Professor Dominique HEYMANN (ORCID : 0000-0001-7777-0669)

Peer-Reviewed Publications, Books, Book Chapters, Invited Conferences
UPDATE: 10th October 2023

PEER-REVIEWED PUBLICATIONS

Manuscripts 2023

316. Pu Y, Li L, Peng H, Liu L, **Heymann D**, Robert C, Vallette F, Shen S. Drug-tolearnt persister cells in cancer: the cutting edges and future directions. **Nat Rev Clin Oncol. in press.**

315. Croquette M, Faugeroux A, Fonlupt C, Godet J, Frouin E, Garcia M, Bernard FX, Cordier-Dirikoc S, Pedretti N, Roblot P, Boutin D, Hainaut-Wierzbicka E, **Heymann D**, Lecron JC, Morel F, Jégou JF. Interleukin-34 is expressed by differentiated keratinocytes and down-regulated in psoriatic inflamed skin. **J Invest Dermatol, in press.**

314. Jubelin C, Muñoz-Garcia J, Cochonneau D, Ollivier E, Vallette F, Heymann MF, Oliver L, **Heymann D**. Technical Report: Liquid Overlay Technique allows the generation of homogeneous osteosarcoma, glioblastoma, lung and prostate adenocarcinoma spheroids that can be used for drug cytotoxicity measurements. **Frontiers Bioeng Biotechnol, 2023, 11 :1260049.**

313. Panez-Toro I, Muñoz-Garcia J, Vargas-Franco JW, Renono-Cornière A, Heymann MF, Lézot F, **Heymann D.** Advances in osteosarcoma. **Curr Osteoporosis Rep 2023, 2023;21(4):330-343.**

312. Dubois N, Muñoz-Garcia J, **Heymann D**, Renodon-Cornière A. High glucose exposure drives intestinal barrier dysfunction by aletring its morphological, structural and functional properties. **Biochem Pharmacol. 2023; 216:115765.**

311. Loussouarn D, Oliver L, Salaud C, Samarut E, Bourgade R, Béroud C, Morenton E, **Heymann D**, Vallette FM. Spatial Distribution of Immune Cells in Primary and Recurrent Glioblastoma: A Small Case Study. **Cancers (Basel). 2023;15(12):3256.**

308. Jacquot P, Muñoz-Garcia J, Fleury M, Cochonneau D, Gaussin R, Enouf E, Roze E, Ollivier E, Cinier M, **Heymann D.** Enginneering of a bispecific nanofitin with immune checkpoint inhibitory activity conditionned by the cross-arm binding to EGFR and PDL1. **Biomolecules 2023, 13 :636**

307. Madel MB, Halper J, Ibáñez L, Lozano C, Rouleau M, Boutin A, Pontier-Bres R, Ciucci T, Topi M, Hue C, Amiaud J, Iborra S, Sancho D, **Heymann D**, Garchon HJ, Czerucka D, Apparailly F, Duroux-Richard I, Wakkach A, Blin-Wakkach C. Specific targeting of inflammatory osteoclasts by the probiotic yeast *S. boulardii* CNCM I-745 reduces bone loss in osteoporosis. **eLife 2023, 12:e82037.**

306. Oliver L, Álvarez-Arenas A, Salaud C, Jiménez-Sanchez J, Calvo GF, Belmonte-Beitia J, Blandin S, Vidal L, Pérez V, **Heymann D**, Vallette FM. A simple 3D cell culture method for studying the interactions between human mesenchymal stromal/stem cells and patients derived glioblastoma. **Cancers 2023, 15:1304.**

Manuscripts 2022

305. Beird HC, Bielack SS, Flanagan AM, Gill J, **Heymann D**, Janeway KA, Livingston JA, Roberts RD, Strauss SJ, Gorlick R. Osteosarcoma. **Nat Rev Dis Primers. 2022;8(1):77.**

304. Heymann CJF, Bobin-Dubigeon C, Muñoz-Garcia J, Cochonneau D, Ollivier E, Heymann MF, **Heymann D.** Lipopolysaccharide-binding protein expression is associated to the metastatic status of osteosarcoma patients. **J Bone Oncol 2022, 36: 100451.**

303. Ollivier L, Orione C, Bore P, Misery L, Legoupil D, Leclere JC, Coste A, Girault G, Sicard-Cras I, Kacperek, Lucia F, Stefan D, Thillays F, Rio E, Lesueur P, Berthou C, **Heymann D**, Champiat S, Supiot S, Vaughier L, Kao W. Abscopal Response in Metastatic Melanoma: Real-World Data of a Retrospective, Multicenter Study. **Cancers 2022 ;14(17):4213.**

302. Jubelin C, Muñoz-Garcia, Griscom L, Cochonneau D, Ollivier E, Heymann MF, Vallette FM, Oliver L, **Heymann D**. Three-dimensional in vitro culture models in ocnology research. **Cell & Biosci 2022, 12 :155.**

301. Jubelin C, Muñoz-Garcia J, Cohconneau D, Moranton E, Heymann MF, **Heymann D.** Biological evidence of cancer stem-like cells and recurrent disease in osteosarcoma. **Cancer Drug Resist 2022, 5:184-198.**

300. Muñoz-Garcia J, Vargas-Franco JW, Brounais-Le-Royer B, Cochonneau D, Amiaud J, Heymann MF, **Heymann D**, Lézot F. Inhibiting endothelin receptors with macitentan strengthens the bone protective action of RANKL inhibition and reduces metastatic dissemination in osteosarcoma. **Cancers 2022, 14:1765.**

299. Rodríguez-Pena A, Armendariz E, Oyarbide A, Morales X, Ortiz-Espinosa S, Ruiz-Fernández de Córdoba B, Cochonneau D, Cornago I, **Heymann D**, Argemi J, D'Avola D, Sangro B, Lecanda F, Pio R, Cortés-Domínguez I, Ortiz-de-Solórzano C. Design and validation of a tunable inertial microfluidic system for the efficient enrichment of circulating tumor cells in blood. **Bioengineering & Translational Medicine 2022:e10331.**

298. Rabé M, Fonteneau L, Oliver L, Morales-Molina A, Jubelin C, Garcia-Castro J, **Heymann D**, Gratas C, Vallette FM. Cellular heterogeneity and cooperativity in glioma persister cells under temozolomide treatment. **Front Cell Dev Biol 2022, 10:85273**

297. Ruiz-Fernandez de Cordoba, Moreno H, Valencia K, Perurena N, Ruedas P, Walle T, Pezonaga-Torres A, Hinojosa J, Guruceaga E, Pineda A, Abengozar-Muela M, Cohonneau D, Zandueta C, Martinez-Canarias S, Teijeira A, Ajona D, Ortiz-Espinosa S, Moralles X, Ortiz de Solorzano C, Santisteban M, Ramo LI, Guembe L, Strnad V, **Heymann D**, Hervas-Stubbs S, Pio R, Rodriguez-Ruiz ME, de Andrea CE, Vient S, Melero I, Lecanda F, Martinez-Monge R. Tumor ENPP1(CD203a)/haptoglobin axis exploits myeloid-derived suppressor cells to promote post-radiotherapy local recurrence in breast cancer**. Cancer Discov.** 2022, 12 :1356-1377.

296. Cadé M, Munoz-Garcia J, Babuty A, Paré L, Cochonneau D, Fekir K, Chatelais M, Heymann MF, Lokajczyk A, Boisson-Vidal C, **Heymann D**. FVIII regulates the molecular profile of endothelial cells:functional impact on the blood barrier and macrophage behavior. **Cell Mol Life Sci. 2022;27(1):102-116.**

295. Cadé M, Munoz-Garcia J, Babuty A, Fouassier M, Heymann MF, Monahan PE, **Heymann D.** FVIII at the crossroad of coagulation, bone and immune biology: emerging evidence biological activities beyond hemostasis. **Drug Discov Today 2022;27(1):102-116.**

Manuscripts 2021

294. Avnet S, Lemma S, Cortini M, Di Pompo G, Perut F, Lipreri MV, Roncuzzi L, Columbaro M, Errani C, Longhi A, Zini N, **Heymann D**, Dominici M, Grisendi G, Golinelli G, Consolino L, Longo DL, Nanni C, Righi A, Baldini N. The release of inflammatory mediators from acid-stimulated mesenchymal stromal cells favours tumour invasiveness and metastasis in oteosarcoma. **Cancers (Basel) 2021;13(22):5855.**

293. Tattersall L, Shah KM, Lath DL, Singh A, Down JM, De Marchi E, Williamson A, Di Virgilio FD, **Heymann D,** Adinofi E, Fraser WD, Green D, Lawson MA, Gartland A. **T**he P2RX7B solece variant modulates osteosarcoma cell behaviour and metastatic properties. **J Bone Oncol. 2021; 31 :100398.**

292. Heymann CJF, Bard JM, Heymann MF, **Heymann D[#],** Bobin-Dubigeon C[#]. The intratumoral microbiome : characterization methods and functional impact. **Cancer Lett. 2021; 522 :63-79. [#]Co-corresponding authors.**

291. Munoz-Garcia J, Jubelin C, Loussouarn A, Gounard M, Grsicom L, Renodon-Cornière A, Heymann MF, **Heymann D**. *In vitro* three-dimensional cell cultures for bone sarcomas. **J Bone Oncol. 2021 ;30 ;100379.**

290. Tabti R, Lamoureux F, Charrier C, Ory B, **Heymann D**, Bentouhami E, Désaubry L. Development of prohibitin ligands against osteoporosis. **Eur J Med Chem. 2021;210:112961.**

289. Muñoz-Garcia J, Mazza M, Alliot C, Sinquin C, Colliec-Jouault S, **Heymann D**, Huclier-Markai S. Antiproliferative Properties of Scandium Exopolysaccharide Complexes on Several Cancer Cell Lines. **Mar Drugs. 2021;19(3):174.**

288. Danieau G, Morice S, Renault S, Brion R, Biteau K, Amiaud J, Cadé M, **Heymann D**, Lézot F, Verrecchia F, Rédini F, Brounais-Le Royer B. ICG-001, an Inhibitor of the β-Catenin and cAMP Response Element-Binding Protein Dependent Gene Transcription, Decreases Proliferation but Enhances Migration of Osteosarcoma Cells. **Pharmaceuticals (Basel). 2021;14(5):421.**

287. Heymann MF, Schiavone K, **Heymann D.** Bone sarcomas in the immunotherapy era. **Br J Pharmacol. 2021;178(9):1955-1972.**

286. Heymann D. The Elderly and the COVID 19 Crisis: A Chronicle of Deaths Foretold, in Isolation and Total Indifference. **Front Public Health. 2021;8:602982.**

285. Muñoz-Garcia J, Cochonneau D, Télétchéa S, Moranton E, Lanoe D, Brion R, Lézot F, Heymann MF, **Heymann D.** The twin cytokines interleukin-34 and CSF-1 : masterful conductors of macrophage homeostasis. **Theranostics. 2021 ;11(4):1568-1593.**

Manuscripts 2020

284. Grünewald TG, Alonso M, Avnet S, Banito A, Burdach S, Cidre-Aranaz F, Di Pompo G, Distel M, Dorado-Garcia H, Garcia-Castro J, González-González L, Grigoriadis AE, Kasan M, Koelsche C, Krumbholz M, Lecanda F, Lemma S, Longo DL, Madrigal-Esquivel C, Morales-Molina Á, Musa J, Ohmura S, Ory B, Pereira-Silva M, Perut F, Rodriguez R, Seeling C, Al Shaaili N, Shaabani S, Shiavone K, Sinha S, Tomazou EM, Trautmann M, Vela M, Versleijen-Jonkers YM, Visgauss J, Zalacain M, Schober SJ, Lissat A, English WR, Baldini N, **Heymann D.** Sarcoma treatment in the era of molecular medicine. **EMBO Mol Med. 2020;12(11):e11131**.

283. Heymann MF, Lézot F, **Heymann D.** Bisphosphonates in common pediatric and adult bone sarcomas. **Bone 2020 ; 139 :115523.**

282. Oliver L, Lalier L, Salaud C, **Heymann D,** Carton PF, Vallette FM. Drug resistance in glioblastoma: is persistence the key to therapy? **Cancer Drug Resist. 2020, 3:287-301.**

281. Briand J, Sérnadour A, Naradjane A, Bougras-Cartron G, **Heymann D,** Ory B, Vallette FM, Cartron PF. N6-adenosine methylation of mature miRNA-200b-3b influences its functionality and is a theranostic tools. **Mol Ther: Nucleid acid. 2020; 22 :72-83.**

280. Mignard V, Dubois N, Lanoé D, Joalland MP, Oliver L, Pecqueur C, **Heymann D**, Paris F, Vallette FM, Lalier L. Sphingolipids distribution at mitochondria-associated membranes (MAM) upon induction apoptosis. **J Lipid Res. 2020; 61 :1025.**

279. Thureau S, Faivre JC, Assaker R, Biver E, Confavreux CB, Debiais F, Duterque-Coquillaud M, Giammarile F, **Heymann D**, Lecouvet FE, Morardet L, Paycha F, Body JJ, Vieillard MH. Adapting palliative radiation therapy for bone metastases during the Covid-19 pandemic: GEMO position paper. **J Bone Oncol. 2020; 22 :100291.**

278. Guyon N, Garnier D, Briand J, Nadarajane A, Bougras-Cartron G, Raimbourg J, Campone M, **Heymann D**, Vallette F, Carton PF. Anti-PD1 therapy induces lymphcoytes-derived exosomal miRNA-4315 release inhibiting Bim-mediated apopotosis of tumor cells. **Cell Death & Dis. 2020; 11 :1448.**

277. Heymann D, Kerdraon O, Verriele V, Verhille E, Veron V, Vitre M, Delmas F, Henry C, Gouy Y, Amiand M, Bard JM. Centre de Ressources Biologiques-Tumorothèque: Bioresources and associated clinical data dedicated to translational research in oncology at the Institut de Cancérologie de l'Ouest, France. **Open J Bioresources 2020; 7:5.**

276. Briand J, Garnier D, Naraddjane A, Clément-Colmou K, Potiron V, Supiot S, Bougras-Cartron G, Frenel JS, **Heymann D,** Vallette FM, Cartron PF. Radiotherapy-induced overexpression of exosomal miRNA-378a-3p in cancer cells limits natural killer cells cytotoxicity. **Epigenomics, 2020; 12(5):397-408.**

275. Gama A, Maman L, Vargas-Franco JW, Omar R, Royer BB, Yagita H, Babajko S, Berdal A, Acevedo AC, **Heymann D**, Lézot F, Castaneda B. Primary Retention of Molars and RANKL Signaling Alteration during Craniofacial Growth. **J Clin Med 2020;9(4).**

274. Gama A, Vargas-Franco JW, Sánchez Mesa DC, Restrepo Bedoya E, Amiaud J, Babajko S, Berdal A, Acevedo AC, **Heymann D**, Lézot F, Castaneda B. Origins of Alterations to *Rankl* Null Mutant Mouse Dental Root Development. **Int J Mol Sci 2020;21(6).**

273. Moukenhue B, Brown HK, Charrier C, Battaglia S, Baud'huin M, Quillard T, Warpman-Berglund U, **Heymann D,** Helleday T, Ory B, Lamoureux F. Th1579, MTH1 inhibitor, delays tumor growth and inhibits metastasis development in osteosarcoma model. **EBioMedicine, 2020;53:102704.**

272. Cheray M, Etcheverry, Jacques C, Pacuad R, Bougras-Cartron G, Aubry M, Denoual F, Peterlongo P, Naradjane A, Briand J, Akcha F, **Heymann D,** Vallette FM, Mosser J, Ory B, Cartron PF. **Molecular Cancer 2020, 19:36.**

271. Heymann MF, Schiavone K, **Heymann D.** Bone sarcomas in the immunotherapy era. **Br J Pharmacol 2020, 1-18.**

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.**

Manuscripts 2019

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, diplay 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-achievd disturbance to the expression levels of TNFSF11 receptors modulate the effects of zoledronic acid on

ghrowing mouse skeletons. **Biochem Pharmacol.**

263. David E, Cagnol S, Goujon JY, Egorov M, Taurelle J, Nenesteau C, Morandeau 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, Lézot 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 heterogenetity. **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.**

257. Brown H, Tellez-Gabriel M, Cartron PF, Vallette F, Heymann MF, **Heymann D**. Characterization of circulating tumor cells as a reflection of the tumor heterogeneity: myth or reality? **Drug Discov Today 2019, 24 :763-772.**

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

255. Vallette FM, Olivier C, Lézot F, Oliver L, Cochonneau D, Lalier L, Cartron PF, **Heymann D**. Dormant, quiescent, tolerant and persister cells: four synonyms for the same target in cancer. **Biochem Pharmacol 2019, 162 :169-175.**

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

Manuscripts 2018

253. Boisson-Vidal C, Benslimane-Ahmim Z, Lokajczyk A, **Heymann D**, Smadja DM. Osteoprotegerin Induces $CD34_+$ Differentiation in Endothelial Progenitor Cells. Front Med (Lausanne) 2018 27;5:331

252. Georges S, Calleja LR, Jacques C, Lavaud M, Moukengue B, Lecanda F, Quillard T, Gabriel MT, Cartron PF, Baud'huin M, Lamoureux F, **Heymann D**, Ory B. Loss of miR-198 and -206 during primary tumor progression enables metastatic dissemination in human osteosarcoma. **Oncotarget. 2018;9(87):35726-35741.**

251. Navet B, Vargas-Franco JW, Gama A, Amiaud J, Choi Y, Yagita H, Mueller CG, Rédini F, **Heymann D**, Castaneda B, Lézot F. Maternal RANKL Reduces the Osteopetrotic Phenotype of Null Mutant Mouse Pups. **J Clin Med. 2018, 8;7(11).**

250. Navet B, Ando K, Vargas-Franco JW, Brion R, Amiaud J, Mori K, Yagita H, Mueller CG, Verrecchia F, Dumars C, Heymann MF, **Heymann D**[#], Lézot F[#]. The Intrinsic and Extrinsic Implications of RANKL/RANK Signaling in Osteosarcoma: From Tumor Initiation to Lung Metastases. **Cancers (Basel). 2018;10(11). [#]Co-corresponding authors.**

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.**

248. Strauss SJ, anninga J, Baglio R, Baumhoer D, Bielack, Boye K, Broto JM, Cleton-Jansen AM, Degasperi A, Evans A, Faglioli F, Fiocco M, Gaspar N, **Heymann D**, Hinid N, Lncia C, Myklebost O,

Nathrath M, Redini F, Scotlandi K, Tirtei E, Vanden Eynden M, Whelan J. Report from the 4th European bone sarcoma networking meeting : focus on osteosarcoma. **Clinical Sarcoma Res 2018, 8 :17.**

247. Guiho R, Biteau K, Grisendi G, Chatelais M, Brion R, Taurelle J, Renault S, **Heymann D**, Dominici M, Redini F. In vitro and in vivo discrepancy in inducing apoptosis by mesenchymal stromal cells delivering membrane-bound tumor necrosis factor-related apoptosis inducing ligand in osteosarcoma pre-clinical models. **Cytotherapy. 2018;20(8):1037-1045.**

246. Heymann D, Téllez-Gabriel M. Circulating Tumor Cells: The Importance of Single Cell Analysis. **Adv Exp Med Biol. 2018;1068:45-58.**

245. González-Fernández Y, Brown HK, Patiño-García A, **Heymann D**[#], Blanco-Prieto MJ[#]. Oral administration of edelfosine encapsulated lipid nanoparticles causes regression of lung metastases in pre-clinical models of osteosarcoma. **Cancer Lett. 2018;430:193-200**. [#]**Co-corresponding authors.**

244. de Ridder D, Marino S, Bishop RT, Renema N, Chenu C, **Heymann D**, Idris AI. Bidirectional regulation of bone formation by exogenous and osteosarcoma-derived Sema3A. **Sci Rep. 2018;8(1):6877.**

243. Steenman M, Espitia O, Maurel B, Guyomarch B, Heymann MF, Pistorius MA, Ory B, **Heymann D**, Houlgatte R, Gouëffic Y, Quillard T. Identification of genomic differences among peripheral arterial beds in atherosclerotic and healthy arteries. **Sci Rep. 2018;8(1):3940**

242. Brown HK, Schiavone K, Gouin F, Heymann MF, **Heymann D**. Biology of Bone Sarcomas and New Therapeutic Developments. **Calcif Tissue Int. 2018;102(2):174-195.**

241. Jacques C, Renema N, Lezot F, Ory B, Walkley CR, Grigoriadis AE, **Heymann D**. Bone sarcomas and small animal models for the study of their pathogenesis: characteristics, therapeutic interests and limitations. **J Bone Oncol. 2018 ;12:7-13**.

240. Franco JWV, Castaneda BH, Redini F, Gomez DF, **Heymann D**, Lezot FPR. Paradoxical side effects of bisphosphonates on the skeleton: what do we know and what can we do? **J Cell Physiol. 2018;233(8):5696-5715.**

239. Espitia O, Chatelais M, Steenman M, Charrier C, Maurel B, Georges S, Houlgatte R, Verrecchia F, Ory B, Lamoureux F, **Heymann D**, Gouëffic Y, Quillard T. Implication of molecular vascular smooth muscle cell heterogeneity among arterial beds in arterial calcification. PLoS One**. 2018;13(1):e0191976.**

238. Talbot J, Brion R, Lamora A, Morice S, **Heymann D,** Verrecchia F**.** Cx43 intercellular communication drives the early differentiation of human bone marrow stromal cells into osteoblasts **J Cell Physiol 2018;233(2):946-957.**

Manuscripts 2017

237. Crenn V, Biteau K, Amiaud J, Dumars C, Guiho R, Vidal L, Le Nail LR**, Heymann D,** Moreau A, Gouin F, Redini F. Bone microenvironment has an influence on the histological response of osteosarcoma to chemotherapy: retrospective analysis and preclinical modeling**. Am J Cancer Res 2017;7(11):2333-23.**

236. Benslimane-Ahmin Z, Pereira J, Lokajczyk A, Dizier B, Galy-Fauroux I, Fischer AM, **Heymann D**[#], Boisson-Vidal C[#]. Osteoprotegerin regulates cell migration trhough SDF-1/CXCR4 axis and promotes tumour development by increasing neovascularization. **Cancer Lett, 2017 ; 385:11-19.** [#]**Co-corresponding authors.**

235. Tellez-Gabriel M, Charrier C, Brounais-Le Royer B, Mullard M, Brown H, Verrecchia F, **Heymann D**. Analysis of gap junctional intercellular communications using a dielectrophoresis-based microchip. **Eur J Cell Biol. 2017, 96:110-118.**

238. Brown HK, Schiavone K, Tazzyman S, **Heymann D,** TJA Chico. Zebrafish xenograft models of cancer and metastasis for drug discovery. **Expert Opin Drug Discov. 2017;12(4):379-389.**

234. Chemel M, Brion R, Ségaliny AI, Lamora A, Charrier C, Brulin B, Maugars Y, Le Goff B, **Heymann D*,** Verrecchia F*. BMP-2 and TGF-β1 inhibit the expression of the pro-inflammatory cytokine IL-34 in rheumatoid arthritis synovial fibroblasts. **Am J Pathol, 2017, 187:156-162**. ***Co-corresponding authors.**

233. Brown HK, Tellez-Gabriel M**, Heymann D.** Cancer stem cells and osteosarcoma**. Cancer Lett, 2017,386:189-195.**

232. Aubin GG, Baud'huin M, Lavigne JP, Brion R, Gouin F, Lepelletier D, Jacqueline C, **Heymann D,** Ashenoune K, Corvec S. Interaction of *Cutibacterium* (formely *Propionibacterium*) *acnes* with bone cells: a step toward understanding bone and joint infection development. **Sci Rep, 2017, 7:42918.**

231. Hochane M, Trichet V, Pecqueur C, Avril P, Oliver L, Denis J, Brion R, Amiaud J, Pineau A, Naveilhan P, **Heymann D**, Vallette FM, Olivier C. Low-Dose Pesticide Mixture Induces Senescence in Normal Mesenchymal Stem Cells (MSC) and Promotes Tumorigenic Phenotype in Premalignant MSC. **Stem Cells 2017, 35(3):800-811**

230. Baud'huin M, Lamoureux F, Jacques C, Rodriguez-Calleja M, Quillard T, Charrier C, Amiaud J, Berreur M, Brounais-Le Royer B, Reilly G, Bradner JE, **Heymann D**, Ory B. Inhibition of BET proteins and epigenetic signaling as a potential treatment for osteoporosis. **Bone, 2017,94:10-21.**

229. De Seta D, Torres R, Russo FY, Ferrary E, Kazmitcheff G, **Heymann D**, Amiaud J, Sterkers O, Bernardeschi D, Nguyen Y. Damage to inner ear structure during cochlear implantation: Correlation between insertion force and radio-histological findings in temporal bone specimens. **Hear Res, 2017, 344:90-97.**

Manuscripts 2016

228. Dumars C, Nguyen JM, Gaultier A, Lanel R, Corradini N, Gouin F, **Heymann D***, Heymann MF*. Dysregulation of macrophage polarization is associated with the metastatic process in osteosarcoma. **Oncotarget, 2016, 78343-78354 * Co-corresponding authors.**

227. Camuzard O, Santucci-Darmanin S, Breuil V, Cros C, Gritsaenko T, Pagnotta S, Cailleteau L, Battaglia S, Ferrari P, **Heymann D,** Carle GF, Pierrefite-Carle V. Sex-specific autophagy modulation in osteoblastic lineage: a critical function to counteract bone loss in female. **Oncotarget, 2016, 66416-66428.**

226. De Seta D, Mancini P, Russo FY, Torres R, Mosnier I, Bensimon JL, De Seta E, **Heymann D**, Sterkers O, Bernardeschi D, Nguyen Y. 3D curved multiplanar cone beam CT reconstruction for intracochlear position assessment of straight electrodes array. A temporal bones and patients study. **Acta Otolaryngol Italica, 2016, 36(6):499-505**

225. Tellez-Gabriel M, Ory B, Lamoureux F, Heymann MF, **Heymann D.** Tumour heterogeneity: the key advantages of single-cells analysis. **Int J Mol Sci 2016, 17, 2142.**

223. Jacques C, Calleja LR, Baud'hiun M, Quillard T, **Heymann D**, Lamoureux F, Ory B. miRNA-193a-5p repression of p73 controls cisplatin resistance in primary bone tumors. **Oncotarget 2016, 7, 54503-54514.**

222. Jacques C, Lamoureux F, Baud'huin M , Rodriguez Calleja L , Quillard T, Amiaud J, Perrot P, Tirode F, Redini F , Bradner J , **Heymann D**, Ory B. Targeting the epigenetic readers in Ewing sarcoma inhibits the oncogenic transciption factor EWS/FLi1. **Oncotarget, 2016, 7,125-140.**

221. Heymann MF, Brown HK, **Heymann D.** Drugs in early clinical development for the treatment of osteosarcoma. **Expert Opin Invest Drugs, 2016, 25:1265-1280.**

220. Guiho R, Biteau K, Grisendi G, Taurelle J, Chatelais M, Gantier M, **Heymann D,** Dominici M, Redini F. TRAIL delivered by mesenchymal stromal/stem cells counteracts tumor development in orthotopic Ewing sarcoma models. **Int J Cancer, 2016, 139:2802-2811.**

219. Ory B, Baud'huin M, Verrecchia F, Brounais-Le Royer B, Quillard T, Amiaud J, Battaglia S, **Heymann D**, Redini F, Lamoureux F. Blocking HSP90 addiction inhibits tumor cell proliferation, metastasis development and synergistically acts with zoledronic acid to delay osteosarcoma progression. **Clin Cancer Res, 2016,22:2520-2533.**

218. Brulefert K, Cordova L, Brulin B, Faucon A, Hulin P, Nedellec S, Gouin F, Passuti N, Ishow E, **Heymann D.** Polyethylene nanoparticles are internalized by human macrophages and osteoclasts and promotes osteoclast differentiation. **J Biomed Mat Res A, 2016, 104:2649-2657.**

217. Tellez-Gabriel M, Brown HK, Young R, Heymann MF, **Heymann D.** The challenges of detecting circulating tumour cells in sarcoma. **Frontiers in Oncol, 2016, 6:202.**

216. Córdova LA, Guilbaud F, Amiaud J, Battaglia S, Charrier C, Lezot F, Piot B, Redini F, **Heymann D.** Severe compromise of preosteoblasts in a surgical mouse model of bisphosphonate-associated osteonecrosis of the jaw. **J Craniomaxillofac Surg. 2016 Jul 22. pii: S1010-5182(16)30149-4.**

215. Renema N, Navet B, Heymann MF, Lezot F, **Heymann D**. RANK-RANKL signalling in cancer. **Biosci Rep, 2016;36(4). pii: e00366.**

214. Tellez Gabriel M, Rodriguez Calleja L, Chalopin A, Ory B**, Heymann D.** Circulating tumor cells: a review of non EpCAM-based approaches for cell enrichment and isolation**. Clin Chem 2016;62(4):571-81.**

213. Rodriguez Calleja L, Jacques, C, Lamoureux F, Baud'huin M, Tellez Gabriel M, Quillard T, Debashish S, Lecanda F, Verrecchia F, **Heymann D**, Ory B, Ellisen LW. ΔNp63a stimulates TGFb-induced metastasis through microRNA regulation. **Cancer Res 2016; 76(11):3236-51**

212. Biteau K, Guiho R, Chatelais M, Taurelle J, Chesneau J, Corradini N, **Heymann D**, Redini F. L-MTP-PE and zoledronic acid combination in osteosarcoma: preclinical evidence of positive therapeutic combination for clinical transfer. **Am J Cancer Res 2016;6(3):677-89.**

211. Bonissent A, Vabres B, Orignac I, Martin E, Libeau L, **Heymann D**, Ducourneau Y, Weber M. Excimer laser-assisted lamellar endothelial keratoplasty (ExALEK): Technique and results. **J Fr Ophtalmol. 2016;39(2):178-86.**

210. **Heymann D**, Ruiz-Velasco C, Chesneau J, Ratiskol, Sinquin C, Colliec-Joault. Anti-metastatic properties of a marine bacterial exopolysaccharide-based derivative designed to mimic glycosaminoglycans. **Molecule 2016, 21(3) pii:309.**

209. Avril P, Ridel P, Heymann MF, De Pinieux G, Rédini F, Blanchard F, **Heymann D**, Trichet V, Perrot P. Opposite effects of soluble factors secreted by adipose tissue on proliferating and quiescent osteosarcoma cells. **Plastic and reconstructive Surgery, 2016, 137(3) :865-875.**

208. Davaine JM, Quillard T, Chatelais M, Guilbaud F, Brion R, Guymorach B, Brennan MA**, Heymann D**, Heymann MF, Goueffic Y. Bone-like tissue artificial calcification in femoral atherosclerotic lesions : prevalence and role of osteoprotegerin and pericytes**. Eur J Vasc Surg, 2016, 51 : 259-267.**

207. Avril P, Le Nail LR, Brennan M, Rosset P, De Pinieux G, Layrolle P, **Heymann D,** Perrot P, Trichet V. Opposite effects of soluble factors secreted by adipose tissue on proliferating and quiescent osteosarcoma cells. **J Bone Oncol, 2016, 5:5-14.**

Manuscripts 2015

206. Ségaliny A, Brion R, Brulin B, Maillasson M, Charrier C, Teletchea S, **Heymann D.** Interleukin-34 and Macrophage Colony-Stimulating Factor form a novel heteromeric cytokine and regulate the M-CSF receptor activation and localization. **Cytokine, 2015, 76(2): 170–181.**

205. Faucon A, Lenk R, Cordova LA, Brulin B**, Heymann D,** Hulin P, Nedelled S, Isho E. Fluorescent organic nanoparticles as solvatochromic probes of cancer cell and monocyte/macrophage activity. **Advanced Health Care Materials, 2015, 4(17):2727-34.**

204. Redini F, **Heymann D.** Bone tumor environment as potential therapeutic target in Ewing sarcoma. **Frontier Oncol Section Pediatric Oncol, 2015, 5: 279.**

203. Crémet L, Broquet A, Brulin B, Jacqueline C, Dauvergne S, Brion R, Asehnoune K, Corvec S, **Heymann D**, Caroff N. Interaction of *Escherichia coli* clinical strains with human osteoblastic cells: low invasion but high cytolytic potential of some Hly-producing strains. **Pathogens & Disease, 2015, 73:ftv065.**

202. Sousa S, Brion R, Lintunens M, Kronqvist P, Sandholm J, Mökkönen J, Kellokupu-Lehtinen PL, Tynninen O, Joensuu H, **Heymann D**, Määttä J. Human breast cancer cells educate macrophages toward the M2 activation status. **Breast Cancer Research, 2015, 17 :101.**

201. Lamora A, Mullard M, Amiaud J, Brion R, Heymann D, Redini F, Verrecchia F. Halofuginone inhibits primary tumor growth and lung metastasis development in osteosarcoma. **Oncotargets, 2015, 6: 14413-14427.**

200. Beranger GE, Djedaini M, Battaglia S, Roux CH, **Heymann D**, Amri EZ, Pisani DF. Oxytocin reversed osteoporosis in sex dependent manner. **Frontiers In Endocrine Research Topics, 2015; 6:181.**

199. Heymann MF, Renema N, **Heymann D.** Alpesilib: Phosphatidulinositol 3-kinase alpha (PI3Ka) inhibitor. Monograph. **Drugs of the Future**. **2015, 40: 213-223.**

198. Ségaliny AI, Mohamadi A, Dizier B, Lokajczyk A, Brion R, Lanel R, Amiaud J, Charrier C, Boisson-Vidal C, **Heymann D.** Interleukin-34 promotes the tumour progression and metastatic process in osteosarcoma through induction of angiogenesis and macrophage recruitment. **Int J Cancer, 2015, 137:73-85.**

197. Guihard P, Boutet MA, Brounais B, Gamblin AL, Renaud A, Berreur M, Redini F, **Heymann D**, Layrolle P, Blanchard F. Oncostatin M, an inflammatory cytokine produced by macrophages, supports intramembranous bone healing in a mouse model of tibia injury. **Am J Pathol, 2015, 185(3): 765-775.**

196. Ségaliny AI, Brion R, Mortier E, Maillasson M, Cherel M, Jacques Y, Le Goff B, **Heymann D**. Syndecan-1 regulates the biological activities of interleukin-34. **Biochim Biophys Acta Mol Cell Res, 2015 1853(5):1010-1021**

195. Segaliny AI, Tellez-Gabriel M, Heymann MF, **Heymann D**. Receptor tyrosine kinases: characterisation, mechanism of action and therapeutic interests for bone cancers. **J Bone Oncol, 2015, 4:1-12.**

194. Guiho R, Biteau K, **Heymann D**, Redini F. TRAIL-based therapy in pediatric bone tumors: how to overcome resistance. **Future Oncol, 2015,11(3):535-542.**

193. Cordova LA, Trichet V, Escriou V', Rosset P, Amiaud J, Battaglia S, Charrier C, Berreur M, Brion R, Gouin F, Passuti N, **Heymann D**. Inhibition of osteolysis and increase of bone formation after local administration of siRNA-targeting *RANK* in a polyethylene–particle-induced osteolysis model. **Acta Biomaterialia, 2015, 13:150-158.**

192. Gobin B, Baud'huin M, Lamoureux F, Charrier C, Lanel R, Battaglia S, Redini F, Lezot F, Blanchard F, **Heymann D**. BYL719, a new a-specific PI3K inhibitor: single administration and in combination with conventional chemotherapy for the treatment of osteosarcoma. **Int J Cancer, 2015. 136:784-96**

191. Lezot F, Chesneau J, Navet B, Gobin B, Choi YW, Yagita H, Mueller C, Redini F, **Heymann D**. Skeletal consequences of RANKL blocking antibody (IK22-5) injections during growth: mouse strains disparities and synergic effect with Zoledronic acid. **Bone, 2015, 73:51-59.**

Manuscripts 2014

190. Nollet M, Santucci-Darmanin S, Breuil V, Al-Sahlanee R, Cros C, Topi M, Momier D, Samson M, Pagnotta S, Cailleteau L, Battaglia S, Farlay D, Dacquin R, Barois N, Jurdic P, Boivin G, **Heymann D,** Lafont F, Lu SS Dempster D, Carle GF, Pierrefite-Carle V. Autophagy in Osteoblasts is involved in Mineralization and Bone Homeostasis. **Autophagy, 2014,10:1965-77.**

189. Brennan MA, Renaud A, Amiaud J, Rojewski MT, Schrezenmeier H, **Heymann D**, Trichet V, Layrolle P.
Preclinical studies of bone regeneration using GMP produced human mesenchymal stem cells associated with biphasic calcium phosphate. **Stem Cell Research & Therapy, 2014, 5: 114.**

188. Gamblin AL, Renaud A, Charrier C, Hulin P, Louarn G, **Heymann D**, Trichet V, layrolle P. Osteoblastic and osteoclastic differentiation of human mesenchymal stem cells and monocytes in a miniaturized three-dimensional culture with mineral granules. **Acta Biomaterialia, 2014, 10 :5139-5147.**

187. Darrieutort-Laffite C, Boutet MA, Chatelais M, Brion R, Blanchard F, **Heymann D**, Le Goff B. IL-1β and TNFα promote monocyte survival and proliferation trhough the induction of GM-CSF expression by synovial fibroblasts. **Mediators of Inflammation, 2014, ID241840 (10 pages).**

186. Télétchéa S, Stresing V, Hervouet S, Baud'huin M, Heymann MF, Bertho G, Charrier C, Ando K, **Heymann D**. Novel RANK antagonists for the treatment of bone resorptive disease: Theoretical predictions and experimental validation. **J Bone Miner Res, 2014, 29:1466-1477.**

185. Cordova Jara L, Stresing V, Gobin B, Rosset P, Passuti N, Gouin F, Layrolle P, Trichet V, **Heymann D**. Mouse models for the study of periprosthetic UHMWPE particles-induced osteolysis. **Clinical Sciences, 2014, 127(5):277-293.**

184. Gobin B, Battaglia S, Lanel R, Chesneau J, Amiaud J, Redini F, Ory B, **Heymann D**. NVP-BEZ235, a dual PI3K/mTOR inhibitor, inhibits osteosarcoma cell proliferation and tumor development *in vivo* with an improved survival rate. **Cancer Letters, 2014, 344:291-298.**

183. Gobin B, Moriceau G, Ory B, Charrier C, Brion R, Blanchard F, Rédini F, **Heymann D**. Therapeutic interest of imatinib mesylate in osteosarcoma: an open debate. **PloS One, 2014;9(3):e90795**

182. Lamoureux F, Baud'huin M, Rodriguez L, Jacques C, Lecanda F, Berreur M, Rédini F, Bradner JE, **Heymann D**, Ory B. Specific inhibition of BET bromodomains interferes with the vicious cycle of bone tumor development. **Nature Commun, 2014, 19;5:3511.**

181. Lamoureux F, Baud'huin M, Ory B, Guiho R, Zoubeidi A, Gleave M, **Heymann D**, Redini F. Clusterin inhibition using OGX-011 synergistically enhances zoledronic acid activity in osteosarcoma**. Oncotarget, 2014, 5 (17):7805-7819.**

180. Lezot F, Chesneau J, Battaglia S, Brion R, Farges JC, Castaneda B, **Heymann D,** Rédini F. Preclinical evidence of potential craniofacial adverse effect of zoledronic acid in pediatric population with bone malignancies. **Bone, 2014, 68: 146-152.**

179. Lau, AG, Sun J, Hanna WB, Livingston E, **Heymann D**, Bateman TA, Monahan P. Joint bleeding in factor VIII deficient mice causes an acute loss of trabecular bone which is prevented with prophylactic factor replacement. **Haemophilia, 2014, 20 :716-22.**

178. Lamora A, Talbot J, Bougras G, Leduc M, Cheneau J, Taurelle J, Stresing V, Le Deley MC, **Heymann D**, Redini F, Verrecchia F. Overexpression of Smad7 blocks primary tumor growth and lung metastasis development in osteosarcoma. **Clin Cancer Res, 2014, 20(19): 5097-5112.**

177. Gamblin AL, Brennan MA, Renaud A, Yagita H, Lézot F, **Heymann D**, Trichet V, Layrolle P. Bone tissue formation with human mesenchymal stem cells and biphasic calcium phosphate ceramics: the local implication of osteoclasts and macrophages. **Biomaterials, 2014, 35(36):9660-9667.**

176. Davaine JM, Quillard T, Brion R, Lapérine O, Merlini T, Gyyomarch B, Chatelais M, Guilbaud F, Brennan MA, Charrier C, **Heymann D**, Goueffic Y, Heymann MF. pericytes and bone-like vascular calcification are associated with carotid plaque stability**. PLoS One, 2014, 9(9):e107642.**

175. Odri G, Kim P, Lamoureux F, Charrier C, Battaglia S, Amiaud J, **Heymann D,** Gouin F, Rédini F. Zoledronic acid inhibits pulmonary metastasis dissemination in a preclinical model of Ewing's sarcoma via inhibition of cell migration. **BMC Cancer, 2014, 14:169.**

174. Beranger GE, Pisani DF, Castel J, Djedaini M, Battaglia S, Amiaud J, Boukhechba F, Ailhaud G, Michiels JF, **Heymann D**, Luquet S, Ez-Zoubir A. Oxytocin reverses ovariectomy-induced osteoporosis and intra-abdominal adiposity. **Endocrinology, 2014, 155:1340-52**.

173. Rousseau J, Gioia R, Layrolle P, Lieubeau B, **Heymann D**, Rossi A, Marini JC, Trichet V, Forlino A. Allele specific silencing reduces mutant collagen in Brtl fibroblasts, a murine model for *osteogenesis imperfecta*. **Eur J Human Genet, 2014, 22(5):667-674.**

Manuscripts 2013

172. Baud'huin M, Duplomb L, Télétchéa S, Ruiz-Velasco C, Maillasson M, Rédini F, Heymann MF, **Heymann D.** Osteoprotegerin: multiple partners for multiple functions. **Cytokine Growth Factors Rev, 2013, 14:401-409.**

171. Heymann D, Rédini F. Targeted therapies for bone sarcomas. **BoneKey Reports, 2013, 2**:**378.**

170. Le Goff B, Berthelot JM, Maugars Y, **Heymann D**. Osteoclasts in RA: Diverse origins and functions. **Joint Bone Spine, 2013, 80:586-591.**

169. Redini F, Odri G, Picarda G, Gaspar N, Heymann MF, Corradini N, **Heymann D**. Drugs targeting the bone microenvironment: new therapeutic tools in Ewing's sarcoma? **Expert Opinion on Emerging Drug, 2013 18(3):339-352.**

168. Ando K, Heymann MF, Stresing V, Kanji M, Redini F, **Heymann D**. Current therapeutic strategy and novel approaches in osteosarcoma. **Cancers, special issue: Soft Tissue and Bone Sarcoma, 2013, *5* : 591-616.**

167. Odri GA, Revert R, Deschamps C, Romih M, Maugars Y, **Heymann D**, Delecrin J. Effect of adding bone marrow to ceramic graft materials with different interconnectivities in lumbar arthrodesis : Quantification of bone formation. **J Orthop Sci. 2013, 18:321-330.**

166. Milan JL, Lavenus S, Pilet P, Louarn G, Wending S, **Heymann D**, Layrolle P, Chabrand P. Computational model combined with in vitro experiments to analyze mechanotransduction during mesenchymal stemm cell adhesion. **Eur Cell Materials, 2013, 25: 97-113.**

165. Picarda G, Matous E, Amiaud J, Charrier C, Lamoureux F, Heymann MF, Tirode F, Pitard B, Trichet V, **Heymann D**, Rédini F. Osteoprotegerin inhibits bone resorption and prevents tumor development in a xenogenic model of Ewing's sarcoma by inhibiting RANKL. **J Bone Oncol, 2013, 2: 95-104.**

164. Miot-Noirault E, David E, Vidal A, Besse S, Dauplat MM, Gouin F, **Heymann D**, Rédini F. Therapeutic efficacy of zoledronic acid in the swarm rat chondrosarcoma model assessed by ^{99}mTc-NTP 15-5 scintigraphic imaging. **European Journal of Nuclear Medicine and Molecular Imaging Research, 2013, 3(1):40.**

163. Monderer D, Luseau A, Bellec A, David E, Ponsolle S, Saiagh S, Bercegeay S, Piloquet P, Denis M, Lobé L, Rédini F, Biger M, **Heymann D,** Heymann MF, Le Bot R, Gouin F, Blanchard F. New chondrosarcoma cell lines and mouse models to study the link between chondrogenesis and chemoresistance. **Lab Invest, 2013, 93: 100-1114.**

162. Deschaseaux F, Gaillard J, Langonné A, Chauveau C, Naji A, Bouacida A, Rosset P, **Heymann D**, De Pinieux G, Rouas-Freiss, Sensebé, L. Regulation and function of immunosuppressive molecule human leukocyte antigen G5 in human bone tissue. **FASEB J, 2013, 27:2977-2987.**

161. Georges S, Chesneau J, Hervouet S, Taurelle J, Rédini F, Padrines M, **Heymann D**, Fortun Y, Verrecchia F. ADAM12 produced by tumor cells accelerates osteosarcoma tumor progression and associated osteolysis. **Eur J Cancer, 2013, 49:2253-2263.**

160. Talbot J, Brion R, Picarda G, Amiaud J, Chesneau J, Stresing V, Tirode F, **Heymann D,** Rédini F, Verrecchia F. Loss of connexin-43 expression in Ewing's sarcoma cells favors the development of the primary tumor and the associated osteolysis. **Biochim Biophys Acta–Molecular Basis of Disease, 2013, 1832:553-564.**

159. Lionetto S, Little A, Moriceau G, **Heymann D,** Decurtins M, Plecko M, Filgueria L, Cadosh D. Pharmacological blocking of the osteoclastic biocorrosion of surgical stainless steel *in vitro***. J Biomed Mat Res A, 2013, 101:991-997.**

158. Benslimane-Ahmin Z, Poirier F, Delomenie C, Lokajczyk A, Grelac F, Galy-Fauroux I, Mouhamedi A, Fischer AM, **Heymann D**, Lutomski D, Boisson-Vidal C. Mechanistic study of the proangiogenic effect of osteoprotegerin. **Angiogenesis, 2013, 16:575-593.**

157. Gouëffic Y, Davaine JM, Merlini T, Rimbert A, Hérisson F, Heymann MF, **Heymann D**, Steenman M, Lambert G. Arterial heterogeneity. **Rev Med Interne 2013, 34(1):61-5.**

Manuscripts 2012

156. Chemel M, Le Goff B, Brion R, Cozic C, Berreur M, Amiaud J, Bougras G, Touchais S, Blanchard F, Heymann MF, Berthelot JM, Verrecchia F, **Heymann D**. Interleukin-34 expression is associated with synovitis severity in rheumatoid arthritis. **Ann Rheum Dis, 2012, 71:150-154.**

155. Moriceau G, Roelofs A, Brion R, Redini F, Ebetino FH, Rogers MJ, **Heymann D**. Synergistic effect of apomine and lovastatin on osteosarcoma cell growth. **Cancer 2012,118:750-60. Selected by the Faculty of 1000.**

154. Ando K, Mori K, Verrecchia F, Baud'huin M, Rédini F, **Heymann D**. Molecular alterations associated with osteosarcoma development. **Sarcoma, 2012:523432.**

153. Heymann MF, Herisson, Davaine JM, Charrier C, Battaglia S, Passuti N, Lambert G, Goueffic Y, **Heymann D.** Role of the OPG/RANK/RANKL triad in calcifications of the atheromatous plaques: comparison between carotid and femoral beds. **Cytokine, 2012, 58:300-306.**

152. Heymann D. Anti-RANKL therapy for bone tumours: basic, pre-clinical and clinical evidences. **J Bone Oncol, 2012, 1:2-11.**

151. Anjubault T, Martin J, Hubert FX, Chauvin C, **Heymann D**, Josien R. Constitutive expression of TNF-related activation – induced cytokine (TRANCE)/Receptor Activator of NFkB (RANK)-L by rat plasmacytoid dendritic cells**. PLoS ONE 2012;7(3):e33713.**

150. David E, Tirode F, Baud'huin M, Guihard P, Laud K, Delattre O, Heymann MF, **Heymann D**, Rédini F, Blanchard F. Oncostatin M is a growth factor for Ewing sarcoma. **Am J Pathol, 2012, 181: 1782-1795.**

149. Guihard P, Danger Y, Brounais B, David E, Brion R, Delécrin J, Richards CD, Chevalier S, Rédini F, **Heymann D**, Gascan H, Blanchard F. Induction of bone formation by activated monocytes/macrophages depends on Oncostatin M signaling. **Stem Cells, 2012, 30:762-772.**

148. Picarda G, Surget S, Guiho R, Téletchéa S, Berreur M, Tirode F, Pellat-Deceunynck C, **Heymann D**, Trichet V, Rédini F. A functional, new short isoform of death receptor 4 in Ewing's sarcoma cell lines may be involved in TRAIL sensitivity/resistance mechanisms. **Mol Cancer Res, 2012,10:336-346.**

147. Odri GA, Hami A, Pomero V, Seite M, **Heymann D**, Bertrand-Vasseur A, Skalli W, Delecrin J. Development of a per-operative procedure for concentrated bone marrow adjunction in postero-lateral lumbar fusion: radiological, biological and clinical assessment. **Eur Spine J. 2012, 21:2665-2672.**

146. Peyrode C, Weber V, David E, Vidal A, Auzuloux, Communal Y, Dauplat MM, Besse S, Gouin F, **Heymann D**, Chezal JM, Redini F, Miot-Noirault E. Quaternary ammonium-melphalan conjugate for anticancer therapy of chondrosarcoma: *in vitro* and *in vivo* preclinical studies. **Invest New Drugs, 2012, 30:1782-90.**

145. Bouacida A, Rosset P, Trichet V, Cordonier T, **Heymann D**, Layrolle P, Sensebé L, Deschaseaux F. Pericyte-like progenitors show high immaturity and engraftment potential as compared with mesenchymal stem cells. **PLoS ONE**, **2012, 7(11):e48648.**

144. Miot-Noirault E, Gouin F, Dauplat MM, **Heymann D**, Chezal JM, Redini F. Relevance of the Pos-1 orthotopic model as an "imaging model" for *in vivo* and simultaneous monitoring of tumor proliferation and bone remodelling in osteosarcoma. **Cancer Biother Radiopharm 2012, 27:96-103.**

Manuscripts 2011

143. Le Goff B, **Heymann D**. Pharmacodynamics of bisphosphonates in arthritis. **Expert rev Clin Pharmacol 2011, 4: 633-641.**

142. Baud'huin M, Ruiz-Velasco C, Jego G, Charrier C, Gasiunas N, Gallagher J, Maillasson M, Naggi A, Padrines M, Redini F, Duplomb L, **Heymann D**. Glycosaminoglycans inhibit the adherence and the spreading of osteoclasts and their precursors: role in osteoclastogenesis and bone resorption. **Eur J Cell Biol, 2011, 90:49-57.**

141. David E, Blanchard F, Heymann MF, De Pinieux G, Gouin F, Redini F, **Heymann D**. The bone niche of chondrosarcoma: a sanctuary for drug resistance, tumour growth and also a source of new therapeutic targets. **Sarcoma, 2011, ID: 932451, 8 pages.**

140. Ando K, Mori K, Corradini N, Redini F, **Heymann D**. Mifamurtide for the treatment of nonmetastatic osteosarcoma. **Expert Opin Pharmacother, 2011, 12: 285-292**.

139. Heymann D and Redini F. Bone sarcomas: pathogenesis and new therapeutic approaches. **BoneKey Reports 2011, 8: 402-414.**

138. Battaglia S, Dumoucel S, Chesneau J, Heymann MF, Picarda G, Gouin F, Corradini N, **Heymann D**, Redini F. Impact of onco-pediatric dosing regimen of zoledronic acid on bone growth: preclinical studies and case report of an osteosarcoma pediatric patient. **J Bone Miner Res, 2011, 26: 2439-2451.**

137. Benslimane-Ahmim Z, **Heymann D**, Dizier B, Lokajczyk A, Brion R, Laurendeau I, Bièche I, Smadja D, Galy-Fauroux I, Colliec-Jouault S, Fischer A, Boisson-Vidal C. Osteoprotegerin, a new actor in vasculogenesis, stimulates endothelial colony-forming cells properties. **J Thromb Haemost, 2011, 9: 834-843.**

136. Picarda G, Trichet V, Teletchea S, **Heymann D**, Redini F. TRAIL receptor signaling and therapeutic option in bone tumors: the trap of the bone microenvironment. **Am J Cancer Res, 2011, 7: 23-38.**

135. Ruiz-Velasco C, Baud'huin M, Sinquin C, Maillasson M, **Heymann D**, Coliec-Jouault S, Padrines M. Effects of a sulphated "heparin-like"exopolysaccharide produced by *Altermonas infernicus* on bone biology. **Glycobiology, 2011, 6: 781-795.**

134. Peyrode C, Gouin F, Vidal A, Auzeloux P, Besse S, Dauplat MM, Askienazy S, **Heymann D**, Chezal JM, Redini F, Miot-Noirault E. 99mTc-NTP 15-5 Radiotracer for a molecular imaging of chondrosarcoma in nuclear medicine: proof of concept in rats. **Sarcoma, 2011, 691608 (8 pages).**

133. David E, Guihard P, Brounais B, Riet A, Charrier C, Battaglia S, Gouin F, Ponsolle S, Le Bot R, Richards CD, **Heymann D**, Rédini F, Blanchard F. Direct anti-cancer effect of oncostatin M on chondrosarcoma. **Int J Cancer, 2011, 128:1822-1835.**

132. Saidi S, Bouri F, Lencel P, Duplomb L, Baud'huin M, Delplace S, Leterme D, Miellot F, **Heymann D**, Hardouin P, Palmer G, Magne D. IL-33 is expressed in human osteoblasts, but has no direct effect on bone remodeling. **Cytokine, 2011, 53: 347-354.**

131. Hérisson F, Heymann MF, Charrier C, Chétiveau M, Battaglia S, Pilet P, Krempf M, Lemarchand P, **Heymann D**, Gouëffic Y.Carotid And Femoral Atherosclerotic Plaques Show Different Patterns. **Atherosclerosis, 2011, 216: 348-354.**

130. Picarda G, Odri G, Corradini N, **Heymann D**, Tirode F, Redini F. Targeting the bone microenvironment as a promising therapeutic approaches in Ewing's sarcoma. **Trends Cancer Res 2011, 7: 23-38.**

129. Egorov M, Aoun S, Padrines M, Redini F, **Heymann D,** Lebreton J, Mathe-Allaimat. A one-pot synthesis of 1-hydroxy-1,-diphosphonic acids starting from the corresponding carboxylic acids. **Eur J Org Chem, 2011, 7148-7154.**

128. Oliver L, Hue E, Rossignol J, Bougras G, Hulin P, Naveilhan P**, Heymann D,** Lescaudron L, Vallette FM. Distinct roles of Bcl-2 and Bcl-Xl in the apoptosis of human bone marrow mesenchymal stem cells during differentiation. **PLoS ONE, 2011, 6:e19820.**

127. Rousseau J, Escriou V, Lamoureux F, Brion R, Chesneau J, Battaglia S, Amiaud J, Scherman D, **Heymann D**, Redini F, Trichet V. Formulated siRNAs targeting Rankl prevent osteolysis and enhance chemotherapeutic response in osteosarcoma models**. J Bone Miner Res, 2011, 26: 2452-2462.**

Manuscripts 2010

126. Baud'huin M, Renault R, Charrier C, Riet A, Moreau A, Brion R, Gouin F, Duplomb L, **Heymann D**. Interleukin-34 is expressed by giant cell tumour of bone and plays a key role in RANKL-induced osteoclastogenesis. **J Pathol, 2010, 221: 77-86.**

125. Moriceau G, Ory B, Mitrofan L, Riganti C, Blanchard F, Brion R, Charrier C, Battaglia S, Pilet P, Denis MG, Shultz LD, Mönkkönen J, Rédini F, **Heymann D**. Zoledronic acid potentiates mTOR inhibition and abolishes the resistance of osteosarcoma cells to RAD001 (Everolimus): pivotal role of the prenylation process. **Cancer Res. 2010, 70:10329-10339.**

124. Moriceau G, Ory B, Gobin B, Verrecchia F, Gouin F, Blanchard F, Redini F, **Heymann D**. Therapeutic approach of primary bone tumors by bisphosphonates. **Curr Pharm Des. 2010;16:2981-7.**

123. Heymann D. Bisphosphonates and bone diseases: past, present and future (Editorial). **Curr Pharm Des. 2010, 16:2948-9.**

122. Heymann D. Interleukin-34: an enigmatic cytokine. **IBMS BoneKEY 2010, 7: 406-413.**

121. Odri GA, Dumoucel S, Picarda G, Battaglia S, Lamoureux F, Corradini N, Rousseau J, Tirode F, Laud K, Delattre O, Gouin F, **Heymann D**, Redini F. Zoledronic acid as a new adjuvant therapeutic strategy for Ewing's sarcoma patients. **Cancer Res. 2010, 70:7610-7619. Selected by the Faculty of 1000**

120. Picarda G, Lamoureux F, Geffroy L, Delepine P, Montier T, Laud K, Tirode F, Delattre O, **Heymann D**, Rédini F. Preclinical evidence of using TRAIL in Ewing's sarcoma therapy: TRAIL inhibits tumor growth, prevents osteolysis and increases animal survival. **Clin Cancer Res, 2010,16: 2363-2374.**

119. Le Goff B, Soltner E, Maugars Y, Rédini F, **Heymann D**, Berthelot JM. Association of methotrexate and zoledronic acid prevents bone erosions and systemic bone mass loos in a rat model of collagen induced arthritis. **Arthritis Res Ther, 2010, R185, 1-10.**

118. Ruiz Velasco C, Colliec-Jouault S, Redini F, **Heymann D**, Padrines M. Proteoglycans on bone tumor development. **Drug Discov Today, 2010, 15: 553-560.**

117. Le Goff B, Blanchard F, Berthelot JM, **Heymann D**, Maugars Y. Role for interleukin-6 in structural joint damage and systemic bone loss in rheumatoid arthritis. **Joint Bone Spine 2010, 77:201-215.**

116. Lézot F, Blin-Wakkach C, Thomas B, Castaneda B, Bolanos A, Hotton D, Sharpe P, **Heymann D**, Carles G, Gregoriadis A, Berdal A. Dlx homeobox gene expression in osteoclasts**. J Cell Physiol, 2010, 223: 779-787.**

115. Rousseau J, Escriou V, Parrot P, Picarda G, Charrier C, Scherman D, **Heymann D**, Rédini F, Trichet V. Advantages of bioluminescence imaging to follow siRNA or chemotherapeutic treatments in osteosarcoma preclinical models. **Cancer Gene Ther, 2010, 17 : 387-397.**

114. Perrot P, Rousseau J, Bouffaut A-L, Rédini F, Cassagnau E, Deschaseaux F, Heymann M-F, **Heymann D**, Duteille F, Trichet V, Gouin F. Safety concern between autologous fat graft, mesenchymal stem cells and osteosarcoma relapse. **PLoS ONE, 2010, 5, e10999: 1-10.**

113. Isidor B, Pichon O, Redon R, Day-Salvatore D, Hamel A, A. Siwicka K, Bitner-Glindzicz M, **Heymann D,** Kjellén L, Kraus C, G. Leroy J, Mortier GR, Rauch A, Verloes A, David A, Le Caignec C. Mesomelia-synostoses syndrome results from deletion of *SULF1* and *SLCO5A1* genes at 8q13. **Am J Human Genetic, 2010, 87: 95-100.**

Manuscripts 2009

112. Dechaseaux F, Sensébé L, **Heymann D**. The mechanism of bone repair and regeneration. **Trends Mol Med, 2009, 563: 1-13.**

111. Baud'huin M, Duplomb L, Télétchéa S, Charrier C, Maillasson M, Fouassier M, **Heymann D**. Factor VIII/von Willebrand factor complex controls RANKL-induced osteoclastogenesis and cell survival. **J Biol Chem, 2009, 264: 31704-31713.**

110. Mori K, Ando K, **Heymann D,** Redini F. Receptor activator of nuclear factor-kappa B ligand (RANKL) stimulates bone-associated tumours through functional RANK expressed on bone associated cancer cells? **Histol Histopathol, 2009, 24: 235-242.**

109. Lamoureux F, Picarda G, Garrigue L, Baud'huin M, Trichet V, Vidal A, Miot-Noirault E, Pitard B, **Heymann D**, Redini F. Glycosaminoglycans as potential regulators of osteoprotegerin therapeutic activity in osteosarcoma. **Cancer Res, 2009, 69: 526-536.**

108. Georges S, Ruiz Velasco C, Trichet V, Fortun Y, **Heymann D**, Padrines M. Proteases and bone remodelling. **Cytokine Growth Factor Rev, 2009, 20:29-41.**

107. Brounais B, David E, Chipoy C, Trichet V, Ferre V, Charrier C, Duplomb L, Berreur M, Rédini F, **Heymann D**, Blanchard F. Long term oncostatin M treatment induces an osteocyte-like differentiation on osteosarcoma and calvaria cells. **Bone, 2009, 44:830-839.**

106. Miot-Noirault E, Gouin F, Vidal A, Rapp M, Maublant J, Askienazy S, Chezal JM, **Heymann D**, Redini F, Moins N. First preclinical imaging of primary cartilage neoplasm and its local recurrence using ^{99}Tc-NTP 15-5 radiotracer. **J Nucl Med, 2009**, **50:1541–1547.**

105. Rossignol J, Boyer C, Thinard R, Remy S, Dugast AS, Dubayle D, Dey ND, Boeffard F, Delecrin J, **Heymann D**, Vandhove B, Anegon I, Naveilhan P, Dunbar GL, lescaudron L. Mesenchymal stem cells induce a weak immune response in the rat striatum after allo or xenotransplantation. **J Cell Mol Med, 2009,13: 2547-2558.**

Manuscripts 2008

104. Duplomb L, Baud'huin M, Charrier C, Berreur M, Trichet V, Blanchard F, **Heymann D**. Interleukin-6 inhibits receptor activator of nuclear factor kB ligand-induced osteoclastogenesis by diverting cells into the macrophage lineage: key role of serine727 phosphorylation of signal transducer and activator of transcription factor 3. **Endocrinology, 2008, 149: 3688-3697.**

103. Mori K, Ando K, **Heymann D**. Liposomal muramyl tripeptide phosphatidyl ethanolamine: a safe and effective agent against osteosarcoma pulmonary metastases. **Expert Rev Anticancer Ther, 2008, 8, 151-159.**

102. Ory B, Moriceau G, Trichet V, Blanchard F, Berreur M, Rédini F, Rogers MJ, **Heymann D**. Farnesyl diphosphate synthase is involved in the resistance to zoledronic acid of osteosarcoma cells. **J Cell Mol Med, 2008, 12, 928-941.**

101. Heymann MF, Riet A, Battaglia S, Paineau J, **Heymann D**. OPG, RANK and RANK ligand expression in thyroid lesions. **Regulatory Peptides, 2008, 148: 46-53**

100. Ando K, Mori K, Redini F, **Heymann D**. RANKL/RANK/OPG: key therapeutic target in bone oncology. **Curr Drug Discov Technol, 2008; 5: 263-268.**

99. Mori K, Rédini F, Blanchard F, Charrier C, Battaglia S, Duplomb L, Ando K, Shultz L, Redini F, **Heymann D**. Conditioned medium from osteosarcoma cells up-regulated MC3T3-E1 osteoblastic cell proliferation via JAKs and PI3-K/Akt signal cross-talk. **Cancer Sci, 2008; 99: 2170-2176.**

98. Lamoureux F, Picarda G, Rousseau J, Gourden C, Battaglia S, Charrier C, Pitard B, **Heymann D**, Redini F. Therapeutic efficacy of soluble receptor activator of NF-kB delivered by non viral gene transfer in a mouse model of osteolytic osteosarcoma. **Mol Cancer Ther, 2008; 7: 3389-3398.**

97. Lamoureux F, Ory B, Battaglia S, Pilet P, Heymann MF, Gouin F, Duteille F, **Heymann D**, Rédini F. Relevance of a new rat syngenic model of osteoblastic metastases from prostate carcinoma for pre-clinical studies using zoledronic acid. **Int J Cancer, 2008, 122: 751-760.**

96. Brounais B, Chipoy C, Mori K, Charrier C, Battaglia S, Pilet P, Richards CD, **Heymann D**, Redini F, Blanchard F. Oncostatin M induces bone loss and sensitizes rat osteosarcoma to the anti-tumor effect of midostaurin *in vivo*. **Clin Cancer Res, 2008; 14: 5400-5409.**

95. Brounais B, Ruiz Veslasco C, Rousseau J, Lamoureux F, Blanchard F, **Heymann D**, Redini F. Novel anti-cancer strategy in bone tumors by targeting molecular and cellular modulators of bone resorption. **Recent Patents on Anti-Cancer, Drug Discov, 2008; 3: 178-186.**

94. Chauvin C, Philippeau JM, Hubert FX, Wittrant Y, Lamoureux F, Trinité B, **Heymann D**, Rédini F, Josien R. Killer dendritic cells link innate and adaptive immunity against established osteosarcoma in rats. **Cancer Res, 2008, 68: 9433-9440.**

Manuscripts 2007

93. Ory B, Blanchard F, Battaglia S, Gouin F, Rédini F, **Heymann D.** Zoledronic acid activates the DNA S phase checkpoint and induces osteosarcoma cell death characterized by AIF and EndoG translocation in dependently of p53 and Rb status. **Mol Pharmacol, 2007, 71: 333-343.**

92. Duplomb L, Dagouassat M, Jourdon P, **Heymann D**. Embryonic stem cells: new tools to study osteoblast and osteoclast differentiation. **Stem Cells, 2007, 25, 544-552.**

91. Mori K, Berreur M, Le Goff B, Riet A, Moreau A, Blanchard F, Chevalier C, Guisle-Marsollier I, Léger J, Guicheux J, Masson M, Gouin F, Rédini F, **Heymann D**. Human osteosarcoma cells express functional Receptor Activator of Nuclear Factor-kappa B. **J Pathol, 2007, 211: 555-562.**

90. Duplomb L, Dagouassat M, Jourdon P, **Heymann D**. Differentiation of osteoblasts from mouse embryonic stem cells without generation of embryoïd body. **In vitro Cell Dev Biol: animals, 2007, 43: 21-24.**

89. Ory B, Moriceau G, Rédini F, **Heymann D**. mTOR inhibitors (rapamycin and derivatives) and nitrogen-bisphosphonates: bi-functional compounds for the treatment of bone tumors. **Current Med Chem, 2007, 14, 1381-1387.**

88. Baud'huin M, Lamoureux F, Duplomb L, Rédini F, **Heymann D**. RANKL, RANK, Osteoprotegerin: key partners of osteoimmunology and vascular diseases. **Cell Mol Life Sci, 2007, 64: 2334-2350.**

87. Mori K, Berreur M, Blanchard F, Chevalier C, Guisle-Marsollier I, Masson M, Rédini F, **Heymann D.** Receptor Activator of Nuclear Factor-kB Ligand (RANKL) directly modulates gene expression profile of RANK-positive Saos-2 human osteosarcoma cells. **Oncol Rep, 2007, 18: 1365-1371**

86. Baud'huin M, Duplomb L, Ruiz Velasco C, Fortun Y, **Heymann D**, Padrines M. Key roles of the OPG-RANK-RANKL system in bone oncology. **Expert Rev Anticancer Ther, 2007, 7, 221-232.**

85. Mori K, Le Goff B, Charrier C, Battaglia S, **Heymann D,** Rédini F. DU145 human prostate cancer cells express functional receptor activator of NFkB: new insights in the prostate cancer bone metastasis process. **Bone, 2007, 40, 981-990.**

84. Lamoureux M, Baud'huin M, Duplomb L, **Heymann D,** Rédini F. Proteoglycans : key partners of the Bone cell biology. **Bioessays, 2007, 29:758-771.**

83. Chipoy C, Brounais B, Trichet V, Battaglia S, Berreur M, Oliver L, Juin P, Rédini F, **Heymann D**, Blanchard F. Sensitization of osteosarcoma cells to apoptosis by oncostatin M depends on STAT5 and p53. **Oncogene, 2007, 26: 6653-6664.**

82. Lamoureux F, Richard P, Wittrant Y, Battaglia S, Pilet P, Trichet V, Pitard B, **Heymann D**, Rédini F. Therapeutic relevance of osteoprotegerin gene therapy in osteosarcoma: prevention of bone resorption, inhibition of tumor progression, increase of animal survival. **Cancer Res, 2007, 67: 7308-7318**

81. Perrot P, **Heymann D**, Rédini F, Charrier C, Couillaud S, Duteille F. Extraosseous bone formation obtained by association of mesenchymal stem cells and a periosteal flap in the rat. **Ann Plat Surg, 2007, 59: 201-206.**

Manuscripts 2006

80. Gouin F, Rédini F, Ory B, **Heymann D.** Zoledronic acid slows down rat chondrosarcoma progression, increases overall survival and delays tumor recurrence after intralesional curettage. **Int J Cancer, 2006, 119:980-984.**

79. Théoleyre S, Kwan Tat S, Vusio P, Blanchard F, Gallagher J, Ricard-Blum S, Fortun Y, Padrines M, Rédini F, **Heymann D.** Characterization of osteoprotegerin binding to glycosaminoglycans by surface plasmon resonance: role in the interactions with Receptor Activator of Nuclear Factor kB Ligand (RANKL) and RANK. **Biochem Biophys Res Commun, 2006, 347:460-467**.

78. Mori K, Rédini F, Gouin F, Cherrier B, **Heymann D**. Osteosarcoma: current status of immunotherapy and future trends. **Oncol Rep, 2006, 15 : 693-700.**

77. Heymann D. Autophagy and inflammation: a protective mechanism in response to the stress**. Current Opinion Invest Drugs, 2006, 7: 443-450.**

76. Wittrant Y, Mori K, Riet A, Kamijo A, **Heymann D,** Rédini F. RANKL directly induces bone morphogenetic protein-2 expression in RANK-expression POS-1 osteosarcoma cells. **Int J Oncol, 2006, 28: 261-269.**

75. Kwan Tat S, Padrines M, Théoleyre S, Battaglia S, **Heymann D**, Redini F, Fortun Y. OPG/membranous-RANKL complex is internalized *via* the clathrin pathway before a lysosomal and a proteasomal degradation. **Bone, 2006, 39:706-715.**

Manuscripts 2005

74. Heymann D, Fortun Y, Rédini F, Padrines M**.** Osteolytic bone diseases: physiological analogues of bone resorption effectors as alternative therapeutic tools to the standard bisphosphonates. **Drug Discov Today, 2005, 10: 242-247.**

73. Heymann D, Ory B, Blanchard F, Heymann MF, Coipeau P, Charrier C, Couillaud S, Thièry JP, Gouin F, Rédini F. Enhanced tumor regression and tissue repair when zoledronic acid is combined with ifosfamide in rat osteosarcoma. **Bone, 2005, 37: 74-86.**

72. Théoleyre S, Mori K, Cherrier B, Passuti N, Gouin F, Rédini F, **Heymann D**. Phenotypic and functional analysis of lymphocytes infiltrating bone-associated tumors: use as a new therapeutic approach of osteosarcoma. **BMC Cancer, 2005, 5: 123 (1-10).**

71. Cherrier B, Gouin F, Thiéry JP, Rédini F, **Heymann D**, Duteille F. A new experimental rat model of osteosarcoma established by intra-femoral tumor cell inoculation, useful for biology and therapy investigations. **Tumor Biol, 2005, 26: 121-130.**

70. Ory B, Heymann MF, Blanchard F, Kamijo A, Gouin F, **Heymann D**, Rédini F. Zoledronic acid suppresses lung metastases and extends overall survival of osteosarcoma of osteosarcoma-bearing mice. **Cancer, 2005, 104: 2522-2529.**

69. Romih M, Delécrin J, **Heymann D**, Passuti N. The vertebral interbody grafting site's low concentration in osteogenic progenitors can greatly benefit from addition of iliac crest bone marrow. **Eur Spine J, 2005, 14: 645-648**.

Manuscripts 2004

68. Théoleyre S, Wittrant Y, Kwan Tat S, Fortun Y, Redini F, **Heymann D**. The molecular triad OPG/RANK/RANKL: Involvement in the orchestration of pathophysiological bone remodeling. **Cytokine Growth Factor Rev, 2004, 15: 457-475.**

67. **Heymann D**, Ory B, Gouin F, Green J, Rédini F. Bisphosphonates : new therapeutic agents for the treatment of bone tumors. **Trends Mol Med, 2004, 10: 337-343.**

66. Théoleyre S, Wittrant Y, Couillaud S, Vusio P, Berreur M, Dunstan C, Blanchard F, Rédini F, **Heymann D**. Cellular activity and signalling induced by osteoprotegerin in osteoclasts: involvement of receptor activator of NF-kB ligand and MAPK. **Biochim Biophys Acta Mol Cell Res, 2004, 1644: 167.**

65. Wittrant Y, Théoleyre S, Chipoy C, Padrines M, Blanchard F, **Heymann D**, Rédini F. RANKL/RANK/OPG: new therapeutic targets in bone tumors and associated osteolysis. **Biochim Biophys Acta Cancer Rev, 2004, 1704:49-57.**

64. Chipoy C, Berreur M, Couillaud S, Pradal G, Vallette F, Colombeix C, Rédini F, **Heymann D**, Blanchard F. Down-regulation of osteoblast markers and induction of the glial fibrillary acidic protein by oncostatin M in osteosarcoma cells required PKCd and STAT3. **J. Bone Miner Res, 2004, 19: 1850-1861.**

63. Wittrant Y, Théoleyre S, Couillaud S, Dunstan C, **Heymann D**, Rédini F. Relevance of *in vitro* osteoclastogenesis system to study receptor activator of NF-kB ligand (RANKL) and osteoprotegerin (OPG) biological activities ? **Exp Cell Res, 2004, 293: 292-301.**

62. Kwan Tat S, Padrines M, Théoleyre S**, Heymann D**, Fortun Y. IL6, RANKL, TNF-alpha/IL1: interrelations in bone resorption pathology. **Cytokine Growth Factor Reviews, 2004, 15: 49-60.**

61. Guérin P, Rondeau F, Grimandi G, **Heymann D**, Heymann MF, Pilet P, Al Habash O, Loirand G, Pacaud P, Crochet D. Neointimal hyperplasia after stenting in a human mammary artery organ culture. **J Vasc Res, 2004, 41: 46-53.**

Manuscripts 2003

60. Grimaud E, Soubigou L, Couillaud S, Coipeau P, Moreau A, Passuti N, Gouin F, Rédini F, **Heymann D**. Receptor activator of NF-kB ligand (RANKL)/osteoprotegerin (OPG) ratio is increased in severe osteolysis. **Am J Pathol, 2003, 163: 2021-2031.**

59. Gouin F, Grimaud E, Rédini F, Moreau A, Passuti N, **Heymann D**. Are metatarsal giant cell tumours and giant-cell reparative granuloma different entities? A clinical, pathological, ultrastructural and *in vitro* resorption ability analysis of two cases. **Clin Orthop Rel Res, 2003, 416: 278-284.**

58. Wittrant Y, Théoleyre S, Couillaud S, Dunstan C, **Heymann D**, Rédini F. Regulation of osteoclast protease expression by RANKL. **Biochem Biophys Res Commun, 2003, 310:774-778.**

57. Robert H, Es-Sayeh J, **Heymann D**, Passuti N, Eliot S, Vaneenoge E. Hamstring insertion site healing after anterior cruciate ligament reconstruction in patients with symptomatic harware orrepeat rupture : a histologic study in 12 patients. **Arthroscopy, 2003, 19: 948-954.**

56. Rousselle AV, **Heymann D.** Osteoclastic acidification pathways during bone resorption. **Bone, 2002, 30: 533-540.**

Manuscripts 2002

55. Wittrant Y, Couillaud S, Théoleyre S, Dunstan C, **Heymann D**, Rédini F. Osteoprotegerin differentially regulates protease expression in osteoclast cultures. **Biochem Biophys Res Commun, 2002, 293: 38-44.**

54. Grimaud E, **Heymann D**, Rédini F. Recent advances in TGF-b effects on chondrocyte metabolism. Potential therapeutic roles of TGF-b in cartlage disorders. **Cytokine Growth Factors Rev, 2002, 13: 241-257.**

53. Grimaud E, Blanchard F, Charrier C, Gouin F, Rédini F, **Heymann D.** Leukaemia inhibitory factor (LIF) is expressed in hypertrophic chondrocytes and vascular sprouts during osteogenesis. **Cytokine, 2002, 20 : 224-230.**

52. Grimaud E, Damiens C, Rousselle AV, Passuti N, **Heymann D,** Gouin F. Bone remodelling and tumor grade modifications induced by interactions between bone and swarm rat chondrosarcoma. **Histol Histopathol, 2002: 17: 1103-1111.**

51. Rousselle AV, **Heymann D**, Demais V, Charrier C, Passuti N, Baslé MF. Influence of metal ion solutions on rabbit osteoclast activities *in vitro*. **Histol Histopathol, 2002: 17: 1025-1032.**

Manuscripts 2001

50. Heymann D, Guicheux J, Rousselle AV, Cottrel M. Ultrastructural evidences *in vitro* of osteoclast-induced degradation of calcium phosphate ceramic by simultaneous resorption and phagocytosis mechanisms. **Histol Histopathol, 2001, 16: 37-44.**

49. Heymann D, Delécrin J, Deschamps C, Gouin F, Padrines M, Passuti N. Etude *in vitro* de l'association ce cellules ostéogènes avec une céramique en phosphate de calcium. **Rev Chir Orthop, 2001, 87: 8-17.**

48. Rousselle AV, Damiens E. Grimaud, C, Fortun Y, Padrines M, Passuti N, **Heymann D.** Potential synergies between matrix proteins and soluble factors on resorption and proteinase activities of rabbit bone cells. **Histol Histopathol, 2001, 16: 727-734.**

47. Grimaud E, Rédini F, **Heymann D.** Osteoprotegerin : a new therapeutic agent for the treatment of bone disease**. Drug Discov Today, 2001, 6: 1241-1242.**

46. Bohic S, Simionovivi A, Snigirev A, Ortega R, Devès G, **Heymann D**, Schroer G. Synchrotron hard x-ray microprobe: fluorescence imaging of single cells. **Applied Physics Lett, 2001, 78: 3544-3546.**

45. Delécrin J, Deschamps C, Romi M, **Heymann D,** Passuti N. Influence of bone environment on ceramic osteointegration in spinal fusion : comparison of bone-poor and bone-rich sites. **Eur Spine J, 2001, 10: S110-S113.**

44. Gauthier O, Boudigues S, Pilet P, Aguado E, **Heymann D**, Daculsi G. Scanning electron microscopic description of cellular activity and mineral changes in feline osteoclastic resorptive lesions. **J Vet Dent, 2001, 18: 171-176.**

Manuscripts 2000

43. Rousselle AV, Damiens C, Fortun Y, Padrines M, **Heymann D.** Human growth hormone influences proteinase activities of rabbit bone cells via IGF-1 : modulation by vitronectin. **Biochem Biophys Res Commun, 2000, 268 : 875-881.**

42. Rousselle AV, Damiens C, Guicheux J, Pilet P, Padrines M**, Heymann D.** Effets *in vitro* de l'hormone de croissance sur l'activité des cellules osseuses. **Rev Chir Orthop, 2000, 86 : 256-264.**

41. Heymann D. Apport des modèles *in vitro* (cultures cellulaires et facteurs de croissance). **Rev Chir Orthop, 2000, 86 : 152-153.**

40. Heymann D, Rousselle AV. gp130 cytokine family and bone cells. **Cytokine, 2000, 12 : 1455-1468.**

39. Padrines M, Rohanizadeh R, Damiens C, **Heymann D**, Fortun Y. Inhibition of hydroxyapatite formation by vitronectin. **Connect Tissue Res, 2000, 41 : 101-108.**

38. Damiens C, Grimaud E,, Rousselle AV, Charrier C, Fortun Y, **Heymann D,** Padrines M. Cysteine protease production by human osteosarcome cells (MG63, SaOS2) and its modulation by soluble factors. **Cytokine, 2000, 5: 539-542.**

37. Damiens C, Fortun Y, Charrier C, **Heymann D,** Padrines M. Modulation by soluble factors of gelatinase activities released by osteoblastic cells. **Cytokine, 2000, 12: 1727-1731.**

Manuscripts 1999

36. Toquet J, Rohanizadeh R, Guicheux J, Couillaud C, Passuti N, Daculsi G, **Heymann D**. Osteogenic potential in vitro of human bone marrow cells cultured on biphasic calcium phosphate ceramic**. J Biomed Mater Res, 1999, 44 : 98-108.**

35. Gouin F., Couillaud C., Cottrel M., Godard A., Passuti N., **Heymann D.** Presence of Leukaemia Inhibitory Factor (LIF) and LIFR-receptor chain (gp190) in osteoclast-like from giant cells tumours of bone. Ultrastructural immunolocalization. **Cytokine, 1999, 11 : 282-289.**

34. Gouin F, Moreau A, Couillaud S, Guicheux J, Passuti N, Godard A, **Heymann D.** Expression of leukemia inhibitory factor by cartilage-forming tumours of bone: an immunohistochemical study. **J Orthop Res, 1999, 17 : 301-305.**

33. Gouin F, Moreau A, Guicheux J, Passuti N, **Heymann D**. Physiopathologie de l'ostéolyse tumorale. **Rev Chir Orthop, 1999, 85 : 58-68.**

32. Heymann D, Pradal G, Benahmed M. Cellular mechanisms of calcium phosphate ceramic degradation**. Histol Histopathol, 1999, 14 : 871-877.**

31. Kimakhe S, Bohic S, Larrose C, Reynaud A, Pilet P, Giumelli B**, Heymann D**, Daculsi G. Biological activities of sustained polymixin B release from calcium phosphate biomaterial prepared by dynamic compaction : an *in vitro* study**. J Biomed Mat Res, 1999, 47 : 18-27.**

30. Malard O, Bouler JM, Guicheux J, **Heymann D,** Pilet P, Coquard C, Daculsi G. Influence of biphasic calcium phosphate granulometry on bone ingrowth, ceramic resorption and inflammatory reactions- Preliminary *in vitro* and *in vivo* study. **J Biomed Mater Res, 1999, 46 : 103-111.**

Manuscripts 1998

29. Heymann D, Guicheux J, Gouin F, Cottrel M, Daculsi G. Oncostatin M stimulates the macrophage polykaryon formation in long-term human bone marrow cultures**. Cytokine, 1998, 10 : 98-109.**

28. Heymann D, Guicheux J, Gouin F, Passuti N, Daculsi G. Cytokines, growth factors and osteoclasts. **Cytokine, 1998, 10 : 155-168.**

27. Heymann D, Touchais S, Bohic S, Rohanizadeh R, Coquard C, Passuti N, Daculsi G. Heterotopic implantation of mouse bone marrow cells. An in vivo model allowing to analysis of the mineral phases during the mineralization processes**. Connective Tissue Res 1998, 37: 219-231.**

26. Bohic S, Pilet P, **Heymann D.** Effects of leukemia inhibitory factor and oncostatin M on bone mineral formed in *in vitro* rat bone-marrow stromal cell culture: physicochemical aspects. **Biochem Biophys Res Commun, 1998, 253 : 506-513.**

25. Guicheux J, Aguado E, Gauthier O, Pilet P, Couillaud S, Jegou D, Daculsi G, **Heymann D**. Human growth hormone locally released in bone site by calcium phosphate biomaterial stimulates the ceramic bone substitution without evidence of systemic effects: a rabbit study. **J Bone Miner Res, 1998, 13: 739-748.**

24. Bohic S, Rohanizadeh R, Touchais S, Godard A, Passuti N, Daculsi G, **Heymann D**. Leukemia Inhibitory Factor (LIF) and Oncostatin M (OSM) influence the mineral phases in a murine heterotopic calcification model. A fourier Transform-Infrared microscopic (FT-IR) study. **J Bone Miner Res 1998, 13: 1619-1632.**

23. Gouin F, **Heymann D**, Raher S, De Groote D, Passuti N, Daculsi G, Godard A. Increased concentrations of leukemia inhibitory factor in urine and tissue culture supernatant of patients with primary bone tumors. **Cytokine, 1998, 10: 110-114.**

22. Guicheux J, **Heymann D**, Gouin F, Pilet P, Faivre A, Daculsi G. Growth hormone stimulates multinucleated cell formation in long-term human bone marrow cultures. **Eur J Cell Biol, 1998, 75 : 59-65.**

21. Guicheux J, **Heymann D**, Rousselle AV, Pilet P, Yamada S, Daculsi G. Evidences for growth hormone stimulatory effects on osteoclastic resorption and demonstration of insulin-like growth factor-1 mediated response. **Bone, 1998, 22: 25-31.**
20. Kimakhe S, **Heymann D**, Guicheux J, Pilet P, Giumelli B, Daculsi G. Polymyxin B inhibits biphasic calcium phosphate ceramic degradation induced by LPS-activated huam monocytes/macrophages. **J Biomed Mat Res, 1998, 40 : 336-340.**

19. Guicheux J, Kimakhe S, **Heymann D,** Pilet P, Daculsi G. Human growth hormone stimulates calcium phopshate biomaterial degradation by human monocytes *in vitro*. **J Biomed Mat Res, 1998, 40: 79-85.**

18. Guicheux J, Gauthier O, Aguado E, **Heymann D**, Pilet P, Couillaud S, Faivre A, Daculsi G. Growth hormone loaded macroporous calcium phosphate ceramic: in vitro biopharmaceutical characterization and *in vitro* preliminary study. **J Biomed Mat Res, 1998, 40 : 560-566.**

Manuscripts 1997
17. Heymann D, Gouin F, Guicheux J, Munevar JC, Godard A, Daculsi G. Upmodulation of multinucleated cell formation in long-term human bone marrow cultures by Leukemia Inhibitory Factor (LIF). **Cytokine, 1997, 1: 46-52.**

16. Yamada S, **Heymann D,** Bouler JM, Daculsi G. Osteoclastic resorption of calcium phosphate ceramics with various hydroxyapatite/b-tricalcium phosphate ratios**. Biomaterials, 1997, 18 : 1037-1041.**

15. Guicheux J, **Heymann D**, Trécant M, Gautier H, Faivre A, Daculsi G. Association of human growth hormone and calcium phosphate by dynamic compaction: *in vitro* biocompatibility and bioactivity. **J Biomed Mat Res, 1997, 36: 258-264.**

14. Yamada S, **Heymann D**, Bouler JM, Daculsi G. Osteoclastic resorption of biphasic calcium phosphate ceramic *in vitro*. **J Biomed Mat Res, 1997, 37: 346-352.**

Manuscripts 1996
13. Heymann D, Godard A, Raher S, Bentouimou N, Blanchard F, Cherel M, Hallet MM and Jacques Y. Leukemia Inhibitory Factor (LIF) and Oncostatin M (OSM) high affinity binding require additional receptor subunits besides GP130 and GP190. **Cytokine, 1996, 8: 197-205.**

12. Heymann D, L'Her E, Ngyen JM, Raher S, Canfrère I, Coupey L, Fixe P, Chailleux E, De Groote D, Praloran V and Godard A. Leukemia Inhibitory Factor (LIF) production in pleural effusions: comparison with production of interleukin(s)-4, -8, -10 and Macrophage-Colony Stimulating Factor (M-CSF). **Cytokine 1996, 8: 410-416.**

11. Benahmed M, **Heymann D**, Pilet P, Bienvenu J, Daculsi G. LPS increases biomaterial degradation by human monocytes *in vitro*. **J Biomed Mat Res, 1996, 34: 115-119.**

10. Benahmed M, **Heymann D**, Berreur M, Cottrel M, Godard A, Daculsi D, Pradal G. Ultrastructural study of calcium phosphate ceramic biodegradation by human monocytes: modulation of this activity by HILDA/LIF cytokine. **J Histochem Cytochem, 1996, 44: 1131-1140.**

9. Fixe P, Lorgeot V, Lemeur Y, Coupey L, **Heymann D**, Godard A and Praloran V. Development of enzymo-immunoassays (EIA) for Macrophage Colony-Stimulating-Factor (M-CSF) and Leukemia Inhibitory Factor (LIF) by using the same capture and signal generating polyclonal antibody. **Cytokine, 1996, 8: 586-591.**

8. Benahmed M, Bouler JM, **Heymann D**, Gan O, Daculsi G. Biodegradation of synthetic biphasic calcium phosphate by human monocytes *in vitro*: a morphological study. **Biomaterials, 1996, 17: 2173-2178**.

7. Martens H, Malgrange B, Robert F, Charlet C, De Groote D, **Heymann D**, Godard A, Soulillou JP, Moonen G, Geenen V. Cytokine production by human epithelial cells: control by the immune recognition of the neurohypophysial self-antigen. **Regulatory Peptides, 1996, 67: 39-45.**

6. Pontvert-Delucq S, Hibner U, Vilmer E, Baillou C, Rohrlich P, **Heymann D,** Najman A, Guigon M, Lemoine FM. Heterogeneity of B lineage acute lymphoblastic leukemias (B-ALL) with regard to their in vitro spontaneous proliferation, growth factor response and BCL-2 expression. **Leukemia Lymphoma, 1996, 21: 267-280.**

Manuscripts 1995

5. Heymann D, Godard A, Raher S, Ringeard S, Lassort D, Blanchard F and Harb J. Human Interleukin for DA cells/Leukemia Inhibitory Factor and Oncostatin M enhance membrane expression of Intercellular Adhesion Molecule-1 on melanoma cells but not the shedding of its soluble form. **Cytokine, 1995, 7: 111-117**.

4. Heymann D, Harb J, Ringeard S, Blanchard F, Lassort D, Raher S and Godard. A. Upmodulation of avb1 integrin expression on human tumor cells by human interleukin for DA cells/leukemia inhibitory factor and oncostatin M. **J Cell Biochem, 1995, 58: 305-314.**

3. Heymann D, Blanchard F, Raher S, De Groote D and Godard A. Modulation of LIF expression in human melanoma cells by Oncostatin M. **Immunol Lett, 1995, 46: 245-251.**

2. Soueidan A, Gan OI, Gouin F, Godard A, **Heymann D**, Jacques Y, Daculsi G. Culturing of cells from giant cell tumor of bone on natural and synthetic calcified substrata: the effect of leukemia inhibitory factor and vitamin D3 on the resorbing activity of osteoclast-like cells. **Virchows Archiv, 1995, 426: 469-477.**

Manuscript 1992

1. Godard A, **Heymann D**, Raher S, Anegon I, Peyrat MA, Le Mauff B, Mouray E, Gregoire M, Virdee K, Soulillou JP, Moreau JF and Jacques Y. High and low-affinity receptors for human interleukin for DA cells/leukemia inhibitory factor on human cells: characterization and cellular distribution. **J Biol Chem, 1992, 26: 3214-3222.**

BOOKS

2022

4. Heymann D (Executive Editor). Bone Cancer, 3rd Edition. "Bone Sarcomas and Bone Metastases - From Bench to Bedside", **Publisher Academic Press (Elsevier, 69 Chapters). ISBN: 978-0-12-821666-8**

2014

3. Heymann D (Executive Editor) "Bone Cancer: Primary Bone Cancers and Bone Metastases", **Second Edition, Publisher Acadamic Press (Elsevier), (58 Chapters), September 2014.**

2010

2. Special issues on bisphosphonates, **Current Pharmaceutical Design (Executive Guest Editor, D. Heymann, Publisher Bentham)**. **2010.**

2009

3. Heymann D (Executive Editor) "Bone Cancer: Recent Advances in Bone Cancer Progression and Therapeutic Approaches", **Publisher Acadamic Press (Elsevier), Sept. 2009 (28 Chapters).**

BOOK CHAPTERS

2022

28. Jubelin C, Cochonneau D, Moranton E, Munoz-Garcia J, Heymann D. Circulating tumor cells and ctDNA in sarcomas. **In Cancer metastasis through the lymphovascular system, Springer Ed, Chapter 12, pp121-128**

27. Munoz-Garcia J, Lézot F, Cochonneau D, Grigoriadis AE, **Heymann D.** Mammalian models of bone sarcomas. **In Bone Cancer 3rd Edition, Publisher Academic Press (Elsevier) (Ed Heymann D.), chapter 3, pp 27-34.**

26. Tellez-Gabriel M, **Heymann D.** Liquid biopsy and circulating tumor cells in bone sarcomas: identification of new biomarkers and analysis of the tumor heterogeity. **In Bone Cancer 3rd Edition, Publisher Academic Press (Elsevier) (Ed Heymann D.), Chapter 35, pp 487-500**

2021

25. Bovée JVMG, Wuyts W, **Heymann D**. Osteochondroma. **World Health Organization Classification of Tumors, International Agency for Research on Cancer, 5th Edition. Pp 356-358**

2019

25. Jacques C, Renema N, Ory B, Walkley CR, Grigoriadis AE, **Heymann D.** Pre-clinical murine models of bone sarcomas induced by tumour-cell injections. **In Bone Protocols, Springer (Ed A Idris), Chapter 18, 331-342.**

2017

24. Heymann MF, **Heymann D.** Immune environment and osteosarcoma**. In Osteosarcoma, Intech, Eds Dr Honoki & Weiss. Chapter 6, 106-120.**

23. Heymann D, Heymann MF. Osteoprotegerin. **Encyclopedia of Signaling Molecules, 2nd Edition, Springer (Ed Sangdun Choi). 2017, 3687-3693**

2015

22. Heymann D. Zoledronic acid. **Encyclopedia of Cancer. Springer (Ed Schwab Manfred).**

2013

21. Bovée JVMG, Wuyts W, **Heymann D**. Osteochondroma. **World Health Organization Classification of Tumors, International Agency for Research on Cancer, 4th Edition, 2013, 250-251.**

2012

20. Ory B, Moriceau G, Gobin B, Redini F, **Heymann D**. mTOR inhibitors (rapamycin and its derivatives) and nitrogen containing bisphosphonates: bi-functional compounds for the treatment of bone tumors. **Frontiers in Medicinal Chemistry, Ed Bentham, 2012, 6:189-202.**

19. Gobin B, Baud'huin M, Isidor B, **Heymann D,** Heymann MF. Monoclonal antibodies targeting RANKL in bone metastasis treatment. **In Monoclonal antibodies in oncology, Ed. Fatih M. Uckum, eBook Future Medicine Ltd, 2012, 42-53.**

18. Heymann D. Novel targeted therapies of bone tumors and future directions. In Advances in Bone Metastasis Management. **Ed P. Picci/P. Ruggieri, eBook Future Medicine Ltd, 2012, 124-133 (DOI 10.2217/9781780840307)**

17. Baud'huin M, Charrier C, Bougras G, Brion R, Lezot F, Padrines M, **Heymann D**. Proteoglycans and osteolysis. **Series "Methods in Molecular Biology" (Humana Press, Ed Rédini F) "Proteoglycans", Chapter 1,2012:323-337**

16. Georges S, **Heymann D**, Padrines M. Modulatory effects of proteoglycans on proteinase activities. **Series "Methods in Molecular Biology" (Humana Press, Ed Rédini F) "Proteoglycans", Chapter 20, 2012:307-322.**

2011

15. Mori K, Endo K, Lézot F, **Heymann D**. RANK/RANKL axis in melanoma. **Breakthroughs in Melanoma Research, Ed: Y. Tanaka, Publisher: InTech, 2011, Chapt. 27, pp575-582.**

14. Heymann D. Zoledronic acid. **Encyclopedia of Cancer. Springer (Ed Schwab Manfred).**

2009

13. Ruiz-Velasco C, Fortun Y, Heymann D, Padrines M. Protease and therapeutic approaches of bone tumors. Chap 9, 107-119. **In "Bone Cancer: Recent Advances in Bone Cancer Progression and Therapeutic Approaches", Ed D. Heymann Publisher Elsevier, Sept. 2009 Chapt. 8, 97-105.**

12. Mori K, **Heymann D**. "Key role of bone microenvironment on prostate cancer metastasis", **Handbook of Prostate Cancer Cell Research, Ed. AT Meridith, Nova Biomedical, 2009, Chapt. 14, pp449-455.**

2007

11. Heymann D. Zoledronic acid. **Encyclopedia of Cancer. Springer (Ed Schwab Manfred).**

2001

10. Delecrin J, Passuti N, Gouin F, **Heymann D.** Bone substitutes. **In Surgical Techniques in orthopedics and traumatology, 2001, 55-010-F-10.**

2000

9. Heymann D. Les techniques de culture cellulaire et leurs applications aux pathologies ostéoarticulaires. **In Actualités en biomatériaux, Ed. Romillat, vol. V, 2000, 163-172.**

1999

8. Passuti N, Delecrin J, Gouin F, **Heymann D**. Substituts osseux. **In Enclyclopédie Medico-Chirurgicale, 1999, 14-015-B-10,**

7. Passuti N, Delecrin J, **Heymann D,** Gouin F. Les substituts osseux appliqués à la chirurgie du rachis. In Dégérescence du rachis lombaire et lombalgies, **Ed Sauramps medical, 1999, 149-154.**

1998

6. Heymann D. Qu'est ce qu'une cytokine, perspectives d'applications aux substituts osseux**. In Actualités en biomatériaux, Ed. Romillat, vol IV, 1998, 165-172.**

5. Heymann D, Benahmed M, Pilet P, Bienvenu J, Daculsi G. Stimulation de la dégradation in vitro d'une céramique en phosphate de calcium par les monocytes humains activés par les lipopolysaccharides (LPS). **In Actualités en biomatériaux, Ed. Romillat, vol IV, 1998, 279-284.**

4. Benahmed M, **Heymann D,** Berreur M, Cottrel M, Godard A, Daculsi G, Pradal G. Etude ultrastructurale de la dégradation en PCa par des monocytes humains. Modulation de cette activité par la cytokine HILDA/LIF. **In Actualités en biomatériaux, Ed. Romillat, vol IV, 1998, 271-277.**

3. Guicheux J, **Heymann D,** Trecant M, Marshall N, Gautier H, Faivre A, Daculsi G. Etude in vitro de la biocompatibilité d'un système hormone de croissance/phosphate de calcium préparé par compaction dynamique. **In Actualités en biomatériaux, Ed. Romillat, vol IV, 1998, 173-180.**

1996

2. Jacques Y, **Heymann D**, Minvielle S, Godard A. HILDA/LIF. In « Les Cytokines » Ed. Masson, **Chapt. 24, 2nd Ed. 1996, 349-365.**

1. Heymann D, Passuti N, Daculsi G. Os hybride: "un substitute osseux vivant". **In Cahiers d'enseignement de la SOFCOT, n°57 "Biomatériaux de substitution de l'os et du cartilage", Expansion Scientifique Française Ed., 1996, 108-112.**

INVITED CONFERENCES (from 2009) (+ more than 250 poster/oral communications)

2009

- The molecular OPG/RANK/RANKL triad and bone tissue: basic aspects and therapeutical interest. **Société Française d'Immunologie 12e Colloque Cytokines. 18-20 May 2009, Le Croisic (France).**

- Glycosaminoglycans and osteoclastogenesis. **17th Symposium on glycosaminoglycans. 21-23th September 2009, Villa Vigoni (Menaggio, Italy).**

- Synergistic inhibition of osteosarcoma cell growth by combination of RAD001 (Everolimus) and zoledronic acid), **4th PreClinical Working Conference, 1 -3 October 2009, Cervo Ligure (Italy).**

2010

- Développement d'inhibiteurs RANK/RANKL et modèles pré-cliniques. **1er Cours Franophone Supérieur sur le Cancer du Sein en Situation Métastatique. 7-9 January 2010, Nice (France).**

- Development of RANK/RANKL inhibitors and pre-clinical models. **5éme Journées Scientifiques du Cancéropôle CLARA. 30-31 March 2010, Lyon (France).**

- Factor VIII/von Willebrand factor complex controls RANKL-induced osteoclastogenesis and cell survival **Canadian Hemophilia Physician Updat 2010. 25-26 June, 2010, Vancouver (Canada)**

- Lessons to be learned from osteosarcoma. 10th International **Conference on Cancer-Induced Bone Disease. 22-25 September 2010 Sheffield (UK).**

2011

- Is it possible to predict environment targeted drug efficacy: the antiosteoclastic approaches. **2nd Edition of prognosis and prediction in breast cancer. St Paul de Vence, (France), 18-19 January 2011.**

- 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 ? **13ème 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.**

- 3ème 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 (SOFCOT 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 DEPArray™ 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 Micronevironment 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 Immunotherapyeeting, « 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 metastastic 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 worshop, Bertinoro (Italy), 31 May-2 June 20178, "Analytical methods to assess tumor heterogeneity"

- 5th DEPArray 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 tissu banking »

- **Réunion d'autonme de la Société Française des Cancers de l'Enfant (Pairs, 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 symposiun. In memory of Frankie Biggs. 31 January 2019. London, UK.** « Isolation of osteosarcoma circulating tumor cells through parsortix. »

- 46th European Calcified Tissue Society, Budapest (Ungary), 10-14 May 2019. « Molecular mechanisms drinving promary bone sarcomas. »

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

2021

- 10éme Symposium du Groupe d'Etude des Métastases Osseuses (11-12 Mars 2021). "Tumeurs à cellules géantes: physiopathologie"

- Innovative Therapies for children cancer (ITCC, « Solid tumour biology day » (Virtual meeting, UK), 18th June 2021 « MultiTyrosine Kinase inhibitors in bone sarcomas: targets and clinical need »

- Joint Oncology/Institute of Reproductive and Developmental Biology Seminar series (Imperial College of London, UK). 07th October 2021, « Interleukin-34 and M-CSF: more than twin cytokines ».

2022

- Association Française d'Histotechnologie, Marseille 16-17 Juin 2022, "Identification des cellules du tissue osseux par histochimie enzymatioque et immunohistochimie"

- **University of Chile**, **9th August 2022,** "Surgical pathology of the Temporomandibular Joint Course for trainees" "Pathophysiology of the osteoarticular diseases".

- University of Chile (Santiago, Chile), 5th October 2022. « Interleukin-34 and M-CSF: more than twin cytokines ».

- University of Chile (Santiago, Chile), 6th October 2022. « Bone sarcomas: interest of liquid biopsies to follow the tumour heterogeneity».

- **Medical College of Wisconsin, Blood Research Institute (USA), 6th December 2022**, "FVIII: biological activities beyond hemostasis"

- Course on Sarcomas in children and AYA, **from biology to clinic (12-13 December 2022, Paris)**. « Microenvionment in bone tumors »

2023

- « Precision Online webinar « Precision Medicine Panel Discussion » organized by Perkin Elmer, 23th February 2023 medicine.

- European Musculo-Skeletal Oncology Society (EMSOS) 2023, 10-12 May, Bruxelles, Belgique. Key note speaker. "Recent advances in osteosarcoma"

- Société Française d'Endocrinologie, 4-7 Octobre (Marseille). «Techniques de culture cellulaire en 3D »

- **National Hemophilia Congress organized by Korea Society of Hematology (KSH) on 13th October 2023.** Virtual presentation. "Extrahemostatic role of FVIII on bone and endothelial cells."

PRESS COMMUNICATION

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

. 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 again 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, DEPArray. A la clé: la prévention des métastases et le développement de thérapies ciblées.

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