



TOTAL PRODUCTION

Nom de l'équipe : Oncogenic functions of  $\beta$ -catenin signalling in the liver

Nom du directeur pour le contrat à venir : Sabine COLNOT

I. PRODUITS DE LA RECHERCHE


Publications of staff recruited during the last five years and done in their previous team are flagged with 

Publications done in collaboration with another team of the CRC are flagged with 

1. Journaux / revues

Articles scientifiques


**2017**

- 1\_2017 Morzyglod, L., M. Caüzac, L. Popineau, PD Denechaud, L Fajas, B Ragazzon, V Fauveau, C Desdouets, O Rosmorduc, C Desbois-Mouthon, AF Burnol. Grb14 is a repressor of insulin-induced hepatocyte proliferation in mouse liver, and is down-regulated in human hepatocellular carcinoma. *Hepatology* 65:1352-1368.
- 2\_2017  Van Renne, N., Roca Suarez, A.A., Duong, F.H., Gondeau, C., Calabrese, D., Fontaine, N., Ababsa, A., Bandiera, S., Croonenborghs, T., Pochet, N., De Blasi, V., Pessaux, P., Piardi, T., Sommacale, D., Ono, A., Chayama, K., Fujita, M., Nakagawa, H., Hoshida, Y., Zeisel, M.B., Heim, M.H., Baumert, T.F., and Lupberger, J. (2017). miR-135a-5p-mediated downregulation of protein tyrosine phosphatase receptor delta is a candidate driver of HCV-associated hepatocarcinogenesis. *Gut* doi: 10.1136.
- 3\_2016 Lequoy\*, M., Desbois-Mouthon\*, C., Wendum, D., Gupta, V., Blachon, J.L., Scatton, O., Dumont, S., Bonnemaire, M., Schmidlin, F., Rosmorduc, O., and Fartoux, L. (2016). Somatostatin receptors in resected hepatocellular carcinoma: status and correlation with poor prognosis markers. *Histopathology*. \* co-authors


**2016**

- 4\_2016 Gougelet, A., C. Sartor, L. Bachelot, C. Godard, C. Marchiol, G. Renault, F. Tores, P. Nitschke, C. Cavard, B. Terris, C. Perret and S. Colnot (2016). "Antitumour activity of an inhibitor of miR-34a in liver cancer with beta-catenin-mutations." *Gut* 65(6): 1024-1034 (IF=16.7).
- 5\_2016 Cordi, S., C. Godard, T. Saandi, P. Jacquemin, S. P. Monga, S. Colnot and F. P. Lemaigre (2016). "Role of beta-catenin in development of bile ducts." *Differentiation* 91(1-3): 42-49.
- 6\_2016 Canal, F., S. Charawi, G. Grimber, C. Houbron, V. Drouet, S. Colnot, B. Terris, C. Cavard and C. Perret (2016). "Generation of Mice with Hepatocyte-Specific Conditional Deletion of Notum." *PLoS One* 11(3): e0150997.
- 7\_2016 Groll, N., T. Petrikat, S. Vetter, S. Colnot, F. Weiss, O. Poetz, T. O. Joos, U. Rothbauer, M. Schwarz and A. Braeuning (2016). "Coordinate regulation of Cyp2e1 by beta-catenin- and

hepatocyte nuclear factor 1alpha-dependent signaling." *Toxicology* 350-352: 40-48.

- 8\_2016 Braeuning, A., A. Gavrillov, M. Geissler, C. Wenz, S. Colnot, M. F. Templin, U. Metzger, M. Romer, A. Zell and M. Schwarz (2016). "Tumor promotion and inhibition by phenobarbital in livers of conditional Apc-deficient mice." *Arch Toxicol* 90(6): 1481-1494.
- 9\_2016 Buta, C., Benabou, E., Lequoy, M., Regnault, H., Wendum, D., Meratbene, F., Chettouh, H., Aoudjehane, L., Conti, F., Chretien, Y., Scatton, O., Rosmorduc, O., Praz, F., Fartoux, L., and Desbois-Mouthon, C. (2016). Heregulin-1ss and HER3 in hepatocellular carcinoma: status and regulation by insulin. *J Exp Clin Cancer Res* 35, 126.
- 10\_2016  Bandiera, S., Pernot, S., El Saghire, H., Durand, S.C., Thumann, C., Crouchet, E., Ye, T., Fofana, I., Oudot, M.A., Barths, J., Schuster, C., Pessaux, P., Heim, M.H., Baumert, T.F., and Zeisel, M.B. (2016). Hepatitis C Virus-Induced Upregulation of MicroRNA miR-146a-5p in Hepatocytes Promotes Viral Infection and Deregulates Metabolic Pathways Associated with Liver Disease Pathogenesis. *J Virol* 90, 6387-6400 (IF=4.7).

## 2015

- 11\_2015 Parisi, A., F. Lacour, L. Giordani, S. Colnot, P. Maire and F. Le Grand (2015). "APC is required for muscle stem cell proliferation and skeletal muscle tissue repair." *J Cell Biol* 210(5): 717-726.
- 12\_2015 Just, P. A., A. Poncy, S. Charawi, R. Dahmani, M. Traore, T. Dumontet, V. Drouet, F. Dumont, H. Gilgenkrantz, S. Colnot, B. Terris, C. Coulouarn, F. Lemaigre and C. Perret (2015). "LKB1 and Notch Pathways Interact and Control Biliary Morphogenesis." *PLoS One* 10(12): e0145400.
- 13\_2015 Tovar, V., Cornella, H., Moeini, A., Vidal, S., Hoshida, Y., Sia, D., Peix, J., Cabellos, L., Alsinet, C., Torrecilla, S., Martinez-Quetglas, I., Lozano, J.J., Desbois-Mouthon, C., Sole, M., Domingo-Domenech, J., Villanueva, A., and Llovet, J.M. (2015). Tumour initiating cells and IGF/FGF signalling contribute to sorafenib resistance in hepatocellular carcinoma. *Gut*.
- 14\_2015 Nguyen Ho-Boulidoires, T.H., Claperon, A., Mergey, M., Wendum, D., Desbois-Mouthon, C., Tahraoui, S., Fartoux, L., Chettouh, H., Merabtene, F., Scatton, O., Gaestel, M., Praz, F., Housset, C., and Fouassier, L. (2015). Mitogen-activated protein kinase-activated protein kinase 2 mediates resistance to hydrogen peroxide-induced oxidative stress in human hepatobiliary cancer cells. *Free Radic Biol Med* 89, 34-46.
- 15\_2015  Maily, L., Xiao, F., Lupberger, J., Wilson, G.K., Aubert, P., Duong, F.H., Calabrese, D., Leboeuf, C., Fofana, I., Thumann, C., Bandiera, S., Lutgehetmann, M., Volz, T., Davis, C., Harris, H.J., Mee, C.J., Girardi, E., Chane-Woon-Ming, B., Ericsson, M., Fletcher, N., Bartenschlager, R., Pessaux, P., Vercauteren, K., Meuleman, P., Villa, P., Kaderali, L., Pfeffer, S., Heim, M.H., Neunlist, M., Zeisel, M.B., Dandri, M., McKeating, J.A., Robinet, E., and Baumert, T.F. (2015). Clearance of persistent hepatitis C virus infection in humanized mice using a claudin-1-targeting monoclonal antibody. *Nat Biotechnol* 33, 549-554.

## 2014

- 16\_2014 Gougelet A, Torre C, Veber P, Sartor C, Bachelot L, Denechaud PD, Godard C, Moldes M, Burnol AF, Dubuquoy C, Terris B, Guillonneau F, Ye T, Schwarz M, Braeuning A, Perret C, Colnot S. T-cell factor 4 and  $\beta$ -catenin occupancies pattern zonal liver metabolism. *Hepatology*. 2014 Jun;59(6):2344-57 (IF=13.2).
- 17\_2014 Sangar, F., Schreurs, A.S., Umana-Diaz, C., Claperon, A., Desbois-Mouthon, C., Calmel, C., Mauger, O., Zaanani, A., Miquel, C., Flejou, J.F., and Praz, F. (2014). Involvement of small ArfGAP1 (SMAP1), a novel Arf6-specific GTPase-activating protein, in microsatellite instability oncogenesis. *Oncogene* 33, 2758-2767.

## 2013

- 18\_2013 Claperon, A., Mergey, M., Aoudjehane, L., Ho-Boulidoires, T.H., Wendum, D., Prignon, A., Merabtene, F., Firrincieli, D., Desbois-Mouthon, C., Scatton, O., Conti, F., Housset, C., and Fouassier, L. (2013). Hepatic myofibroblasts promote the progression of human cholangiocarcinoma through activation of epidermal growth factor receptor. *Hepatology* 58, 2001-2011.

- 19\_2013 [Chettouh, H., Fartoux, L., Aoudjehane, L., Wendum, D., Claperon, A., Chretien, Y., Rey, C., Scatton, O., Soubrane, O., Conti, F., Praz, F., Housset, C., Rosmorduc, O., and Desbois-Mouthon, C. \(2013\). Mitogenic insulin receptor-A is overexpressed in human hepatocellular carcinoma due to EGFR-mediated dysregulation of RNA splicing factors. \*Cancer Res\* 73, 3974-3986 \(IF=9.1\).](#)
- 20\_2013 [Demongeot, J., Hazgui, H., Bandiera, S., Cohen, O., and Henrion-Caude, A. \(2013\). MitomiRs, chloromiRs and modelling of the microRNA inhibition. \*Acta Biotheor\* 61, 367-383.](#)
- 21\_2013 [Bandiera, S., Cartault, F., Jannot, A.S., Hatem, E., Girard, M., Rifai, L., Loiseau, C., Munnich, A., Lyonnet, S., and Henrion-Caude, A. \(2013\). Genetic variations creating microRNA target sites in the FXN 3'-UTR affect frataxin expression in Friedreich ataxia. \*PLoS One\* 8, e54791.](#)

## 2012

- 22\_2012 [Anson M, Crain-Denoyelle AM, Baud V, Chereau F, Gougelet A, Terris B, Yamagoe S, Colnot S, Viguier M\\*, Perret C\\*, Couty JP. Oncogenic  \$\beta\$ -catenin triggers an inflammatory response that determines the aggressiveness of hepatocellular carcinoma in mice. \*J Clin Invest\*. 2012 Feb 1;122\(2\):586-99. \\*Co-corresponding authors \(IF=12.8\).](#)
- 23\_2012 [Nouët Y, Dahan J, Labalette C, Levillayer F, Julien B, Jouvion G, Cairo S, Langa Vives F, Ribeiro A, Huerre M, Colnot S, Perret C, Tran Van Nhieu J, Tordjmann T, Buendia MA, Wei Y. The four and a half LIM-only protein 2 participates to liver homeostasis and carcinogenesis. \*J Hepatol\*, 2012 Nov;57\(5\):1029-36.](#)
- 24\_2012 [Zeller E, Mock K, Horn M, Colnot S, Schwarz M, Braeuning A. Dual-specificity phosphatases are targets of the Wnt/ \$\beta\$ -catenin pathway and candidate mediators of  \$\beta\$ -catenin/Ras signaling interactions. \*Biol Chem\*, 2012 Oct;393\(10\):1183-91.](#)
- 25\_2012 [Claperon, A., Guedj, N., Mergey, M., Vignjevic, D., Desbois-Mouthon, C., Boissan, M., Saubamea, B., Paradis, V., Housset, C., and Fouassier, L. \(2012\). Loss of EBP50 stimulates EGFR activity to induce EMT phenotypic features in biliary cancer cells. \*Oncogene\* 31, 1376-1388.](#)
- 26\_2012 [Blivet-Van Eggelpoel, M.J., Chettouh, H., Fartoux, L., Aoudjehane, L., Barbu, V., Rey, C., Priam, S., Housset, C., Rosmorduc, O., and Desbois-Mouthon, C. \(2012\). Epidermal growth factor receptor and HER-3 restrict cell response to sorafenib in hepatocellular carcinoma cells. \*J Hepatol\* 57, 108-115 \(IF=12.5\).](#)
- 27\_2012 [Cartault, F., Munier, P., Benko, E., Desguerre, I., Hanein, S., Boddaert, N., Bandiera, S., Vellayoudom, J., Krejbich-Trotot, P., Bintner, M., Hoarau, J.J., Girard, M., Genin, E., de Lonlay, P., Fourmaintraux, A., Naville, M., Rodriguez, D., Feingold, J., Renouil, M., Munnich, A., Westhof, E., Fahling, M., Lyonnet, S., and Henrion-Caude, A. \(2012\). Mutation in a primate-conserved retrotransposon reveals a noncoding RNA as a mediator of infantile encephalopathy. \*Proc Natl Acad Sci U S A\* 109, 4980-4985.](#)



## Articles de synthèse / revues bibliographiques

### 2017


- 28\_2017 [Riou R, Colnot S. Chromatine et épigénome dans le cancer primitif du foie. \*J. Biol. Med.\* 2017;6\(21\):10-4. Review.](#)

### 2016

- 29\_2016 [Colnot S. Focusing on beta-catenin activating mutations to refine liver tumor profiling. \*Hepatology\* 64\(6\), 1850-1852. Editorial.](#)
- 30\_2016 [Lechel A, Gougelet A. Early HCC treatment: a future strategy against interferon/miR-484 axis to revert precancerous lesions? \*Gut\* 65, 1073-1074 \(2016\). Commentary.](#)
- 31\_2016 [Gougelet A, Colnot S. "Hepatocellular carcinoma diagnosis: Circulating microRNAs emerge as robust biomarkers." \*Clin Res Hepatol Gastroenterol\*. Review. \(IF=2.3\).](#)

- 32\_2016  Bandiera, S., Billie Bian, C., Hoshida, Y., Baumert, T.F., and Zeisel, M.B. (2016). Chronic hepatitis C virus infection and pathogenesis of hepatocellular carcinoma. ***Curr Opin Virol*** 20, 99-105.
- 33\_2016  Bandiera, S., Baumert, T.F., and Zeisel, M.B. (2016). Circulating microRNAs for early detection of hepatitis B-related hepatocellular carcinoma. ***Hepatobiliary Surg Nutr*** 5, 198-200.

## 2015

- 34\_2015 Chettouh, H., Lequoy, M., Fartoux, L., Vigouroux, C., and Desbois-Mouthon, C. (2015). Hyperinsulinaemia and insulin signalling in the pathogenesis and the clinical course of hepatocellular carcinoma. ***Liver Int*** 35, 2203-2217.
- 35\_2015  Bandiera, S., Pfeffer, S., Baumert, T.F., and Zeisel, M.B. (2015). miR-122--a key factor and therapeutic target in liver disease. ***J Hepatol*** 62, 448-457.


## 2014

- 36\_2016 Sylvester KG, Colnot S. Hippo/YAP, beta-catenin and the cancer cell: a "ménage à trois" in hepatoblastoma. ***Gastroenterology*** 2014. 147(3): 562-565. Commentary.
- 37\_2014 Colnot S, Fortes P. Editing liver tumours. ***Gut*** 2014 May;63(5):709-10. Commentary.

## 2013

- 38\_2013 Gougelet A, Colnot S. [microRNA: new diagnostic and therapeutic tools in liver disease?]. ***Med Sci (Paris)***. 2013 Oct;29(10):861-7. Review.
- 39\_2013 Gougelet A, Colnot S. MicroRNA-feedback loop as a key modulator of liver tumorigenesis and inflammation. ***World J Gastroenterol*** 2013;19(4):440 -444. Commentary.

## 2012

- 40\_2012 Gougelet A, Colnot S. A complex interplay between Wnt/beta-catenin signalling and the cell cycle in the adult liver. ***Int J Hepatol***, 2012;2012:816125. Review.
- 41\_2012  Bandiera, S., Barrey, E., Ernoult-Lange, M., Gidrol, X., Henrion-Caude, A., Huang, L., Saint-Auret, G., and Weil, D. (2012). [Mitochondria, microRNA and RNA interference]. ***Med Sci (Paris)*** 28, 23-26.

Autres articles (articles publiés dans des revues professionnelles ou techniques, etc.) sans objet

### 2. Ouvrages

Monographies et ouvrages scientifiques, éditions critiques, traductions (sans objet)  
Direction / édition scientifique (sans objet)

#### Chapitre d'ouvrage

- 2014 Gougelet A, Colnot S. MicroRNAs in liver cancer. In ***MicroRNAs: Key Regulators of Oncogenesis***. Springer.

### 3. Colloques / congrès, séminaires de recherche

Éditions d'actes de colloques / congrès (sans objet)

Autres produits présentés dans des colloques / congrès et des séminaires de recherche

➤ Invited talks in congress

## 2016

- 1\_2016 **79<sup>e</sup> journée AFEF Bordeaux (29/09/2016)**. Organizer : Association Française pour l'Etude du Foie. Invited speaker: Colnot S. « Chromatin and epigenome in liver cancers ».
- 2\_2016 **ILCA in Vancouver, Canada (08/09/2016)**. Organizer : International Liver Cancer Association. **Pre-conference Workshop. Pre-clinical Models of HCC: From Target Identification to Clinical Trials**. Invited speaker: Colnot S. « WNT/Beta-catenin Activation in Mice Models ».
- 3\_2016 **Symposium Xcelligence Ozyme, Marseille, 21 avril 2016**. Invited speaker: Gougelet A. « miR-34a inhibition: a promising therapeutic strategy in liver tumours mutated for  $\beta$ -catenin ».
- 4\_2016 **Cold Spring Harbour Asia conference in SuZhou, China (04/2016)**. Invited speaker: Colnot S. « Metabolic reprogramming in  $\beta$ -catenin-driven carcinogenesis ».
- 5\_2016 **EASL International Liver Conference in Barcelona (04/2016)**. Invited speaker: Colnot S. « CRISPR-Cas9 to study in vivo liver carcinogenesis in mice ».
- 6\_2016 **6<sup>th</sup> colloquium "Génomique fonctionnelle du foie", Montpellier, France (Mars 2016)**. Invited speaker: Colnot S. « Nouvelles cibles de la  $\beta$ -caténine dans le foie murin normal et cancéreux ».
- 7\_2016 **Journée de la Cancéropôle IDF « La diversité tumorale au travers des plateformes franciliennes », 14 Janvier 2016**. Invited speaker: Gougelet A. "Inhiber miR-34a : une stratégie prometteuse pour le traitement des cancers du foie muté pour la  $\beta$ -caténine".
- 8\_2016 **Société Française d'Endocrinologie, Bordeaux, 6 octobre 2016**. Invited speaker: Desbois-Mouthon C. "Implication de la signalisation insulinique dans la carcinogénèse hépatique".
- 9\_2016 **GIS "Nutrition-Alimentation-Métabolisme-Santé", Saint Malo, 12,septembre 2016**. Invited speaker: Desbois-Mouthon C. "Signalisation insulinique et carcinogénèse hépatique: quelles sont les évidences ?"

## 2015

- 10\_2015 **EASL International Liver Conference (2015/04/22); Vienna, Austria**. Invited speaker: Colnot S. « Wnt/beta-catenin and metabolism in HCC ».
- 11\_2015 **EASL International Liver Conference (2015/04/22); Vienna, Austria**. Invited speaker: Gougelet A. "F-Choline: a powerful diagnosis tool for tumours mutated for  $\beta$ -catenin".
- 12\_2015 Paris NASH symposium, French US meetings, Paris, juin 2015, Invited speaker: Desbois-Mouthon C. "Insulin resistance and HCC".

## 2014

- 13\_2014 **Hepatinov seminar (2014/10/01); Villejuif, France**. Invited speaker: Colnot S. « Reprogramming the metabolism of the hepatocyte by beta-catenin in hepatocellular carcinoma ».
- 14\_2014 **31<sup>e</sup> journée JC Dreyfus - Institut Cochin "Epigenetics and Medicine"(2014/09/19); Paris, France**. Invited speaker: Colnot S. « Hepatocyte reprogramming by beta-catenin in liver cancer ».
- 15\_2014 **EASL HCC Summit. Basic Science: Molecular pathogenesis and translational research in liver cancer – 2014/02/13-14 in Geneva, Switzerland**. Invited speaker: Colnot S. "Wnt/beta-catenin and metabolism in hepatocellular carcinoma"
- 16\_2014 **74<sup>e</sup>me journées scientifiques de l'AFEF, Toulouse, septembre 2014**. Invited speaker: Desbois-Mouthon C. "Insulino-résistance et cancer du foie".

## 2013

- 17\_2013 **Mini-colloquium organized by E.Blackburn (Nobel Prize 2009) & A.Londono: Telomere maintenance machinery and Cytoplasmic Processes - September 19 2013, Institut Curie, Paris, France**. Invited speaker: Colnot S. "Wnt/beta-catenin signalling alterations in hepatocellular carcinoma".

## 2012

- 18\_2012 **FASEB Summer Research Conferences: Liver Growth, Development and Disease, Snowmass Village, Colorado, 29 Juillet - 2 Août 2012**. S. Colnot & Satdarshan Paul Monga (Pittsburgh University), chairs of a roundtable about "Wnt/ $\beta$ -catenin signaling".

### ➤ Selected oral communications in congress

## 2017

- 19\_2017 **Young Researchers in Biology congress, April 13, 2017, FRANCE, Paris**. R. RIOU : "Impact of ARID1A loss in adult mouse liver : From carcinogenesis to erythropoiesis" (1st Price for the best presentation).

- 20\_2017 **French American Doctoral Exchange Program (FADEx): Epigenetics Metabolism & Nutrition**, March 07, 2017, FRANCE, Villejuif. R. RIOU : Chromatin remodeler ARID1A : emergence of tumor suppressor function in liver.
- 21\_2017 **French American Doctoral Exchange Program (FADEx): Epigenetics Metabolism & Nutrition**, March 06, 2017, FRANCE, Villejuif. R. RIOU :  $\beta$ -catenin-dependent erythropoiesis in adult mice deficient in hepatic ARID1A chromatin remodeler.

## 2016

- 22\_2016 **LabEx « Who Am I ? » conference**, November 16, 2016, FRANCE, Paris. R. RIOU :  $\beta$ -catenin dependent erythropoiesis in adult mice deficient in hepatic ARID1A chromatin remodeler.
- 23\_2016 **79<sup>e</sup> journée AFEF Bordeaux, 28 Septembre 2016 - Rozenn RIOU** : Dialogue entre la voie Wnt/ $\beta$ -caténine et ARID1A dans le foie murin adulte et émergence d'une érythropoïèse splénique.
- 24\_2016 **79<sup>e</sup> journée AFEF Bordeaux 28 Septembre 2016. A. Gougelet**: "Deregulation of the imprinted DLK1/Dio3 locus in liver tumours mutated for  $\beta$ -catenin".
- 25\_2016 **FASEB SRC FASEB Summer Research Conference "Liver biology: fundamental mechanisms and translational applications"**. West Palm Beach USA (June 26/July 1). N. Senni. Consequences of  $\beta$ -catenin pathway activation on hepatic metabolism.
- 26\_2016 **Cold Spring Harbour Asia conference in SuZhou, China (04/2016): Liver Diseases and Tumorigenesis. R. RIOU** : " $\beta$ -catenin-dependent erythropoiesis in adult mice deficient in hepatic ARID1A chromatin remodeler."
- 27\_2016 **6<sup>e</sup>me colloque Génomique Fonctionnelle du Foie, Montpellier, 23-25-mars 2016. A. Gougelet**: "Deregulation of the imprinted DLK1/Dio3 locus in mouse tumours mutated for  $\beta$ -catenin".
- 28\_2016 **6<sup>e</sup>me colloque Génomique Fonctionnelle du Foie, Montpellier, 23-25-mars 2016. Rozenn RIOU**: "Nouvelles cibles de la  $\beta$ -caténine dans le foie murin normal et cancéreux."
- 29\_☞ **16<sup>e</sup>me Réunion du Réseau National Hépatites de l'ANRS**. February 3rd-4th 2016, Paris, France. S. Bandiera: "miR-146a-5p, a proviral factor up-regulated by hepatitis C virus infection, deregulates metabolic pathways relevant for liver disease progression in hepatocytes".

## 2015

- 30\_☞ **22nd International Symposium on Hepatitis C Virus and Related Viruses**. October 9th-13th 2015, Strasbourg, France. S. Bandiera: "Deciphering epigenetic reprogramming in persistent hepatitis C virus infection reveals candidate drivers of hepatocarcinogenesis".
- 31\_☞ **22nd International Symposium on Hepatitis C Virus and Related Viruses**. October 9th-13th 2015, Strasbourg, France. S. Bandiera: "MicroRNA profiling in liver cells unravels HCV-induced up-regulation of miR-146a-5p in hepatocytes".

## 2014


- 32\_2014 **ECLCB-6. Castelfranco Veneto, 11-13 septembre 2014. A. Gougelet**: A proof of concept study for the tumour suppressor effect of a therapeutic strategy against miR-34a in mouse tumours mutated for  $\beta$ -catenin.
- 33\_2014 **5<sup>e</sup>me colloque Génomique Fonctionnelle du Foie, Paris, 17-19-mars 2014. A. Gougelet**: "Validation d'une stratégie anti-miR-34a dans le cancer du foie muté pour la  $\beta$ -caténine".
- 34\_2014 **5<sup>e</sup>me colloque Génomique Fonctionnelle du Foie, Paris, 17-19-mars 2014. C. Godard**: "Rôle de la glutamine dans le développement tumoral hépatique lié à l'activation de la voie Wnt/béta-caténine"
- 35\_2014 **EASL Hepatocellular Carcinoma Summit 2014. Genève, 13-16 février 2014. A. Gougelet**: "A proof of concept study for the tumour suppressor effect of a therapeutic strategy against miR-34a in mouse tumours mutated for  $\beta$ -catenin".

## 2013

- 36\_2013 **73<sup>e</sup>me journées scientifiques de l'AFEF, Lille, 2-5-Oct 2013. A. Gougelet**: "Validation d'une stratégie anti-miR-34a dans le cancer du foie muté pour la  $\beta$ -caténine".

## 2012

- 37\_2012 **FASEB Summer Research Conferences: Liver Growth, Development and Disease, Snowmass Village, Colorado, 29 Juillet - 2 Août 2012. Colnot S**: "Liver beta-catenin controls a metabolic transcriptome impacting zonal functions and potentially hepatocarcinogenesis."




- 38\_2012 **EMBO conference: "30 years of Wnt"**, Juin 2012, Egmond aan Zee, Hollande. Colnot S: "Beta-catenin dependent transcription impacts hepatic metabolism in the zonal liver and in liver cancers".
- 39\_2012 **4ème colloque "Génomique fonctionnelle du foie", Bordeaux, Mars 2012**. Colnot S: "Connexion entre beta-caténine et métabolisme dans le foie zoné: une clé pour comprendre la cancérogenèse hépatique associée à des mutations activatrices de beta-caténine ?".
- 40\_  **6èmes Assises de Génétique Humaine et Médicale**. February 2nd-4th 2012, Marseille, France. Bandiera S: "Achieving a novel dynamic in mitochondrial diseases: identification of mitochondrial microRNAs".

➤ **Selected poster communications in congress**


**2017 :**

- 41\_2017 **EMBO "Chromatin and Epigenetics "**, May 03-06, 2017, GERMANY, Heidelberg - RIOU. R : "β-catenin-dependent erythropoiesis in adult mice deficient in hepatic ARID1A chromatin remodeler."
- 42\_2017 **French American Doctoral Exchange Program (FADEx): Epigenetics Metabolism & Nutrition**, March 06, 2017, FRANCE, Villejuif – RIOU.R : Chromatin remodeler ARID1A : emergence of tumor suppressor function in liver (1st Price for the best poster).


**2016**

- 43\_2016 **24th Biennial Congress of the European Association for Cancer Research (EACR24), Manchester (UK), juillet 2016**. Desbois-Mouthon C: "Heregulin-1β/HER3 system in hepatocellular carcinoma: status and regulation by insulin".
- 44\_  **Journées Jeunes Chercheurs en cancérologie - Fondation ARC (Paris, France)**. S Bandiera, A Venkatesh, N Van Renne, X Sun, H El Saghire, J Lupberger, C Thumann, C Fauvelle, ER Verrier, L Wei et al. "Fast-track liver cancer chemoprevention discovery using a clinical gene signature-based human cell culture model"
- 45\_  **The International Liver Congress 2016 (Barcelona, Spain)**. S Bandiera, N Hamdane, I Davidson, C Thumann, MB Zeisel, Y Hoshida, N Bardeesy, TF Baumert. "Deciphering epigenetic reprogramming in persistent hepatitis c virus infection reveals candidate drivers of hepatocarcinogenesis"
- 46\_  **The International Liver Congress 2016 (Barcelona, Spain)**. S Pernot, S Bandiera, H El Saghire, SC Durand, T Ye, C Thumann, E Crouchet, C Schuster, I Fofana, MH Heim, TF. Baumert, MB Zeisel. "mir-146a-5p, a proviral factor up-regulated by hepatitis c virus infection, deregulates metabolic pathways relevant for liver disease progression in hepatocytes"

**2015**

- 47\_2015 **Carrefour Pathologies 3-6 novembre 2015**. A. Gougelet "A proof of concept study for the tumour suppressor effect of a therapeutic strategy against miR-34a in mouse tumours mutated for β-catenin".
- 48\_2015 **Retraite Labex Who Am I? Deauville, FRANCE, Novembre 2015**. R. RIOU "β-catenin-dependent resurgence of liver erythropoiesis in adult mice deficient in hepatic ARID1A chromatin remodeler".
- 49\_2015 **11th Course on Epigenetics « Chromatin dynamics and epigenetics »** - Paris, FRANCE - Octobre 2015 – R. RIOU "β -catenin-dependent resurgence of liver erythropoiesis in adult mice deficient in hepatic ARID1A chromatin remodeler".
- 50\_  **15ème Réunion du Réseau National Hépatites de l'ANRS (Paris, France)**. S Pernot, S Bandiera, E Girardi, A Weiss, SC Durand, W Raffelsberger, L Brino, S Pfeffer, T Baumert, M Zeisel. "Identification systématique des micro-ARNs impliqués dans le cycle viral du HCV"

**2014**

- 51\_2014 **Colloque Labex Who Am I? – Paris, FRANCE - Décembre 2014**. R. RIOU "Chromatin reprogramming in the pathogenesis of liver cancer : a focus on ARID1A".
- 52\_2014 **EASL Hepatocellular Carcinoma Summit 2014. Genève, 13-16 février 2014**. C. Godard "Glutamine protects against beta-Catenin dependant tumor Development in liver".
- 53\_  **The Liver Meeting (Boston, US)**. S Pernot, S Bandiera, E Girardi, A Weiss, SC Durand, W Raffelsberger, L Brino, S Pfeffer, TF Baumert, MB Zeisel. "Systematic identification of microRNAs functionally involved in the HCV life cycle"

**2013**

- 54\_2013 **73ème journées scientifiques de l'AFEF, Lille, 2-5-Oct 2013**. C. Godard "Rôle de la glutamine dans le

développement tumoral hépatique lié à l'activation aberrante de la voie Wnt/béta-caténine".

- 55\_2013 **EASL meeting, The International liver Congress. Amsterdam 24-28 Avril 2013.** A. Gougelet "miR-34a & beta-catenin signaling in mouse liver: a complex network regulating liver zonation, metabolism ... and cancer".
- 56\_2013 **56èmes Journées Internationales d'Endocrinologie Clinique HP KLOTZ, Paris, juin 2013.** Desbois-Mouthon C: "The mitogenic insulin receptor isoform A is overexpressed in hepatocellular carcinoma due to epidermal growth factor receptor-mediated dysregulation of splicing factor expression".

## 2012

- 57\_2012 **International liver cancer association (ILCA), Berlin septembre 2012 (best scored e-poster).** Desbois-Mouthon C: "Mitogenic Insulin Receptor Isoform A ( Ir-A) Is Overexpressed In Hepatocellular Carcinoma (Hcc) By Epidermal Growth Factor Receptor (Egfr)-Mediated Regulation Of The Splicing Machinery".

### Articles publiés dans des actes de colloques / congrès

- 58\_2015 Senni, N., Gougelet, A., Sartor, C., Perret, C., Colnot, S., and Bossard, P. (2015). CONSEQUENCES OF beta-CATENIN PATHWAY ACTIVATION ON MOUSE HEPATIC METABOLISM. *Journal of Hepatology* 62, S405-S405.
- 59\_2015 Vaquero, J., Claperon, A., Mergey, M., Desbois-Mouthon, C., Praz, F., and Fouassier, L. (2015). LONG-TERM INHIBITION OF EGFR IN HUMAN CHOLANGIOCARCINOMA CELLS LEADS TO THE INDUCTION OF AN EPITHELIAL TO MESENCHYMAL TRANSITION PROGRAM AND ACTIVATION OF INSULIN/INSULIN GROWTH FACTOR 1 RECEPTORS. *Journal of Hepatology* 62, S409-S409.
- 60\_2014 Groll, N., Petrikat, T., Colnot, S., Rothbauer, U., Gopfert, J., and Braeuning, A. (2014). Regulation of Cyp2e1 transcription by beta-catenin and hepatocyte nuclear factor 1 alpha. *Naunyn-Schmiedeberg's Archives of Pharmacology* 387, S45-S45.
- 61\_2013 Gougelet, A., Bachelot, L., Perret, C., and Colnot, S. (2013). miR-34a & beta-CATENIN SIGNALING IN MOUSE LIVER: A COMPLEX NETWORK REGULATING LIVER ZONATION, METABOLISM ... AND CANCER. *Journal of Hepatology* 58, S429-S430.
- 62\_2013 Claperon, A., Mergey, M., Aoudjehane, L., Ho-Boulidoires, T.H.N., Wendum, D., Prignon, A., Merabtene, F., Firrincieli, D., Desbois-Mouthon, C., Scatton, O., Conti, F., Housset, C., and Fouassier, L. (2013). Hepatic myofibroblasts promote the progression of human cholangiocarcinoma through activation of epidermal growth factor receptor. *Hepatology* 58, 1062A-1062A.

#### 4. Développements instrumentaux et méthodologiques (sans objet)

Prototypes et démonstrateurs  
Plateformes et observatoires

#### 5. Produits et outils informatiques (sans objet)

Logiciels  
Bases de données / cohortes  
Corpus  
Outils présentés dans le cadre de compétitions de solveurs  
Outils d'aide à la décision

#### 6. Brevets, licences et déclarations d'invention



A Henrion-Caude, S Lyonnet, S Bandiera. US patent \*\*61/492,058\* "Methods for adjusting the mitochondrial genome".

#### 7. Rapports d'expertises techniques, produits des instances de normalisation (sans objet)

#### 8. Produits des activités didactiques (sans objet)

Ouvrages  
E-learning, moocs, cours multimedia, etc.



## 9. Produits destinés au grand public

Émissions radio, TV, presse écrite

Produits de vulgarisation : articles, interviews, éditions, vidéos, etc.

Produits de médiation scientifique

### Débats science et société

- 2016 S. Colnot, C. Desdouets, A. Gougelet, C. Godard, R. Riou, A. Defontaine, R. Loesch, M. Fortier, R. Donné. Animation de l'atelier "le foie dans tous ses états", **Fête de la Science 2016**.  
<https://www.fetedelascience.fr/pid35201/fiche-evenement.html?identifiant=53045264>
- 2016-2017 R. Riou, R. Loesch. Les apprentis chercheurs organisé par l'Arbre des connaissances, « L'anticorps ce super héros ».
- C. Godard One-week initiation to research for schoolchildren (stages de 3ème).  
- décembre 2016, Collège « Le Petit Bois » Pierrelaye  
- novembre 2016, Collège Lycée Pasteur Neuilly sur seine  
- décembre 2013, Collège « Jean François Clervoy » Franconville

## 10. Autres produits propres à une discipline (sans objet)

Créations artistiques théorisées

Mises en scènes

Films

## II. ACTIVITÉS DE RECHERCHE ET INDICES DE RECONNAISSANCE

*La liste de ces activités n'a pas à être exhaustive. On mettra en évidence les activités les plus significatives en termes de rayonnement et d'attractivité, d'interaction avec l'environnement et d'implication dans la formation par la recherche.*

### 1. Activités éditoriales

Direction de collections et de séries (sans objet)

Participation à des comités éditoriaux (revues, collections)

C. Desbois-Mouthon : **Associate Editor** for "Clinics and Research in Hepatology and Gastroenterology"

S. Colnot : **Editorial board** of "Journal of Hepatology", "World Journal of Gastroenterology"

### 2. Activités d'évaluation

Responsabilités au sein d'instances d'évaluation

2014-2016 S. Colnot : Chair of scientific committee 1 "Genetics and Oncogenesis" at the Ligue Nationale Contre le Cancer (LNCC). Member of this committee from 2012 to 2016.

2017- S. Colnot: Member of the INCa evaluation committee for the programme: Support to Translational Research.

2013- S. Colnot: Member of the Ethical Committee regarding Animal Experimentation, Paris Descartes (CEEA 34).

Participation to thesis examination committees : 19 for S. Colnot in France and Belgium, 7 for C. Desbois-Mouthon.

Participation to recruitment committee of a University Professor (UPMC) in 2017: S. Colnot.

Évaluation d'articles et d'ouvrages scientifiques

S. Colnot for *Gastroenterology*, *Gut*, *Development*, *Cancer Res*, *Hepatology*, *Oncogene*, *Carcinogenesis*, *Int J Cancer*, *FEBS J*, *J Hepatol*, *PIOs Biol*, *PIOs Med*, *PIOs One*.

C. Desbois-Mouthon for *Gut*, *Liver International*, *Journal of Hepatology*, *J Exp Clin Cancer Res*, *Int J Cancer*, *Plos*

*One, Carcinogenesis, Mol Cell Biol, Cell Death Disease, Oncotarget, JNCI.*

A. Gougelet for *Gut, Liver International, Clin Res Hepatol Gastroenterol, J Hepatol, Int J Hepatol, Plos One, Medecine, Molecular Cancer, Tumor biology, Cell proliferation, Carcinogenesis? J Cell Mol Med, Oncotarget.*

**Évaluation de laboratoires (type Hceres) (sans objet)**  
**Évaluation de projets de recherche**

S. Colnot : research proposals for "South African Medical Research Council", "Swiss Cancer League", "French National League against Cancer (LNCC)", Canceropole GSO, "Association Française pour l'Étude du Foie (AFEF).

C. Desbois-Mouthon : research proposals for "French National League against Cancer (LNCC)", "Association Française pour l'Étude du Foie (AFEF).

A. Gougelet: research proposals for the Italian Telethon

**3. Activités d'expertise scientifique (sans objet)**  
**Activités de consultant**  
**Expertise juridique**  
**Participation à des instances d'expertises (type Anses) ou de normalisation**

**4. Organisation de colloques / congrès**

2016 EASL International Liver Conference in Barcelona (04/2016). S. Colnot & Q. Anstee (UK): co-organization of a CRISPR-Cas9 Early Morning Workshop.

2014 S. Colnot: Local Organizing Committee of the French Meeting "Genomique Fonctionnelle du Foie" (Functional Genomics of the Liver) in Paris.

**5. Post-doctorants et chercheurs accueillis (ordre chronologique)**

Philippe Veber Post-doctoral bio-informatician (granted by ANR funding), hosted in Colnot's group in 2010. Currently research engineer at Lyon, and continuing until now to analyze our NGS data as a collaborator, PV is involved in two publications, as a third author (Gougelet et al., Hepatology 2014) and as a fourth author (Torre, Benhamouche et al., J Hepatol 2011).

Angélique Gougelet Post-doctoral fellow in Colnot's group from 2010 to 2015. Recruited at INSERM as a CR1 in 2015. Two original publications in the team as a first author (Hepatology 2014, Gut 2016) and one as a fourth author (Anson et al., JCI 2012). Five commentaries/reviews as a first or a last author.

Pascale Bossard CR1 CNRS hosted in Colnot's group from 2013 to 2016. Co-direction of Nadia Senni's PhD (obtention of LNCC doctoral contract by S. Colnot), on the metabolism of liver cancer. One manuscript is in preparation with N. Senni as a first author, P. Bossard as a last author and S. Colnot as a second last author. One other is in preparation with N. Senni as a first co-author (together with C. Sartor and A. Gougelet), P. Bossard as a second last author and S. Colnot as a last author. PB stays at Cochin Institute for the next five-year period, and is still engaged in collaborations with Colnot's team.

Christèle Desbois-Mouthon CR1 INSERM. Joins Colnot's group in 2017 to initiate common projects at the basis of our next five-year aims. Bringing an expertise in insulin and tyrosine kinase receptor signaling and in hepatocellular carcinoma, through her previous participation to Rosmorduc/Praz INSERM team at Saint-Antoine Hospital, she will also have a precious input for translational studies.

Simonetta Bandiera Young italian researcher hosted as a post-doctoral fellow in Colnot's group since 2017, with a skillful history in basic research on liver physiopathology, in the INSERM Team of T. Baumert at Strasbourg. She will pass the INSERM competitive recruitment for researchers in 2018.

**6. Interactions avec les acteurs socio-économiques**

**Contrats de R&D avec des industriels**

2013 C. Desbois-Mouthon, coordinator: IPSEN, 13000€

**Bourses Cifre (sans objet)**

**Créations de laboratoires communs avec une / des entreprise(s) (sans objet)**

**Création de réseaux ou d'unités mixtes technologiques (sans objet)**

**Créations d'entreprises, de start-up (sans objet)**

**7. Contrats de recherche financés par des institutions publiques ou caritatives**

**Contrats européens (ERC, H2020, etc.) et internationaux (NSF, JSPS, NIH, Banque mondiale, FAO , etc.) (sans objet)**

**Contrats avec les collectivités territoriales (sans objet)**

**Contrats nationaux (ANR, PHRC, FUI, INCA, etc.)**

2017-2018 **INCa Emergence** (30000€/ 1 year). S. Colnot, PI.

2015-2018 **Plan-Cancer « Epigenetics & Cancer »**. S. Colnot, coordinator (164507€/ 3 years). Collaborative project with JF Deleuze/S. Chantalat, CNG Evry.

2014-2017 **INCa PIBio2014**. V. Moreau, coordinator, S. Colnot, participant (124800€/3 years).

2013-2016 **INCa PIBio2013**. S. Colnot, coordinator (290000€/3 years). Other participants: C. Desdouets, J. Zucman-Rossi, J. Weitzman.

2011-2013 **ANR Blanc**. S. Colnot, coordinator (305300€/ 3 years). Other participants: AF Burnol, M. Vasseur.

**Contrats financés dans le cadre du PIA**

2015-2018 **IDEX UPSC**. S. Colnot, coordinator (125000€/3 years). Collaborative project with Pr J. Weitzman interrupted in July 2016 due to the non-reconduction of the IDEX UPSC.

2015 **SIRIC «CARPEM»**. Colnot's group: funding to Genom'IC facility of Institut Cochin for microarray analyses of mRNA expression in mouse models.

2013 **Labex « Who Am I »**. S. Colnot, Collaborative Project with Pr J. Weitzman (20000€/1 year)

2013 **Labex « Who Am I »**. S. Colnot, 3-year doctoral contract for R. Riou, for a Collaborative Project with Pr J. Weitzman.

**Contrats financés par des associations caritatives et des fondations (ARC, FMR, FRM, etc.)**

2008-2019 **Ligue Nationale Contre le Cancer (LNCC)** (currently for Colnot's group : 135000€/3 years). C. Perret (project holder), S. Colnot. Labellisation of Perret's Team: 2008-2010; 2011-2013 ; 2014-2016 ; 2017-2019.

2017-2018 **Association Française pour l'Etude du Foie (AFEF)** (30000€/ 1 year). A. Gougelet, PI.

2017 **Ligue Départementale Contre le Cancer** (20000€/1 yr). C. Desbois-Mouthon, PI.

2015 **Ligue Départementale Contre le Cancer** (20000€/1 yr). C. Desbois-Mouthon, PI.

2015 **Groupement des Entreprises Françaises dans la Lutte contre le Cancer (GEFLUC)** (18000€/1 yr). C. Desbois-Mouthon, PI.

2013-2014 **Association Française pour l'Etude du Foie (AFEF)** (30000€/ 1 year). S. Colnot, PI.

**8. Indices de reconnaissance**

**Prix**

<u>A. Gougelet</u>	2015	APEMM Prize for the best manuscript
	2014	EASL HCC Summit: young investigator bursary
	2013	EASL ILC: young investigator bursary
	2013	AFEF Young researcher bursary

<u>R. Riou</u>	2017	Young Researchers in Biology congress, Saint Louis Hospital, Paris, FRANCE, April 13. 1st Price for the best oral presentation.
	2017	French-American Doctoral Exchange Seminar « Epigenetics Metabolism & Nutrition » Gustave Roussy Institute, Villejuif, FRANCE, March 06, 2017. 1st Price for the best poster.
	2017	Cochin Institute PhD Students Day, Cochin Institute, Paris, FRANCE, February 22, 2017. 2nd price for oral presentation.
<u>R. Loesch</u>	2016	Association Française pour l'Etude du Foie (AFEF). 3ème prix au concours internes et étudiants proposé par «Etude du carcinome hépatique par ciblage hépato-spécifique de l'outil CRISPR/Cas9 chez la souris».

**Distinctions**

<u>S. Colnot</u>	2012	Knight of the French National Order of Merit (JORF n° 0104 du 3 mai 2012), attributed April 26, 2013, by Pr Axel Kahn.
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**Responsabilités dans des sociétés savantes**

<u>S. Colnot</u>	since 2014	Member of the Basic Science Concerted Action Group of the <b>European Association for the Study of the Liver (EASL)</b> . Role: Programming of EASL educational activities, promoting interaction between Basic Science and Clinical Researchers.
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**Invitations à des colloques / congrès à l'étranger, séjours dans des laboratoires étrangers**

- 1\_2016 S. Colnot. **ILCA in Vancouver, Canada (08/09/2016)**. Organizer : International Liver Cancer Association. **Pre-conference Workshop. Pre-clinical Models of HCC: From Target Identification to Clinical Trials**. Invited Speaker: « WNT/Beta-catenin Activation in Mice Models ».
- 2\_2016 S. Colnot. **Cold Spring Harbour Asia conference in SuZhou, China (04/2016)**. « Metabolic reprogramming in  $\beta$ -catenin-driven carcinogenesis ».
- 3\_2016 S. Colnot. **EASL International Liver Conference in Barcelona (04/2016)**. Invited Speaker: « CRISPR-Cas9 to study in vivo liver carcinogenesis in mice ».
- 4\_2015 S. Colnot. **EASL International Liver Conference (2015/04/22); Vienna, Austria**. Invited Speaker: « Wnt/beta-catenin and metabolism in HCC ».
- 5\_2015 A. Gougelet. **EASL International Liver Conference (2015/04/22); Vienna, Austria**. Invited Speaker: "F-Choline: a powerful diagnosis tool for tumours mutated for  $\beta$ -catenin".
- 6\_2014 S. Colnot. **EASL HCC Summit. Basic Science: Molecular pathogenesis and translational research in liver cancer – 2014/02/13-14 in Geneva, Switzerland**. Invited Speaker: "Wnt/beta-catenin and metabolism in hepatocellular carcinoma"
- 7\_2012 S. Colnot & Satdarshan Paul Monga (Pittsburgh University), chairs of a roundtable about "Wnt/ $\beta$ -catenin signaling". **FASEB Summer Research Conferences: Liver Growth, Development and Disease, Snowmass Village, Colorado, 29 Juillet - 2 Août 2012**.

