) 3. Heterochromatin changes undergo epigenetic changes and escape silencing in (ICF) syndrome. Bruni MC, et al. PLoS One. 29:6(4):19464. (2011) 4. Variants in CFTR untranslated regions are associated with congenital bilateral absence of the vas deferens. Lopez E, et al., J Med Genet. 48(3):152-9. (2011) 5. Nasal epithelial cells are a reliable source to study splicing variants in Usher syndrome. Vaché C, et al., Hum Mutat. 31(6):734-41.(2010) 6. NF- $\kappa$ B-related factor 2, a key inducer of antioxidant defenses, negatively regulates the CFTR transcription. René C, et al., Cell Mol Life Sci. 671(13):2297-309. (2010) 7. The US2DA c.22946G mutation: dating its common origin in a southern European population. Alier E, et al., Eur J Hum Genet. 18(7):788-91. (2010) 8. Ex vivo splicing assays of mutations at noncanonical positions of splice sites in USHER genes. Le Guldard-Mèneze S, et al., Hum Mutat. 31(3):347-55. (2010)	To develop high throughput approaches based on next generation sequencing technologies for gene expression profiling (transcriptome, splicing isoforms, microRNAs) or identification of disease genes (targeted exome sequencing).	Molecular biology, cell biology, human genetics	1	Molecular biology, cell biology and bioinformatics	<a href="mailto:mireille.claustres@inserm.fr">mireille.claustres@inserm.fr</a>	Invited by Brazilian colleagues to present their research in the Genetics Congress in Brazil in 2012	Important to support	
<b>INSERM U839</b>	Paris	<b>René-Marc MEGE</b>	The general scope of the team is the study of the molecular mechanisms of cadherin based cell adhesion and associated cytoskeletal dynamics regulating neuro-epithelial and neuronal cell migration. A particular interest is given to actin-myosin and microtubule related mechanisms allowing mechano-transduction and mechanosensing at cell cell contacts as well as cell polarization. This implication of these regulations in neuronal cell and neurites migration is central.	Gavard J.; Lambert M.; Grosheva I.; Marthiens V.; Iriopoulou T.; Riou J-F.; Bershadsky A. et Mège R.M. Lamellipodium extension and cadherin activation relying on distinct signalling pathways. <i>J.Cell Sci.</i> 2004, 117:257-270. Marthiens V.; Gavard J.; Padilla F.; Monnet C.; Castellani V.; Lambert M. et Mège R.M. Functional properties of cadherin-11, a cell adhesion receptor involved in motor axon elongation and fasciculation. <i>Mol. Cell. Neurosci.</i> 2005, 28: 715-726. Thoumine O.; Lambert M.; Mège R.M. et Choquet D. Regulation of N-cadherin dynamics at neuronal contacts through ligand binding and cytoskeletal coupling. <i>Mol.Biol.Cell</i> 2006 17: 862-875. Mège R.M., Gavard J. et Lambert M. Regulation of cell-cell junctions by the cytoskeleton. <i>Curr Opin.Cell Biol.</i> 2006 18:541-548. Lambert M.; Thoumine O.; Riveline D.; Choquet D. et Mège R.M. Formation and dynamics of cadherin adhesions. <i>Exp. Cell Res.</i> 2007, 313: 4025-4040. Boscher C. et Mège R.M. Cadherin-11 interacts with the FGF receptor and induces neurites outgrowth through associated downstream pathways. <i>Cell. Signal.</i> 2008, 20: 1061-1072. Bard L.; Boscher C.; Lambert M.; Mège R.M.; Choquet D. et Thoumine O. A molecular clutch between the actin flow and N-cadherin adhesions drives growth cone migration. <i>J. Neurosci.</i> 2008, 28:5879-90. Giannone G.; Mège R.M. et Thoumine O. Multi-level Clutches in motile cell processes. <i>Trends Cell Biol.</i> 2009 19:475-486. Lafoux B.; Anon E.; Lambert M.; Rabotney A.; Hensen P.; Buguin A.; Silberzan P., et Mège R.M. Strength dependence of cadherin-mediated adhesions. <i>Biophysical J.</i> 2010, 98 : 534-542.	Molecular biology of intercellular adhesion, mechano-transduction at cell-cell contacts	Cell biologist or Biochemist	1	Cell biologist	<a href="mailto:rene-marc.mege@inserm.fr">rene-marc.mege@inserm.fr</a>	<a href="http://www.jd39aff.inserm.fr/">http://www.jd39aff.inserm.fr/</a>		
<b>CECS/istem</b>	Evry	<b>Alexandra BENCHOUA</b>	Our team used human pluripotent stem cells to study pathologies affecting brain development	1. Claire Bollart, Xavier Nisan, Karine Giraud-Tribout, Marc Peschanski, Alexandra Benchoua. MR 125 potentiates early neural specification of human embryonic stem cells. 2012 Development. <i>Apr.13(7):1247-57.</i> 2. Alexandra Benchoua and Brigitte Oteniente Intracerebral transplantation for neurological disorders: Lessons from developmental, experimental and clinical studies, <i>Frontiers in Cellular Neuroscience.</i> 2012 Jan 27(6) doi: 10.3389/fncel.2012.00002 3. Benchoua A, Trioulier Y, Diguet E, Malgron C, Gallard MC, Dufour N, Elalouf JM, Krajewski S, Hantraye P, Déglon N, Brouillet E. Dopamine determines the vulnerability of striatal neurons to the N-terminal fragment of mutant huntingtin through the regulation of mitochondrial complex II. <i>Hum Mol Genet.</i> 2008 May 15;17(10):1446-56. Epub 2008 Feb 11. PubMed PMID: 18267960; PubMed Central PMCID: PMC2367694. 4. Lowe S, Benchoua A, Heavey B, Smith AG. Notch promotes neural lineage entry by pluripotent embryonic stem cells. <i>PLoS Biol.</i> 2006 May;4(5):e121. Epub 2006 Apr 11. PubMed PMID: 16594731; PubMed Central PMCID: PMC1431581. 5. Benchoua A, Trioulier Y, Zala D, Gallard MC, Lefort N, Dufour N, Saudou F, Elalouf JM, Hirsch E, Hantraye P, Déglon N, Brouillet E. Involvement of mitochondrial complex II defects in neuronal death produced by N-terminus fragment of mutated huntingtin. <i>Mol Biol Cell.</i> 2006 Apr;17(4):1652-63. Epub 2006 Feb 1.	Autism spectrum disorders	1 cell biologist	0		<a href="mailto:abenchoua@istem.fr">abenchoua@istem.fr</a>		To support in priority, in the frame of the Network Brazil-France "stem cells and Rare Diseases"	
<b>istem.CECS</b>	Evry	<b>Christian Pisset</b>	The objectives of the muscular disease team are to explore and validate the potential of human and dog pluripotent stem cells - human Embryonic Stem (hES) cells and induced Pluripotent Stem (iPS) cells - and their differentiated progenies to design new therapeutic strategies for muscular diseases such as duchenne muscular dystrophy	1) Intrasphincteric injections of autologous muscular cells in women with refractory stress urinary incontinence: a prospective study. Sibe P, Doucet C, Cornu JM, Clouf C, Costa P, de Medina SG, Pisset C, Haab F. <i>Int Urogynecol J.</i> 2011 Feb;22(2):183-9. 2) Real-time monitoring of cell transplantation in mouse dystrophic muscles by a secreted alkaline phosphatase reporter gene. Gerard X, Vignaud L, Charles S, Pisset C, Scherman D, Kichler A, Israel D. <i>Gene Ther.</i> 2009 Jun;16(6):815-9. 3) Cell density-dependent induction of endogenous myogenin (Myf4) gene expression by Myf5.Lindson C, Albagli O, Pisset C, Montarras D. <i>Dev Biol.</i> 2001 Dec; 15:2402(2):574-84. 4) Cell cycle-regulated expression of the muscle determination factor Myf5 in proliferating myoblasts. Lindson C, Montarras D, Pisset C. <i>J Cell Biol.</i> 1998 Jan 15;140(1):815-9. 5) Quantitative estimation of minor mRNAs by cDNA-polymerase chain reaction. Application to dystrophin mRNA in cultured myogenic and brain cells. Chelly J, Montarras D, Pisset C, Berwaldt-Netter Y, Kaplan JC, Kahn A. <i>Eur J Biochem.</i> 1990 Feb 14;187(3):691-8	Muscle disease group is a new team inside istem institute dedicated to the development of treatments intended for monogenic diseases, founded on the strong potential of stem cells for substitutive and regenerative therapies and for screening compounds libraries in order to discover new potential drugs.	Cell biologist, cell therapy	No but 2 engineers	Reprogramming, Tissue culture, expression analysis, animal models	<a href="mailto:cpisset@istem.fr">cpisset@istem.fr</a>	<a href="http://www.istem.fr">www.istem.fr</a>	To support in priority, in the frame of the Network Brazil-France "stem cells and Rare Diseases"	

INSERM U-RELS, IRTSM, AFM, Institute for Stem Cell Therapy and Exploration of Monogenic Diseases	Ervy	Xavier Nissan	Progeria, also known as Hutchinson-Gilford Progeria Syndrome (HGPS), is a rare fatal genetic disease characterized by an appearance of accelerated aging in children. The principal objective of our team is to use pluripotent stem cells to set up an in vitro pharmacological model of HGPS suitable for drug discovery and pharmacological studies.	Functional melanocytes derived from human pluripotent stem cells engraft into pluristratified epidermis. Xavier Nissan, Lionel Larrière, Manoubia Saidani, Ise Hurbani, Cedric Deleveys, Jessica Fetaris, Gilles Lemaitre, Marc Peschanski, Christine Baldeschi. Proc Natl Acad Sci U S A. 2011 Sep 6;108(36):14861-6.	Health, stem cells, pharmacology, progeria	1	Cell biologist	1	Cell biologist	xnissan@istem.fr	www.istem.eu	To support in priority, in the frame of the Network Braille-France "stem cells and Rare Diseases"		
INSERM UB61	Ervy	Christine Baldeschi	Modeling pigmentary defects of the neurofibromatosis type 1 using pluripotent stem cells	1) Functional melanocytes derived from human pluripotent stem cells engraft into pluristratified epidermis. Nissan et al. Proc Natl Acad Sci U S A. 2011. 2) mir-203 modulates epithelial differentiation from human embryonic stem cells towards epidermal stratification. Nissan et al. Dev Biol. 2011. 3) Human embryonic stem-cell derivatives for full reconstruction of the pluristratified epidermis: a preclinical study. Gueno H et al. Lancet 2009;383(9833):1745-53.	pluripotent stem cells/ melanocytes/ genodermatoses			1	cell culture of pluripotent stem cells and epidermis cells. Molecular biology	cbaldeschi@istem.fr		To support in priority, in the frame of the Network Braille-France "stem cells and Rare Diseases"		
INSERM UMR_S 910	Marseille	NICOLAS LEVY	Role of nuclear lamins and molecular partners in premature aging inherited diseases and acquired diseases.	(3) Splicing-directed therapy in a new mouse model of human accelerated aging. Osorio et al., Sci Transl Med. 2011 Oct 26;3(106):106ra107. (2) Type B mandibuloacral dysplasia with congenital myopathy due to homozygous ZNF5724 missense mutation. Ben Yabu et al., Eur J Hum Genet. 2012 Jun 26. (3) Novel Framing-Shift Mutations of the ZNF5724 Gene in Two Siblings Affected With Restrictive Dermopathy and Review of the Mutations Described in the Literature. Smigiel R et al., Am J Med Genet. 2010 Feb;152A:447-52. (4) Novel LMNA mutation in a familial case of atypical Werner syndrome presenting with severe atherosclerosis and acute ischemic disease. Renard et al., Stroke 2009;40:1511-14. (5) HGPS and related premature aging disorders: from genetic identification to the first therapeutic approaches. Pereira et al., Mechanisms of Aging and Development, 2008;129:449-459. (6) An association of Hutchinson-Gilford Progeria and malignancy. Shalov et al., Am J Med Genet. 2007;143:1821-1826. (7) Loss of ZNF5724 (FACE-1) causes autosomal recessive restrictive dermopathy and accumulation of A protein precursors. Navarro et al., Hum Mol Genet. 2005;14:1103-13. Epub 2005 Apr 20. (8) Lamin A and ZNF5724 (FACE-1) defects cause nuclear disorganization and identify Restrictive Dermopathy as a lethal neonatal laminopathy. Claire Navarro, et al., Human Molecular Genetics, 2004;13:2493-503. (9) Lamin A Truncation in Hutchinson-Gilford Progeria. De Sandre-Giovannoli et al., Science. 2003 Jun 27;300(5628):2055. Epub 2003 Apr 17. (10) Homozygous effects in LMNA, encoding lamin A/C nuclear envelope proteins, cause autosomal recessive axonal neuropathy in human (Charcot-Marie-Tooth disorder type 2) and mouse. De Sandre-Giovannoli et al., Am J Hum Genet. 2002; 70: 726-736.	Further characterisation of the molecular mechanisms underlying lamin-linked premature ageing diseases on patients cell lines and mouse models; identification of novel therapeutic targets and approaches.		cell biology, molecular biology, genetics, gene therapy; additionally, several team members are MD/PhDs with clinical or laboratory skills and activities; one bioinformatician is	1	crit biology, molecular biology, genetics, gene therapy; additionally, several team members are MD/PhDs with clinical or laboratory skills and activities; one bioinformatician is permanently recruited in the research unit	nicolas.levy@umv-amu.fr	http://www.istem-eu.fr www.u-m-a.fr	The U910 scientific environment is highly dynamic and involves frequent and stimulating interactions between clinicians and fundamental researchers, representing a fertile ground for translational research and applications. (Two clinical trials have already been started in the recent years, based on preclinical results issued from U910 teams, one of which on Hutchinson-Gilford Progeria).	To support in priority, in the frame of the Network Braille-France "stem cells and Rare Diseases"	
InsERM U910	Marseille	Bernard Blétrévy	Molecular mechanisms of differentiation of ES and IPS cells: isolation, validation and characterization of human iPSC lines from patients suffering monogenic diseases	1- F. Boit, M. Aouadi, L. Caron, P. C. Ewen, N. Belmonte, M. Prot, C. Dairi, F. Hoffman, G. Pages, J. Pouvion-Seiler, Y. Le Marchand and B. Blétrévy. The erk1 isoform is specifically required for in vitro and in vivo adipogenesis. Diabetes, 2005, 54, 402-411. 2- F. Boit, M. Aouadi, L. Caron, L. & Blétrévy B. The role of MAPKs in adipocyte differentiation and obesity. Biochemie, 2005, 87, 51-56. 3- L. Caron, M. Prot, M. Rouleau, M. Robitaille, F. Boit and B. Blétrévy. The lac-repressor provides a reversible gene expression system in undifferentiated and differentiated embryonic stem cells. Cellular and Molecular Life Sciences, 2005, 62(14):1605-12. 4- L. Caron, F. Boit, M. Prot, F. Hoffman & B. Blétrévy. A new role for the oncogenic High Mobility Group A2 transcription factor in myogenesis of embryonic stem cells. Oncogene, 2005, 24(11):2818-19. 5- M. Aouadi, K. Laurent, M. Prot, Y. Le Marchand-Bruatet, B. Blétrévy and F. Boit* Inhibition of $\beta$ 3MAPK increases adipogenesis from embryonic to adult stages. Diabetes, 2006 Feb;55(2):2819. *no last authors. 6- M. Aouadi, F. Boit, L. Caron, K. Laurent, Y. Le Marchand-Bruatet and B. Blétrévy. $\beta$ 3MAPK constitutes an early switch in embryonic stem cells commitment into neurogenesis versus cardiomyogenesis. Stem Cells, 2006, 2006 May;24(5):1399-406. 7- Aouadi M, Blétrévy B, Caron L, Le Marchand-Bruatet Y, Boit F. Role of MAPKs in development and differentiation: lessons from knockout mice. Biochimie. 2006 Sep;88(9):1093-8. 8- Blétrévy B, Heavily L, Boit F, Caron L, Aouadi M. Concise review: regulation of embryonic stem cell lineage commitment by mitogen-activated protein kinases. Stem Cells. 2007 May;25(5):1096-5. 9- Aouadi M, Jager L, Laurent K, Gonzalez T, Gonzalez M, Blétrévy B, Le Marchand Bruatet Y, Tami JF, Boit F. $\beta$ 3MAPK kinase activity is required for human primary adipocyte differentiation. FEBS Lett. 2007 Dec 15;581(29):5595-4. Epub 2007 Nov 13. 10- E. Barakat, D. Hadadsh, F. Peretti, Y. M. Renault, J. Hudot, D. Bonnot, R. Tournante, D. Negre, J. Ahanou-Vague, M. C. Alessi & B. Blétrévy. $\beta$ 3MAPK Controls Two Successive Steps During the Early Mesodermal Commitment of Embryonic Stem Cells. Stem Cells & Development. 2010 Nov 24. [Epub ahead of print]. 2010; 20(7): 1233-1246.	Isolation, validation and characterization of human iPSC lines from patients suffering monogenic diseases	1	Cell biologist	1	Cell Biologist	Bernard.Bletrivy@umv-amu.fr		The U910 scientific environment is highly dynamic and involves frequent and stimulating interactions between clinicians and fundamental researchers, representing a fertile ground for translational research and applications. (Two clinical trials have already been started in the recent years, based on preclinical results issued from U910 teams, one of which on Hutchinson-Gilford Progeria).	To support in priority, in the frame of the Network Braille-France "stem cells and Rare Diseases"	
INSERM U933	Paris 75012	Serge Anselme	Research programs dedicated to the study of the molecular and cellular bases of several human genetic disorders (Rare diseases)	1. Merville AC*, Davis EE*, Becker-Heck A*, Legendre M**... Georges M, Lequarré AS*, Katsanis N*, Omran H*, Anselme S*. CCDC39 is required for assembly of inner dynein arms and the dynein regulatory complex as well as normal ciliary motility in humans and dogs. Nature Genet (accepted for publication); *co-first authors and co-supervisors) 2. Duquesnoy P, Escudier E, Vincensini L, Chérent A, Escallier E, Bastin P, Mitchell DR, Anselme S. Loss-of-function mutations in the human ortholog of Chlamydomonas reinhardtii ODA7 disrupt dynein arm assembly and cause primary ciliary dyskinesia. Am J Hum Genet. 2009;85(6):899-6. 3. Jéru I, Duquesnoy P, Fernandes-Alnemri T., Grateau G, Alnemri ES, Anselme S. Mutations in NALP12 cause hereditary periodic fever syndromes. Proc Natl Acad Sci U S A. 2008;105(15):1614-9. 4. Duriez B*, Duquesnoy P*, Escudier E., Bercher JF, Anselme S. A common variant in combination with a nonsense mutation in a member of the thorexinoin family causes primary ciliary dyskinesia. Proc Natl Acad Sci U S A. 2007;104(9):3336-41. (*co-first authors) 5. Pantel J*, Legendre M**, Epelbaum I., Le Bouc Y, Anselme S. Loss of constitutive activity of the growth hormone secretagogue receptor in familial short stature. J Clin Invest. 2006;116(3):760-8. (*co-first authors.) 6. Borensztajn K, Sobrier ML, Duquesnoy P, Fischer AM, Tapon-Bredaudière J, Anselme S. Oriented scanning is the leading mechanism underlying $\beta$ splice site selection in mammals. PLoS Genetics. 2006 Sep; 2(9):1291. 7. Machinis K, Pantel J, Anselme S, Czernichow P, Czemielow P, Anselme S. Syndromic short stature in patients with a germline mutation in the LIM homeobox LHX4. Am J Hum Genet. 2001; 69 : 961-968. 8. Hetchine L, Sobrier ML, Duriez B, Gratters A., Anselme S. Mutations in the LIM-homeodomain LHX3 gene result in a new syndrome resembling by combined pituitary hormone deficiency. Nature Genet. 2000; 24(2):183-6. 9. Pajon S., Duquesnoy P., Cazenève C., Pantel J., Coppoly-Molsan M., Dargemont C., Anselme S. Ubiquitous splicing at the MEFV locus involved in familial Mediterranean fever regulates translocation of the maresin1/syrin protein to the nucleus. Hum Mol Genet. 2000; 9(20):3001-9. 10. Cazenève C, Arapartyan H, Pajon S., Grateau G, Sarkisian T., Anselme S. Identification of MEFV-independent modifying genetic factors for familial Mediterranean fever. Am J Hum Genet. 2000;67(15):1136-43.		3 main themes: 1/ Primary ciliary dyskinesia and related disorders of the axoneme (ciliopathies), 2/ Auto-inflammatory syndromes, 3/ Growth disorders of endocrine origin (abnormal pituitary development and somatotrophic axis)	1	cell biology in priority (and genetics if possible)	2	genetics in priority (and genetics if possible)	seize.anselm@inserm.fr		To support in priority, in the frame of the Network Braille-France "stem cells and Rare Diseases"	
INSERM U964	Illkirch-Strasbourg	Rocelyn Laporte	We study rare and severe neuromuscular disorders caused by mutations in proteins affecting organelles and membrane trafficking. While focusing on these genetic diseases, our approaches are multidisciplinary and encompass the identification of the implicated genes by next generation sequencing, the study of the molecular and cellular functions of these proteins in cells and animal models, and the use of viral vectors for pathophysiology studies and preclinical therapeutic trials. In parallel, we study the function of these proteins in skeletal muscle under normal and pathological conditions through the development of novel imaging methods.	1) Al-Qasbi and Laporte. T-tubule biogenesis and trial formation in skeletal muscle and implication in human diseases. Skelet Muscle. 2011 Jul 12;1(1):26. 2) Nicot and Laporte. Endosomal phosphoinositides and human diseases. Traffic. 2008 Aug;9(8):1240-9. 3) Fujger et al. Misregulated alternative splicing of BIN1 is associated with T-tubule alterations and muscle weakness in myotonic dystrophy. Nat Med. 2011 Jun;17(6):720-5. 4) Cowling et al. Increased expression of wild-type or a centronuclear myopathy mutant of dynamin 2 in skeletal muscle of adult wild-type mice leads to structural defects and muscle weakness. Am J Pathol. 2011 May;178(5):2224-35. 5) Toussaint et al. Defects in Amphiphysin 2 (BIN1) and traits in several forms of centronuclear myopathies. Acta Neuropathol. 2011 Feb; 121(2):253-266. 6) Hnia et al. Myotubularin controls desmin intermediate filament architecture and mitochondrial dynamics in human and mouse skeletal muscle. J Clin Invest. 2011 Jun 1; 121(11):7045-7. 7) Spiegelhalter et al. From dynamic live cell imaging to 3D ultrastructure: integrated methods for high pressure freezing and correlative light-electron microscopy. PLoS One. 2010 Feb 3;5(2):e9014. 8) Nicot et al. Mutations in amphiphysin 2 (BIN1) disrupt interaction with dynamin 2 and cause autosomal recessive centronuclear myopathy. Nat Genet. 2007 Sep;39(9):1134-9.	Genetic basis of neuromuscular diseases, and Regulation of membrane and organelle trafficking in skeletal muscle under healthy and pathological conditions		bioinformatician or geneticist	1	Cell biologist	rocelyn@iglmv.fr	http://www.iglmv.fr/la/laporte	To support in priority, in the frame of the Network Braille-France "stem cells and Rare Diseases"		
IGBMC - US64	ILLKIRCH	Daniel Metzger	Characterisation of the physiological and pathophysiological function of nuclear receptors in mouse skeletal muscles. Identification of new targets to fight myopathies and metabolic diseases	M. Schuler, F. Ali, C. Chambon, D. Dutell, J-M Bornert, A. Tardivel, B. Desvergne, W. Wahli, P. Chambon and D. Metzger (2006) PGC1 $\alpha$ expression is controlled in skeletal muscles by PPAR $\delta$ , whose ablation results in fiber type switching, obesity and type 2 diabetes. Cell Metabolism 4, 407-414. C. Chambon, D. Dutell, A. Vignaud, A. Ferry, N. Messadegq, R. Malvindi, S. Kato, P. Chambon & D. Metzger (2010). Myocytic androgen receptor controls the strength, but not the mass of limb muscles. Proc Natl Acad Sci (USA) 107: 14327- 14332. D. Dutell, C. Chambon, F. Ali, J. Zoll, R. Malvindi, B. Gony, P. Chambon and D. Metzger (2010) The transcriptional co-repressor TIF2 regulates energy homeostasis by controlling mitochondrial respiration in skeletal muscles. Cell Metabolism 12 : 499-508. Masiero E, Agatea L, Mammucari C, Blaauw B, Loro E, Komatsu M, Metzger D, Reggiani C, Schifano S, Sandri M (2009) Autophagy is required to maintain muscle mass. Cell Metabolism 10 : 507-515. M. Surjit, K. Priya Ganti, A. Mukherji, T. Ye, G. Hua, D. Metzger, M. Li, and P. Chambon (2011). Widespread negative response elements mediate direct transrepression by agonist-liganded glucocorticoid receptor. Cell, 145 : 224-241.	Characterisation of androgen and glucocorticoid signalling in mouse skeletal muscles	1	Molecular biologist with expertise in mouse physiology or bioinformatics	1	Molecular biologist with expertise in mouse physiology or bioinformatics	metzger@iglmv-u-strasbg.fr metzger@iglmv.fr				
INSERM U964	ILLKIRCH	Nicolas CHARLET-BERGUEMAND	We are studying how expanded non-coding RNA repeats cause RNA gain-of-function diseases (Myotonic Dystrophies, Cerebellar Ataxia 10, Fragile X-Associated Tremor/Ataxia Syndrome, etc). These autosomal dominant genetic diseases are caused by expanded tetra-, tetra- or penta-nucleotide repeats that are transcribed but are not exported, and accumulate in pathogenic nuclear RNA aggregates that sequester specific RNA-binding proteins, leading to molecular changes ultimately resulting in the pathological symptoms. Our goal is to elucidate the molecular causes of these diseases and to identify drugs able to restore a normal function in patient models.	Fujger C, Klein A, Hammer C, Vassilopoulos S, Vansson Y, Toussaint A, Tosch V, Vignaud A, Ferry A, Messadegq N, Kokunal Y, Tsiburaya R, de la Grange P, Dembele D, Francois V, Precigout G, Bouleau-Ladame C, Hummel MC, Lopez de Munain A, Sergeant N, Laquerrière A, Thibault C, Deryckere A, Thibault C, Garcia L, Zimmerman P, Udd B, Schoer B, Takahashi M, Nishino I, Basses G, Laporte J, Furling D, Charlet-B N. Mis-regulation of the alternative splicing of BIN1 is associated with T-tubule alterations and muscle weakness in Myotonic Dystrophy. Nature Medicine. 2011 ; 17(6):720-5. Rau F, Freyermuth T, Fujger J, Vellente JP, Jost B, Dembele D, Gourdon O, Nicole A, Duboc D, Wahli K, Day JW, Fujimura H, Takahashi MP, Auboeuf D, Dreumont N, Furling D, Charlet-B N. Mis-regulation of miR-1 processing is associated with heart defects in Myotonic Dystrophy. Nature Structural and Molecular Biology. 2011. Jun 19. doi: 10.1038/nsmb.2147. Sellier C, Rau F, Liu Y., Tassone F., Hakima RK., Gattou R., Schneider A., Richard S., Willemssen R., Elliott DJ., Hagerman PJ., Charlet-B N. Sam68 sequestration and partial loss of function are associated with splicing alterations in FXTAS patients. EMBO J. 2010. 29(7):1248-61.	To study the molecular and cellular causes of human genetic diseases due to long non-coding RNA (lncRNAs) due to expanded CGG repeats, Myotonic Dystrophies due to CUG expanded repeats, ALS-FTD due to expanded CCGGGG repeats).	1	Molecular Cell biology.	1	Molecular Cell biology, Mouse	ncharlet@iglmv-u-strasbg.fr		Important to support		
INSERM U964	Illkirch (CU Strasbourg)	Cécile Rochette-Egly	Crosstalk between Retinoic acid and Signaling pathways: molecular mechanism and deregulation in cancers	Samarut E, Rochette-Egly C (2011) Nuclear Retinoic Acid Receptors: Conductors of the Retinoic Acid Symphony during development. Molecular and cellular endocrinology Apr 8. [Epub ahead of print]. Lalève S, Anno YN, Chatagnon A, Samarut E, Poch O, Laudet V, Benoit G, Lecompte O, Rochette-Egly C (2011) Evolution of nuclear retinoic acid receptor alpha (RAR $\alpha$ ) phosphorylation sites. Serrine gain provides fine-tuned regulation. Mol. Biol. Evol. 28(7):2125-2137. Doung V, Rochette-Egly C (2011) The molecular physiology of nuclear retinoic acid receptors. From health to disease. Biochim Biophys Acta. 1812(8):1023-1032 Lalève S, Ferry C, Rochette-Egly C (2010) Phosphorylation control of nuclear receptors. Methods Mol Biol. 2010;647:251-67. Lalève S, Bour G, Quinternet M, Samarut E, Kessler P, Vitorino M, Bruck N, Delasc MA, Vonesch JJ, Kieffer B, Rochette-Egly C Vnexin $\delta$ , an atypical "sensor" of retinoic acid receptor gamma signaling: unidirectional separation, and phosphorylation. PAPER J. 2010;24:4523-35 Bour G, Lalève S, Rochette-Egly C. Protein kinases and the proteasome join in the combinatorial control of transcription by nuclear retinoic acid receptors. Trends Cell Biol. 2007;17:302-10	New unconventional roles of the nuclear retinoic acid receptor alpha in tumor invasion		1	cell biologist	1	cell biologist	cegly@iglmv-u-strasbg.fr			
IGBMC	Illkirch	Yann Héruault	Our main interest is directed towards the identification of genes sensitive to dosage effect which contributes to Down syndrome. We developed new mouse models with genetic bases similar to the trisomy and monosomy 21 in order to: 1) Address the phenotype-genotype relationship by filling the gap with new mouse models 2) Better understand the origins and the physiopathology of Down syndrome 3) Identify pathways involving dosage sensitive genes 4) Validate and assess the risk of pharmacological intervention in order to treat intellectual disabilities in DS.	1. Dalloueu E., Lopes Pereira P., Braut V., Nabel E.G. and Héruault Y. The protein arginine N-methyltransferase 2, Prmt2, regulates the lipopolysaccharide-induced responses in lungs and macrophages. J. Immunol. (in Press) 2. Duchon A., Ravreau M., Chevalier C., Nalèso V., Sharp J. A., and Héruault Y. Identification of the translocation breakpoints in the Ts65Dn and T15c1e mouse lines: relevance for modeling Down syndrome. Mammalian Genome (in Press) 3. Braudeau J., Daughnott L., Duchon A., Loïtron A., Dodd R.H., Héruault Y., Delatour B., Potter MC. (2011) Chronic treatment with a promiscuous GABA-A $\alpha$ 5 selective inverse agonist increases immediate early genes expression during memory processing in mice and rectifies their expression levels in a Down syndrome mouse model. Adv. Pharm. Sci. (in Press). 4. Braudeau J., Delatour B., Duchon A., Lopes Pereira P., Daughnott L., De Chaumont F., Olivo-Marin J.-C., Dodd R., Héruault Y., Potter, MC. (2011) A non convulsant $\alpha$ 5-selective GABAA receptor inverse agonist restores cognitive deficits in a mouse model of Down syndrome. J. Psychopharmacology 25, 1030-1042 5. Duchon A., Potthos S., Braut V., Sharp A., Tybulewicz V., Fisher E.M. and Héruault Y. (2011) The telomeric part of the human chromosome 21 from Cdtb to Prmt2 is not necessary for the locomotor and short-term memory deficits observed in the Tc1 mouse models of Down syndrome. Beh. Brain Res 217, 271-281. 6. Coqueronnet O., Braut V., Babinet, C., and Héruault Y. (2009) Amplification of poly-alanine tract through Fostes mechanism in the Dyc mutant allele of the Y mouse murine model of Locomotory. Genetics, 183, 23-30. 7. Lopes Pereira P., Magnoli L., Sahou Abizaidas L., Braut V., Duchon A., Prandini P., Guart, A., Bizoz, J.-C. Chedeffaux-Vekemans, B., Derstsch S., Trovero, F., Maria Delgado-García, J., Antonarakis, S.E., Diensen, M. and Héruault Y. (2009) A new mouse model for the triomy of the AluX1-U2A1 region reveals the complexity of the combinatorial genetic coded of Down syndrome. Hum. Mol. Genet. , 18, 4756-4769 8. Duchon, A., Besson, V., Lopes Pereira, P., Magnoli, L., and Héruault, Y. (2008) Inducing segmental aneuploidy mosaicism in the mouse through Targeted Asymmetric Sister Chromatid Event of Recombination (TASCR). Genetics, 180, 51-59. 9. Besson, V., Braut, V., Duchon, A., Togbe, D., Bizot, J.-C., Quenlioux, V., Fyffel, B., and Héruault, Y. (2007). Modeling the monosomy for the telomeric part of human chromosome 21 reveals haploinsufficient genes modulating the inflammatory and arway responses. Hum Mol Genet 16, 2040-2052.	We contributed to the identification of two targets, in preclinical models and we plan to test drugs to circumvent their change in DS. Focus will be on target involved in cognition, cardiovascular and lung functions			1	geneticist, bioinformatician, neuroscientist - physiologist	1	bioinformatician, geneticist, physiologist, neuroscientist	heruault@iglmv.fr		



Inserm U1024	PARIS	Nathalie SPASSKY	We are studying the mechanisms regulating the biology of neural stem cells by using the mouse brain as a model.	1- Spassky et al., 2005, J Neurosci 25(1):10-18; 2- Sawamoto et al., 2006, Science, 311(5761):629-32; 3- Spassky et al., 2008, Dev Biol, 317(1):246-59; 4- Han et al., 2008, Nat Neuro, 11(3):277-84; 5- Guirao et al., 2010, Nat Cell Biol, 12(4):341-50.	Cell Biology, Developmental neurobiology	1	Cell Biologist	2	Cell Biologist, Neurobiologist	spassky@biologie.ens.fr		
INSERM U1024 CNRS UMR8197	Paris	Vincent COLOT	Plant Epigenetics and Epigenomics. Transgenerational inheritance of epigenetic variation. RNA-directed DNA methylation. RNA interference.	- Ahmed I, Sarazin A, Bowler C, Colot V, Quesneville H. Genome-wide evidence for local DNA methylation spreading from small RNA-targeted sequences in Arabidopsis. Nucleic Acids Res. 2011 Sep 13;39(16):6919-31. - Roudier F, Ahmed I, Bérand C, Sarazin A, Mary-Huard T, Cortijo S, Bouyer D, Caillieux E, Duvernois-Berthet E, Al-Shakibey L, Giraut L, Després B, Drevesek S, Barneche F, Dérozier S, Brunaud V, Aubourg S, Schnittger A, Bowler C, Martin-Magniette ML, Robin S, Caboche M, Colot V. Integrative epigenomic mapping defines four main chromatin states in Arabidopsis. EMBO J. 2011 May 18;30(10):1928-38. - Bouyer D, Roudier F, Heese M, Andersen ED, Gey D, Nowack MK, Goodrich J, Renou JP, Grini PE, Colot V, Schnittger A. Polycomb repressive complex 2 controls the embryo-to-seedling phase transition. PLoS Genet. 2011 Mar;7(3):e1002014 - Teixeira FK, Colot V. Repeat elements and the Arabidopsis DNA methylation landscape. Heredity. 2010 Jul;105(1):14-23. - Roudier F, Teixeira FK, Colot V. Chromatin indexing in Arabidopsis: an epigenomic tale of talk and more. Trends Genet. 2009 Nov;25(11):511-7. - Johannes F, Porcher E, Teixeira FK, Saliba-Colombani V, Simon M, Agier N, Bulski A, Albuison J, Heredia F, Audigier P, Bouchez D, Dillmann C, Guerche P, Hospital F, Colot V. Assessing the impact of transgenerational epigenetic variation on complex traits. PLoS Genet. 2009 Jun;5(6):e1000530. - Teixeira FK, Colot V. Gene body DNA methylation in plants: a means to an end or an end to a means? EMBO J. 2009 Apr 22;28(8):997-8. PubMed PMID: 19384348; PubMed Central PMCID: PMC2683714. 13: Teixeira FK, Heredia F, Sarazin A, Roudier F, Bocara M, Claudio C, Cruaud C, Poulain J, Bendasco M, Fraga MF, Voimnet O, Wincker P, Esteller M, Colot V. A role for RNAi in the selective correction of DNA methylation defects. Science. 2009 Mar 20;323(5921):1600-4. - Johannes F, Colot V, Jansen RC. Epigenome dynamics: a quantitative genetics perspective. Nat Rev Genet. 2008 Nov;9(11):883-90. PubMed PMID: 18927581. - Turck F, Roudier F, Farona S, Martin-Magniette ML, Guillaume E, Busine N, Gagnot S, Martienssen RA, Coupland G, Colot V. Arabidopsis TFL2/LHP1 specifically associates with genes marked by trimethylation of histone H3 lysine 27. PLoS Genet. 2007 Jun;3(6):e166. - Lippman Z, Gendrel AV, Colot V, Martienssen R. Profiling DNA methylation patterns using genomic tiling microarrays. Nat Methods. 2005 Mar;2(3):219-24. PubMed PMID: 16163801. - Gendrel AV, Lippman Z, Martienssen R, Colot V. Profiling histone modification patterns in plants using genomic tiling microarrays. Nat Methods. 2005 Mar;2(3):213-8. PubMed PMID: 16163802.	Genomic, genetic and phenotypic consequences of epigenetic variation			1 molecular geneticist, 1 bioinformatician	colot@biologie.ens.fr	<a href="http://www.beni.ens.fr/pdp.php?article=7">http://www.beni.ens.fr/pdp.php?article=7</a>		
U1091 (U634)	Nice	Minoou Rassoulzadegan	Our laboratory established the first mouse models of an epigenetic heredity distinct from the Mendelian rules. Small noncoding (sn) RNA molecules with sequence homology to the transcript were shown to act as transgenerational signals leading to the establishment of the modified phenotypes. We are also exploring the possibility of RNA signalling and transgenerational maintenance of other phenotypes including compartmental variations for which evidence of paternal inheritance has been established.	Rassoulzadegan M, et al., Nature 441, 469-474 (2006). Wagner, K.D. et al., Dev Cell 14, 962-969 (2008). Gravdean, V. et al., Development 136, 3647-3655 (2009). Cuzin F, Rassoulzadegan M. Essays Biochem. 2010 Sep 20;48(1):101-6. Rassoulzadegan M, Cuzin F. Organogenesis. 2010 Jan;6(1):33-6.	Epigenetic heredity	2	Geneticist, developmental biologist	2	Molecular biologist, mammalian genetic and embryology	minoou@unice.fr		
U1091 (U636)	Nice	Andreas Schedl	Kidneys and adrenal glands have central roles in controlling the cardiovascular system and the homeostasis of the human body. The major aims of my research team are to unravel the molecular mechanisms underlying normal development, identify the genetic factors involved in congenital disease and elucidate mechanisms that contribute to organ maintenance (stem cell activation) and the development of cancer within these organs.	Regimensi et al., (2011) Hum. Mol. Genet. 20:1143-53. Bradford ST, et al., (2009) Hum. Mol. Genet. 8:3429-38. Schedl A. (2007) Nat Rev Genet. 8:791-802. Parma P. et al (2006) Nat Genet. 38:1304-1309. Wagner et al. (2006) Curr. Biol. 16:793-800 Wagner et al. (2005) Genes & Dev. 19:2631-42. Vidal et al. (2005) Curr. Biol. 15:1340-51. Wagner et al. (2005) Development 132:1327-1336 Vidal et al. (2001) Nature Genet. 28: 216-7. Hammes et al., (2001) Cell 106: 319-329	Congenital diseases of the kidney Molecular analysis of renal development and disease Signaling pathways is organ maintenance and cancer	2	Geneticist, developmental biologist, molecular biologist	4	Geneticist, developmental biologist, molecular biologist, bioinformatician	schedl@unice.fr		
U1091 (U636)	Nice	Marie-Christine Chaboissier	The incidence of disorders of sexual development (DSD) has increased in the last 50 years with, for example, the doubling of cases of cryptorchidism and an increase in testicular cancer, the most common cancer in young men. Many cases of DSD and testicular cancers are caused by genetic defects during embryogenesis. In the laboratory, we work on the identification and the analysis of the mechanisms of action of genetic factors responsible for these pathologies.	Vidal VPI*, Chaboissier MC* et al.(2001). Nat Genet 28, 216-217. <b>Equal contribution.</b> Chaboissier MC et al.(2004). Development 131, 1891-1901. <b>FACULTY 1000</b> Parma P., et al (2006). Nat. Genet. 38, 1304-09. <b>FACULTY 1000</b> Chassot A., et al (2008). Hum Mol Genet 17, 1264-77. <b>FACULTY 1000</b> Gregoire E., et al.(2011). Dev. Biol. 349 (1), 65-77 Lavery R. et al.(2011). Dev. Biol. 354(1), 111-122. <b>FACULTY 1000</b> Chassot A., et al.(2011). PLoS ONE. In press Auguste A. et al.(2011). Sex Dev. In press	Genetics of disorders of sexual differentiation	1	Geneticist, Developmental biologist	2	Geneticist, Developmental biologist	chaboiss@unice.fr		
U1091 (U636)	Nice	Nichèle STUDER	Molecular mechanisms of brain development with particular emphasis on cortical cell-specification and neural stem cells	Alfano et. AL, Development, in press. Lodato et al., J. of Neuroscience 2011; 4650-4662 Lodato et al. Neuron, 2011, 69: 2-17 Tomasiy Shubel et al. PNAS, 2010, 107(8): 3576-81. Faedo et al., Cerebral Cortex, 2008, 9, 2117-31. Armentano et al. Nature Neuroscience, 10, 2007, 1277-1286 (with cover) Armentano et al., Development 133, 2006, 4151-4162. Ferrante et al., Nature Genetics 38, 2006, 113-7. Coppola et al., EMBO Journal 24, 2005, 4392-401. Tripathi et al. Development 131, 2004, 6119-29.	Molecular Neurobiology	3	Molecular biologist, developmental biologist, neurobiologist	2	cell biologist, neurobiologist	Nichèle.STUDER@unice.fr		