

CURRICULUM VITAE

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INITIAL TRAINING

- **“Habilitation à Diriger les Recherches”**: Vacuolar ATPase $\alpha 3$ subunit and infantile malignant osteopetrosis: from positional cloning to bone tissue engineering. Univ. Nice Sophia Antipolis (28/09/2007).
- **PhD**: ERK1 MAP kinase: mechanism of activation and association with ribosomal S6 kinase. Univ. Nice Sophia Antipolis, (16/12/1992).

WORK EXPERIENCE

- 2023 - deputy director, Institut de Biologie Valrose (iBV)
- 2012 - senior researcher, CNRS, permanent position.
- 1994-1996 - post-doctoral fellow, Centre de Recherche Hôtel-Dieu de Montréal (Dir. S. Meloche).
- 1992 - researcher, CNRS, permanent position.

AWARDS

- J Bone Miner Res, (2006) 21, 1757-1769: GE Beranger, student in thesis under the supervision of JC [Scimeca](#), was the winner of the 2006 Raisz-Drezner Award for best first paper.
- Bone (2000) Mar;26(3):207-13: winning Manuscript of the 2000 IBMS/Bone Best Paper Award in the Basic Research category.

FUNDING (project leader and collaborations)

- 2023-2026 ANR AAPG2022. Programme PRC. (78 k€). Projet INVICT-US: Mécanotransduction *in vitro* déclenchée par ultrasons. Porteur de projet: Cécile BARON.
- 2018-2023 ANR AAPG2018. Programme PRCE. (58 k€). Projet BREAKSIT: Reconstruction osseuse suivie par Scanner Spectral à Comptage de Photons. Porteur de projet: Bruno BUJOLI.
- 2022 CNRS “Modélisation du vivant” AAP 2022 (17 k€). Projet MecaSUROs (renouvellement an 2): Mécanotransduction par Stimulation Ultrasonore dans le contexte de la Régénération Osseuse. Porteur de projet: Carine GUVIER-CURIEN.
- 2021 CNRS “Modélisation du vivant” AAP 2021 (27 k€). Projet MecaSUROs: Mécanotransduction par Stimulation Ultrasonore dans le contexte de la Régénération Osseuse. Porteur de projet: Carine GUVIER-CURIEN.
- 2018 AVIESAN - ITMO Cancer - Plan Cancer 2014-2019 – Équipement pour la recherche en cancérologie (54 k€). Projet: Biomarkers in the microenvironment: exploring tumor progression and therapeutic solutions through last generation microarray electrochemiluminescence detection. Project leader: Jean-Claude [SCIMECA](#).
- 2018 Agence de Développement Economique de la Corse (ADEC) - Société de Coordination de Recherches Thérapeutiques (SCRT) (60 k€). Project: Antitumor activity of a rhenium (I)-diselenoether complex in experimental models of human breast cancer. Academic leader: Jean-Claude [SCIMECA](#).
- 2018 IDEX Academy 2 AAP3 “Complex systems” (23 k€). Project RheoGels: Synthesis, microstructure and RHEology of magnetizable hydroGELS for injectable scaffolds. Project leader: Pavel KUZHIR.
- 2017-2020 R&D Project FUI AAP23 – Eurobiomed (121 k€). SPINEFLEX project: Fatigue resistant and elastic cements for spinal surgery. Industrial leader: Graftys SA (Aix-en-Provence). Academic leader for “région PACA”: Jean-Claude [SCIMECA](#).

2017-2019	CNRS “Osez l'Interdisciplinarité” AAP 2017 (28 k€) . SUBITO project: Low frequency ultrasounds for bone tumour therapy. Project leader: Cécile BARON.
2012-2015	R&D Project FUI AAP13 – Eurobiomed (87 k€) . SPINEINJECT project: Development of bone substitutes for spinal surgery. Industrial leader: Graftys SA (Aix-en-Provence). Academic leader for “région PACA”: Jean-Claude SCIMECA .
2012-2015	CIFRE grant (Industrial agreements for training through research) with GRAFTYS SARL (Aix-en-Provence). Doctoral fellowship for Ivana STRAZIC. (70,5 k€) . <i>in vitro</i> and <i>in vivo</i> studies of the interactions between bone cells and bone substitutes. Thesis supervisor: Jean-Claude SCIMECA .
2012-2013	Fondation de l'Avenir 2012. Appel pour la Recherche Médicale Appliquée (RMA2012). (30 k€) . Bone metastasis of breast cancer: anti-tumour activity of a bisphosphonate-loaded calcium-phosphate cement. Project leader: Heidy SCHMID-ANTOMARCHI.
2010	ANR2010. Emergence program. (220 k€) . WHATBONE project: Autologous white adipose tissue withdrawn extemporaneously and biphasic calcium phosphate particles for bone defect reconstruction. Project leader: Nathalie ROCHET.
2009-2	Fondation de l'Avenir 2009 (RMA2009). (30 k€) . Biomaterials for bone defects filling: feasibility study on quantitative monitoring of resorption rate. Project leader: Jean-Claude SCIMECA .
2009-1	ANR2009. Emergence program (Emergence-TEC). (126,5 k€) . BRB project: Combination of blood and of biphasic calcium phosphate ceramic particles. Project leader: Nathalie ROCHET.
2007-2010	Co-funding CNRS/industrial (GRAFTYS SARL, Aix-en Provence): doctoral fellowship for Caroline MOULINE. (108 k€) . Structure/function study of vacuolar ATPase $\alpha 3$ subunit and development of a biomaterial suitable for bone tissue engineering. Thesis supervisor: Jean-Claude SCIMECA .
2003-2006	Association de Recherche sur la Polyarthrite. Doctoral fellowship for Guillaume BERANGER. (40,5 k€) . <i>Tcirg1</i> gene function in osteoclastic control of normal and pathologic bone remodelling. Thesis supervisor: Jean-Claude SCIMECA

TEACHING

2018	Master 2, teaching module “New Therapeutique Strategies”, 2h.
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PEER REVIEW FOR FUNDING AGENCIES

2014	Indo French Centre for the Promotion of Advanced Research (IFCPAR). Area: 08/Material Science.
2009-2011	The Portuguese Foundation for Science and Technology (FCT). Area: Health Sciences. Sub-area: Biomaterials & BioMedical Engineering.

PEER REVIEW FOR JOURNALS

- Acta Biomaterialia
- Biochemical and Biophysical Research Communications
- European Cells and Materials
- Journal of Biomedical Materials Research Part A
- Journal of Biomedical Materials Research Part B
- Journal of Cellular Physiology
- Tissue Engineering

- Collery, P., B. Michalke, M. Lucio, D. Varlet, J. M. Guigonis, J. C. [Scimeca](#), H. Schmid-Antomarchi and A. Schmid-Alliana (2023). Plasma rhenium and selenium concentrations after repeated daily oral administration of rhenium(i)-diselenoether in 4T1 breast tumor-bearing mice. *Anticancer Res* 43(3): 1017-1023.
<https://doi.org/10.21873/anticancer.16246>
- Guo, T., J.C. [Scimeca](#), S. Ivanovski, E. Verron and K. Gulati (2023). Enhanced Corrosion Resistance and Local Therapy from Anodized Nano-Engineered Titanium Dental Implants. *Pharmaceutics* 15(2):315.
<https://doi.org/10.3390/pharmaceutics15020315>
- [Scimeca](#), J.C. and E. Verron (2022). Nano-engineered biomaterials: Safety matters and toxicity evaluation. *Mater Today Adv* 15: 100260.
<https://doi.org/10.1016/j.mtadv.2022.100260>
- Majnooni, M., E. Doveri, J. Baldisser, V. Long, J. Houles, J.C. [Scimeca](#), D. Momier, C. Guivier-Curien, P. Lasaygues and C. Baron (2022). Anti-reflection cover to control acoustic intensity in in vitro low-intensity ultrasound stimulation of cells. *Acta Acust* 6: 11.
<https://doi.org/10.1051/aacus/2022007>
- Majnooni, M., P. Lasaygues, V. Long, J.C. [Scimeca](#), D. Momier, F. Rico, N. Buzhinsky, C. Guivier-Curien and C. Baron (2022). Monitoring of in-vitro ultrasonic stimulation of cells by numerical modeling. *Ultrasonics* 124: 106714.
<https://doi.org/10.1016/j.ultras.2022.106714>
- Collery, P., B. Michalke, I. Krossa, C. Cohen, J. Antomarchi, P. Lagadec, D. Varlet, M. Lucio, J. M. Guigonis, J.C. [Scimeca](#), H. Schmid-Antomarchi and A. Schmid-Alliana (2022). Relationship between the oxidative status and the tumor growth in transplanted triple-negative 4T1 breast tumor mice after oral administration of rhenium(I)-diselenoether. *J Trace Elem Med Biol* 71: 126931.
<https://doi.org/10.1016/j.jtemb.2022.126931>
- Manas-Torres, M.C., C. Gila-Vilchez, F.J. Vazquez-Perez, P. Kuzhir, D. Momier, J.C. [Scimeca](#), A. Borderie, M. Goracci, F. Burel-Vandenbos, C. Blanco-Elices, I. A. Rodriguez, M. Alaminos, L.A. de Cienfuegos and M.T. Lopez-Lopez (2021). Injectable Magnetic-Responsive Short-Peptide Supramolecular Hydrogels: Ex Vivo and In Vivo Evaluation. *ACS Appl Mater Interfaces* 13(42): 49692-49704.
<https://doi.org/10.1021/acsami.1c13972>
- Jing, L., S. Rota, F. Olivier, D. Momier, J. M. Guigonis, S. Schaub, M. Samson, J.M. Boulter, J.C. [Scimeca](#), N. Rochet and P. Lagadec (2021). Proteomic analysis identified LBP and CD14 as key proteins in blood/biphasic calcium phosphate microparticle interactions. *Acta Biomater* 127: 298-312.
<https://doi.org/10.1016/j.actbio.2021.03.070>
- Gulati, K., J.C. [Scimeca](#), S. Ivanovski and E. Verron (2021). Double-edged sword: Therapeutic efficacy versus toxicity evaluations of doped titanium implants. *Drug Discov Today* 26(11): 2734-2742.
<https://doi.org/10.1016/j.drudis.2021.07.004>
- Bujoli, B., J.C. [Scimeca](#) and E. Verron (2019). Fibrin as a Multipurpose Physiological Platform for Bone Tissue Engineering and Targeted Delivery of Bioactive Compounds. *Pharmaceutics* 11(11): 556.
<https://doi.org/10.3390/pharmaceutics11110556>
- Strazic Geljic, I., N. Melis, F. Boukhechba, S. Schaub, C. Mellier, P. Janvier, J.P. Laugier, J.M. Boulter, E. Verron and J.C. [Scimeca](#) (2018). Gallium enhances reconstructive properties of a calcium phosphate bone biomaterial. *J Tissue Eng Regen Med* 12(2): e854-e866.
<https://doi.org/10.1002/term.2396>
- Schmid-Alliana, A., H. Schmid-Antomarchi, R. Al-Sahlane, P. Lagadec, J.C. [Scimeca](#) and E. Verron (2018). Understanding the Progression of Bone Metastases to Identify Novel Therapeutic Targets. *Int J Mol Sci* 19(1).
<https://doi.org/10.3390/ijms19010148>
- Le Ferrec, M., C. Mellier, F. Boukhechba, T. Le Corroller, D. Guenoun, F. Fayon, V. Montouillout, C. Despas, A. Walcarius, D. Massiot, F.X. Lefevre, C. Robic, J.C. [Scimeca](#), J.M. Boulter and B. Bujoli (2018). Design and properties of a novel radiopaque injectable apatitic calcium phosphate cement, suitable for image-guided implantation. *J Biomed Mater Res B Appl Biomater* 106(8): 2786-2795.
<https://doi.org/10.1002/jbm.b.34059>

- Amoretti, N., P. Diego, P. Amelie, O. Andreani, P. Foti, H. Schmid-Antomarchi, J.C. [Scimeca](#) and P. Boileau (2018). Percutaneous vertebroplasty in tumoral spinal fractures with posterior vertebral wall involvement: Feasibility and safety. *Eur J Radiol* 104: 38-42.
<https://doi.org/10.1016/j.ejrad.2018.04.010>
- [Scimeca](#), J.C. and E. Verron (2017). The multiple therapeutic applications of miRNAs for bone regenerative medicine. *Drug Discov Today* 22(7): 1084-1091.
<https://doi.org/10.1016/j.drudis.2017.04.007>
- Rouede, D., E. Schaub, J.J. Bellanger, F. Ezan, J.C. [Scimeca](#), G. Baffet and F. Tiaho (2017). Determination of extracellular matrix collagen fibril architectures and pathological remodeling by polarization dependent second harmonic microscopy. *Sci Rep* 7(1): 12197.
<https://doi.org/10.1038/s41598-017-12398-0>
- Lagadec, P., T. Balaguer, F. Boukhechba, G. Michel, S. Bouvet-Gerbetaz, J.M. Boulter, J.C. [Scimeca](#) and N. Rochet (2017). Calcium supplementation decreases BCP-induced inflammatory processes in blood cells through the NLRP3 inflammasome down-regulation. *Acta Biomater* 57: 462-471.
<https://doi.org/10.1016/j.actbio.2017.05.039>
- Strazic-Geljic, I., I. Guberovic, B. Didak, H. Schmid-Antomarchi, A. Schmid-Alliana, F. Boukhechba, J.M. Boulter, J.C. [Scimeca](#) and E. Verron (2016). Gallium, a promising candidate to disrupt the vicious cycle driving osteolytic metastases. *Biochem Pharmacol* 116: 11-21.
<https://doi.org/10.1016/j.bcp.2016.06.020>
- Verron, E., H. Schmid-Antomarchi, H. Pascal-Mousselard, A. Schmid-Alliana, J.C. [Scimeca](#) and J.M. Boulter (2014). Therapeutic strategies for treating osteolytic bone metastases. *Drug Discov Today* 19(9): 1419-1426.
<https://doi.org/10.1016/j.drudis.2014.04.004>
- Bouvet-Gerbetaz, S., F. Boukhechba, T. Balaguer, H. Schmid-Antomarchi, J.F. Michiels, J.C. [Scimeca](#) and N. Rochet (2014). Adaptive immune response inhibits ectopic mature bone formation induced by BMSCs/BCP/plasma composite in immune-competent mice. *Tissue Eng Part A* 20(21-22): 2950-2962.
<https://doi.org/10.1089/ten.TEA.2013.0633>
- Verron, E., A. Loubat, G.F. Carle, C. Vignes-Colombeix, I. Strazic, J. Guicheux, N. Rochet, J.M. Boulter and J.C. [Scimeca](#) (2012). Molecular effects of gallium on osteoclastic differentiation of mouse and human monocytes. *Biochem Pharmacol* 83(5): 671-679.
<https://doi.org/10.1016/j.bcp.2011.12.015>
- Verron, E., J.M. Boulter and J.C. [Scimeca](#) (2012). Gallium as a potential candidate for treatment of osteoporosis. *Drug Discov Today* 17(19-20): 1127-1132.
<https://doi.org/10.1016/j.drudis.2012.06.007>
- Mouline, C.C., G.E. Beranger, H. Schmid-Antomarchi, D. Quincey, D. Momier, F. Boukhechba, G.F. Carle, N. Rochet and J.C. [Scimeca](#) (2012). Monocytes differentiation upon treatment with a peptide corresponding to the C-terminus of activated T cell-expressed Tirc7 protein. *J Cell Physiol* 227(8): 3088-3098.
<https://doi.org/10.1002/jcp.23059>
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<https://doi.org/10.1089/ten.TEA.2010.0461>
- Verron, E., M. Masson, S. Khoshniat, L. Duplomb, Y. Wittrant, M. Baud'huin, Z. Badran, B. Bujoli, P. Janvier, J.C. [Scimeca](#), J.M. Boulter and J. Guicheux (2010). Gallium modulates osteoclastic bone resorption in vitro without affecting osteoblasts. *Br J Pharmacol* 159(8): 1681-1692.
<https://doi.org/10.1111/j.1476-5381.2010.00665.x>
- Mouline, C.C., D. Quincey, J.P. Laugier, G.F. Carle, J.M. Boulter, N. Rochet and J.C. [Scimeca](#) (2010). Osteoclastic differentiation of mouse and human monocytes in a plasma clot/biphasic calcium phosphate microparticles composite. *Eur Cell Mater* 20: 379-392.
<https://doi.org/10.22203/ecm.v020a31>
- Balaguer, T., F. Boukhechba, A. Clave, S. Bouvet-Gerbetaz, C. Trojani, J.F. Michiels, J.P. Laugier, J.M. Boulter, G. F. Carle, J.C. [Scimeca](#) and N. Rochet (2010). Biphasic calcium phosphate microparticles for bone formation: benefits of combination with blood clot. *Tissue Eng Part A* 16(11): 3495-3505.
<https://doi.org/10.1089/ten.TEA.2010.0227>
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<https://doi.org/10.1007/s10126-008-9101-1>

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<https://doi.org/10.1359/jbmr.071111>
- Beranger, G.E., D. Momier, J.M. Guignonis, M. Samson, G.F. Carle and J.C. [Scimeca](#) (2007). Differential binding of poly(ADP-Ribose) polymerase-1 and JunD/Fra2 accounts for RANKL-induced Tcigr1 gene expression during osteoclastogenesis. *J Bone Miner Res* 22(7): 975-983.
<https://doi.org/10.1359/jbmr.070406>
- Trojani, C., F. Boukhechba, J.C. [Scimeca](#), F. Vandenbos, J.F. Michiels, G. Daculsi, P. Boileau, P. Weiss, G.F. Carle and N. Rochet (2006). Ectopic bone formation using an injectable biphasic calcium phosphate/Si-HPMC hydrogel composite loaded with undifferentiated bone marrow stromal cells. *Biomaterials* 27(17): 3256-3264.
<https://doi.org/10.1016/j.biomaterials.2006.01.057>
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<https://doi.org/10.1359/jbmr.060809>
- Zoccola, D., E. Tambutte, E. Kulhanek, S. Puverel, J.C. [Scimeca](#), D. Allemand and S. Tambutte (2004). Molecular cloning and localization of a PMCA P-type calcium ATPase from the coral *Stylophora pistillata*. *Biochim Biophys Acta* 1663(1-2): 117-126.
<https://doi.org/10.1016/j.bbame.2004.02.010>
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<https://doi.org/10.1002/humu.10165>
- Vidal, F., P. Lopez, L.A. Lopez-Fernandez, F. Ranc, J.C. [Scimeca](#), F. Cuzin and M. Rassoulzadegan (2001). Gene trap analysis of germ cell signaling to Sertoli cells: NGF-TrkA mediated induction of Fra1 and Fos by post-meiotic germ cells. *J Cell Sci* 114(Pt 2): 435-443.
<https://doi.org/10.1242/jcs.114.2.435>
- Santucci-Darmanin, S., F. Vidal, J.C. [Scimeca](#), C. Turc-Carel and V. Paquis-Flucklinger (2001). Family of SRY/Sox proteins is involved in the regulation of the mouse Msh4 (MutS Homolog 4) gene expression. *Mol Reprod Dev* 60(2): 172-180.
<https://doi.org/10.1002/mrd.1074>
- [Scimeca](#), J.C., A. Franchi, C. Trojani, H. Parrinello, J. Grosgeorge, C. Robert, O. Jaillon, C. Poirier, P. Gaudray and G.F. Carle (2000). The gene encoding the mouse homologue of the human osteoclast-specific 116-kDa V-ATPase subunit bears a deletion in osteosclerotic (oc/oc) mutants. *Bone* 26(3): 207-213.
[https://doi.org/10.1016/s8756-3282\(99\)00278-1](https://doi.org/10.1016/s8756-3282(99)00278-1)
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[https://doi.org/10.1016/s0014-5793\(98\)00260-9](https://doi.org/10.1016/s0014-5793(98)00260-9)
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[https://doi.org/10.1016/0014-5793\(94\)01376-c](https://doi.org/10.1016/0014-5793(94)01376-c)
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- Van Obberghen, E., V. Baron, J.C. [Scimeca](#) and P. Kaliman (1993). Insulin receptor: receptor activation and signal transduction. *Adv Second Messenger Phosphoprotein Res* 28: 195-201.
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[https://doi.org/10.1016/0014-4827\(91\)90436-x](https://doi.org/10.1016/0014-4827(91)90436-x)
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