

## Valerie TALY

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### Valérie TALY (Abécassis)

valerie.taly<at>parisdescartes.fr

47 years old

Married, 2 Children

## BIOGRAPHY

**Dr Valerie Taly is a CNRS research director and group leader of the Translational Research And Microfluidics group within the MEPPOT team (Personalized medicine, pharmacogenomics and therapeutic optimization). She is deputy director of this team headed by Prof. P. Laurent-Puig in the Cordeliers Research Center (CRC).**

After graduation as a Molecular Toxicologist, Dr Valerie Taly (Abecassis) performed her PhD research at the Center of Molecular Genetics (CNRS, Gif-sur-Yvette, FR) on applications of combinatorial methods (generally used for proteins directed evolution) to the study of the functional plasticity of human Cytochromes P450. She joined Andrew Griffiths' group in 2003, in the Laboratory of Molecular Biology (LMB) in the Medical Research Council in Cambridge (UK, dir. Pr. Greg Winter), to work on *in vitro* compartmentalization of biological and chemical reactions in emulsion droplets and participated to the development of High-throughput selection procedures of double-emulsions by FACS. In 2005, she integrated the Laboratory of Biological Chemistry directed by Pr. A. Griffiths in the ISIS institute (created by Pr JM Lehn and directed by Pr T. Ebbesen at that time, Univ. Strasbourg), as a permanent CNRS researcher to work on HTS procedures using droplet-based microfluidics. Starting from 2008, she focussed on the development of droplet-based digital procedures for Cancer diagnosis. In particular, her team developed highly sensitive quantitative procedures for the detection of Cancer Biomarkers in droplets in a collaboration involving the clinical laboratory of Pr. P. Laurent-Puig (hEGP hospital, Univ. Paris-Descartes), the team of Dr J.-C. Baret (Max Plank Institute, Goettingen) and Raindance Technologies (US, now part of BIO-Rad). She has recently created (January 2012) a new Group, named Translational Research And Microfluidics (TRAM), within the clinical oncology research unit MEPPOT in the university Paris-Descartes. Her research is dedicated to the clinical validation of the developed droplet-based procedures for the non-invasive detection of Cancer biomarkers, the highlighting of new Cancer Biomarkers and the development of original tools and procedures for their detection with applications in personalized medicine, cancer recurrence detection and cancer diagnostics.

## CURRICULUM VITAE (updated March 2022)

### SCIENTIFIC TRACK

118 scientific publications including 105 original articles (40 as corresponding author; >5334 citations; h-index = 39 (Source Publons/Web of Science, 40 in Google scholar), average citation per item > 48.8 (ISI), 4 journal covers, 4 highly cited (Top 1%) papers), 7 other publications (in French or editorials), 7 book chapters, 1 book "Microchips for Diagnostics" (Springer) co-ed. Pr J-L. Viovy & S. Descroix, 1 editorial for Biomolecular Detection and Quantification, Elsevier (BDQ, invited editor), co-editor

with Dr L. Benhaim of a special issue of the journal *Cancers*. Editor board of Scientific Report (2018-2021) and Micromachines (2020-today)

4 patents awarded Europe & USA and 9 patent applications

> 117 Invited Talks including 88 in international Conferences/Workshops

45 Master /Bachelor students advised, 11 PhD advised (2009-2021, 1 ongoing), 3 PhD co-advised (1 ongoing), 12 Post-doc. supervised, 7 technicians or engineers supervised since 2011.

Co-founder emulseo (<https://www.emulseo.com/>) and METHYS DX start-up companies

## **RESEARCH ACADEMIC POSITIONS**

2019-2021 CNRS Research director class 1 (DR1)

2019-2021 Deputy director MEPPOT team (Team 26, Cordeliers research center, UMRS1138)

2016- 2021 Head of labeled Ligue contre le Cancer (LNCC) team

2015- today CNRS Research director (DR2)

2012- today Group leader of the "Translational Research And Microfluidics"-Univ. Paris-Descartes - UMRS-1147- Director: Prof. P. Laurent-Puig (now UMRS1138)

2006-2011 CNRS permanent Researcher (CR1 2010-2015). ISIS. UMR 7006, Strasbourg – Dir.: Prof. T. Ebbesen.

Laboratoire de biologie chimique (dir.: Pr A. Griffiths).

2003-2006 Post-doctoral researcher. Team of Dr A. Griffiths. Medical Research Council, LMB, Cambridge, UK. "High throughput sorting of double-emulsions for directed evolution".

1999-2003 PhD student in molecular toxicology. Supervised by Dr D. Pompon and G. Truan. Funding from French ministry of research (MNERT), FRM and Ligue nationale contre le cancer (4th year).

## **TEACHING, MENTORING AND TRAINING ACTIVITIES**

2022-today Mentor for the Ile-de-France / Paris-Saclay F&S (women and Sciences) mentoring program 2022

2017-today EMBL workshops on liquid biopsies and digital PCR

2011-2020 Frontiers of Life Sciences (FDV) Bachelor/ Univ. Paris-Descartes. Internships (~70h/yr) & Biology course coordination. Microfluidics Practical courses, FDV selection committee

2014-15 Online course/scientific flyer "liquid biopsy" for MDs (Accès cibles, Boehringer Ingelheim)

2014-15 Female Mentoring program/ Univ. Cologne/ Germany

2006-11 Master Degree - Toxicology and Molecular Biology (8h/yr), Univ. de Strasbourg / FR

1999-02 Teaching in 1st yr of medical studies and Bachelor (192h), Univ. Paris-Descartes

1997-98 Practical courses Med. studies, Univ. Amiens & Training 1st yr medical Exam (272h).

## **QUALIFICATIONS**

2021 DeepTech Founders Training

2008 Habilitation à diriger les recherches (HDR). "Protein directed evolution: from the creation of genetic diversity to the analysis within microreactors." University of Strasbourg.

2003 PhD in Molecular toxicology. "Combinatorial approaches applied to the study of Cytochrome P450s functional diversity." University Paris Descartes (Paris V).

1999 Master of molecular toxicology. University Paris Descartes.

## **PRIZES/AWARDS/ACADEMY MEMBERSHIPS (2003-now)**

2021 Biorad Positive Droplet Awards "Rare mutation detection" 2020 (<https://bit.ly/3jmUBTk>)

2021 Nominated « Women in Microfluidics & BioMEMS » (<https://microfluidics.berkeley.edu/>)

2016-2019 CNRS award for supervision & research ("Prime d'encadrement et de recherche", PEDR ex. PES).

2016- 2021 Five year labelization from "ligue nationale contre le cancer" (renewable 4 times after evaluation)  
 2016 Prize "Equipe à l'honneur", "Association for cancer research" (10k€, with P. Laurent-Puig)  
 2015 Advanced Merieux Institute Grant (co-coord. with P. Laurent-Puig)  
 2012-2015 CNRS award for scientific excellence ("Prime d'excellence scientifique", PES).  
 2006 Long-term FEBS post-doctoral fellowship (3 yrs, declined for the CNRS position).  
 2003-2006 Marie-Curie "Research Training Network" Fellowship ENDIRPRO.

### **INSTITUTIONAL RESPONSIBILITIES/ COMMISSIONS OF TRUST**

2021- Member of the early detection panel committee of cancer research UK  
 2018- today Scientific committee of the CARPEM SIRIC network, responsible of the axe 2 "technological developments"  
 2017- 2021 Partner steering Committee member of the ELICIT (Empowering Life sSciences with Innovative Technologie) DIM (Major Interest Domains, Ile-de-France region)  
 2017- today Expert for the High Council for Evaluation of Research and Higher Education (HCERES, laboratory/Institute evaluations)  
 2016- 2021 Nominated member of the INSERM commission CSS6 Panel (Nominated member, Technologies for Health and public health, selection new researchers/research director, evaluation of researchers and research units)  
 2016- today Nominated member of the Frontiers of Life Sciences (FDV) doctoral school (ED474) steering committee  
 2016- 2021 FWO (Fonds Wetenschappelijk Onderzoek) Interdisciplinary Expert panel member  
 2015- today Board of the GDR "Micro nanofluidics" (CNRS research network)  
 2014- today UMR S1147 scientific committee/ Univ. Paris-Descartes  
 2014-16 Scientific Advisory Board, Interdisciplinary Center for Chemistry and Biology (FR 3567, 2013-2016)  
 2013-15 Expert member for the <https://www.omnt.fr/en/> (OMNT, CNRS)

### **ORGANISATION AND ADVISORY PANELS OF SCIENTIFIC MEETINGS**

**Congress advisory panels:** Chair miRNA Panel WORLDBLAB-EUROMEDLAB ROMA 2023, Instructor MicroTas 2021 Liquid Biopsy Workshop, Panel Chair/organisation SLAS 2019 (Washington 2019), 9th Annual NGS UK Congress & 5th Annual Single Cell Analysis UK Congress (2017), 3rd Annual NGS & Single Cell Analysis USA Congress (2017), digital PCR & qPCR US 2016, Next-Generation Diagnostics Summit 2016 (US), Microfluidics Europe 2015 (London), qPCR and dPCR world congress 2015 (Philadelphia), Circulating Cancer Biomarkers US 2014 (Boston), qPCR and digital PCR congress 2014 (London), Circulating Biomarkers US 2014, MicroTas 2013-15 (Technical Prog. Committee, TPC) and Flow17 TPC

**Workshop organizations:** Microbs on chip (2020), HTE Organoids work-shop (2019), Single cell genomics workshop (ICM institute, Paris) (2017); International Scientific Committee (ISC) NanoBio Interfaces in Healthcare and Sciences (2015-now, 1 meeting/yr)

### **REVIEWING/EXPERTISES/EDITING ACTIVITIES**

**Journals:** Analytical Bioanalytical Chemistry, Analytical Chemistry, Annals of oncology, British Journal of Cancer, Cancers, Cancer Research, Clinical Chemistry, Clinical Cancer Research, Gut, IUBMB life, JoVe, Lab on a Chip, Microfluid Nanofluidics, Molecular Applications of Medicine, NPJ Precision Oncology (Nature), Nature Protocols, Plos One, RSC advances, Scientific Report, etc

**Institutions/Grant/Prize:** "Association for cancer research (ARC)" foundation, Biomedicine agency, Canceropole Aquitaine, Canceropole "Ile-de-France", Canceropole Grand-est, Canceropole Auvergne-Rhone-Alpes, Campus France, Cancer Research UK, CNRS "mission for interdisciplinarity", Dutch Cancer Society (KWF), EADS foundation PhD award (2011), European commission (Research and Innovation action (Research and Innovation Actions-RIA, ICT-03-2016); Future Emerging Technology (FET, member of follow-up committee 2015/17, project Ribonets), Marie-Curie Fellowship, Prestige Marie-Curie Fellowship); French National Research Agency (ANR), French National Cancer Institute (INCa), Idex Paris-Saclay, Kom op tegen Kanker (stand up to cancer, the Flemish cancer society), Ligue Nationale contre le cancer

(LNCC), Science & Technology Foundation (STW, Belgium), Rosetrees Trust (UK, Interdisciplinary Prize Award), etc.{page:WordSection1;}

**Editing:** Board Editor Scientific Report 2018-2021, Invited editor (with Dr D. Pekin) of Micromachine journal special issue "Microfluidics-based Liquid Biopsies" (publication targeted in Sept. 2019), Co-ed. Pr S Descroix/JL Viovy "Microchips for diagnostics" (2017), Springer, Methods in Molecular Biology (MiMB); Guest editor with Pr J Huggett, Biomol. Detect. Quantif. (BDQ, 2016), Elsevier.

**Other committee/Jurys:** Jury of selection of new students for the FdV Bachelor and doctoral school "Frontiers of innovation in research (ED474) (2017 & 2019), University Paris Descartes since 2012; Member of the evaluation committee "Physics for cancer" 2018 (Research projects in physics, mathematics or engineering sciences related to Cancer); Vice-chair of the committee of evaluation PCSI 2019 ("interdisciplinary approaches of oncogenic processes and therapeutic perspectives: benefit for oncology of physics, chemistry and engineering sciences", INSERM Cancer plan)

**Participation to juries:** University full professor position, University of Strasbourg (May 2019); University assistant professor position, ESBS engineer school, University of Strasbourg (April 2018); Junior Group Leader, University of Leuven (Belgium, December 2018), 28 PhD jury since 2013 (7 abroad) including 22 as reviewer or opponent and 5 as president of the jury

**Participation to evaluations of laboratories or institutes:** Member of HCERES committees with on-site visits since 2016; Evaluation for Cancer Research UK (2018); Evaluation of INSERM research units since 2016

**Other committee/Jurys:** Jury of the call PRIDE-Laboratoires Guigoz PRIDE (FHU PREMA), ANR committee ANR CES18 (biomedical innovation 2020-2022), Jury of selection of new students for the FdV Bachelor and doctoral school "Frontiers of innovation in research (ED474) (2017 & 2019), University Paris Descartes since 2012; Member of the evaluation committee "Physics for cancer" 2018 (Research projects in physics, mathematics or engineering sciences related to Cancer); Vice-chair of the committee of evaluation PCSI 2019 ("interdisciplinary approaches of oncogenic processes and therapeutic perspectives: benefit for oncology of physics, chemistry and engineering sciences", INSERM Cancer plan)

## **PUBLICATIONS (including book chapters, \* corresponding authors)**

### **2022**

**Association of high plasma Severe Acute Respiratory Syndrome Coronavirus 2 RNAemia with diabetes and mortality in COVID-19 critically ill patient.** Monchi, M., Veyer, D., Jochmans, S., Bruneau, T., Pitsch, A., Ellrodt, O., Picque, M., Taly, V., Sy, O., Mazerand, S., Diamantis, S., Péré, H. *iScience*, *accepted*.

**BRCA1 and RAD51C promotor methylation in human resectable pancreatic adenocarcinoma.** R. ABDALLAH, S. Zhao, S. Garinet, K. Hormigos, D. Le Corre, J. Cros, J. Augustin, J.B. Bachet, V. Taly, H. Blons, J. Taieb and P. Laurent-Puig\*. Clinics and Research in Hepatology and Gastroenterology, *accepted*.

**Circulating tumor DNA: A help to guide therapeutic strategy in patients with borderline and locally advanced pancreatic adenocarcinoma ?** O. Calliez, D. Pietrasz, F. Ksontini, S. Doat, J-M. Simon, J-C. Vaillab, V. Taly, P. Laurent-Puig and J-B. Bachet. *Digestive and liver disease*, *accepted*.

**Development and validation of a RNAseq signature for prognostic stratification in endometrial cancer.** G. Beinse, M-A. Le Frere Belda, P-A. Just, N. Bekmezian, M. Koual, S. Garinet, K. Leroy, F. Letourneur, A. Lussion, C. Mulot, D. Le Corre<sup>1</sup>, M. Metairie, N. Delanoy, H. Blons, C. Gervais, C. Durdux, C. Chapron, F. Goldwasser, B. Terris, C. Badoual, V. Taly, P. Laurent-Puig, B. Borghese, A-S. Bats, J. Alexandre. *Gynecologic Oncology*, *accepted*.

**Highly specific ddPCR detection of universally methylated circulating tumor DNA in endometrial carcinoma.** G. Beinse, B. Borghese, M. Metairie, P.-A. Just, G. Poulet, S. Garinet, B. Parfait, A. Didelot, C. Bourreau, N. Agueff, B. Terris, C.

2021

**\*113.Circulating ubiquitous RNA, a highly predictive and prognostic biomarker in hospitalized COVID-19 patients.**

Bruneau, B., Poulet, G., Wack, M., Robillard, N., Laurent-Puig P., Belec, L., Kernéis, S., Terrier, B., Smadja, D., Taly, V.\*, Veyer, D.\*, Pere, H.\* *Clinical Infectious Diseases*, accepted.

**\*112.Prognostic value of circulating tumor DNA in metastatic pancreatic cancer patients: post-hoc analyses of 2 randomized trials.** Pietrasz, D., Wang-Renault, S., Taieb, T.\*, Dahan, L., Postel, M., Durand-Labrunie, J., Le Malicot, K., Mulot, C., Rinaldi, Y., Phelip, J.M, Doat, S., Blons, H., de Reynies, A., Bachet\*, J.B., Taly, V.\*,#, Laurent-Puig, P.\*,#. *British Journal of Cancer*, accepted.

**\*111.Circulating tumor DNA is a prognostic marker of tumor recurrence in stage II and III colorectal cancer: multicentric, prospective cohort study (ALGECOLS).** Benhaim, L., Bouché, O., Normand, C., Didelot, A., Mulot, C., Le Corre, D., Mallet, K., Garrigou, S., Pekin, D., Hor, T., El Harrak, Z., Niarra, R., Aucouturier, P., Perez-Toralla, K., Nizard, P., Poulet, G., Landi, B., Taieb, J., Perkins, G., Pezet, D., Bibeau, F., Emile, JF, Berger, A., Lecomte, T., Di Fiore, F., Pezet, D., Bibeau, Frederic, Blons, Hélène, Zaan, Aziz, Chatellier, G., Hutchison, B., Link, D., Wang-Renault, S., Laurent-Puig, P.\*, Taly, V.\* *European Journal of Cancer* (2021), 159:24-33.

**110.Role of circulating tumor DNA in gastrointestinal cancers: current knowledge and perspectives.** Moati, E., Taly, V., Taieb, J., Laurent-Puig, P., Zaan, A. *Cancers* (2021), 13(19):4743.

**109. Everolimus and plicamycin specifically target chemoresistant colorectal cancer cells of the CMS4 subtype.** J. Deng#, A-L. Tian#, H. Pan, A. Sauvat, M. Leduc, P. Liu, L. Zhao, S. Zhang, H. Chen, V. Taly, P. Laurent-Puig, L. Senovilla, Y. Li1\*, G. Kroemer\* and O. Kepp\*. *Cell Death & disease* (2021), 12(11):978.

**\*108. Technological Advances for Tumor-On-Chip: From Bench to Bedside.** Berzina, S.#, Harrison, A.#, Xiao, W.\* and Valérie Taly, V.\*. *Cancers* (2021), 13(16):4192.

**107. Intratumor CMS heterogeneity impacts patient prognosis in localized colon cancer.** Marisa, L., Blum, Y., Taieb, J., Ayadi, M., Pilati, C., Le Malicot, K., Lepage, C., Salazar, R., Aust, D., Duval, A., Blons, H., Taly, V., Gentien, D. Rapinat, A., Selves, J., Mouillet-Richard, S., Boige, V., Emile, J-F., de Reynies, A., Laurent-Puig P. *Clinical cancer research* (2021), Online ahead of print, doi: 10.1158/1078-0432.CCR-21-0529.

<b>106. Detection of brain somatic mutations in CSF from refractory epilepsy patients. </b>S. Kin

**105.Prognostic value and relation with adjuvant treatment duration of ctDNA in stage III colon cancer: a post hoc analysis of the PRODIGE-GERCOR IDEA-France trial.** J. Taieb, V. Taly, J. Henriques, C. Bourdeau, L. Mineur, J. Bennouna, J. Desrame, C. Louvet, C. Lepere, O. Dupuis, M. Mabro, J. Egret, O. Bouche, C. Mulot, M. Ychou, A. de Gramont, D. Vernerey, T. André, P. Laurent-Puig\*. *Clinical Cancer Research* (2021), clincanres.0271.2021, Online ahead of print, doi: 10.1158/1078-0432.CCR-21-0271.

**\*104.Characterization of plasma cell free DNA integrity using picoliter-droplet digital PCR: towards the development of a circulating tumor DNA - dedicated assay.** F. Garlan#, G. Poulet#, A. Didelot, S. Garrigou, M.-J. Carrillon, E. Zonta, P. Nizard, J. Pacelli, F. Ginot, A. Boutonnet-Rodat, L. Jagot-Lacoussière, Q. Tavernier, C. Mulot, N. Pecuchet, H. Blons, P. Laurent-Puig, A. Zaan, S. Wang-Renault\*, V. Taly\*. *Frontiers in oncology, section Molecular and cellular oncology* (2021), 11, 639675.

**103.Usefulness of plasma SARS-CoV-2 RNA quantification by droplet-based digital PCR to monitor treatment against COVID-19.** T-A Szwed, D. Veyer, N. Robillard, D. Eshagh, E. Canoui, T. Bruneau, A. Contejean, C. Azoulay, T. Serrano, T. Hueso, L. Izquierdo, F. Rozenberg, B. Terrier, M. Vignon, P. Laurent-Puig, V. Taly, L. Bélec, S. Kernéis, K. Lacombe, H. Péré. *Stem Cell Rev Rep.* (2021), 17(1):296-299.

**\*102. Multiplexed microRNA detection methods for disease monitoring.** T. Jet, G. Gines, Y. Rondelez\* and V. Taly\*. Chemical Society Reviews. Chemical Society Reviews (2021), **50**, 4141 - 4161. IF: 42.8

**101. Highly sensitive quantification of plasma SARS-CoV-2 RNA sheds light on its potential clinical value.** D. Veyer, S. Kernéis, G. Poulet, M. Wack, N. Robillard, V. Taly, A.-S. L'Honneur, F. Rozenberg, P. Laurent-Puig, L. Bélec, J. Hadjadj, B. Terrier, H. Péré. Clinical Infectious Diseases (2021), 73 (9) , pp.E2890-E2897

## 2020

**Circulating tumor cells and circulating nucleic acids in oncology.** K. Pantel, V. Taly and C. Alix-Panabières. Tietz Textbook of Laboratory Medicine 7e (2020), *In press*.

**The digital MIQE guidelines update: minimum information for publication of quantitative digital PCR experiments for 2020 (dMIQE2020).** J. F. Huggett, A. S. Whale, W. De Spiegelaere, W. Trypsteen, A. A. Nour, Y.-K. Bae, V. Benes, D. G. Burke, Philippe Corbisier, Megan Cleveland, Alison S Devonshire, Iianhua DONG, Deniela Drandi, Carole Foy, J. A. Garson, J. Hellemans, H.-J. HE, M. Kubista, A. Lievens, M. Makrigiorgos, M. Milavec, R. D. Mueller, T. Nolan, D. O'Sullivan, M. W. Pfaffl, S. Roediger, E. Romsos, G. Shipley, V. Taly, A. Untergasser, C. Wittwer, S. Bustin, and J. Vandesompele. Clinical Chemistry (2020), 66(8): 1012-1029.

**Plasma circulating tumor DNA in pancreatic adenocarcinoma for screening, diagnosis, prognosis, treatment and follow-up: A Systematic Review.** R. Abdallah, V. Taly, S. Zhao, D. Pietrasz, J. B. Bachet, D. Basile, L. Mas, A. Zaanan, P. Laurent-Puig, J. Taieb\*. Cancer Treatment Reviews (2020), 87 ; 102028.

**Decision for adjuvant treatment in stage II colon cancer based on circulating tumor DNA: The CIRCULATE - PRODIGE 70 trial.** J. Taïeb, L. Benhaim, P. Laurent Puig, K. Le Malicot, JF Emile, F. Geillon, D. Tougeron, S. Manfredi, M. Chauvenet, V.Taly, C. Lepage\* & T. André\*. Digestive and Liver Disease (2020), 52(7) : 730-733.

**Mechanical characterization of cells and microspheres sorted by acoustophoresis with in-line resistive pulse sensing.** A Riaud\*, ALP Thai, W Wang, V Taly. arXiv preprint posted online Jun 2019, arXiv:1906.11944 – Physical Review Applied (2020), 13(3), 034058.

**[Development of molecular analysis by digital PCR for clinical practice: positioning, current applications and perspectives.]** J.A. Denis, A. Perrier, J. Nectoux, P-J. Lamy, A-S. Alary, N. Sarafan-Vasseur, D. Hennauff, B. Busser, R. Appay, P. Pedini, P. Romanet, V. Taly, F. Fina. For the working group of the french society of clinical biology "digital PCR". Annales de biologie clinique (2019), 77(6): 619-637.

**Streamlined digital bioassays with a 3D-printed sample changer.** Menezes, R., Dramé-Maigné, A., Taly, V., Rondelez, Y., Gines, G.\*. Analyst, 145(2), 572-581.

**Isothermal digital detection of microRNA using background-free molecular circuit.** G. Gines\*, R. Menezes\*, N. Kaori, A-S. Kirstetter, V. Taly\* and Y. Rondelez\*. bioRxiv preprint first posted online Jul. 14, 2019, doi: <https://doi.org/10.1101/701276> - Science Advances (2020), 6(4), eaay5952.

## 2019

**Emerging technologies for microRNA biosensing: applications to liquid biopsies.** Gines, G., Menezes, R., Xiao, W., Rondelez, Y. and Taly, V.\*, Molecular Aspects of medicine (2019), 72:100832. Revue invitée.

**HPV circulating tumoral DNA quantification by droplet-based digital PCR: a promising predictive and prognostic biomarker for HPV-associated oropharyngeal cancers.** D. Veyer, M. Wack, M. Mandavit, S. Garrigou, S. Hans, P. Bonfils, L. Belec, S. Wang-Renault, P. Laurent-Puig, H. Mirghani, B. Rance, V. Taly, C. Badoual, H. Péré. International Journal of Cancer (2019), 15;147(4):1222-1227.

**Plasma clearance of RAS mutation under therapeutic pressure is a rare event in metastatic colorectal cancer.** E. Moati, H. Blons, V. Taly, F. Garlan, S. Wang-Renault, D. Pietrasz, A. Didelot, G. Sonia, A. Saint, S. Pernot, J. Taieb, P. Laurent-Puig, A. Zaanani\*. *International Journal of Cancer* (2019), Doi: 10.1002/ijc.32657. [Epub ahead of print]

**BRAF mutation analysis in circulating tumor DNA from patients with metastatic colorectal cancer: complementary results from the AGEO RASANC study.** L. Mas, J-B. Bachet, V. Taly, O. Bouche, J. Taieb, R. Cohen, A. Meurisse, C. Normand, J-M. Gornet, P. Artru, S. Louafi, A. Thiot-bidault, I. Baumgaertner, R. Coriat, D. Tougeron, T. Lecomte, F. Mary, T. Aparicio, L. Marthey, H. Blons, D. Vernerey, P. Laurent-Puig\*. *Cancers* (2019), 11(7). pii: E998.

**Digital PCR: principle and applications.** Poulet G. and Taly V. *Onco-theranostic* (2019), Invited review in French.

**Vemurafenib for refractory multisystem Langerhans cell histiocytosis (LCH) of children: results of an international observational study.** J. Donadieu, I. A. Larabi, M. Tardieu, J. Visser, H. Caroline, E. Sieni, N. Kabbara, M. Barkaoui, P. Milne, J. Haroche, Z. Helias, M. Jehanne, A. Kolenova, A. Pagnier, N. Aladjidi, P. Schneider, G. Plat, A. Lutun, A. Heisig, A. Ferster, V. Efremova, M. Ahlmann, L. Blanc, J. Nicholson, A. Lambilliotte, H. Boudiaf, A. Lissat, K. Svojr, F. Bernard, S. Elitzur, M. Golan, D. Evseev, M. Maschan, A. Idbaih, O. Slater, M. Minkow, V. Taly, M. Collin, J-C. Alvarez, J-F. Emile, S. Héritier\*. *Journal of Clinical Oncology* (2019), 37(31):2857-2865.

**Tunable and reversible gelatin-based bonding for microfluidic cell culture.** G. Pitingolo\*, P. Nizard, A. Riaud and V. Taly\*. *Advanced Engineering Materials* (2019). 1900145.

**Gelatin Coated Microfluidic Channels for 3D Microtissue Formation: on-Chip Production and Characterization.** G. Pitingolo\*, P. Nizard, A. Riaud, C. Nastruzzi and V. Taly\*. *Micromachines* (2019),10(4).

**Coins in microfluidics: from mere scale objects to font of inspiration for microchannel circuits.** G. Pitingolo\*, V. Taly and C. Nastruzzi. *Biomicrofluidics* (2019), 13(2):024106.

**Liquid biopsy: general concepts.** G. Poulet, J. Massias and V. Taly. Invited review, *Acta cytologica* (2019), pp. 1-7.

**HPV-circulating tumoural DNA by droplet-based digital polymerase chain reaction, a new molecular tool for early detection of HPV metastatic anal cancer? A case report.** D. Veyer, J. Pavie, S. Pernot, M. Mandavit, S. Garrigou, M-L. Lucas, L. Gibault, V. Taly, L. Weiss, H. Péré. *European journal of cancer* (2019), 112:34-37.

**Microfluidic extraction of circulating tumor DNA for the sensitive detection and quantification of rare mutations.** K. Perez-Toralla, I. Pereiro, J. Champ, F. Faqir, P. Nizard, L. Malaquin, J-L. Viovy, V. Taly\* and S. Descroix\*. *Sensors and Actuators B: Chemical* (2019), 286: 533-539.

**Highly sensitive methods are required to detect mutations in histiocytoses.** S. Melloul, Z. Hélias-Rodzewicz, F. Cohen-Aubart, F. Charlotte, S. Fraitag, N. Terrones, Q. Riller, T. Chazal, S. Heritier, A. Moreau, M. Kambouchner, MC. Copin, J. Donadieu, V. Taly, Z. Amoura, J. Haroche, JF Emile. *Haematologica* (2019), 104(3): e97-e99.

2018

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**Incidence and risk factors for clinical neurodegenerative Langerhans cell histiocytosis: a longitudinal cohort study.** S. Héritier, M-A. Barkaoui, J. Miron, C. Thomas, D. Moshous, A. Lambilliotte, F. Mazingue, K. Kebaili, E. Jeziorski, G. Plat, N. Aladjidi, H. Pacquement, C. Galambrun, L. Brugières, G. Leverger, L. Mansuy, C. Paillard, A. Deville, A. Pagnier, A. Lutun, M. Gillibert-Yvert, J-L. Stephan, F. Cohen-Aubart, J. Haroche, I. Pellier, F. Millot, V. Gandemer, N. Martin-Duverneuil, V. Taly, Z. Hélias-Rodzewicz, J-F. Emile, K. Hoang-Xuan, A. Idbaih, J. Donadieu\*. *The British journal of haematology* (2018), 183(4): 608-617.

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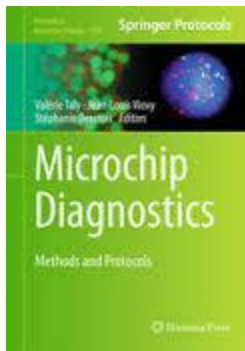
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Computational methods for sequence mapping of large combinatorial libraries and deduced sequence signatures. Abecassis V., Aggerbeck L., Truan G. and Pompon D. Biotechniques (2003), 34: 1280-1286.

Exploration of natural and artificial sequence spaces: towards a functional remodelling of membrane-bound cytochrome P450s. Abecassis V., Urban P., Truan G. and Pompon D. Biocatalysis and Biotransformation (2003), 21 (2): 55-66.

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Design and characterization of a novel "family-shuffling" technology adapted to membrane enzyme: application to P450s involved in xenobiotic metabolism. Abecassis, V., Pompon, D. and Truan, G. Advance in Experimental Medicine and Biology (2001), 500: 319-322.

## 2000

High efficiency family shuffling based on multi-step PCR and in vivo DNA recombination in yeast: statistical and functional analysis of a combinatorial library between human cytochrome P450 1A1 and 1A2. Abecassis V., Pompon D. and Truan G. Nucleic Acid Research (2000), 28: e88

## PROCEEDING ARTICLES (peer-reviewed)

Molecular program for isothermal digital detection of microRNA. Guillaume Gines, Roberta Menezes, Thomas Jet, Valérie Taly and Yannick Rondelez. DNA25 conference. Seattle, WA, USA. 5-9 August 2019.

Methylated circulating tumor DNA (Met-DNA) as an independent prognostic factor in metastatic pancreatic adenocarcinoma (mPAC) patients. D. Pietrasz, S. Wang-Renault, L. Dahan, J. Taieb, K. Le Malicot, Y. Ronaldi, S. Doat, JM Phelip, V. Taly, JB Bachet, P. Laurent-Puig. May 2019. Journal of Clinical Oncology 37(15\_suppl):4136-4136. DOI: 10.1200/JCO.2019.37.15\_suppl.4136

VEMURAFENIB IN CHILDREN WITH REFRACTORY LCH: 53 PATIENTS TREATED IN EU AND LEBANON. By: Donadieu, Jean; Larabi, Islam Amine; Tardieu, Mathilde; et al. PEDIATRIC BLOOD & CANCER Volume: 66 Supplement: 1 Pages: S7-S8 Published: JAN 2019

VARIANT ALLELIC FREQUENCY IN ADULTS WITH BRAF MUTATED HISTIOCYTOSES AND RESPONSE TO BRAF INHIBITORS. By: Emile, Jean Francois; Melloul, Sarah; Helias-Rodzewicz, Zofia; et al. PEDIATRIC BLOOD & CANCER Volume: 66 Supplement: 1 Pages: S14-S14 Published: JAN 2019

CUTANEOUS ADVERSE EVENTS IN CHILDREN TREATED WITH BRAF-INHIBITOR VEMURAFENIB FOR REFRACTORY BRAF (V600E) MUTATED LANGERHANS CELL HISTIOCYTOSIS: A EUROPEAN COHORT STUDY. By: Tardieu, Mathilde; Neron, Amelie; Duvert-Lehembre, Sophie; et al. PEDIATRIC BLOOD & CANCER Volume: 66 Supplement: 1 Pages: S46-S47 Published: JAN 2019

Braf V600E Mutation is Associated with A Cardiac and Neurological Phenotype but not Mortality in Erdheim-Chester Disease: Results from A Single-Center 165-Patient Cohort. By: Haroche, Julien; Emile, Jean-Francois; Carrat, Fabrice; et al. PEDIATRIC BLOOD & CANCER Volume: 64 Supplement: 2 Pages: S12-S12 Published: NOV 2017

RAS mutations concordance in circulating tumor DNA (ctDNA) and tissue in metastatic colorectal cancer (mCRC): RASANC, an AGEO prospective multicenter Study. By: Bachet, Jean-Baptiste; Bouche, Olivier; Taieb, Julien; et al. Conference: Annual Meeting of the American-Society-of-Clinical-Oncology (ASCO) Location: Chicago, IL Date: JUN 02-06, 2017. Sponsor(s): Amer Soc Clin Oncol. JOURNAL OF CLINICAL ONCOLOGY Volume: 35 Supplement: 15 Meeting Abstract: 11509 Published: MAY 20 2017

Direct characterization of circulating DNA in blood plasma using LAS technology. By : R. Malbed, B. Chami, HHT Ngo, A. Didelot, F. Garlan, S. Garrigou, V. Taly, L. Aeschbach, E. Trofimenko, V. Dion, A. Boutonnet-Rodat, F. Ginot, A. Bancaud. Conference: 2017 IEEE International Electron Devices Meeting (IEDM). DOI: 10.1109/IEDM.2017.8268465.

Proof of Principle for Mutations Monitoring Using Picoliter-Droplet Digital PCR on DNA and Living Cells: Application to Myelodysplastic Syndromes. By: Guermouche, Helene; Nizard, Philippe; Lu, Heng; et al. Conference: 58th Annual Meeting and Exposition of the American-Society-of-Hematology (ASH) Location: San Diego, CA Date: DEC 03-06, 2016. Sponsor(s): Amer Soc Hematol. BLOOD Volume: 128 Issue: 22 Meeting Abstract: 5515 Published: DEC 2 2016

Prognostic value of circulating tumor DNA in advanced colorectal cancer patients: quantification of hypermethylated or mutant sequences using picoliter-droplet digital PCR. By: Garlan, Fanny; Laurent-Puig, Pierre; Siauve, Nathalie; et al. Conference: AACR 107th Annual Meeting on Bioinformatics and Systems Biology Location: New Orleans, LA Date: APR 16-20, 2016. Sponsor(s): Amer Assoc Canc Res. CANCER RESEARCH Volume: 76 Supplement: 14 Meeting Abstract: 508. Published: JUL 2016

Hypermethylated circulating DNA detection using picoliter droplet-based PCR in colorectal cancer. By: Perkins, Geraldine; Garrigou, Sonia; Garlan, Fanny; et al. Conference: Gastrointestinal Cancers Symposium Location: San Francisco, CA Date: JAN 21-23, 2016. JOURNAL OF CLINICAL ONCOLOGY Volume: 34 Issue: 4 Supplement: S Meeting Abstract: 622 Published: FEB 1 2016

Next-Generation Sequencing with Digital Droplet PCR for Circulating Tumor DNA Quantification in Non-Small-Cell Lung Cancer Patients. By: Pecuchet, Nicolas P.; Zonta, Eleonora; Didelot, Audrey; et al. JOURNAL OF THORACIC ONCOLOGY Volume: 10 Issue: 9 Supplement: 2 Pages: S604-S604 Meeting Abstract: P2.04-084 Published: SEP 2015

Recurrent RAS and PIK3CA mutations in Erdheim-Chester disease and histiocytic sarcoma. J. Haroche, E.L. Diamond, J-F Emile, Z. Helias-Rodzewicz, F. Cohen-Aubart, R. Charlotte, D.M. Hyman, R. Rampal, M. Patel, C. Ganzel, S. Aumann, G. Faucher, C. Le Gall, K. Leroy, M. Colombat, J.E. Kahn, S. Trad, P. Nizard, P J. Donadieu, V. Taly, Z. Amoura, O. Abdel-Wahab. Pediatric Blood & cancer, 62(1), p. S9-S10

Circulating tumor DNA as a prognostic marker in colorectal cancer: Preliminary results of a prospective trial. Pierre Laurent-Puig, Olivier Bouché, Ralph Niarra, Pascaline Aucouturier, Leonor Benhaim, Bruno Landi, Anne Berger, Thierry Lecomte, Corinne Normand, Delphine Le Corre, Audrey Didelot, Karine Mallet, Karla Perez Toralla, Theyvy Hor, Zakaria El Harrak, Gilles Chatellier, Brian Hutchison, Darren Link, Valerie Taly. Proceedings: AACR 106th Annual Meeting 2015, Avril 18-22, 2015; Philadelphia, US.

Assessing cancer drug resistance at the single-cell level. O. Caen, E. Zonta, H. Lu, J. Vrignon, P. Nizard, J-C. Baret and V. Taly The International Conference for Micro& Nanotechnologies for the Biosciences, NanoBioTech-Montreux, Switzerland. Novembre 2014.

High-resolution landscape of a molecular program. A.J. Genot, A. Baccouche, R. Sieskind, N. Aubert, N. Bredeche, J.F. Bartolo, V. Taly, T. Fujii, Y. Rondelez. Extended proceedings of DNA20 conference (2014) Kyoto, Japan.

Picoliter droplet-based digital PCR to quantify circulating DNA in plasma of metastatic colorectal cancer patients. Garlan F., Didelot A., Perkins G., Rice N., Zaanen A., Laurent-Puig P. and Taly V. The International Conference for Micro& Nanotechnologies for the Biosciences, NanoBioTech-Montreux, Switzerland. November 2014.

Pipette-and-play: parallelized ultra-high throughput microfluidic emulsifier for quantitative biochemical assays. J. Lim, O. Caen, J. Vrignon, M. Konrad, V. Taly and J.C. Baret. In: Proceedings of the 18th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS), p. 258-260. ISBN: 978-0-9798064-7-6.

Clinical significance of low frequency KRAS and BRAF subclones for advanced colon cancer management. Valerie Taly, Pierre Laurent-Puig, Deniz Pekin, Corinne Normand, Steve K. Kotsopoulos, Philippe Nizard, Karla Perez-Toralla, Rachel Rowell, Jeff Olson, Preethi Srinivasan, Delphine Le Corre, Thevy Hor, Zakaria El Harrak, Xinyu Li, Qun Zhong, Darren R. Link, Olivier Bouché, Jean-François Emile, Bruno Landi, Valérie Boige, J. Brian Hutchison. Proceedings: AACR 105th Annual Meeting 2014; Apr 5-9, 2014; San Diego. Published in Cancer Research October 1, 2014 ; 74:2820; DOI:10.1158/1538-7445.AM2014-2820.

Quantitative cancer analysis using digital PCR: Absolute counting of DNA (solid tumors and liquid biopsies in glioma, breast, and colon cancer) and RNA (mRNA and miRNA using One-Step RT-dPCR). Michael L. Samuels, Valerie Taly, Leonora Balaj, Saumya Das, and Ben H. Park. Proceedings: AACR 105th Annual Meeting 2014, Avril 5-9, 2014; San Diego, CA. Published in Cancer Research, October 1, 2014 74:5316; DOI: 10.1158/1538-7445.AM2014-5316.

Peptide Nucleic Acid Fluorescent Probes For Detection Of Specific Biomarkers for digital microfluidics systems. Jean-Francois Bartolo, Sylain Ladame and Valerie Taly. The International Conference for Micro& Nanotechnologies for the Biosciences, NanoBioTech-Montreux, Switzerland. Novembre 2013.

Detection and quantification of minority subclones of KRAS in metastatic colorectal cancers by digital microfluidics: therapeutic implications. D. Pekin, C. Normand, S. Kotsopoulos, X. Li, L. Benhaim, O. Bouché, T. Lecompte, D. Le Corre, T. Hor, Z. El Harrak, P. Nizard, D. Link, J.B. Hutchison, P. Laurent-Puig and V. Taly. Proceedings: AACR 104th Annual Meeting 2013; Apr 6-10, 2013; Washington, DC. Published in Cancer Research Avril 15, 2013; 73(8 Supplement): 4211. DOI:10.1158/1538-7445.AM2013-4211

Microfluidic Approaches for the Study of Emulsions: Transport of Solutes. Philipp Gruner, Yousr Skhiri, Benoit Semin, Quentin Brosseau, Andrew D Griffiths, Valérie Taly, Jean-Christophe Baret. MRS Proceedings / Volume 1530 / 2013, DOI: <http://dx.doi.org/10.1557/opl.2013.80>.

Picoliter droplet-based digital PCR for the quantitative and sensitive detection of rare mutations and the assessment of DNA integrity. Deniz Pekin, Audrey Didelot, Steve K. Kotsopoulos, Jean-Christophe Baret, Delphine Le Corre, Brian Hutchison, Darren R. Link, Pierre Laurent-Puig, Andrew D. Griffiths, and Valérie Taly. Proceedings of the 3rd European Conference on Microfluidics - Microfluidics 2012 - Heidelberg, December 3-5, 2012

Quantitative detection of circulating tumor DNA by droplet-based digital PCR. Valerie Taly, Deniz Pekin, Steve Kotsopoulos, Xinyu Li, Ivan Atochin, Hu Gang, Delphine Le Corre, Leonor Benhaim, J. Brian Hutchison, Darren R. Link, Hélène Blons, Pierre Laurent-Puig. American Association for Cancer annual meeting (AACR 2012). March 31-April 4th, Chicago, USA.

Quantitative detection of circulating tumor DNA in plasma samples by droplet digital PCR. Pekin D., Kotsopoulos S., Xinyu L., Atochin I., Gang H., Le Corre D., Benhaim L., Hutchison J. B., Link D.R., Blons H., Laurent-Puig P. and Taly V.,\* The 16th International conference on miniaturized systems for Chemistry and Life Science (MicroTas2012). Oct. 28- Nov. 1, 2012.



Okinawa. Japan.

Multiplex highly sensitive detection of cancer biomarkers in biological samples. D. Pekin, Y. Skhiri, Baret, J.-C., Le Corre, D., Mazutis, L., Ben Salem, C., El Abed, A., Hutchison, J.B., Link, D.R., Griffiths, A.D., Laurent-Puig, P. and Taly, V. In: Proceedings of the 15th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS), 2011, p. 665-667. ISBN: 978-0-9798064-4-5.

Integrated microfluidic platform for directed evolution of lactase for Biofuel cell applications. Skhiri, Y., Beneyton, T., El Harrak, A., Griffiths, A.D. and Taly, V. In: Proceedings of the 14th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS), 2010, p. 980-982. ISBN: 978-0-9798064-3-8.

Droplet-based microfluidics for the quantitative detection of rare mutations. D. Pekin, Y. Skhiri, Baret, J.-C., Le Corre, D., Mazutis, L., Ben Salem, C., El Abed, A., Hutchison, J.B., Link, D.R., Griffiths, A.D., Laurent-Puig, P. and Taly, V. In: Proceedings of the 14th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS), 2010, p. 58-60. ISBN: 978-0-9798064-3-8.

Mining the functional sequence space of shuffled P450s. Urban, P., Truan, G., Abecassis, V., and Pompon, D. 7th European ISSX Meeting, 2004, Published in Drug Metabolism Reviews, 36 (1) : 253.

Yeast as a versatile tool for functional expression, characterization and engineering of P450s and associated redox enzymes. Pompon, D., Abecassis, V., Truan, G., Urban, P. May 21.–26th 2002. FEBS course: "Cytochrome P450 systems: from structure to application". Kranjska Gora, Slovenia

## INVITED CONFERENCES AND SEMINARS

Circulating Biomarkers, Exosomes & Liquid Biopsy Europe, SelectBio, Rotterdam, ND, 1-2 Mars 2022, Invited lecture (Keynote).

Droplet-based digital PCR for patient follow-up: Applications to Cancers and Covid19. Lab on Chip US, Selectbio, Coronado Islands, US, 12-16 Decembre 2021, Invited lecture (Keynote).

From droplet-based microfluidics developments to droplet-based digital PCR. Lab on Chip US, Selectbio, Coronado Islands, US, 12-16 Decembre 2021, Invited lecture (Plenary).

8th Annual qPCR & Digital PCR Congress, London, UK, 5-7 Decembre 2021, Invited lecture (Keynote).

Tracking circulating tumor DNA for cancer patient follow-up : application to colorectal cancer. Journées 2021, du cancer Grand Sud Ouest, Carcassonne, FR, 17-19 Novembre 2021, Invited lecture (Plénière).

Droplet Digital PCR And Next Generation Sequencing For Monitoring Circulating Tumour DNA: A Cancer Diagnostic Perspective. 3rd Annual Digital PCR Congress, taking place on the 4th – 5th November 2021 in London, UK.

*Droplet-based digital PCR for cancer research: Application for cancer patient follow-up.* Biotechnology and Health Sciences Symposium, Toulouse Biotechnology Institute, Invited lecture (Keynote).

EMBL course on digital PCR, Heidelberg, Germany, 15 Octobre 2021. Virtual workshop, Invited lecture (Keynote).

Droplet-based digital PCR for cancer research: Application for cancer patient follow-up. MicroTas 2021 (Hybrid conference), Palm Spring, US, 10-18 Octobre 2021. Invited lecture (Virtual VT), Workshop on Liquid Biopsy (Keynote, organizer).

Droplet-based microfluidics for cancer research: Application for cancer patient follow-up. Lab-on-chip and Microfluidics Europe 2021 (SelectBio). June 28-30 2021. Rotterdam. Hybrid (Virtual VT). Keynote speaker.

Potential application of digital PCR in clinics : from sample quality analysis to cancer patient follow-up. MarketsandMarkets qPCR and dPCR Virtual conference. April 2021.

Developing strategies to ensure reliability of ctDNA results for clinical applications. Digital PCR online – Frontlines genomics- March 2021.

ADN tumoral circulant : Méthodes de détection .Journées de la Société Française de Biologie.

Genomics Live 2020, 10-12th November 2020, Basel, Switzerland.

Developing strategies to ensure reliability of ctDNA results for clinical applications. 7th qPCR & Digital PCR Congress, Global engage conferences, Virtual conference, 8-9 October 2020. Keynote.

Developing strategies to ensure reliability of ctDNA results for clinical applications. Liquid Biopsy ONLINE series - Isolating rare events in blood- Online webinar Frontline genomics, 8-9 October 2020.

Microtas 2020 Liquid Biopsy workshop instructor and invited speaker. Microtas 2020, 3-4 October 2020, virtual meeting.

Droplet-based microfluidics for cancer research. Laboratoire Gulliver ESPCI, 10 february 2020.

Liquid Biopsy symposium, Frontline genomics, 01 october 2020, Round table invited speaker, virtual meeting.

Microfluidics for cancer research. International Iberian Nanotechnology laboratory, Braga, Portugal, Jan. 2020.

Droplet-based microfluidics for cancer research. Lab-on-a-Chip and Microfluidics Europe 2020, 7-9 of September 2020, Rotterdam, The Netherlands. Keynote Speaker.

Clinical validations of droplet-based digital PCR procedures in the context of liquid biopsies. EMBL course on digital PCR, Heidelberg, Germany, 14-19 September 2020. Invited lecture. Virtual.

Genomic Live conference, 4-5th December 2019, Basel, Switzerland. Session chair and Invited speaker

Use Of Digital PCR For Cancer Patient Follow-Up. Digital PCR congress, SynGen Series UK, 7th – 8th November 2019, Novotel London West Hotel, London, UK. Keynote lecture.

SelectBio 2019 Circulating Biomarkers, Exosomes & Liquid Biopsy Europe Conference, Rotterdam, The Netherlands. Invited speaker

Clinical validation of droplet-based procedures in the context of liquid biopsies (Lecture). EMBL Course- Liquid Biopsy, 9 - 13 Oct 2019, Heidelberg, Germany

Droplet-based microfluidics for cancer research. LIMMS, Tokyo, Japan, June 2019

Apport de la microfluidique digitale en oncologie. Invited conference. Journées de Biologie Clinique Necker-Pasteur (60ème édition). Institut Imagine, Paris. January 2018

Circulating tumor DNA for cancer patient follow up. Personalized Cancer Treatment meeting, Bergen 2017, 28-29 Sept. 2017. Bergen, Norway

New strategies for the highly sensitive detection of cell free circulating tumor DNA : Applications to cancer patient' follow up. Dreyfus symposium, 21-22 sept. 2017, Paris, FR,

Droplet-based microfluidics for cancer patient follow-up: Tracking ctDNA in liquid biopsies. Precision Cancer Medicine: Forefront Technologies at the Clinical Interface, IFLS conferences, Southampton, UK, Sept. 2017

Quantitative detection of circulating tumor DNA for the follow up of cancer patients. Invited seminar, 13th June 2017, Aarhus university, Denmark

Droplet-based digital PCR for cancer research: Application to liquid biopsies. Porto Cancer Meeting, 11-12 May 2017, Porto, Portugal

Droplet-based microfluidics for single cell and single molecule analysis. Statistical Challenges in Single-Cell Biology workshop, April 30 to May 5, 2017, Ascona, Switzerland

Droplet based digital PCR for cancer patient follow-up. qPCR dPCR & NGS 2017 event, 3 - 7 April 2017, Freising, Germany

Droplet-based microfluidics: towards a new tool for cancer research. ELRIG's Research and Innovation (R&I) Conference, March 29-30 2017, Cambridge, UK

Digital PCR and circulating plasmatic DNA: a multi-cancers analysis. Annual meeting for Grant awardees of Merieux Institute. Les Pensières conference center, October 2016, Annecy, FR.

Digital PCR for cancer patient follow up. Diagnostics Summit 2016 - Circulating Biomarkers for Liquid Biopsy Development and Companion Diagnostics, 13th-14th October 2016, Singapore.

Droplet based microfluidics for single cell analysis. 4th Annual Single Cell Analysis Congress 2016, 10 -11 November 2016, London, UK.

From droplet-based microfluidics to digital PCR : The development of a new tool for cancer patient follow-up. NanoBio Surfaces and Interfaces in Healthcare and Science Event, 27-28 September 2016, Twente, NL.

Droplet based digital PCR for cancer patient follow up. Precision medicine based on liquid biopsies "from detection to dissection" symposium, 15 -16 September 2016, Granada, Spain.

Droplet digital PCR, liquid biopsies and patient follow-up. qPCR and Digital PCR Congress USA, Philadelphia, USA, 11-12 July 2016.

Microfluidics for cancer research. IC-ANMBES 2016, Brasov, Romania, June 2016.

Circulating tumor DNA as a new tool to follow cancer patients. Ecole thématique Hétérogénéité des tumeurs, Provins, France, May 2016.

Microfluidics for cancer research: a new tool for patients' follow up. Journées de la federation CICB, Université Paris Descartes, France, May 2016.

Using Droplets to Highlight and Follow Cancer Genetic Markers. Molecular Dx Europe meeting, Lisbon, April 2016.

Microfluidics for cancer research: a new tool for patients' follow up. Journée commune UFR Maths informatique et UFR biomédicale, Univ. Paris Descartes, January 2016.

Détecter et quantifier l'ADN tumoral circulant pour le suivi des patients atteints de cancers. Journées Onco-pharmacologie, Institut Cochin, Paris, France, 4th December 2015.

Tracking circulating tumor DNA using Picoliter droplet-based digital PCR. dPCR conference, San Diego, US, 2-3 November 2015.

Picoliter droplet-based microfluidics for cancer research: from the detection of low frequency KRAS subclones within tumors to the analysis of liquid biopsies. Microfluidics, London, UK, 20-21 October 2015.

Picoliter droplet-based digital PCR for cancer patient follow-up. Biotechnica 2015, Personalized medicine and its impact in the Clinic, Hanover, Germany, 7-8 October 2015.

Droplet based microfluidics to follow cancer genetic marker in the blood. NanoBlood conference, Paris, France, 6 July 2015

Droplet based microfluidics for cancer research : from the detection of low frequency KRAS subclones within tumors to the analysis of liquid biopsies. Invited conference, Institut du cerveau et de la moelle épinière (ICM), Paris, France, 3 July 2015

Monitoring circulating tumor DNA using picoliter droplet based digital PCR. qPCR and digital PCR congress USA, San Diego, 25-26 June 2015

Picoliter Droplet-Based Digital PCR for the Quantitative Analysis of Circulating Tumor DNA for Cancer Patient Follow Up. Festival of genomics, Raindance Technologies Workshop, Boston, US, 22 June 2015

PCR en microcompartiments : intérêt pour la recherche clinique. Colloque DIM analytics " La miniaturisation des mesures : quels espoirs, quels challenges ?", Paris, France, 17 April 2015

Picoliter Droplet-Based Digital PCR for the Quantitative Analysis of Circulating Tumor DNA for Cancer Patient Follow Up. Molecular Diagnostics Europ conference, Lisbon, Portugal, 15-16 April 2015

Picoliter Droplet-Based Digital PCR and microRNA Quantification. Extracellular Markers summit, Cambridge, US, 19-20 March 2015

Picoliter droplet digital PCR for cancer patient follow-up : application to colorectal cancer. 2nd qPCR & Digital PCR Congress, London, UK, 20-21 October 2014

Picoliter droplet digital PCR for cancer research. Taly V. Invited conference. Biopathology symposium. Paris, France, 19-20 June 2014.

Tiny droplets to detect cancer biomarkers. Taly V. Invited conference. 5th International Conference on Biomarkers and Clinical Research. University of Oxford, St Hilda's College - UK, April 15-17, 2014.

Droplet digital PCR as a new tool for cancer research. Taly V. Invited conference. Advances in qPCR & dPCR conference . Barcelona, Spain. 14-15 May 2014.

Picoliter Droplet-Based Digital PCR for Molecular Diagnostics. Taly V. Invited conference. Molecular Medicine Tri conference 2014. San francisco, USA. 9-14 February 2014.

On the Journey to Personalised Follow ups: Using Circulating Tumour DNA in Colorectal Cancer Patients. Taly V. Invited conference. Circulate Europe - Berlin, Germany. 18-20 february 2014. Additional authors: Aziz Zaanani, Hélène Blons, Audrey Didelot, Géraldine Perkins, Nadejda Rice, Fanny Garlan, Philippe Nizard, Julien TAIEB and P. Laurent-Puig.

L'apport de la microfluidique à la PCR numérique dans la détection des biomarqueurs. Taly V. Invited conference. Journées Internationales de Biologie- Paris, France. 13-15 November 2013.

How Digital PCR Simplifies Screening for Multiple Cancer Biomarkers. Taly, V. Invited Raindance Digital PCR webinars, 16th October 2013.

Droplet-based microfluidics as a tool for personalized medicine. Taly V. Invited conference. Digital PCR conference. San Diego, US, October 6-9 2013.

Detection of low frequency alleles in patient samples by digital PCR. Taly V. Invited conference. qPCR and dPCR congress. Lyon, France, September 2013.

Digital PCR strategies in the development and analysis of molecular biomarkers for personalized medicine. Taly V. Invited conference (on behalf of Prof. P. Laurent-Puig). qPCR and dPCR congress. Lyon, France, September 2013.

Droplet-based microfluidics for cancer biomarker screening. Taly, V. Invited Conference. Société de pharmacotoxicologie cellulaire (SPTC) annual conference. Chatenay-Malabry. France. 6th June 2013.

Droplet-based microfluidic for cancer research: Applications for personalized medicine. Taly, V. Invited Seminar. Microfluidique, MEMS, Nanostructures (MMN group), Gulliver Lab, ESPCI. Paris. France. May 21 2013.

Droplet-based microfluidic for cancer research: Applications for personalized medicine. Invited Seminar. Microfabrication and cell biology club. May 3rd 2013.

Microdroplets for High-throughput screening of biological and chemical reactions : towards the development of new procedures for cancer research. IMTCE Seminar. Paris. January 2013.

Detection of cancer biomarkers in microdroplets. Taly, V. Invited Speaker. The International Conference for Micro & Nanotechnologies for the Biosciences, NanoBioTech-Montreux, Switzerland. November 12-14 2012.

Microfluidics, droplets and Cancer research. Taly, V. Invited Speaker. Kagawa University Mini-conference on Novel devices applicable to bio/clinical/medical fields, Takamatsu, Japan. November 2, 2012.

Droplet-based Microfluidics for the Highly Sensitive Detection of Cancer Biomarkers in Biological Samples. Taly, V. Invited Speaker. Euromeddiag International Convention, 5th July 2012. Montpellier. France.

Tiny droplets to fight cancer. Taly, V. Invited Seminar. Laboratory for Photonics and Nanostructures (LPN), 5th June 2012. Paris. France.

Droplet-based Microfluidics for the High Sensitivity Detection of Cancer Biomarkers in Biological Samples. Taly, V. Invited Speaker. Nano and Microfluidics conference. 30-31 May 2012. Hamburg. Germany.

Tiny droplets to fight cancer. Taly, V. Invited Seminar. Institut Jacques Monod, Université Paris 7. 20th March 2012. Paris. France.

Droplet-based microfluidics for biological applications: From enzymatic screening to biomarker analysis. Taly, V. Invited Seminar. Twente University. 6 February 2012. Enschede. Netherlands.

Multiplex highly sensitive detection of Cancer Biomarkers in biological samples. D. Pekin, S. Kotsopoulos, H. Gang, Q. Zhong, J.-C. Baret, D. Le Corre, A. El Abed, J. B. Hutchison, D. Link, J. Larson, A. Griffiths, P. Laurent-Puig and V. Taly. Invited by Raindance Technologies. Association of Molecular Pathology (AMP) 2011 Annual meeting workshop. 19 November 2011, Dallas, US.

How microdroplets could help fighting Cancer. Invited Speaker. Scientific days of the Ecole Doctorale Biologie-Santé Nantes (France). 8 November 2011. Sable d'Olonne. France.

Droplet-based microfluidic for the quantitative detection of rare mutations. Pekin, Y. Skhiri, Baret, J.-C., Le Corre, D., Mazutis, L., Ben Salem, C., El Abed, A., Hutchison, J.B., Link, D.R., Griffiths, A.D., Laurent-Puig, P. and Taly, V. Invited Speaker. MicroTas Conference. 4-7 October 2010. Groningen. Netherlands.

Microfluidics. Invited seminar, UMRS-775 (Paris Descartes university). 14 June 2010. Etampes. France.

Tiny droplets for single-cell analysis: From enzymatic screening to cell sorting. Lorentz workshop "micro- and nanofluidics

forcell biology". Invited Speaker. 17-22 January 2010.

Minaturizing the Laboratory in Emulsion Droplets. Stepsevent 2009, Meeting for french, german and swiss scientists in life sciences(funding companies/researchers) organised by the Alsace BioValley cluster. 15thDecember 2009. Strasbourg. France.

Tiny droplets for cell-based assays. 2nd German / French /European Meeting on Yeast and Filamentous Fungi. 28-30 May 2009. Strasbourg.France.

Microfluidic systems for High-throughput screening anddirected evolution. Conectus meetings between Alsacian Companies and ResearchLaboratories. 16th October 2008.

Miniaturizing laboratory in emulsion droplets: applicationto toxicology. Invited seminar in the laboratory of Pr. P. Laurent-Puig, INSERMUMR S775, University Paris Descartes, June 2008, Paris, France.

Miniaturizing the Laboratory in Emulsion Droplets. Taly V.and Griffiths A. Next generation Therapeutics. November 2006, Basel,Switzerland.

Directed evolution of enzymes using selection ofdouble-emulsions by FACS. Application to the design of biocatalysts for biofuelcell. Taly V. and Griffiths AD. Invited seminar in the laboratory of Pr. H.Goerish, November 2004, Technical University of Berlin, Germany.

## **OTHER ORAL COMMUNICATIONS (selection).**

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