

Professor Dominique HEYMANN

Peer-Reviewed Publications, Books, Book Chapters, Invited Conferences UPDATE: 27th January 2020

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PEER-REVIEWED PUBLICATIONS

Manuscripts in press

272. Heymann MF, Schiavone K, **Heymann D**. Bone sarcomas in the immunotherapy era. **Br HJ Pharmacol**.

271. Briand D, Garnier D, Nadaradjane A, Colmou K, Potiron V, Supiot S, Cartron G, Frenel JS, **Heymann D**, Vallette F, Cartron PF. Radiotherapy-induced overexpression of exosomal miRNA-378a-3p in cancer cells limits Natural Killer cells cytotoxicity. **Epigenomics**

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270. Dufrostel M, Briand J, Cartron G, **Heymann D**, Frenel JS, Cartron PF. Cell-free circulating epimarks in cancer monitoring: a systemic review. **Epigenomics 2020,12 :145-155**.

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269. Tellez-Gabriel M, **Heymann D**. Exosomal lncRNAs: the newest promising liquid biopsy. **Cancer Drug Resistance 2019,2 :1002-1017**.

268. Taves S, Sun J, Livingston EW, Chen X, Amiaud J, Brion R, Hannah WB, Bateman TA, **Heymann D**[#], Monahan P[#]. Hemophilia A and B mice, but not VWF^{-/-} mice, display bone defects in congenital development and remodeling after injury. **Sci Rep 2019; 9:14428**. [#]**Co-corresponding authors**.

267. Alvarez C, Monasterio G, Cavalla F, Cordova LA, Hernandez M, **Heymann D**, Garlet GP, Sorsa T, Pärnänen P, Lee HM, Golub LM, Vernal R, Kantarci A. Osteoimmunology of oral and maxillofacial diseases: translational applications based on biological mechanisms. **Front Immunol 2019; 10: 1664**.

266. Leveque X, Hochane M, Geraldo F, Dumont S, Gratas C, Oliver L, Gaignier C, Trichet V, Layrolle P, **Heymann D**, Herault O, Vallette FM, Olivier C. Low-dose pesticide mixture induces accelerated mesenchymal stem cells aging *in vitro*. **Stem Cells 2019; 37(8): 1083-1094**.

265. Marino S, de Ridder D, Bishop RT, Renema N, Ponzetti M, Sophocleous A, Capulli M, Aljeffery A, Carrasco G, Gens MD, Khogeer A, Ralston SH, Gertsch J, Lamoureux F, **Heymann D**, Rucci N, Idris AI. Paradoxical effects of JZL184, an inhibitor of monoacylglycerol lipase, on bone remodelling in healthy and cancer-bearing mice. **EBioMedicine 2019; 44: 452-466**.

264. Vargas-Franco JW, Castaneda B, Mueller CG, Heyman D, Redini F, Lezot F. Genetically-achieved disturbance to the expression levels of TNFSF11 receptors modulate the effects of zoledronic acid on growing mouse skeletons. **Biochem Pharmacol**.

263. David E, Cagnol S, Goujon JY, Egorov M, Taurelle J, Nenesteau C, Morandau L, Moal C, Sicard M, Pairel S, **Heymann D**, Redini F, Gouin F, Le Bot R. 12b80 – Hydroxybisphosphonate linked doxorubicin: bone targeted strategy for treatment of osteosarcoma. **Bioconjugate Chem**.

262. Heymann MF, Lézet F, **Heymann D**. The contribution of immune infiltrates and the local

microenvironment in the pathogenesis of osteosarcoma. **Cell Immunol** 2019; 343: 103711.

261. Tellez-Gabriel M, Heymann MF, **Heymann D**. Circulating tumor cells as a tool for assessing tumor heterogeneity. **Theranostics** 2019, 9 :4580-4594.

260. Schiavone K, Garnier D, **Heymann MF, Heymann D**. The heterogeneity of osteosarcoma : the role played by cancer stem cells. **Adv Exp Med Biol** 2019 : 119 :187-200.

259. Jacques C, Renema N, Ory B, Walkley CR, **Grigoriadis AE, Heymann D**. Murine models of bone sarcomas. **Methods Mol Biol** 2019, 1914 :331-342.

258. Bertin H, Guilho R, Brion R, Amiaud J, Battaglia S, Moreau A, Bouchez-Gomez A, Longis J, Piot B, **Heymann D**, Corre P, Redini F. Jaw osteosarcoma models in mice : first description. **J Translational Med** 2019, 17 :56.

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256. **Heymann D**. Metastatic osteosarcoma challenged by regorafenib. **Lancet Oncol** 2019,20 :12-14.

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254. Tellez-Gabriel M, Cochonneau D, Cadé M, Jubelin C, Heymann MF, **Heymann D**. Circulating tumor cell-derived pre-clinical models for personalized medicine. **Cancers** 2019,11 : 19.

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249. Chalopin A, Tellez-Gabriel M, Brown HK, Vallette F, Heymann MF, Gouin F, **Heymann D**. Isolation of circulating tumor cells in a preclinical model of osteosarcoma: Effect of chemotherapy. **J Bone Oncol**. 2018;12:83-90.

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osteosarcoma pre-clinical models. **Cytotherapy**. 2018;20(8):1037-1045.

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- Biology of primary bone cancer/giant cell tumours. **Skeletal Care Academy 2011, Madrid (Spain) February 25-26, 2011**

- The concept of “bone niche” in the pathogenesis of osteosarcoma. **BIT’s 4th Annual World Congress 2011, Dalian (China), May 22-26, 2011**

- Session 5 : Traitements pharmacologiques actuels, Apport des bisphosphonates dans les tumeurs primitives « **Journée Recherche et Santé INSERM – Tumeurs et Métastases Osseuses** », **4 February 2011, Paris**

2013

- Cancer du sein et expression RANK : mythe ou réalité ? **13^{ème} Cours Francophone Supérieur sur le Cancer du Sein. Nice 16-18 January 2013.**

- **Webinar organization and moderator, IBSM-BoneKey, 22 March 2013.** Recent advances in the therapy of osteosarcomas.

- **SORRO (Société Orthopédie Rhumatologie Radiologie de l’Ouest), Moderator of the session entitled «Quoi de neuf dans les ostéolyses péri-prothétiques?», Les Sables d’Olonne (France), 05 March 2013**

- Ciblage thérapeutique des ostéolyses. **Transgène, Strasbourg (France) 7 June 2013**

- **Groupe d’Etude des Métastases Osseuses (GEMO), Os et Cancer, actualités 2013.** « Rôle clé du système RANK/RANKL dans la physiologie et la pathologie osseuse : nouvelles cibles potentielles », **Lille 14 November 2013.**

- **3^{ème} Symposium National « Niches Tumorales », 21-22 November 2013 Tours,** « Notions de niche dans l’ostéosarcome »

- **Rencontres de la Recherche en Santé du Grand Ouest, 3 December 2013.** « Modèles animaux en oncologie : exemple des sarcomes osseux »

- **Organisation and chairman of a webinar (IBSM-BoneKey, 22 March 2013)** Recent advances in the therapy of osteosarcomas (<http://www.nature.com/bonekey/community/tag/webinar/page/2/>)

2014

- **Frontiers of Science seminars** « Biology and new therapeutic approaches of bone sarcomas, **27 March 2014, Turku (Finland)**

- University of Sheffield, «Therapeutic approach of bone sarcomas by targeting the tumor microenvironment», **Sheffield (UK), 25th April 2014.**

- **23th Annual Meeting of the European Orthopaedic Research Society (EORS),** “Targeting of bone niche for the treatment of bone sarcomas”, **2/4 July 2014, Nantes.**

- **Société Française de Chirurgie Orthopédique et Traumatologique (SOFOT 2013),** Chairman of the session entitled “**Bone Fragility**», **Paris 11 November 2014.**

. **4th National Symposium ‘Tumour Niche’**, Tours (France), **24-25 Novembre 2014**, Chairman of session entitled “**Biomarkers and Therapeutic Targeting**”

2015

- **37th meeting of The Scandinavian Sarcoma Group, Stockholm, 20-22th May 2015.** « The microenvironment of sarcoma as sources of therapeutic targets »

- **2nd of DEPArray user meeting. Bologna, Italy, November 10-11, 2015.** Interests of the DEPArrayTM for studying the pathogenesis of osteosarcoma.

- **6th Mellanby Centre Research Day, Sheffield, 4th December 2015.** Bone tumours in children : new perspectives.

- **3rd Bone Oncology and Tumour Microenvironment workshop, 16 October 2015.** The University of Sheffield. Osteosarcoma has arrived in Sheffield.

- **Annual meeting of Academic Unit of Oncology and Western Park Hospital, Sheffield, 6 November 2015.** Bone sarcoma : new projects in Sheffield.

2016

- **29th European Musculo-Skeletal Oncology Society (EMSOS),** Invited conference, « Tumour heterogeneity of bone sarcomas : the next challenge », 25-27 May 2016, La Baule, France.

- **University of Leiden (Leiden University Medical Centre)** « Tumour microenvironment as a source of therapeutic targets in osteosarcoma” 2 June 2016.

- **Société Française de lutte contre les Cancers et les leucémies de l’Enfant et de l’adolescent (SFCE),** « Méthodes d’Analyse et Intérêt Clinique de l’Hétérogénéité Tumorale: Cas des Sarcomes Osseux”, Curie Institute, Paris 25 December 2016

2017

- **2nd Symposium on Advances in Cancer Immunology and Immunotherapy**, « Circulating tumor cells and epithelial to mesenchymal transition (EMT) ». Athens (Greece) 15-17 December 2016.

- **Invited conference by the UMR E 4320 TIRO-MATOs CEA/Univeristy of Nice** (Mécanismes biologiques des Altérations du Tissu Osseux), **31 March 2017.** Interleukin-34: mechanisms of action, biological functions and therapeutic interests in oncology.

- **30th Meeting of European Musculo-Skeletal Oncology Society (Budapest, Hungary, 26-28 April 2017).** “Circulating Tumour Cells as a biomarker of early/recurrent disease and therapeutic response in a preclinical model of osteosarcoma ».

- **DEPArray workshop (Innovation hub, Cancer Centre at Guy's Hospital, London ; 16 June 2017).** “Dielectrophoresis-based microchip for the study of gap junctional intercellular communications and early/recurrent disease in a preclinical model of osteosarcoma”.

- **4th European Bone Sarcoma Networking (London, 21-23 June 2017).** «Circulating tumour cells »

- **Sheffield Experimental Cancer Medicine Centre (ECMC), 30th June 2017,** « Rare Tumours »

- **13-15th September 2017 European Orthopedic Research Society.** « Quality and quality control in tissue banking, gene and cellular therapy » (workshop: « Cell and tissue banking for tissue engineering »)

- **4th DEPArray user meeting, Bologna, Italy, 26-27 September 2017.** “Analysis of the early events in metastatic in osteosarcoma”

- **4th meeting of the International Society of Cancer Metabolism (ISCaM), Bertinoro, Italy, 19-21 October 2017.** « Tumour Heterogeneity: The Key Advantages of Single-Cell Analysis »

- Mellanby Centre Non-coding RNAs in Bone and Cartilage Workshop (Sheffield, UK) 19-20 October 2017. "miRNA and osteosarcoma"

2018

- 45th European Calcified Tissue Society (Valencia, Spain), 26-29 May 2018, « RANKL and Oncogenesis »

- 8th International Workshop on Advances in the Molecular Pharmacology and Therapeutics of Bone and other Musculoskeletal Diseases and Cancer and Bone Society 2018 Meeting, 30 June -3 July 2018. "Sarcoma and bone tumours"

- EuSARC 2018, The biology of sarcoma a residential workshop, Bertinoro (Italy), 31 May-2 June 2018, "Analytical methods to assess tumor heterogeneity"

- 5th DEPAArray user meeting, Philadelphia, USA, 18-19 September 2018. "Rare cell events in sarcoma"

-27th Congress of European Association of Tissue Banks, October 17-19, Lille, FR. « Quality control in tissue banking »

- Réunion d'autonomie de la Société Française des Cancers de l'Enfant (Paris, FR), 2-27 Novembre 2018 « Hétérogénéité Tumorale des Sarcomes Osseux »

- 4th Symposium Advances in Cancer Immunology and Immunotherapy, 29 Nov-1 Dec 2018, Athens Greece. « Therapeutic advances in immunotherapy in the field of mesenchymal tumors. »

2019

- International osteosarcoma research symposium. In memory of Frankie Biggs. 31 January 2019. London, UK. « Isolation of osteosarcoma circulating tumor cells through parsortix. »

- 46th European Calcified Tissue Society, Budapest (Hungary), 10-14 May 2019. « Molecular mechanisms driving primary bone sarcomas. »

- Bisphosphonates 2019, Celebrating 50 years. Sheffield (UK), 15-17 July 2019. « Bisphosphonates in primary bone tumors – do they have a role ? »

PRESS COMMUNICATION

- 2013, Videos (<http://www.thinkovery.com/recherche-site?keys=heyman>)

. Quel Environnement favorise les tumeurs? (Which environment facilitates the tumours?) (09/2013)

. Le cancer de l'os. (The bone cancer)(09/2013)

. Qu'est ce qu'un os? (What is a bone?)(09/2013)

. Comment se diffuse la tumeur? (How migrate the tumour cells?)(09/2013)

. Quelles relations entre l'âge et le cancer? (Relationships between age and cancer?) (09/2014)

. Quelle thérapie d'avenir contre le cancer? (Which future therapy against cancer?) (01/2015)

- University of Nantes, portrait de Chercheur (<http://www.univ-nantes.fr>)

- 2013, Sciences et Santé, n°13 March-April 2013: portrait de chercheur, En savoir plus : Isoler les cellules tumorales qui circulent dans le sang des patients victimes d'un cancer de l'os, c'est la mission de la plateforme de tri cellulaire unique en France, DEPAArray. A la clé: la prévention des métastases et le développement de thérapies ciblées.

Short article describing the first platform in France and located in Nantes (Heymann's Laboratory), to isolate circulating tumour cells and based on the DEPAArray technology

- 2014, Science et Santé, n°19 March 2014, Ostéosarcome: augmenter l'efficacité de la chimiothérapie (osteosarcoma to improve the efficacy of chemotherapy)

- **2017**, Sponsor of the press pack "Tumeurs osseuses : du diagnostic aux travaux de recherche" (Fondation pour la Recherche Médicale, FR)