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Academic Appointments

2020 -	Professor, Dpt of Pathology, Beaujon University Hospital
2014 - 2020	Associate Professor, Dpt of Pathology, Beaujon University Hospital
2011-2014	Assistant Professor, Dpt of Pathology, Beaujon University Hospital

Education/ Research Experience

2021	DIU Artificial intelligence, UPEC, Creteil
2017	Sabbatical : Dpt of genetics, Curie Institute, Paris
2011	Molecular pathology diploma, St Quentin en Yvelines University
2011	MD thesis "Molecular alteration in salivary gland carcinomas », University of Paris Descartes
2006-2011	Resident in Pathology, Assistance Publique Hôpitaux de Paris, France
2004-2007	Postdoctoral Fellow, *Inserm* Unit 838, Biology of the mononuclear Phagocyte system, University Paris-Descartes, Necker Hospital, Paris, France (Director: Pr. F Geissmann).
2001-2004	PhD thesis, Mount Sinai Hospital, NY, USA. "Nuclear trafficking of influenza virus nucleoprotein". (Director: Pr. P Palese).
2000-2001	Master Degree, Mount Sinai Hospital, NY, USA. « Recombinant Newcastle Disease Virus ». (Director: Pr. P Palese).
1996-2000	University Paris V- Necker medical school

RESEARCH ACTIVITY

163 peer reviewed articles. H-Score : 46

Axis 1: Pancreatic tumor heterogeneity

- Study of pancreatic adenocarcinoma plasticity and spatial molecular intratumor heterogeneity through integrated Pathology-AI-omics (RNA) analyses.
- Spatio-temporal heterogeneity of aggressive neuroendocrine tumors: Characterization by a multi-omic approach of intratumoral sptaial and temporal heterogeneity
- Development of diagnostic tools based on innovative approaches (AI augmented RNA signatures, MALDI imaging, RNAfish and multiplex IHC).

Axis 2: Impact of heterogeneity on clonal selection and resistance upon chemotherapy treatment in pancreatic tumors
- Determination of the mechanisms of hyperprogression in temozolomide-treated neuroendocrine tumors.
- Chemo-induced remodeling in the stroma in PDAC: Study of the impact of chemotherapy on fibroblasts associated with cancer and their interactions with tumor cells.

Research projects funded (as PI)

2023	• ARC project "IMPULSE: Multimodal approach to detect and assess the risk of malignancy of IPMN, a frequent pancreatic precancerous lesion" (882k€ 4 years).
2022	• USA NET Research Foundation "MoYpan – Native and chemoinduced intra tumor heterogeneity of neuroendocrine tumors" (300k€, 2 years)
2020	• PRTK MOSAPAC "Molecular signature of adenocarcinomas of the pancreas, an ancillary study on the PRODIGE 24 trial" (473k€ 3 years)
2020	• Emergence canceropole IDF " preliminary study on the impact of temozolomide in neuroendocrine tumors" (28k€ 1 year)
2019	• ENETS SYNERGY "Grant Predictive biomarkers of relapse in small pancreatic neuroendocrine tumors" (17k€ 1 year)
2018	• FARE "Develpoment of tools to subtype panceratic adenocarcinoma" (20k€ 1 year)
2017	• SNFGE grant "Genomic and transcriptomic landscape of pancreatic adenocarcinoma metastasis" (20 k€,1 year)
2016	• FNAB grant "Pancreas carcinoma and aging 3" (300k€, 3 years)

	• SNFGE grant "Progression of neuroendocrine tumors" (20 k€,1 year)
2015	• GTE Grant "Progression of neuroendocrine tumors" (30 k€,1 year)
	• ENETS Young investigator award "Molecular evolution of neuroendocrine tumors" (50 k€, 1 year)
2014	• FNAB grant "Pancreas carcinoma and aging 2" (150k€, 1 year)
	• ANR Epigénétique "Role of methylation aberrations in IPMN carcinogenesis" (170k€, 3 years)
2013	• FNAB grant "Pancreas carcinoma and aging" (100k€, 1 year)
	• SNFGE Grant "Molecular alterations in intermediary grade neuroendocrine tumors" (10 k€, 2 years)
	• ARCAD Foundation "molecular alterations in familial IPMN" (8 k€, 2 years) Co-investigator.
	• SNFGE Grant "Role of Hypoxia and stroma in pancreatic adenocarcinoma" (20 k€, 2 years) Co-investigator.
2012	• REFCOR Grant "CKIT mutation in Epithelial/myoepithelial carcinomas of salivary gland » (10 k€, 1 year)
	• GTE Grant "Molecular alterations in intermediary grade neuroendocrine tumors" (20 k€, 2 years)
2011	• SNFGE Grant "Role of GNAS mutations in pancreatic IPMN carcinogenesis" (20 k€, 2 years)
	• SNFGE Grant "Development of xenograft model for pancreatic IPMN" " (20 k€, 2 years) Co-investigator.

CLINICAL RESEARCH ACTIVITY

WP leader of the RHU OPERANDI

Tissue hub manager of the SIRIC InSITU

Steering committee for the following clinical trials and handling of the pathology: PANDAS-PRODIGE 24 and 44 / Emergency pancreas ARCAD / ERC1623 / GEMFOX / REMIND-01 / HISTOPAN / PANACHE01&02.

Head of the hub that manage related ancillary studies dealing with tissues.

PATENT

PACpAInt : Predicting PAC molecular subtype using artificial intelligence

MINOS: Caged single cell analysis

HONORS AND AWARDS

◆ Best oral scientific communication CFP 2021

◆ Prime d'Encadrement Doctoral et de Recherche (PEDR) 2019

◆ Best scientific poster – European neuroendocrine society 2016 and 2018

◆ Fondation Nuovo-Soldati award 2016

◆ Young investigator award - European neuroendocrine society 2015

MEDICAL ACTIVITY

Head of the pancreatic pathology unit in Beaujon University hospital, the largest French pancreatic surgery center and an **ENETS center of excellence**.

TEACHING

General Pathology, molecular pathology and digestive pathology.

Coordination of the pathology module in the cancerology DESC diploma

Creation and co-coordination of the "gene to image" module of the PIR genetic diploma

◆ Pathology practical courses, DCEM1, Paris VII University

◆ Biopathology practical courses, L2, Paris VII University

◆ Gut pathology practical courses, L3, Paris VII University

◆ Skin disease practical courses, L3, Paris VII University

◆ Lecturer UE5 Tissues and cells pathology, Paris VII University

◆ Lecturer UE8 Epithelium and cancer Master 2 Research, Paris VII University

◆ Lecturer Gut pathology, L3, Paris VII University

◆ Lecturer DESC Cancerology, Paris VII University

◆ Lecturer DU Digestive cancerology, Paris VI University

◆ Lecturer DIU Head and Neck imaging, Paris V University, Paris

◆ Lecturer DU Pancreatic surgery, Paris VII University

◆ Lecturer Master Cancer and epithelium, Paris VII University

Best Peer reviewed publications in the last 2 years

1: Nicolle R, Bachet JB, … **Cros J**. Prediction of Adjuvant Gemcitabine Sensitivity in Resectable Pancreatic Adenocarcinoma Using the GemPred RNA Signature: An Ancillary Study of the PRODIGE-24/CCTG PA6 Clinical Trial. Journal of clinical oncology, in press

2: Saillard C, Delecourt F, …. **Cros J**. PACpAInt: a histology-based deep learning model uncovers the extensive intratumor molecular heterogeneity of pancreatic adenocarcinoma. Nat comm 2023 (in press).

3: Neuzillet C, Nicolle R, Raffenne J, Tijeras-Raballand A, Brunel A, Astorgues-Xerri L, Vacher S, Arbateraz F, Fanjul M, Hilmi M, Samain R, Klein C, Perraud A, Rebours V, Mathonnet M, Bièche I, Kocher H, **Cros J** & Bousquet C.Periostin- and podoplanin-positive cancer-associated fibroblast subtypes cooperate to shape the inflamed tumor microenvironment in aggressive pancreatic adenocarcinoma. J Pathol. 2022 Dec;258(4):408-425. doi: 10.1002/path.6011. Epub 2022 Oct 21. PMID: 36102377; PMCID: PMC9828775.

4: Depoilly T, Leroux R, Andrade D, Nicolle R, Dioguardi Burgio M, Marinoni I, Dokmak S, Ruszniewski P, Hentic O, Paradis V, De Mestier L, Perren A, Couvelard A, **Cros J**. Immunophenotypic and molecular characterization of pancreatic neuroendocrine tumors producing serotonin. Mod Pathol. 2022 Nov;35(11):1713-1722. doi: 10.1038/s41379-022-01110-x. Epub 2022 Jun 23. PMID 35739266.

5: de Mestier L, Nicolle R, Poté N, Rebours V, Cauchy F, Hentic O, Maire F, Ronot M, Lebtahi R, Sauvanet A, Paradis V, Ruszniewski P, Couvelard A, **Cros J**. Molecular deciphering of primary liver neuroendocrine neoplasms confirms their distinct existence with foregut-like profile. J Pathol. 2022 Sep;258(1):58-68. doi: 10.1002/path.5977. Epub 2022 Jul 11. PMID: 35681273.