Unit Label	City	organisme	First Name and last Name of the Head of the team	Email	Brief description of the research performed by the team	6 main publications related to the proposed thematic scope	proposed thematic scope	PhD profile, expertise, training	Post-doctoral fellowship profile, expertise, training
U 1011	LILLE	Inserm	Philippe Lefebvre	philippe-claude.lefebvre@inserm.fr	Investigate the epigenetic basis of obesity and its impact on the adipocyte transcriptome and functions	Lefebvre et al., J. Clin. Invest., 2010, (e-published April 1st, 2010), 120(5): 1454–1468.; Carmona et al., Int.J.Obesity, 2009, (e-published January 6, 2009), 33: 204-211.; Carmona et al., Diabetes, 2007, (e-published August 17, 2007), 56:2797-2808. ; Flajollet et al., J.Biol.Chem., 2006, (e-published May 24, 2006), 281: 20338-20348.; Lefebvre et al., J. Clin. Invest., 2006, 116:571-580.; Benkoussa et al., Mol. Cell. Biol., 2002, 22: 4522-4534	Alteration of post-transcriptional processes in obesity	Biochemistry, cell biology	Cell biology, Biochemistry, Molecular biology
U 1011	LILLE	Inserm	David Dombrowicz	david.dombrowicz@pasteur-lille.fr	To investigate the contribution of nuclear receptor expressed by immuno-inflammatory cells to the development of cardiometabolic diseases. To investigate the link existing between development of psoriasis and cardiometabolic diseases.	C. Cudejko et al. Blood, 2011, 118, 2556-2566 ; C. Mionnet et al. Nat. Med., 2010, 16, 1305-1312 ; D. Staumont-Salle et al. J. Allergy Clin. Immunol., 2008, 121, 962-968 ; V. Verhasselt et al. Nat. Med., 2008, 14, 170-175 ; K. Honda et al. J. Allergy Clin. Immunol., 2004, 113, 882-888 ; G. Woerly et al. J. Exp. Med., 2003, 198, 411-421.	Inflammation - Immunology - Metabolism - Nuclear receptors	Animal experimentation - Cellular biology - Molecular biology	Animal experimentation - Cellular biology - Molecular biology
U 1011	LILLE	Inserm	Giulia Chinetti	giulia.chinetti@pasteur-lille.fr	Our main interest isto determine the roles of macrophage sub-populations in the development of atherosclerosis (mainly in humans) and to study the pharmacological modulation of these functions by the agonists of nuclear receptors (such as PPARs and LXRs)	Chinetti-Gbaguidi G et al. Circ Res. 2011, 108(8): 985-995 ; Bouhlel M A et al. Cell Met. 2007 ; 6 :137-143 ; Bouhlel MA et al. Biochem. Biophys. Res. Commun. 2009, 28;386:459-62 ; Rigamonti E et al. Arterioscler. Thromb. Vasc. Biol. 2008, 28: 932-939 ; Chinetti-Gbaguidi G. et al. J Lipid Res. 2005;46:2717-2725 ; G. Chinetti G. et al. Nature Medicine. 2001; 7: 53-58.	Role of macrophage sub-populations in human atherosclerosis	cell biology, histology, molecular biology	cell biology, histology, molecular biology
U 1016	Paris	Inserm	Ralf JOCKERS	ralf.jockers@inserm.fr	Major interest in therapeutic potention of membrane recetors involved in depression and metabolic disorders (obesity, diabetes)	**1**) Levoye et al. **EMBO Journal**, 25:3012-3023 (2006). **2)** Levoye et al. **EMBO Reports**, 7:1094-1098 (2006). **3)** Couturier C, et al. **Proc Natl Acad Sc**i, 104:19476-19481 (2007). **4)** Daulat et al. **Mol Cell Proteomics**, 6:835-844 (2007). **5)** Maurice et al. **The Embo J**, 29:3646-3659 (2010). **6)** Maurice et al. **Trends Pharmacol Sci.,** 32:514-520 (2011).	Study on leptin resistance observed in most obese people	biochemist, endocrinologist, signal transduction,	
U 1016	Paris	Inserm	Ralf JOCKERS	ralf.jockers@inserm.fr	Major interest in therapeutic potention of membrane recetors involved in depression and metabolic disorders (obesity, diabetes)	**1**) Levoye et al. **EMBO Journal**, 25:3012-3023 (2006). **2)** Levoye et al. **EMBO Reports**, 7:1094-1098 (2006). **3)** Couturier C, et al. **Proc Natl Acad Sc**i, 104:19476-19481 (2007). **4)** Daulat et al. **Mol Cell Proteomics**, 6:835-844 (2007). **5)** Maurice et al. **The Embo J**, 29:3646-3659 (2010). **6)** Maurice et al. **Trends Pharmacol Sci.,** 32:514-520 (2011).	Study on G protein-coupled receptors involved in circadian rhythm regulation and diabetes		molecular pharmacologist, biochemist, endocrinologist
U 1031	Toulouse	Inserm	Louis Casteilla	louis.casteilla@inserm.fr	Physiological role of the peculiar hematopoietic process harbored in white adipose tissue.	De Toni et al., Stem Cell Dev, 2011; Poglio et al., Stem cells, 2010; Poglio et al., Am J Pathol, 2009; Caspar-Bauguil, Exp Cell Res, 2006; Corre et al., J Cell Physiol, 2006; Cousin et al, BBRC, 2003.	Detrmine whether adipose tissue hematopoiesis plays a role in pathologies associated with inflammation.	Physiology, Cell biology, Hematopoiesis, Metabolism, cardiovascular	Cell biology, Proteomics
U 1033	LYON	Inserm	Roland Chapurlat	roland.chapurlat@inserm.fr	Clicial research in osteoporosis (epidemiology, bone imaging, clinical trials)	1. Szulc P, Boutroy S, Vilayphiou N, Chaitou A, Delmas PD, Chapurlat R. Cross-sectional analysis of the association between fragility fractures and bone microarchitecture in older men: the STRAMBO study. J Bone Miner Res. 2011 Jun;26(6):1358-67. 2. Vilayphiou N, Boutroy S, Szulc P, van Rietbergen B, Munoz F, Delmas PD, Chapurlat R. Finite element analysis performed on radius and tibia HR-pQCT images and fragility fractures at all sites in men. J Bone Miner Res. 2011 May;26(5):965-73 3. Szulc P, Boutroy S, Vilayphiou N, Chaitou A, Delmas PD, Chapurlat R. Cross-sectional analysis of the association between fragility fractures and bone microarchitecture in older men - the STRAMBO study. J Bone Miner Res. 2010 Dec 16. [Epub ahead of print] 4. Sornay-Rendu E, Munoz F, Delmas PD, Chapurlat RD. The FRAX tool in French women: How well does it describe the real incidence of fracture in the OFELY cohort? J Bone Miner Res. 2010 Oct;25(10):2101-7. 5. Vilayphiou N, Boutroy S, Sornay-Rendu E, Van Rietbergen B, Munoz F, Delmas PD, Chapurlat R. Finite element analysis performed on radius and tibia HR-pQCT images and fragility fractures at all sites in postmenopausal women. Bone. 2010 Apr;46(4):1030-7. 6. Fouque-Aubert A, Boutroy S, Marotte H, Vilayphiou N, Bacchetta J, Miossec P, Delmas PD, Chapurlat RD.Assessment of hand bone loss in rheumatoid arthritis by high-resolution peripheral quantitative CT. Ann Rheum Dis. 2010 Sep;69(9):1671-6.	non invasive exploration of bone microarchitecture and risk factors for fracture	Imaging, epidemiology, engineering	Imaging, epidemiology, engineering

U 1034	Pessac	Inserm	Thierry Couffinhal	thierry.couffinhal@inserm.fr	During the regeneration and renewal of adult tissue, the formation of the vessels are regulated by a combination of signaling factors, including the Wnt, BMP and Hedgehog, of guidance proteins including the netrins and by local mechanical interactions between cells. A comprehension of this complex problem requires multidisciplinary approaches. We propose to combine tools of genetics and of in vivo and in vitro imagery to characterize and follow in time and space the role of target Wnt/frizzled genes in the vascular morphogenesis.	**Dufourcq P**, Leroux L, Ezan J, Descamps B, Daniel Lamazière JM, Costet P, Basoni C, Moreau C, Deutsch U, Couffinhal T, Duplàa C. Regulation of endothelial cell cytoskeletal reorganization by a secreted frizzled-related protein-1 and frizzled 4- and frizzled 7-dependent pathway: role in neovessel formation. Am J Pathol 2008, 172:37-49. **Dufourcq P**, Descamps, B, Tojais N. F, Leroux L, Oses, P., Daret D, Moreau C, Daniel Lamazière JM, Couffinhal, T, Duplàa C. sFRP1 Enhances Mesenchymal Stem Cell Function In Angiogenesis And Contributes To Neovessel Maturation. Stem Cells 2008, 26(11): 2991-3001. **Oses, P**, Renault, MA, Chauvel, R, Leroux, L, Allieres, C, Seguy, B, et al. (2009). Mapping 3-dimensional neovessel organization steps using micro-computed tomography in a murine model of hindlimb ischemia-brief report. Arterioscler Thromb Vasc Biol; 29: 2090-2092. **Leroux, L,** Descamps, B, Tojais, NF, Seguy, B, Oses, P, Moreau, C, et al. (2010). Hypoxia preconditioned mesenchymal stem cells improve vascular and skeletal muscle fiber regeneration after ischemia through a Wnt4-dependent pathway. Mol Ther; 18: 1545-1552. **Vigneron F**, Dos Santos P, Lemoine S, Bonnet M, Tariosse L, Couffinhal T, Duplaà C, Jaspard-Vinassa B. GSK-3β at the crossroads in the signalling of heart preconditioning: implication of mTOR and Wnt pathways. Cardiovasc Res. 2011, 90(1): 49-56 **Barandon L**, Casassus F, Leroux L, Moreau C, Allières C, Lamazière JM, Dufourcq P, Couffinhal T, Duplàa C.sFRP-1 Improves Postinfarction Scar Formation Through a Modulation of Inflammatory Response. Arterioscler Thromb Vasc Biol. 2011.	We have set up in the laboratory an innovative methodology for 3D visualization of the arterial macro-vasculature by the use of a micro-CT scanner. The quantification of images in 3D, generated by micro-CT, enables us to understand the organization of the vessels and their functionality. We can therefore apply this tool to the analysis of the vascularization of various tissues in simple or double mutants we wish to study.		bio informatician, digital image treatment
U 1045	Bordeaux	Inserm	Michel Haissaguerre	michel.haissaguerre@chu-bordeaux.fr	Our research encompass celular electrophysiology, multimodal cardiac imaging and therapy, optical mapping	Haissaguerre M et al Sudden cardiac arrest associated with early repolarization. N Engl J Med 2008 358:2016-23. Jais P et al A focal source of atrial fibrillation treated by discrete radiofrequency ablation. Circulation 1997 95:572-6. Haissaguerre M et al Mapping and ablation of idiopathic ventricular fibrillation Circulation 2002 106:962-7 Walton RD et al Dual excitation wavelength epifluorescence imaging of transmural electrophysiological properties in intact hearts. Heart Rhythm 2010 7:1843-9. Desplantez T et al Gap junction channels and cardiac impulse propagation. J Membr Biol 2007 218 :13-28. Hey S et al Towards optimized MR thermometry of the human heart at 3T. NMR Biomed 2011. In press.	cardiac electrophysiology, cardiac structure and mechanisms of arrhythmias	cellular and whole organ electrophysiology, interventional and diffusion MRI, fluorescence imaging, image processing	cellular and whole organ electrophysiology, interventional and diffusion MRI, fluorescence imaging, image processing
U 1046	Montpellier	Inserm	Pascal de Santa Barbara	Pascal.de-Santa-Barbara@inserm.fr	The main focus of our research is to identify the molecular mechanisms that govern the development and differentiation of the digestive smooth muscle using animal models. Moreover, our interface with clinicians allows us to translate our findings into pathophysiological field.	1/ Notarnicola et coll., 2011. Role of the RNA binding protein RBPMS2 during gastrointestinal SMC development. ***Gastroenterology.*** In press. 2/ Le Guen et coll., 2009. Intermuscular Tendons are Essential for the Development of the Stomach. ***Development*** . 136:791-801. 3/ Puig et coll., 2009. A lack of PTEN in the enteric nervous system induces ganglioneuromatosis and intestinal pseudo-obstruction. ***J Clin Invest.*** 119:3586-96. 4/ Rouleau et coll., 2009. Activation of MAP Kinase (ERK1/2) in human neonatal colonic enteric nervous system. ***Neurogastroenterol Motil*** . 21:207-214. 5/ Hnia et coll., 2008. Biochemical properties of gastrokine-1 purified from chicken gizzard smooth muscle. ***PlosONE.*** 3:e3854. 6/ Moniot et coll., 2004. SOX9 specifies the pyloric sphincter epithelium through mesenchymal-epithelial signals. ***Development,*** 131, 3795-804.	Identification of the molecular pathways involved during the development of the visceral smooth muscle and associated digestive pathologies (motility disorders and gastrointestinal stromal tumors-GISTs)	Molecular Biology or Biochemistry.	cancer biology.
U 1046	Montpellier, France	Inserm	Jacques MERCIER	jacques.mercier@univ-montp1.fr	The team works on physiology and pathologies of the skeletal muscle, and specifically on the muscle metabolism (mitochondrial respiration, lactate metabolism, oxidative stress…)	Aldehyde dehydrogenase activity promotes survival of human muscle precursor cells.Jean E, Laoudj-Chenivesse D, Notarnicola C, Rouger K, Serratrice N, Bonnieu A, Gay S, Bacou F, Duret C, Carnac G. J Cell Mol Med. 2011 Jan;15(1):119-33. DUX4c is up-regulated in FSHD. It induces the MYF5 protein and human myoblast proliferation.Ansseau E, Laoudj-Chenivesse D, Marcowycz A, Tassin A, Vanderplanck C, Sauvage S, Barro M, Mahieu I, Leroy A, Leclercq I, Mainfroid V, Figlewicz D, Mouly V, Butler-Browne G, Belayew A, Coppée F. PLoS One. 2009 Oct 15;4(10):e7482. "Myoblasts from affected and non-affected FSHD muscles exhibit morphological differentiation defects. ""Barro M, Carnac G, Flavier S, Mercier J, Vassetzky Y, Laoudj-Chenivesse D. Barro M, Carnac G, Flavier S, Mercier J, Vassetzky Y, Laoudj-Chenivesse D. J Cell Mol Med. 2010 Jan;14(1-2):275-89. Epub 2008 May 24.""" Sodium bicarbonate ingestion prior to training improves mitochondrial adaptations in rats. Bishop DJ, Thomas C, Moore-Morris T, Tonkonogi M, Sahlin K, Mercier J. Am J Physiol Endocrinol Metab. 2010 Aug;299(2):E225-33. Epub 2010 May 18. Am J Physiol Endocrinol Metab. 2010 Aug;299(2):E225-33. Epub 2010 May 18. Effects of high-intensity training on muscle lactate transporters and postexercise recovery of muscle lactate and hydrogen ions in women. Bishop D, Edge J, Thomas C, Mercier J. Am J Physiol Regul Integr Comp Physiol. 2008 Dec;295(6):R1991-8. Epub 2008 Oct 1. Effects of high-intensity training on MCT1, MCT4, and NBC expressions in rat skeletal muscles: influence of chronic metabolic alkalosis. Thomas C, Bishop D, Moore-Morris T, Mercier J. Am J Physiol Endocrinol Metab. 2007 Oct;293(4):E916-22. Epub 2007 Jul 3.	to aim to determine muscle oxygenation response during force and endurance exercice in patients with muscle dystrophy (fascio-scapulo-humeral dystrophy FSHD) compared to health subjetcs, to determine the effects of antioxydants supplementation in these patients on sarcolemmal lactate transporters expression, and to perform longitudinal study from a datatbase of mitochondrial respiration measured in health and patients with muscle pathologies, and then to determine some relevant markers of metabolic disorders in FSHD patients	cell biologist, physiologist	

U 1046	Montpellier	Inserm	Sylvain Richard (team 1)	sylvain.richard@inserm.fr	The team has broad expertise in the fields of electrophysiology, Ca2+ imaging and pharmacology used to study cardiovascular diseases. We offer a unique plat-form to investigate molecular mechanisms, and related functions ("from organ function in vivo to cell") in the cardiovascular field. We use a wide range of biological models, techniques, methodologies and pre-clinical models to study cardiac remodeling during acquired or inherited pathology with particular focus on arrhythmias and conduction alterations.	André L, Gouzi F, Thireau J, Meyer G, Boissiere J, Delage M, Abdellaoui A, Feillet-Coudray C, Fouret G, Cristol JP, Lacampagne A, Obert P, Reboul C, Fauconnier J, Hayot M, Richard S, Cazorla O. Carbon monoxide exposure enhances arrhythmia after cardiac stress: involvement of oxidative stress. Basic Res Cardiol. 2011 Aug 6. [Epub ahead of print] Thireau J, Pasquié JL, Martel E, Le Guennec JY, Richard S. New drugs vs. old concepts: A fresh look at antiarrhythmics. Pharmacol Ther. 2011 Nov;132(2):125-45. Epub 2011 Mar 21. Andre L, Boissière J, Reboul C, Perrier R, Zalvidea S, Meyer G, Thireau J, Tanguy S, Bideaux P, Hayot M, Boucher F, Obert P, Cazorla O, Richard S (2010). Carbon monoxide pollution promotes cardiac remodeling and ventricular arrhythmia in healthy rats. American journal of respiratory and critical care medicine, 181(6), 587-95 Fauconnier J, Thireau J, Reiken S, Cassan C, Richard S, Matecki S, Marks AR, Lacampagne A (2010). Leaky RyR2 trigger ventricular arrhythmias in Duchenne muscular dystrophy. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AME, 107(4), 1559-1564 Fernández-Velasco M, Rueda A, Rizzi N, Benitah JP, Colombi B, Napolitano C, Priori SG, Richard S, Gómez AM (2009). Increased Ca2+ sensitivity of the ryanodine receptor mutant RyR2R4496C underlies catecholaminergic polymorphic ventricular tachycardia. Circulation research, 104(2), 201-9, 12p Gomez AM, Rueda A, Sainte-Marie Y, Pereira L, Zissimopoulos S, Zhu X, Schaub R, Perrier E, Perrier R, Latouche C, Richard S, Picot MC, Jaisser F, Lai FA, Valdivia HH, Benitah JP. Mineralocorticoid Modulation of Cardiac Ryanodine Receptor Activity Is Associated With Downregulation of FK506–Binding Proteins. Circulation 2009;119:2179–U89.	Malaria is a relevant health public problem in many countries, including Brazil. Artemisinins are potent antimalarial drugs but cardiotoxic effects are suspected (arrhythmias, Ca handling, ...). New formulations (nanotechnology) containing artemether and developed by Pr. Andrea Grabe Guimarães (Universidade Federal;Escola de Farmácia; Campus UFOP, s/n, Bauxita 35400-000 – Ouro Preto - Minas Gerais – Brasil) will be investigated on preclinical models both in vivo and at the cardiomyocytes level.	Pharmacologist or Physiologist	Pharmacologist or Physiologist
U 1048 team 09	Toulouse	Inserm	Jean-François ARNAL	jean-francois.arnal@inserm.fr	The aim of our research is to open new perspectives regarding the modulation of Estrogen Receptor alpha by phytoestrogens / Selective Estrogen Receptor Modulator (SERM), providing the rationale to select and/or develop, among molecules eliciting minor sexual and proliferative actions those having beneficial effects in the prevention of cardiovascular and metabolic diseases.	1. Arnal JF, Lenfant F, Flouriot G, Tremollieres F, Laurell H, Fontaine C, Krust A, Chambon P, Gourdy P. From in vivo gene targeting of Estrogen Receptors to Optimisation of their Modulation in Menopause. Br J Pharmacol. 2011. 2. Billon-Gales A, Krust A, Fontaine C, Abot A, Flouriot G, Toutain C, Berges H, Gadeau AP, Lenfant F, Gourdy P, Chambon P, Arnal JF. Activation function 2 (AF2) of estrogen receptor-{alpha} is required for the atheroprotective action of estradiol but not to accelerate endothelial healing. Proc Natl Acad Sci U S A. 2011;108:13311-13316. 3. Toutain CE, Brouchet L, Raymond-Letron I, Vicendo P, Berges H, Favre J, Fouque MJ, Krust A, Schmitt AM, Chambon P, Gourdy P, Arnal JF, Lenfant F. Prevention of Skin Flap Necrosis by Estradiol Involves Reperfusion of a Protected Vascular Network. Circ Res. 2009;104:245-254. 4. Toutain CE, Filipe C, Billon A, Fontaine C, Brouchet L, Guery JC, Gourdy P, Arnal JF, Lenfant F. Estrogen receptor alpha expression in both endothelium and hematopoietic cells is required for the accelerative effect of estradiol on reendothelialization. Arterioscler Thromb Vasc Biol. 2009;29:1543-1550. 5. Billon-Gales A, Fontaine C, Filipe C, Douin-Echinard V, Fouque MJ, Flouriot G, Gourdy P, Lenfant F, Laurell H, Krust A, Chambon P, Arnal JF. The transactivating function 1 of estrogen receptor {alpha} is dispensable for the vasculoprotective actions of 17{beta}-estradiol. Proc Natl Acad Sci U S A. 2009;106:2053–2058. 6. Billon-Gales A, Fontaine C, Douin-Echinard V, Delpy L, Berges H, Calippe B, Lenfant F, Laurell H, Guery JC, Gourdy P, Arnal JF. Endothelial estrogen receptor-alpha plays a crucial role in the atheroprotective action of 17beta-estradiol in low-density lipoprotein receptor-deficient mice. Circulation. 2009;120:2567-2576.	*In vivo* expression/function analysis of Estrogen Receptor alpha: optimization of **vasculoprotective actions**.	biologist/physiologist	biologist/physiologist
U 1050	Paris	Inserm	Stéphane GERMAIN	stephane.germain@college-de-france	hypoxia-induced angiogenesis in vivo (hindlimb and heart ischemia, tumor models) and in vitro (endothelial and smooth muscle cells culture in 3D)	1. BignonM, Pichol-Thievend C, Hardouin J, Malbouyres M, Bréchot N, Nasciutti L, Barret A, Teillon J, Guillon E, Etienne E, Caron M, Joubert-Caron R, Monnot C, Ruggiero F, Muller L, Germain S. Lysyl oxidase-like protein-2 regulates sprouting angiogenesis and type IV collagen assembly in the endothelial basement membrane. **Blood**. 2011 Oct 6;118(14):3979-89. 2. Gomez Perdiguero E, Galaup A, Durand M, Teillon J, Philippe J, Valenzuela DM, Murphy AJ, Yancopoulos GD, Thurston G, Germain S. Alteration of developmental and pathological retinal angiogenesis in ANGPTL4-deficient mice. **J Biol Chem**. 2011 Aug 5. In press 3. Germain S, Eichmann A. VEGF and ephrin-B2: a bloody duo. **Nature Medicine**. 2010 Jul;16(7):752-4. 4. Germain S, Monnot C, Muller L, Eichmann A. Hypoxia-driven angiogenesis: role of tip cells and extracellular matrix scaffolding. **Curr. Opinion Hematol.** 2010. May;17(3):245-51. 5. Verine J, Lehmann-Che J, Soliman H, Feugeas JP, Vidal JS, Mongiat-Artus P, Belhadj S, Philippe J, Lesage M, Wittmer E, Chanel S, Couvelard A, Ferlicot S, Rioux-Leclercq N, Vignaud JM, Janin A, Germain S. Determination of angptl4 mRNA as a Diagnostic Marker of Primary and Metastatic Clear Cell Renal-Cell Carcinoma. **PLos ONE** 2010, Apr 29;5(4):e10421. 6. Chomel C, Cazes A, Faye C, Bignon M, Gomez E, Ardidie-Robouant C, Barret A, Ricard-Blum S, Muller L, Germain S, Monnot C. Interaction of the coiled-coil domain with glycosaminoglycans protects angiopoietin-like 4 from proteolysis and regulates its antiangiogenic activity. **FASEB J.** 2009 Mar;23(3):940-9.	vascular biology - tissue engineering - cancer - cardiovascular diseases	angiogenesis, cell biology, matrix biology, growth factors, signaling, cancer, metastasis	angiogenesis, cell biology, matrix biology, growth factors, signaling, cancer, metastasis
U 1059	St-Etienne	Inserm	Laurence VICO	Laurence.Vico@inserm.fr	Crosstalks between bone cells and vascular factors ; effects of energetic and mechanical disorders on bone ; Prevention of Bone fragility (microgravity, immobilisation, gonadectomy, osteoporosis) by mechanical signals ; "in vitro" bone project	[1] VICO L, COLLET P, GUIGNANDON A, LAFAGE-PROUST MH, THOMAS T, REHAILIA M, ALEXANDRE C. Effects of long-term microgravity exposure on cancellous and cortical weight-bearing bones of cosmonauts. Lancet 2000, 355 (9215):1607-1611.[2]GUIGNANDON A, LAFAGE-PROUST MH, USSON Y, LAROCHE N, CAILLOT-AUGUSSEAU A, ALEXANDRE C, VICO L. Cell cycling determines integrin-mediated adhesion in osteoblastic ROS 17/2.8 cells exposed to space-related conditions. FASEB J 2001, 15: 2036-2038. [3]YAO Z, LAFAGE-PROUST MH, PLOUET J, BLOOMFIELD S, ALEXANDRE C, VICO L. Increase of both angiogenesis and bone mass in response to exercise depends on VEGF. J Bone Miner Res. 2004 19:1471-80. [4]DAVID V, MARTIN A, LAFAGE-PROUST MH, MALAVAL L, PEYROCHE S, JONES DB, VICO L, GUIGNANDON A. Mechanical loading down-regulates peroxisome proliferator-activated receptor gamma in bone marrow stromal cells and favors osteoblastogenesis at the expense of adipogenesis. Endocrinology. 2007 May;148(5):2553-62. [5] MALAVAL L, WADE-GUÉYE NM, BOUDIFFA M, FEI J, ZIRNGIBL R, CHEN F, LAROCHE N, ROUX JP, BURT-PICHAT B, DUBOEUF F, BOIVIN G, JURDIC P, LAFAGE-PROUST MH, AMÉDÉE J, VICO L, ROSSANT J, AUBIN JE. Bone sialoprotein plays a functional role in bone formation and osteoclastogenesis. J Exp Med. 2008 May 12;205(5):1145-53. [6] PRISBY R, GUIGNANDON A, VANDEN-BOSSCHE A, MAC-WAY F, LINOSSIER MT, THOMAS M, LAROCHE N, MALAVAL L, LANGER M, PETER ZA, PEYRIN F, VICO L, LAFAGE-PROUST MH. Intermittent PTH 1-84 is osteoanabolic but not osteoangiogenic and relocates bone marrow blood vessels closer to bone forming sites. J Bone Miner Res. 2011 Jun 28.	1) regulation of the hematopoietic stem cell pool by the bone marrow environnement in mouse models of bone challenges 2) development of a 3D in vitro bone model	bio-engineering	cell biology

U 1062	MARSEILLE	Inserm	ALESSI MC	Marie-Christine.Alessi@univmed.fr	Study of the proinflammatory properties of platelets and rare paltelet disorders	cuisset et al nature med 2011 albers CA et al nature gen 2011 Robert P et al J immunol 2011 Barbier M plos one 2011 Canault m et al blood 2010	thrombosis and haemostasis	cell biologist	molecular biologist
U 1065 /C3M	NICE	Inserm	Jean-François TANTI	Jean-Francois.Tanti@unice.fr	Our team works on the molecular mechanisms involved in insulin resistance in obesity and type 2 diabetes.	1. Jager J, Corcelle V, Grémeaux T, Laurent K, Waget A, Pagès G, Binétruy B, Le Marchand-Brustel Y, Burcelin R, Bost F, Tanti JF. 2011 Deficiency in the extracellular signal-regulated kinase 1 (ERK1) protects leptin-deficient mice from insulin resistance without affecting obesity. Diabetologia. Jan;54(1):180-189. 2. Jager J, Grémeaux T, Gonzalez T, Bonnafous S, Debard C, Laville M, Vidal H, Tran A, Gual P, Le Marchand-Brustel Y, Cormont M, Tanti JF. 2010 The Tpl2 kinase is up-regulated in adipose tissue in obesity and may mediate IL-1β and TNF-α effects on ERK activation and lipolysis. Diabetes, 59(1):61-70 3. Regazzetti, C., Peraldi, P., Gremeaux, T., Najem-Lendom, R., Ben-Sahra, I., Cormont, M., Bost, F., Le Marchand-Brustel, Y., Tanti, J.F., Giorgetti-Peraldi, S. 2009. Hypoxia decreases insulin signaling pathways in adipocytes. Diabetes 58:95-103. 4. Kaddai, V., Jager, J., Gonzalez, T., Najem-Lendom, R., Bonnafous, S., Tran, A., Le Marchand-Brustel, Y., Gual, P., Tanti, J.F., Cormont, M. 2009. Involvement of TNF-alpha in abnormal adipocyte and muscle sortilin expression in obese mice and humans. Diabetologia 52:932-940. 5. Jager, J., Grémeaux, T., Cormont, M., Le Marchand-Brustel, Y., Tanti, J.F. 2007. Interleukin-1beta-induced insulin resistance in adipocytes through down-regulation of insulin receptor substrate-1 expression. Endocrinology 148:241-251. 6. Gual P, Gremeaux T, Gonzalez T, Le Marchand-Brustel Y, Tanti JF 2003 MAP kinases and mTOR mediate insulin-induced phosphorylation of insulin receptor substrate-1 on serine residues 307, 612 and 632. Diabetologia 46:1532-1542	To identify signaling networks involved in inflammation and hypoxia-induced insulin resistance in obesity and diabetes	cell biologist, celluar signaling	cell biologist, cellular signaling, miRNA studies , in vivo study of mice models of obesity
U 1065 /C3M, Team 1 "Biology and pathology of melanocytic cells: from cutaneous pigmentation to melanomas "	NICE	Inserm	Robert BALLOTTI	ballotti@unice.fr	Cutaneous melanoma is one of the most lethal cancers among young adults. Melanoma has a high capability of invasion and rapid metastasis to other organs. The prognosis of metastatic melanoma is extremely pejorative, as the various therapies have not shown real survival benefit. In this context, our team investigates for new molecules or new molecular targets to treat melanoma.	Botton, et al. Journal of Investigative Dermatology, 129(5):1208-18, 2009 Botton, et al., Cell Death and Differentiation, 18(1):109-21 2011. Cheli, S. et al. 30(20):2307-18, 2011 M. Ohanna,et al., Gene and Development, 25(12):1245-61, 2011. Tomic, T. et al. Cell Death and Disease, in press, 2011 Bertolotto et al, Nature, in press, 2011	Melanoma	Cell biologist	Cell biologist
U 1065 /C3M, Team 2 "Cell deaths, differentiation and cancer"	NICE	Inserm	Patrick AUBERGER	auberger@unice.fr	Our team adresses a couple of questions of broad fundamental and clinical interest regarding the mechanisms of leukemogenesis in mice and humans. These past years our team has contributed to decipher the role of caspases and cathepsins in cell death and differentiation of hematopoietic cells. In this line, i) We use home-made animal models of human hematological malignancies such as those recapitulating chronic myelogenous leukemia (CML) and multiple myeloma (MM) to learn more about the pathophysiology of these diseases. Our main goals are to decipher the molecular mechanisms involved in alteration of cell deaths (Type I and II) and differentiation, culminating in drug resistance in cellular models, as well as in samples from leukemic patients and ii) To develop, validate and patent new therapeutical compounds to overcome resistance to conventional treatments in hematological malignancies.	Marchetti S. et al, Embo J, 28: 2449-2460, 2009. Gamas P. et al. Leukemia, 23: 1500-1506, 2009. Puissant A. et al. Cancer Res, 70: 9659-9670, 2010. Puissant A. et al. Leukemia, 24: 1099-1101, 2010. Puissant A. et al. Cancer Res, 70: 1042-1052, 2010. Puissant A. et al. Leukemia, 24: 115-124, 2010.	Identification of the mechanisms of resistance to tyrosine kinase inhibitors and Vidaza in Chronic Myelogenous Leukemia and MyeloDysplastic Syndroms	Cell Biology, Biochemistry, Signaling, Cancer, Oncohematology	Cell Biology, Biochemistry, Signaling, Cancer, Oncohematology
U 1065 /C3M, Team 3 "Metabolic control of cell deaths"	NICE	Inserm	Jean-Ehrland RICCI		Our team is investigating the importance of the metabolic control of cell deaths going from basic research to pre-clinical models. Over the last years we evidenced that the glycolysis pathway could control apoptosis but also a new type of cell death so-called caspase-independent cell death. We are currently investigating how the metabolic control of those cell death can be relevant for cancer treatment.	Munos-Pinedo C et al (2011) Cell Death and Disease, in press, Pradelli et al (2010) Oncogene, 29:1641-52, Lavallard et al (2009) Cancer Res. 69:3013-3020, Kazama et al (2008) Immunity. 29:21-32, Colell et al (2007) Cell, 129: 983-997, Ricci et al (2004) Cell 117: 773-786.	metabolic control of cell deaths	cell biology	cell biology

U 1065 /C3M, Team 8 "hepatic complications of obesity"	NICE	Inserm	Philippe GUAL and Albert TRAN	Albert.TRAN@unice.fr	The study of liver complications in obesity is the main goal of the team. The group's main objectives are: 1) To develop a non invasive index from clinical data and the identified markers allowing the diagnosis of NASH in obese patients and to validate it in alcoholic patients. 2) To study the role of identified and potential players in the progression from normal liver to steatosis and then NASH. 3) To better understand and prevent cell death associated with hepatic inflammation.	Bekri, S et al, 2006. Gastroenterology. 131:788-96. Anty, R. et al 2006. Am J Gastroenterol. 101:1824-33. Nousbaum, J.B. et al 2007 Hepatology. 45:1275-81. Bertola, A., et al 2009. Diabetes. 58:125-33. Lavallard V et al. PLoS ONE, 2011, 6(3), e17599 Zimmermann E, et al. J of Hepatology, 2011;55(3):660-5.	To study the role of identified and potential players in the progression from normal liver to steatosis and then NASH. in liver complications of obesity	Hepatologist, Immunologist, Cell biologist, animals Models,	Hepatologist, Immunologist, Cell biologist, animals Models,
U 1069	Tours (Loire Valley)	Inserm	Stephan Chevalier and Philippe Bougnoux	stephane.chevalier@univ-tours.fr	The fundamental and clinical project of our research unit is positioned at the junction of the two fields “cancer and nutrition” with a specialization in lipid biochemistry and breast cancer and bone metastasis. Our research unit has described the potential benefit of the clinical use of lipid nutrients in order to increase the efficiency of cancer treatment. Our scientific project are transversal in its expertise (biology, biochemistry, physiology, metabolism, nutrition and oncology) and resources (medicine, pharmaceutical and sciences). It aims at investigating the molecular and cellular mechanisms of action of lipids (alkyl-lipids, cardiolipines, polyunsaturated fatty acids) on mitochondria, tumor cell lines, the tumor itself and its host to facilitate the transfer of this fundamental knowledge to a clinical setting for patients developing chemo-resistant cancers and/or metastases.	**BRISSON L. et al.** NaV1.5 enhances breast cancer cell invasiveness by increasing NHE1-dependent H+ efflux in caveolae. Oncogene, 2011 Apr 28;30(17):2070-6. **JELASSI B. et al.** P2X7 receptor activation enhances SK3 channels- and cystein cathepsin-dependent cancer cells invasiveness. Oncogene, 2011 May 5;30(18):2108-22. **DUMAS JF et al.** Efficiency of oxidative phosphorylation in liver mitochondria is decreased in a rat model of peritoneal carcinosis. J. Hepatol 2011 Feb;54(2):320-7. **POTIER M. et al.** SK3/KCa2.3 potassium channel is a new cellular target for edelfosine Br J Pharmacol, 2011 Jan;162(2):464-79. **BOUGNOUX P. et al.** Fatty acids and breast cancer: sensitization to treatments and prevention of metastatic regrowth. Progress in Lipid Research. 2010 Jan;49(1):76-86. **GILLET L. et al.** Voltage-gated sodium channel activity promotes cysteine cathepsin-dependent invasiveness and colony growth of human cancer cells. J. Biol. Chem. 2009, 284(13):8680-91.	The team study the beneficial clinical effects of lipids of marine origin such as alkyl lipids and n-3 polyunsaturated fatty acids on 1) ion channels and their involvement in tumor cell migration and invasion; 2) epithelial mammary cell proliferation, tumor growth and tumor angiogenesis; 3) mitochondrial energetics and cancer unduced denutrition (cachexia).	cell and molecular biologist, biochemist, electrophysiologist.	cell and molecular biologist, biochemist, electrophysiologist.
U 1081	Nice	Inserm	Kay-Dietrich Wagner	kay.wagner@unice.fr	Research on molecular mechanisms of cardiovascular development and disease	The podocyte protein nephrin is required for cardiac vessel formation. Wagner N, Morrison H, Pagnotta S, Michiels JF, Schwab Y, Tryggvason K, Schedl A, Wagner KD. Hum Mol Genet. 2011 Jun 1;20(11):2182-94. Peroxisome proliferator-activated receptor beta stimulation induces rapid cardiac growth and angiogenesis via direct activation of calcineurin. Wagner N, Jehl-Piétri C, Lopez P, Murdaca J, Giordano C, Schwartz C, Gounon P, Hatem SN, Grimaldi P, Wagner KD. Cardiovasc Res. 2009 Jul 1;83(1):61-71. RNA induction and inheritance of epigenetic cardiac hypertrophy in the mouse. Wagner KD, Wagner N, Ghanbarian H, Grandjean V, Gounon P, Cuzin F, Rassoulzadegan M. Dev Cell. 2008 Jun;14(6):962-9. The Wilms' tumour suppressor WT1 is involved in endothelial cell proliferation and migration: expression in tumour vessels in vivo. Wagner N, Michiels JF, Schedl A, Wagner KD. Oncogene. 2008 Jun 12;27(26):3662-72. Coronary vessel development requires activation of the TrkB neurotrophin receptor by the Wilms' tumor transcription factor Wt1. Wagner N, Wagner KD, Theres H, Englert C, Schedl A, Scholz H. Genes Dev. 2005 Nov 1;19(21):2631-42. The Wilms' tumor suppressor Wt1 is expressed in the coronary vasculature after myocardial infarction. Wagner KD, Wagner N, Bondke A, Nafz B, Flemming B, Theres H, Scholz H. FASEB J. 2002 Jul;16(9):1117-9.	Role of the PPARbeta transcription factor in adult angiogenic processes	molecular biologist	Mouse genetics and surgery
U 1087	Nantes	Inserm	SCHOTT JEAN-JACQUES	jjschott@univ-nantes.fr	The main goal is to identify the genetic bases of common cardiovascular diseases with a special focus on heart valve defects. Main research strategies developed are essentially epidemiological and familial based approaches and involve association studies, high throughput genome sequencing. The study of epigenetic alterations in diseased valve tissue constitute another new aspect of our research program.	1. Kyndt F, Gueffet JP, Probst V, Jaafar P, Legendre A, Le Bouffant F, Toquet C, Roy E, McGregor L, Lynch SA, Newbury-Ecob R, Tran V, Young I, Trochu JN, Le Marec H, Schott JJ. Mutations in the gene encoding filamin A as a cause for familial cardiac valvular dystrophy. Circulation 2007. 2. Probst V, Le Scouarnec S, Legendre A, Jousseaume V, Jaafar P, Nguyen JM, Chaventré A, Le Marec H, Schott JJ. Familial aggregation of calcific aortic valve stenosis in the western part of France. Circulation 2006 3. Barc J, Briec F, Schmitt S, Kyndt F, Le. Cunff M, Baron E, Vieyres C, Sacher F, Redon R, Le Caignec C, Le Marec H, Probst V, Schott JJ. Screening for copy number variation in genes associated with the long QT syndrome: clinical relevance. J Am Coll Cardiol. 2011. 4. Watanabe H, Koopmann TT, Le Scouarnec S, Yang T, Ingram CR, Schott JJ, Demolombe S, Probst V, Anselme F, Escande D, Wiesfeld AC, Pfeufer A, Kääb S, Wichmann HE, Hasdemir C, Aizawa Y, Wilde AA, Roden DM, Bezzina CR. Sodium channel beta1 subunit mutations associated with Brugada syndrome and cardiac conduction disease in humans. J Clin Invest. 2008. 5. Mohler PJ, Schott JJ, Gramolini AO, Dilly KW, Guatimosim S, duBell WH, Song LS, Haurogné K, Kyndt F, Ali ME, Rogers TB, Lederer WJ, Escande D, Le Marec H, Bennett V. Ankyrin-B mutation causes type 4 long-QT cardiac arrhythmia and sudden cardiac death. Nature. 2003. 6. Trochu JN, Kyndt F, Schott JJ, Gueffet JP, Probst V, Bénichou B, Le Marec H. Clinical characteristics of a familial inherited myxomatous valvular dystrophy mapped to Xq28. J Am Coll Cardiol. 2000	Molecular genetics: Exome / full genome analysis; expression analysis; mehylation profiling. Association studies, eqtl identification	Genetician; molecual biologist, cell biologist, clinical reasercher; bioinformatian, cardiologist, physiologist	

U 1087	Nantes	Inserm	Philippe Costet	philippe.costet@univ-nantes.fr	Molecular investigation of dyslipidemia. We focus on cholesterol excretion by the liver and directly through the intestine.	Plasma PCSK9 is increased by Fenofibrate and Atorvastatin in a non-additive fashion in diabetic patients. Costet P, Hoffmann MM, Cariou B, Delasalle BG, Konrad T, Winkler K. Atherosclerosis. 2010 May 25. Sep;212(1):246-51. Association between plasma PCSK9 and gamma-glutamyl transferase levels in diabetic patients. Cariou B, Le Bras M, Langhi C, Le May C, Guyomarc'h-Delasalle B, Krempf M, Costet P. Atherosclerosis. 2010 Aug;211(2):700-2. PCSK9 dominant negative mutant results in increased LDL catabolic rate and familial hypobetalipoproteinemia. Cariou B, Ouguerram K, Zaïr Y, Guerois R, Langhi C, Kourimate S, Benoit I, Le May C, Gayet C., Belabbas K., Dufernez F, Chétiveaux M, Tarugi P, Krempf M, Benlian P, and Costet P. Arterioscler Thromb Vasc Biol 2009 Dec;29(12):2191-7. Proprotein Convertase Subtilisin Kexin Type 9 Null Mice Are Protected From Postprandial Triglyceridemia. Le May C, Kourimate S, Langhi C, Chétiveaux M, Jarry A, Comera C, Collet X, Kuipers F, Krempf M, Cariou B, Costet P. Arterioscler Thromb Vasc Biol. 2009 Mar 5. 5 29(5):684-90. Dual mechanisms for the fibrate-mediated repression of proprotein convertase subtilisin/kexin type 9. S. Kourimate, C. Le May, C. Langhi, AL Jarnoux, K. Ouguerram, Y. Zaïr, P. Nguyen, M. Krempf, B. Cariou, and P. Costet. J. Biol. Chem. 2008 Apr 11;283(15):9666-73. Hepatic PCSK9 expression is regulated by nutritional status via insulin and sterol regulatory-element binding protein 1c. P. Costet, B. Cariou, G. Lambert, F. Lalanne, B. Lardeux, A.L. Jarnoux, A. Grefhorst, B. Staels, and M. Krempf. J. Biol Chem 2006 Mars 281(10):6211-8.	PCSK9 -dependent regulation of cholesterol excretion	molecular biologist, in vivo experimentation	molecular biologist, in vivo experimentation
U 1091	Nice	Inserm	Christian Dani	dani@unice.fr	Study self-renewal and differentiation of Human Adipose-Derived Stem Cells. Characterization of the earliest steps of human adipogenesis using hiPS cells. Role of adipocytes in healthy and pathological human muscles	Rodriguez AM et al. ***J Exp Med*** **.** (2005) 2;201:1397-405. Zaragosi LE et al. Stem Cells (2006) 24(11):2412-9. Billon N et al. . Development. (2007) 134 (12) :2283-92. Fontaine, C., et al. (2008). Stem Cells 26(4):1037-46 Zaragosi LE et al. Diabetes (2010) 56, 2513-2521. Pisani et al..Stem Cells. Stem Cells. (2010) 28:2182-94.	Identification of regulators of proliferation and differentiation of human adipose stem cells. Functional properties of adipocytes derived from mesoderm and neuroectoderm. Role of adipocytes resident in human muscles	Cellular and molecular biologist	Cellular and molecular biologist
U 606	Paris	Inserm	Pierre MARIE	pierre.marie@larib.inserm.fr	Physiology and pathology of bone formation-Bone tumors (metastasis and chemoresistance)	Marion A, et al. Calpain-6 is an endothelin-1 signaling dependent protective factor in chemoresistant osteosarcoma. Int J Cancer. 2011 Jun 16. doi: 10.1002/ijc.26246. Dieudonné FX, et al. High Wnt signaling represses the proapoptotic proteoglycan syndecan-2 in osteosarcoma cells. Cancer Res. 2010 Jul 1;70(13):5399-408. Haÿ E, et al. N-cadherin negatively regulates osteoblast proliferation and survival by antagonizing Wnt, ERK and PI3K/Akt signalling. PLoS One. 2009 Dec 14;4(12):e8284. Orosco A, et al. Syndecan-2 affects the basal and chemotherapy-induced apoptosis in osteosarcoma. Cancer Res. 2007 Apr 15;67(8):3708-15. Modrowski D et al. Syndecan-2 overexpression induces osteosarcoma cell apoptosis: Implication of syndecan-2 cytoplasmic domain and JNK signaling. Bone. 2005 Aug;37(2):180-9. Fromigué O et al. RhoA GTPase inactivation by statins induces osteosarcoma cell apoptosis by inhibiting p42/p44-MAPKs-Bcl-2 signaling independently of BMP-2 and cell differentiation. Cell Death Differ. 2006 Nov;13(11):1845-56.	Targeting calpain-6 as a protective factor in the cancer stem cells of bone tumors	Cell and molecular biologist, animal models	
U 606	Paris	Inserm	Pierre MARIE	pierre.marie@larib.inserm.fr	Physiology and pathology of bone formation-Bone tumors (metastasis and chemoresistance)	Marion A, et al. Calpain-6 is an endothelin-1 signaling dependent protective factor in chemoresistant osteosarcoma. Int J Cancer. 2011 Jun 16. doi: 10.1002/ijc.26246. Dieudonné FX, et al. High Wnt signaling represses the proapoptotic proteoglycan syndecan-2 in osteosarcoma cells. Cancer Res. 2010 Jul 1;70(13):5399-408. Haÿ E, et al. N-cadherin negatively regulates osteoblast proliferation and survival by antagonizing Wnt, ERK and PI3K/Akt signalling. PLoS One. 2009 Dec 14;4(12):e8284. Orosco A, et al. Syndecan-2 affects the basal and chemotherapy-induced apoptosis in osteosarcoma. Cancer Res. 2007 Apr 15;67(8):3708-15. Modrowski D et al. Syndecan-2 overexpression induces osteosarcoma cell apoptosis: Implication of syndecan-2 cytoplasmic domain and JNK signaling. Bone. 2005 Aug;37(2):180-9. Fromigué O et al. RhoA GTPase inactivation by statins induces osteosarcoma cell apoptosis by inhibiting p42/p44-MAPKs-Bcl-2 signaling independently of BMP-2 and cell differentiation. Cell Death Differ. 2006 Nov;13(11):1845-56.	Syndecan-2 and osteoprogenitor survival		Cell and molecular biologist, animal models
U 606	Paris	Inserm	Lioté Frederic	frederic.liote@lrb.aphp.fr	mechanisms of cartilage biology and the crosstalks between bone and cartilage (Wnt …)	Kadri A, Arthritis Rheum. 2008 Ostertag A, Bone. 2009 Kadri A, Ann Rheum Dis. 2010 Ah Kioon MD, Arthritis Res Ther. 2010 Ah Kioon MD, Arthritis Res Ther. 2010. Funck-Brentano Th , Cytokines and growth factors reviews, 2011	Wnt signalling in cartilage and effects of wnt modulation in osteoarthritis	cell biology, histology, molecular biology	cell biology, histology, molecular biology

U 699	Paris	Inserm	Team 1: Renato MONTEIRO	renato.monteiro@inserm.fr	The team investigates the role of immunoglobulins and their receptors in physiology and physiopathology notably of glomerulonephritis and IgA-associated diseases.	1. Launay et al. J Exp Med 2000, 191: 1999-2009. 2. Moura et al J Exp Med 2001, 194 : 417-425. 3. Pasquier et al Immunity 2005, 22: 31-42. 4. Pinheiro da Silva et al. Nat Med 2007, 13: 1368-74 5. Matysiak-Budnik et al J Exp Med 2008, 205:143-54. 6. Coulon et al Nat Med (in press)	Nephrology, Inflammation, Antibodies, Receptors	immunology, cell biology, biochemistry and/or nephrology	immunology, biochemistry, cell biology and/or nephrology
U 769	Châtenay-Malabry	Inserm	Renée Ventura-Clapier et Anne Garnier	renee.ventura@u-psud.fr	We are investigating cardiac energy metabolism and mitochondrial function in normal and failing heart	Garnier et al. (2003). Depressed mitochondrial transcription factors and oxidative capacity in rat failing cardiac and skeletal muscles. J Physiol 551:491-501. Garnier et al. (2005). Coordinated changes in mitochondrial function and biogenesis in healthy and diseased human skeletal muscle. FASEB J 19:43-52. Athéa et al. (2007). AMP-activated protein kinase a2 deficiency affects cardiac cardiolipin homeostasis and mitochondrial function. Diabetes 2007 56:786-794. Joubert et al. (2008). Local energetic regulation of sarcoplasmic reticulum ATPase and actomyosin ATPase is differently impaired in rats with heart failure. Journal of Physiology 586:5181-5192. Garnier et al. (2009). Control by circulating factors of mitochondrial function and transcription cascade in heart failure. A role for endothelin-1. Circulation Heart Failure 2:342-350. Rimbaud et al. (2011). Multiple beneficial effects of resveratrol in a rat model of ventricular dysfunction. Improved survival, ventricular and endothelial function and energetics. PLos One 2011 in press.	Metabolic therapy of heart failure. Search for signaling pathways and molecules able to increase cardiac energy metabolism.	physiologist cell biologist	physiologist cell biologist
U 844	Montpellier	Inserm	Jorgensen	christian.jorgensen@inserm.fr	stem cells in osteoarticular diseases, immunotherapies through antagomir	Djouad , Bouffi C, Ghannam S, Noël D, Jorgensen C. Mesenchymal stem cells: innovative therapeutic tools for rheumatic diseases. Nat Rev Rheumatol. 2009 Jul;5 7:392-9. - Ghannam S, Pène J, Torcy-Moquet G, Jorgensen C, Yssel H. Mesenchymal stem cells inhibit human Th17 cell differentiation and function and induce a T regulatory cell phenotype. J Immunol. 2010 Jul 1;185(1:302-12. - Ghannam S, Bouffi C, Djouad F, Jorgensen C, Noël D. Immunosuppression by mesenchymal stem cells: mechanisms and clinical applications. Stem Cell Res Ther. 2010 Mar 15;1 1:2. - Djouad F, Plence P, Bony C, Tropel P, Apparailly F, Sany J, Noël D, Jorgensen C. Immunosuppressive effect of mesenchymal stem cells favors tumor growth in allogeneic animals. Blood. 2003 Nov 15;102 10:3837-44. - Charbonnier LM, Han WG, Quentin J, Huizinga TW, Zwerina J, Toes RE, Jorgensen C, Louis-Plence P. Adoptive transfer of IL-10-secreting CD4+CD49b+ regulatory T cells suppresses ongoing arthritis. J Autoimmun. 2010 Jun;34 4:390-9.	stem cells chondrocyte	cell biologist, cytometry, differentiation, in vivo models OA	cytometry, differentiation, in vivo models of RA
U 845	PARIS	Inserm	GOFFIN Vincent, head of team n°4 (PRL/GH pathophysiology : translational approaches)	vincent.goffin@inserm.fr	Involvement of prolactin receptor signaling in breast and prostate cancer	Bogorad,R.L., Courtillot,C., Mestayer,C., Bernichtein,S., Harutyunyan,L., Jomain,J.B., Bachelot,A., Kuttenn,F., Kelly,P.A., Goffin,V., and Touraine,P. (2008). Identification of a gain-of-function mutation of the prolactin receptor in women with benign breast tumors. Proc. Natl. Acad. Sci. U. S. A 105, 14533-14538. Goffin,V., Bernichtein,S., Touraine,P., and Kelly,P.A. (2005). Development and potential clinical uses of human prolactin receptor antagonists. Endocr. Rev. 26, 400-422. Goffin,V., Touraine,P., Culler,M.D., and Kelly,P.A. (2006). Drug Insight: prolactin-receptor antagonists, a novel approach to treatment of unresolved systemic and local hyperprolactinemia? Nat. Clin. Pract. Endocrinol. Metab 2, 571-581. Llovera,M., Pichard,C., Bernichtein,S., Jeay,S., Touraine,P., Kelly,P.A., and Goffin,V. (2000). Human prolactin (hPRL) antagonists inhibit hPRL-activated signaling pathways involved in breast cancer cell proliferation. Oncogene 19, 4695-4705. Manhes,C., Kayser,C., Bertheau,P., Kelder,B., Kopchick,J.J., Kelly,P.A., Touraine,P., and Goffin,V. (2006). Local over-expression of prolactin in differentiating mouse mammary gland induces functional defects and benign lesions, but no carcinoma. J. Endocrinol. 190, 271-285. Rouet,V., Bogorad,R.L., Kayser,C., Kessal,K., Genestie,C., Bardier,A., Grattan,D.R., Kelder,B., Kopchick,J.J., Kelly,P.A., and Goffin,V. (2010). Local prolactin is a target to prevent expansion of basal/stem cells in prostate tumors. Proc Natl. Acad. Sci. U. S. A 107, 15199-15204.	In vivo analysis of the pro-tumor potency of a constitutively active prolactin receptor mutant identified in breast cancer patients: use of a transgenic model		molecular endocrinologist, biochemist, oncologist, pathologist
U 845	Paris	Inserm	Mario Pende	mario.pende@inserm.fr	Cell growth control by nutrients: focus on mTOR signal transduction pathway.	http://u845.necker.fr/recherche/presentation-des-equipes/6.-m-pende/publications	Molecular mechanisms downstream of mTOR kinase involved in growth and metabolic adaptations . Relevance for cancer, diabetes, obesity, myopathies	cell and molecular biologists, pathophysiologists	cell and molecular biologists, pathophysiologists

U 845	Paris	Inserm	Raphael Scharfmann	raphael.scharfmann@inserm.fr	Our objective is to better define signals regulating pancreatic beta cell (insulin-producing cells) development	Ravassard P, Hazhouz Y, Pechberty S, Bricout-Neveu E, Armanet M, Czernichow P and Raphael Scharfmann. A genetically-engineered human pancreatic beta cell line with glucose-inducible insulin secretion. J Clin Invest 121:3589-97 Lenoir O, Flosseau K, Ma FX, Blondeau B, Mai A, Bassel-Duby R, Ravassard P, Olson EN, Haumaitre C Scharfmann R. Specific control of pancreatic endocrine beta and delta cell mass by class IIa histone deacetylases HDAC4, 5 and 9. Diabetes (in press) Heinis M, Simon MT, Ilc K, Mazure N, Pouysségur J, Scharfmann R, Duvillié B. Oxygen tension regulates pancreatic beta-cell differentiation through HIF1{alpha}. Diabetes 2010, 59:662-669 Filhoulaud G, Guillemain G, Scharfmann R. The hexosamine biosynthesis pathway is essential for pancreatic beta cell development. J Biol Chem. 2009, 284:24583-94 Haumaitre C, Lenoir O, Scharfmann R. Histone deacetylase inhibitors modify pancreatic cell fate determination and amplify endocrine progenitors. Mol Cell Biol. 2008;28:6373-6383 Babenko AP, Polak M, Cave H, Busiah K, Czernichow P, Scharfmann R, Bryan J, Aguilar-Bryan L, Vaxillaire M, Froguel P. Activating mutations in the ABCC8 gene in neonatal diabetes mellitus. N Engl J Med. 2006, 355:456-66. O11	The objective will be to develop new assays to better understand pancreatic progenitor cell proliferation and differentiation during human pancreas develeopment	Cell biologist	Cell and/or molecularbiologist
U 872, team 3	Paris	Inserm	Alain Doucet/ H Fridman	alain.doucet@crc.jussieu.fr	Recent findings in our laboratory challenge existing paradigms regarding the mechanisms underlying a) NaCl reabsorption in the distal nephron and the targets of hypotensive drugs, and b) the regulation of Na/K balance in the kidney and the homeostasis of plasma potassium.	1. Fila M, Brideau G, Morla L, Cheval L, Deschênes G, Doucet A. Inhibition of K+ secretion in the distal nephron in nephrotic syndrome: possible role of albuminuria. J Physiol. 2011; 589: 3611-21. 2. Paulais M, Bloch-Faure M, Picard N, Jacques T, Ramakrishnan SK, Keck M, Sohet F, Eladari D, Houillier P, Lourdel S, Teulon J, Tucker SJ. Renal phenotype in mice lacking the Kir5.1 (Kcnj16) K+ channel subunit contrasts with that observed in SeSAME/EAST syndrome. Proc Natl Acad Sci USA. 2011; 108:10361-6. 3. Elabida B, Edwards A, Salhi A, Azroyan A, Fodstad H, Meneton P, Doucet A, Bloch-Faure M, Crambert G. Chronic potassium depletion increases adrenal progesterone production that is necessary for efficient renal retention of potassium. Kidney Int. 2011; 80: 256-62. 4. Azroyan A, Laghmani K, Crambert G, Mordasini D, Doucet A, Edwards A. Regulation of pendrin by pH: dependence on glycosylation.Biochem J. 2011; 434: 61-72. 5. Leviel F, Hübner CA, Houillier P, Morla L, El Moghrabi S, Brideau G, Hassan H, Parker MD, Kurth I, Kougioumtzes A, Sinning A, Pech V, Riemondy KA, Miller RL, Hummler E, Shull GE, Aronson PS, Doucet A, Wall SM, Chambrey R, Eladari D. The Na+-dependent chloride-bicarbonate exchanger SLC4A8 mediates an electroneutral Na+ reabsorption process in the renal cortical collecting ducts of mice. J Clin Invest. 2010; 120: 1627-35. 6. El Moghrabi S, Houillier P, Picard N, Sohet F, Wootla B, Bloch-Faure M, Leviel F, Cheval L, Frische S, Meneton P, Eladari D, Chambrey R. Tissue kallikrein permits early renal adaptation to potassium load. Proc Natl Acad Sci USA. 2010; 107: 13526-31	Two positions (phD or post doc) to: 1. study these new signaling and regulation pathways in vitro and in vivo (cell biologist/physiologist), and 2. develop a mathematical model of water and solute transport across different cell types in the distal nephron, so as to elucidate these new signaling and regulation pathways (biomathematician)	cell biologist/physiologist biomathematician	cell biologist/physiologist biomathematician
U 938	Paris	Inserm	Chantal Housset	chantal.housset@inserm.fr	Contribution of tyrosine kinase receptors from HER/Erbb and IGFR/IR families to liver carcinogenesis. Basic and translational research.	Blivet-Van Eggelpoël MJ, Chettouh H, Fartoux L, Aoudjehane L, Barbu L, Rey C, Priam S, Housset C, Rosmorduc O, Desbois-Mouthon C. Epidermal growth factor receptor and HER-3 restrict cell response to sorafenib in hepatocellular carcinoma cells, in revision Claperon A, Guedg V, Mergey M, Vignjevic D, Desbois-Mouthon C, Boissan M, Saubaméa B, Paradis V, Housset C, Fouassier L. Loss of EBP50 stimulates EGFR activity to induce EMT phenotypic features in biliary cancer cells, Oncogene 2011, Aug 8. doi: 10.1038/onc.2011.334. Desbois-Mouthon C, Baron A, Blivet-Van Eggelpoël M, Fartoux L, Venot C, Bladt F, Housset C, Rosmorduc O: IGF-1R inhibition induces a resistance mechanism via the EGFR/HER3/AKT signaling pathway: rational basis for co-targeting IGF-1R and EGFR in hepatocellular carcinoma Clin Cancer Res 2009;15:5445-56. Desbois-Mouthon C: The HER3/ErbB3 receptor: a promising target in cancer drug therapy. Gastroenterol Clin Biol 2010;34:255-9. Desbois-Mouthon C, Cacheux W, Blivet-Van Eggelpoel MJ, Barbu V, Fartoux L, Poupon R, Housset C, Rosmorduc O: Impact of IGF-1R/EGFR cross-talks on hepatoma cell sensitivity to gefitinib. Int J Cancer 2006;119:2557-66. Schiffer E, Housset C, Cacheux W, Wendum D, Desbois-Mouthon C, Rey C, Clergue F, Poupon R, Barbu V, Rosmorduc O: Gefitinib, an EGFR inhibitor, prevents hepatocellular carcinoma development in the rat liver with cirrhosis. Hepatology 2005;41:307-14.	Role of the mitogenic insulin receptor isoform A in liver carcinogenesis and impact of insulin sensitizing agents on liver cancer prevention and treatment		cell biologist, animal experiments
U 939	Paris	Inserm	Philippe LESNIK	philippe.lesnik@upmc.fr	Our research is focussed on the lipido-inflammatory dimension of atherosclerosis, on the metabolism and function of pro- and anti-atherogenic lipoproteins, on the genetics of cholesterol transport and homeostasis. This translational and integrated research is supported by patient cohorts (dyslipidemics, diabetics, obeses and autoimmunes), and by production of genetically-modified animal models.	1- Out R.*, Jessup W.*, Le Goff W.*, Hoekstra M., Gelissen I.C., Zhao Y., Kritharides L., Chimini G., Kuiper J., Chapman M.J., Huby T., Van Berkel T.J.C., Van Eck M. Coexistence of foam cells and hypocholesterolemia in mice lacking the ABC transporters A1 and G1. Circ. Res., 2008;102:113-120. 2- Gautier EL, Huby T, Witztum JL, Ouzilleau B, Miller ER, Saint-Charles F, Aucouturier P, Chapman MJ and Lesnik P. Macrophage apoptosis exerts divergent effects on atherogenesis as a function of lesion stage. Circulation, 2009, 119: 1795-804. 3- Larrède S., Quinn C.M., Jessup W., Frisdal E., Olivier M., Hsieh V., Kim M., Van Eck M., Couvert P., Carrié A., Giral P., Chapman M.J., Guérin M, Le Goff W. Stimulation of cholesterol efflux by LXR agonists in cholesterol-loaded human macrophages is ABCA1-dependent but ABCG1-independent. Arterioscler. Thromb. Vasc. Biol. 2009;29:1930-1936. 4- Gautier EL, Huby T, Saint-Charles F, Ouzilleau B, Pirault J, Deswaerte V, Ginhoux F, E.R. M, Witztum JL, Chapman MJ, Lesnik P. Conventional Dendritic Cells at the Crossroads between Immunity and Cholesterol Homeostasis in Atherosclerosis. Circulation, 2009, 119:2367-75. 5- Bellanger N, Orsoni A, Julia Z, Fournier N, Frisdal E, Duchene E, Bruckert E, Carrie A, Bonnefont-Rousselot D, Pirault J, Saint-Charles F, Chapman MJ, Lesnik P, Le Goff W, Guerin M. Atheroprotective reverse cholesterol transport pathway is defective in familial hypercholesterolemia. Arterioscler Thromb Vasc Biol. 2011 Jul;31(7):1675-81. 6- Frisdal E, Lesnik P, Olivier M, Robillard P, Chapman MJ, Huby T, Guerin M, Le Goff W. Interleukin-6 protects human macrophages from cellular cholesterol accumulation and attenuates the proinflammatory response. J Biol Chem. 2011 Sep 2;286(35):30926-36	Study of cellular mechanisms controlling lipid homeostasis in human macrophages in the lipido-inflammatory context of metabolic diseases	Cell / Molecular biologist	Cell / Molecular biologist

U 939	Paris	Inserm	Philippe LESNIK	philippe.lesnik@upmc.fr	Our aim is to study the implication of DNA methylation in cholesterol homeostasis and in inflammation using DNA methyltransferase 3A (DNMT3A) liver-specific (Alb-Cre) or mononuclear phagocytes-specific (macrophages and dendritic cells, CD11c-Cre) knock-out mice.	1- Frisdal E, Lesnik P, Olivier M, Robillard P, Chapman MJ, Huby T, Guerin M, Le Goff W. Interleukin-6 protects human macrophages from cellular cholesterol accumulation and attenuates the proinflammatory response. J Biol Chem. 2011 Sep 2;286(35):30926-36 2- Gautier EL, Huby T, Witztum JL, Ouzilleau B, Miller ER, Saint-Charles F, Aucouturier P, Chapman MJ and Lesnik P. Macrophage apoptosis exerts divergent effects on atherogenesis as a function of lesion stage. Circulation, 2009, 119: 1795-804. 3- Larrède S., Quinn C.M., Jessup W., Frisdal E., Olivier M., Hsieh V., Kim M., Van Eck M., Couvert P., Carrié A., Giral P., Chapman M.J., Guérin M, Le Goff W. Stimulation of cholesterol efflux by LXR agonists in cholesterol-loaded human macrophages is ABCA1-dependent but ABCG1-independent. Arterioscler. Thromb. Vasc. Biol. 2009;29:1930-1936. 4- Gautier EL, Huby T, Saint-Charles F, Ouzilleau B, Pirault J, Deswaerte V, Ginhoux F, E.R. M, Witztum JL, Chapman MJ, Lesnik P. Conventional Dendritic Cells at the Crossroads between Immunity and Cholesterol Homeostasis in Atherosclerosis. Circulation, 2009, 119:2367-75. 5- Couvert, P., Carrié, A., Pariès, J., Vaysse, J., Miroglio, A., Kerjean, A., Nahon, P., Chelly, J., Trinchet, J.C., Beaugrand, M. and Ganne-Carrié, N. Liver insulin-like growth factor 2 methylation in hepatitis C virus cirrhosis and further occurrence of hepatocellular carcinoma. World J Gastroenterol. 2008, 14:5419-27. 6- Couvert, P., Giral, P., Dejager, S., Gu, J., Chapman, J., Bruckert, E. and Carrié, A. A frequent allele of the gene encoding the Organic Anion Transporting Polypeptide-1B1 (OATP-1B1) is associated with high response to Fluvastatin therapy. Pharmacogenomics,2008, 9:1217-27.	study of the implication of epigenetic regulation in atherosclerosis pathophysiology.	Cell / Molecular biologist	Cell / Molecular biologist
U 955	Creteil	Inserm	Sophie LOTERSZTAJN	Sophie.Lotersztajn@inserm.fr	Identification of novel antiinflammatory and antifibrogenic approaches for the treatment of chronic liver diseases	Cannabinoid CB2 receptors protect against alcoholic liver disease by regulating Kupffer cell polarization,Louvet, Teixeira-Clerc, Chobert, Deveaux, Pavoine, Zimmer, Pecker, Mallat, Lotersztajn (2011)Hepatology, in press Hyperactivation of anandamide synthesis and regulation of cell-cycle progression via cannabinoid type 1 (CB1) receptors in the regenerating liver. Mukhopadhyay B, Cinar R, Yin S, Liu J, Tam J, Godlewski G, Harvey-White J, Mordi I, Cravatt BF, Lotersztajn S, Gao B, Yuan Q, Schuebel K, Goldman D, Kunos G. Proc Natl Acad Sci U S A. 2011 Apr 12;108(15):6323-8. Beneficial paracrine effects of cannabinoid receptor 2 on liver injury and regeneration. Teixeira-Clerc F, Belot MP, Manin S, Deveaux V, Cadoudal T, Chobert MN, Louvet A, Zimmer A, Tordjmann T, Mallat A, Lotersztajn S. Hepatology. 2010 Sep;52(3):1046-59. Cannabinoid CB2 receptor potentiates obesity-associated inflammation, insulin resistance and hepatic steatosis Deveaux, V, Cadoudal, T Ichigotani, Y, Teixeira-Clerc F, Louvet A, Manin, S, Tran-Van Nhieu, J, Belot, MP, Zimmer, A, Even, P, Cani, P, Knauf, C, Burcelin, A, Bertola, A, Le Marchand-Brustel, Y, Gual, P, Mallat, A, and Lotersztajn, S. PLoS ONE. 2009 Jun 9;4(6):e5844 Daily cannabis use: a novel risk factor of steatosis severity in patients with chronic hepatitis C. Hézode C, Zafrani ES, Roudot-Thoraval F, Costentin C, Hessami A, Bouvier-Alias M, Medkour F, Pawlostky JM, Lotersztajn S, Mallat A. Gastroenterology. 2008 Feb;134(2):432-9. CB1 cannabinoid receptor antagonism: a new strategy for the treatment of liver fibrosis. Teixeira-Clerc F, Julien B, Grenard P, Tran Van Nhieu J, Deveaux V, Li L, Serriere-Lanneau V, Ledent C, Mallat A, Lotersztajn S. Nature Medicine. 2006 Jun;12(6):671-6.	Inflammation and liver fibrosis	cell biologist	cell biologist
U 955, TEAM 21	Creteil	Inserm	Dil Sahali	dil.sahali@inserm.fr	Molecular pathophysiology of idiopathic nephrotic syndrome. Generation of transgenic and inducible KO mice	Science Signal 18; 3(122):ra39., 2010 Blood 115(18):3756-62.2010 Mol Immunol, 46: 991-8.2009 J Immunol. 172:688-98, 2004 J of Exp Med.198 : 797-807,2003 J of Am Soc of Nephrol. 13: 1238-1247, 2002	Study of inducible and tissue specifique model of c-mip-deficient mice (podocyte) Transcriptional regulation of c-mip		Immunogist Cell biologist with some background in podocyte biology
U 956	Paris	Inserm	Pascale GUICHENEY	pascale.guicheney@upmc.fr	Pathophysiological consequences of the selenoprotein N deficiency leading to myopthies, regulation of SelN by microRNAs	Moghadaszadeh B, Petit N, Jaillard C, Brockington M, Quijano Roy S, Merlini L, Romero N, Estournet B, Desguerre I, Chaigne D, Muntoni F, Topaloglu H, Guicheney P. Mutations in SEPN1 cause congenital muscular dystrophy with spinal rigidity and restrictive respiratory syndrome. Nature Genet 2001, 29: 17-18. Petit N, Lescure A, Rederstorff M, Krol A, Moghadaszadeh B, Wewer UM, Guicheney P. Selenoprotein N: an endoplasmic reticulum glycoprotein with an early developmental expression pattern. Hum Mol Genet 2003, 12: 10 45-1053. Allamand V, Richard P, Lescure A, Ledeuil C, Desjardin D, Petit N, Gartioux C, Ferreiro A, Krol A, Pelligrini N, Urtizberea JA, Guicheney P. A single homozygous point mutation in the 3'untranslated region motif of selenoprotein N mRNA causes SEPN1-related myopathy. EMBO rep 2006, 7:450-454. Castets P, Maugenre S, Gartioux C, Rederstorff M, Krol A, Lescure A, Tajbakhsh S, Allamand A, Guicheney P. Selenoprotein N is dynamically expressed during mouse development and detected early in muscle progenitors. BMC Dev Biol 2009, 9: 46. Castets P, Bertrand AT, Beuvin M, Ferry A, Le Grand F, Castets M, ChazOT G, Rederstorff M, Krol A, Lescure A, Romero NB, Guicheney P, Allamand V. Satellite cell loss and impaired muscle regeneration in Selenoprotein N deficiency. Hum Mol Genet. 2011, 20: 694-704. Rederstorff M*, Castets P*, Arbogast S, Lainé J, Vassilopoulos S, Beuvin M, Dubourg O, Vignaud A, Ferry A, Krol A, Allamand V*, Guicheney P*, Ferreiro A*, Lescure A. Increased muscle stress-sensitivity induced by selenoprotein N inactivation in mouse: a mammalian model for SEPN1-Related Myopathy * contribution équivalente. PLoS ONE 2011, 6(8):e23094.	Physiological consequences of hypoxia in wild type and SEPN1 deficient mice: plasma and tissue microRNA variations and protein regulation		cell biologist a previous experience in microRNAs or hypoxia and oxydative stress, or animal models would be appreciated

U 970	Paris	Inserm	Guillaume Duménil	guillaume.dumenil@inserm.fr	Bacterial pathogenesis talking place in the context of the vasculature such as septicemia and meningitidis. We study the molecular and cellular basis of such infection. We us Neisseria meningitidis infection as model for this type of disease.	Chamot-Rooke J, Mikaty G, Malosse C, Soyer M, Dumont A, Gault J, Imhaus AF, Martin P, Trellet M, Clary G, Chafey P, Camoin L, Nilges M, Nassif X, Dumenil G (2011) Posttranslational modification of pili upon cell contact triggers N. meningitidis dissemination. Science 331 : 778-782. Coureuil, M., Mikaty, G., Miller, F., Lecuyer, H., Bernard, C., Bourdoulous, S., Dumenil, G., Mege, R.M., Weksler, B.B., Romero, I.A., et al. (2009). Meningococcal type IV pili recruit the polarity complex to cross the brain endothelium. Science 325, 83-87. Mikaty, G., Soyer, M., Mairey, E., Henry, N., Dyer, D., Forest, K.T., Morand, P., Guadagnini, S., Prevost, M.C., Nassif, X., et al. (2009). Extracellular bacterial pathogen induces host cell surface reorganization to resist shear stress. PLoS Pathog 5, e1000314. Chamot-Rooke, J., Rousseau, B., Lanternier, F., Mikaty, G., Mairey, E., Malosse, C., Bouchoux, G., Pelicic, V., Camoin, L., Nassif, X., et al. (2007). Alternative Neisseria spp. type IV pilin glycosylation with a glyceramido acetamido trideoxyhexose residue. Proc Natl Acad Sci U S A 104, 14783-14788. Mairey, E., Genovesio, A., Donnadieu, E., Bernard, C., Jaubert, F., Pinard, E., Seylaz, J., Olivo-Marin, J.C., Nassif, X., and Dumenil, G. (2006). Cerebral microcirculation shear stress levels determine Neisseria meningitidis attachment sites along the blood-brain barrier. J Exp Med 203, 1939-1950.	Study the molecular and cellular basis of Neisseria meningitidis infection	Microbiologist, cell biologist, Expertise in mouse models of infection, Live imaging	Microbiologist, cell biologist, Expertise in mouse models of infection, Live imaging
U 970	Paris	Inserm	Eric Camerer	eric.camerer@inserm.fr	The team uses mouse models to study the role of G protein-coupled receptors in embryonic development, angiogenesis and vascular inflammation.	1. Frateschi S, Camerer E, Crisante G, Reiser S, Membrez M, Charles RP, Beerman F, Stehle JC, Breiden B, Sandhoff K, Rotman S, Haftek M, Wilson A, Ryser S, Steinhoff M, Coughlin SR and Hummler E (2011) PAR2 absence completely rescues inflammation and ichthyosis caused by altered CAP1/Prss8 expression in mouse skin. Nat Commun 2: 161 doi:10.1038/ncomms 1162 2. Camerer E, Barker A, Duong DN, Ganesan R, Kataoka H, Cornelissen I, Darragh MR, Hussain A, Zheng YW, Srnivasan Y, Brown C, Xu SM, Regard JB, Lin CY, Craik CS, Kirhhofer D, and Coughlin SR (2010) Local protease signaling contributes to neural tube closure in the mouse embryo. Dev Cell 18:25-38 3. Camerer E, Regard JB, Cornelissen I, Srnivasan Y, Duong DN, Palmer D, Pham TH, Wong JS, Pappu R and Coughlin SR (2009) Sphingosine-1-phosphate in the plasma compartment regulates basal and inflammation- induced vascular leak in mice. J Clin Invest 119:1871-9 4. Pappu R, Schwab SR, Cornelissen I, Pereira JP, Regard, J, Xu Y, Camerer E, Zheng YW, Huang Y, Cyster JG and Coughlin SR (2007) Promotion of lymphocyte egress into blood and lymph by distinct sources of sphingosine-1-phosphate. Science 316:295-8 5. Camerer E, Qazi A, Duong DN, Cornelissen I, Advincula R and Coughlin SR (2004) Platelets, protease-activated receptors and fibrinogen in hematogenous metastasis. Blood 104 : 397-401 6. Camerer E, Huang W and Coughlin SR (2000) Tissue factor- and factor X- dependent activation of PAR2 by factor VIIa. Proc Natl Acad Sci USA 97 : 5255-60	The role of G protein-coupled receptor signaling in embryonic development, angiogenesis and vascular inflammation.	cellular and molecular biology	Cellular and molecular biologist or medical doctor with experience with mouse models. Ideally vascular biology and/or immunology.
U 970	Paris	Inserm	Jean-sébastien Silvestre	jean-sebastien.silvestre@inserm.fr	Our research aim to understand the cellular and molecular mechanisms governing post-ischemic neovascularization and to define new strategies of therapeutic angiogenesis	1. Mees B, Récalde A, Loinard C, Tempel D, Godinho M, Vilar J, van Haperen R, Lévy B, de Crom R, Silvestre JS. Endothelial nitric oxide synthase overexpression restores the efficiency of bone marrow mononuclear cell-based therapy. Am J Pathol. 2011 Jan;178(1):55-60. 2. Cochain C, Rodero MP, Vilar J, Récalde A, Richart AL, Loinard C, Zouggari Y, Guérin C, Duriez M, Combadière B, Poupel L, Lévy BI, Mallat Z, Combadière C, Silvestre JS. Regulation of monocyte subset systemic levels by distinct chemokine receptors controls post-ischaemic neovascularization. Cardiovasc Res. 2010 Oct 1;88(1):186-95. 3. Zouggari Y, Y, Ait-Oufella H, Waeckel L, Vilar J, Loinard C, Cochain C, Récalde A, Duriez M, Levy BI, Lutgens E, Mallat Z, Silvestre JS. Regulatory T cells modulate postischemic neovascularization. Circulation. 2009 Oct 6;120(14):1415-25 4. Leroyer AS, Ebrahimian TG, Cochain C, Récalde A, Blanc-Brude O, Mees B, Vilar J, Tedgui A, Levy BI, Chimini G, Boulanger CM, Silvestre JS. Microparticles from ischemic muscle promotes postnatal vasculogenesis. Circulation. 2009;119(21):2808-17 5. Loinard C, Ginouvès A, Vilar J, Cochain C, Zouggari Y, Recalde A, Duriez M, Lévy BI, Pouysségur J, Berra E, Silvestre JS. Inhibition of prolyl hydroxylase domain proteins promotes therapeutic revascularization. Circulation. 2009;120(1):50-9. 6. Foubert P, Silvestre JS, Souttou B, Barateau V, Martin C, Ebrahimian TG, Leré-Déan C, Contreres JO, Sulpice E, Levy BI, Plouët J, Tobelem G, Le Ricousse-Roussanne S. PSGL-1-mediated activation of EphB4 increases the proangiogenic potential of endothelial progenitor cells. J Clin Invest. 2007;117(6):1527-37	Understanding the cellular and molecular mechanisms governing post-ischemic tissue remodelling	physiologist	cell biologist, physiologist
U 986	Paris	Inserm	Agnes LEHUEN	agnes.lehuen@inserm.fr	Immunoregualtion for the prevention of type 1 diabetes. Role of iNKT cells and plasmacytoid dendritic cells in several mouse models. Characterization of iNKT cells in diabetic patients and function of new iNKT cell agonists on human cells.	Diana J, Griseri T, Lagaye S, Beaudoin L, Autrusseau E, et al. (2009) NKT cell-plasmacytoid dendritic cell cooperation via OX40 controls viral infection in a tissue-specific manner. Immunity 30: 289-299. Lehuen A, Diana J, Zaccone P, Cooke A (2010) Immune cell crosstalk in type 1 diabetes. Nat Rev Immunol 10: 501-513. Diana J, Brezar V, Beaudoin L, Dalod M, Mellor A, et al. (2011) Viral infection prevents diabetes by inducing regulatory T cells through NKT cell-plasmacytoid dendritic cell interplay. J Exp Med 208: 729-745. Brezar V, Carel JC, Boitard C, Mallone R (2011) Beyond the Hormone: Insulin as an Autoimmune Target in Type 1 Diabetes. Endocr Rev doi: 10.1210/er.2011-0010. Martinuzzi E, Afonso G, Gagnerault MC, Naselli G, Mittag D, et al. (2011) acDCs enhance human antigen-specific T-cell responses. Blood 118: 2128-2137. Luce S, Lemonnier F, Briand JP, Coste J, Lahlou N, et al. (2011) Single insulin-specific CD8+ T-cells show characteristic gene expression profiles in human type 1 diabetes. Diabetes In press.	Immunology of type 1 diabetes: innate and adaptive immune responses in mouse models and with human cells.	immunologist	immunologist

U 995 (team 4)	Lille	Inserm	Frédéric Gottrand	fgottrand@chru-lille.fr	The main focus of research aims to identify new alimentary compounds to prevent and/or modulate the immune and inflammatory systems and reinforce the mucosal barrier during lung and intestinal infectious diseases.	1. GOTTRAND F. Long chain polyunsaturated fatty acid influences the immune system of the infant. J Nutr 2008;138:1807S-1812S 2. GOUYER V, LEIR SH, TETAERT D, LIU Y, GOTTRAND F, HARRIS A, DESSEYN JL. The characterization of the first anti-mouse Muc6 antibody shows an increased expression of the mucin in pancreatic tissue of Cftr-knockout mice. Histochem Cell Biol 2010;133:517-25 (IF:4.7) 3. GOUYER V, GOTTRAND F, DESSEYN JL. The extraordinarily complex but highly structured organization of intestinal mucus-gel unveiled in multicolor images; PLos ONE. 2011 12;6(4):e18761 (IF: 4.1) 4. TIESSET H, BERNARD H, BARTKE N, BEERMANN C, FLACHAIRE E, DESSEYN JL, GOTTRAND F, HUSSON MO. (n-3) long-chain PUFA differentially affect resistance to Pseudomonas aeruginosa infection of male and female cftr-/- mice. J Nutr. 2011 Jun;141(6):1101-7. (IF: 4.3)	investigating new hypothesis involving nutritional compounds and mucus barrier for their influence on the immune system and the evolution of inflammatory bowel diseases	. Mouse models • Transgenic mouse (KO and KI) • Bacterial infection • Animal imaging	. Mouse models • Transgenic mouse (KO and KI) • Bacterial infection • Animal imaging