

## Dr. Contel's List of Scientific Publications & Patents (Reverse Chronological Order)

### **A. Publications**

#### At Brooklyn College

80. 'Shifting the Antibody–Drug Conjugate Paradigm: A Trastuzumab-Gold-Based Conjugate Demonstrates High Efficacy against Human Epidermal Growth Factor Receptor 2-Positive Breast Cancer Mouse Model'. A. Ahad, H.K. Saeed, V. del Solar, J.E. López-Hernández, A. Michel, J. Mathew, J.S. Lewis,\* and **M. Contel**.\* *ACS Pharmacol. Trans. Sci.* **2023**, in press. <https://pubs.acs.org/doi/10.1021/acsptsci.3c00270>
79. 'Development of immunoliposomes containing cytotoxic gold payloads against HER2-positive breast cancers'. A. Ahad, F. Aftab, A. Michel, J.S. Lewis,\* and **M. Contel**.\* *RSC Med. Chem.* **2023**, Advance Article. <https://pubs.rsc.org/en/content/articlelanding/2023/md/d3md00334e/unauth>
78. 'Platinum(IV)–Gold(I) Agents with Promising Anticancer Activity: Selected Studies in 2D and 3D Triple-Negative Breast Cancer Models'. J.E. López-Hernández, N. Nayeem, J.P. Cerón-Carrasco, A. Ahad, A. Hafeez, I.E. León, and **M. Contel**.\* *Chem. A Eur. J.* **2023**, e202302045. Selected as "hot paper" and journal cover. <https://chemistry-europe.onlinelibrary.wiley.com/doi/10.1002/chem.202302045>
77. 'N-Acetylation of Biodegradable Supramolecular Peptide Nanofilaments Selectively Enhances Their Proteolytic Stability for Targeted Delivery of Gold-Based Anticancer Agents'. Y. Marciano, N. Nayeem, D. Dave, R.V. Ulijn,\* **M. Contel**.\* *ACS Biomater. Sci. Eng.* **2023**, 9 (6) 3379.
76. '5-Nitrofuryl-Containing Thiosemicarbazone Gold(I) Compounds: Synthesis, Stability Studies, and Anticancer Activity'. E. Rodríguez-Arce,\* E. Gavrilov, X. Alvite, N. Nayeem, I.E. León, M.C. Neary, L. Otero, D. Gambino, C. Olea Azar, **M. Contel**.\* *ChemPlusChem* **2023**, e202300115. Invited Article Special Issue on Gold Chemistry.
75. 'Promising Heterometallic Compounds as Anticancer Agents: Recent Studies *In Vivo*'. J.E. López-Hernandez, **M. Contel**.\* *Curr. Opin. Chem. Biol.* **2023**, 72, 102250.
74. 'Encapsulation of Gold-Based Anticancer Agents in Protease-Degradable Peptide Nanofilaments Enhances Their Potency'. Y. Marciano, V. del Solar, N. Nayeem, D. Dave, J. Son, **M. Contel**,\* and R.V. Ulijn.\* *J. Am. Chem. Soc.* **2023**, 145, 1, 234–246.
73. 'Self-Complementary Zwitterionic Peptides Direct Nanoparticle Assembly and Enable Enzymatic Selection of Endocytic Pathways'. R.H. Huang, N. Nayeem, Y. He, J. Morales, D. Graham, R. Klajn, **M. Contel**, S. O'Brien, and R.V. Ulijn.\* *Adv. Mater.* **2022**, 41, 2104962.
72. 'Intracellular Localization Studies of the Luminescent Analogue of an Anticancer Ruthenium Iminophosphorane with High Efficacy in a Triple-Negative Breast Cancer Mouse Model'. K. Miachin, V. del Solar, E. El Khoury, N. Nayeem, A. Khrystenko, P. Appelt, M.C. Neary, D. Buccella,\* and **M. Contel**.\* *Inorg. Chem.* **2021**, 60, 19152.
71. 'Investigation of the Effects and Mechanisms of Anticancer Action of a Ru(II)-Arene Iminophosphorane Compound in Triple Negative Breast Cancer Cells'. N. Nayeem, A. Yeasmin, S.N. Cobos, A. Younes, K. Hubbard and **M. Contel**.\* *ChemMedChem.* **2021**, 21, 3280.
70. 'Exploring the Potential of Metallodrugs as Chemotherapeutics for Triple Negative Breast Cancer'. N. Nayeem, and **M. Contel**.\* *Chem. A. Eur. J.* **2021**, 27, 8891.

69. 'Auranofin-Based Analogues Are Effective Against Clear Cell Renal Carcinoma *In Vivo* and Display No Significant Systemic Toxicity'. B.T. Elie, K. Hubbard, B. Layek, W.S. Yang, S. Prabha, J.W. Ramos\*, and **M. Contel**.\* *ACS Pharmacol. Transl. Sci.* **2020**, 3(4) 644-654.
68. 'Sec Hyphenated to a Multielement-Specific Detector Unravels the Degradation Pathway of a Bimetallic Anticancer Complex in Human Plasma'. S. Sarpong-Kumankomah, **M. Contel**, and J. Gailer.\* *J. Chromatogr B.*, **2020**, 1145, 122093.
67. 'Metal-Based Antibody Drug Conjugates. Potential and Challenges in Their Application as Targeted Therapies in Cancer'. V. Del Solar, and **M. Contel**.\* *J. Inorg. Biochem.*, **2019**, 199, 110780.
66. 'Unconventional Anticancer Metallodrugs and Strategies to Improve the Pharmacological Profile'. **M. Contel**. Editorial. *Inorganics* **2019**, 7, 88. Editor of special issue (book).
65. 'Preclinical Evaluation of an Unconventional Ruthenium-Gold-Based Chemotherapeutic: RANCE-1, in Clear Cell Renal Cell Carcinoma'. B.T. Elie, K. Hubbard,\* Y. Pechhenyy, B. Layek, S. Prabha, and **M. Contel**.\* *Cancer Med*, **2019**, 4304 (open access).
64. 'Preparation of Titanocene-Gold Compounds Based on Highly Active Gold(I)-N-Heterocyclic Carbene Anticancer Agents: Preliminary *in vitro* Studies in Renal and Prostate Cancer Cell Lines'. N. Curado, N. Gimenez, K. Miachin, M. Aliaga-Lavrijsen, M.A. Cornejo, A.A. Jarzecki, and **M. Contel**.\* *ChemMedChem*. **2019**, 14, 1086.
63. 'Customizing Morphology, Size, and Response Kinetics of Matrix Metalloproteinase-Responsive *Nanostructures* by Systematic Peptide Design'. J. Son, D. Kalafatovic, M. Kumar, B. Yoo, M.A. Cornejo, **M. Contel**, and R.V. Ulijn.\* *ACS Nano*. **2019**, 13, 1555.
62. 'Heterometallic Complexes as Anticancer Agents'. N. Curado, and **M. Contel**.\* In 'Metal-based Anticancer Agents' (Series Metallobiology) A, Casini, S. Meier-Menches, A. Vessieres Eds. *Royal Society of Chemistry*. 2019.
61. 'Trastuzumab Gold-Conjugates: Synthetic Approach and *In Vitro* Evaluation of Anticancer Activities in Breast Cancer Cell Lines'. N. Curado, G. Dewaele-Le Roi, S. Poty, J.S. Lewis,\* and **M. Contel**.\* *Chem. Commun.* **2019**, 55, 1394.
60. 'How the Horvath Paradigm, Fluorous Biphasic Catalysis, affected Oxidation Chemistry: Successes, Challenges and a Sustainable Future'. J.-M. Vincent,\* **M. Contel**,\* G. Pozzi,\* and R.F. Fish.\* *Coord. Chem. Rev.* **2019**, 380, 584.
59. 'Bimetallic Titanocene-Gold Phosphane Complexes Inhibit Invasion, Metastasis, and Angiogenesis-Associated Signaling Molecules in Renal Cancer'. B.T. Elie, J. Fernandez-Gallardo, N. Curado, M.A. Cornejo, J.W. Ramos,\* and **M. Contel**.\* *Eur. J. Med. Chem.* **2019**, 161, 310.
58. 'A Heterometallic Ruthenium–Gold Complex Displays Antiproliferative, Antimigratory, and Antiangiogenic Properties and Inhibits Metastasis and Angiogenesis-Associated Proteases in Renal Cancer'. B.T. Elie, Y. Pecheny, F. Uddin, and **M. Contel**.\* *J. Biol. Inorg. Chem.* **2018**, 23, 399.
57. 'Water-compatible gold and silver nanoparticles as catalysts for the oxidation of alkenes'. E. Fisher, L. Kenisgberg, M. Carreira, J. Fernández-Gallardo, R. Baldwin,\* and **M. Contel**.\* *Polyhedron*. **2016**, 120, 82. Special Issue to honor Prof. Martin A. Bennett.
56. 'Auranofin and N-heterocyclic carbene gold- analogs are potent inhibitors of the bacteria *Helicobacter Pylori*'. J.P. Owings, N.N. McNair, Y.F. Mui, T.N. Gustafsson, A. Holmgren, **M. Contel**, J.B. Goldberg, and J.R. Mead.\* *FEMS Microbiol. Lett.* 2016, 363, fnw148.

55. 'Titanocene-Gold Complexes Containing N-heterocyclic Carbene Ligands Inhibit Growth of Prostate, Renal and Colon Cancers *In Vitro*.' Y.F. Mui, J. Fernández-Gallardo, A. Gubran, B.T. Elie, I. Maluenda, M. Sanaú, O. Navarro, and **M. Contel**.\* *Organometallics*. **2016**, 35, 1218. (ACS author choice open access).
54. 'Synthesis and Anticancer Activity of Carbosilane Metallodendrimers Based on Arene Ruthenium (II) Complexes'. M. Maroto-Díaz, B.T. Elie, P. Gómez-Sal, J. Perez-Serrano, R. Gómez, **M. Contel**,\* and F.J. de la Mata.\* *Dalton Trans.* **2016**, 45, 7049.
53. 'Versatile Synthesis of Cationic N-Heterocyclic Carbene-Gold(I) Complexes Containing a Second Ancillary Ligand. Design of Heterobimetallic Ruthenium-Gold Anticancer Agents'. J. Fernández-Gallardo, B. T. Elie, M. Sanaú, and **M. Contel**.\* *Chem. Commun.* **2016**, 52, 3155.
52. 'Novel Enantiopure Cyclopentadienyl Ti(IV) Oximate Compounds as Potential Anticancer Agents'. I. de la Cueva-Alique, L. Muñoz-Moreno, Y. Benebdelouahab, B.T. Elie, M.A. El Amrani, M. E.G. Mosquera, **M. Contel**, A.M. Bajo, T. Cuenca, E. Royo.\* *J. Inorg. Biochem.* **2016**, 156, 22.
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50. 'Heterometallic Titanium–Gold Complexes Inhibit Renal Cancer Cells *In Vitro* and *In Vivo*'. J. Fernández-Gallardo, B. T. Elie, T. Sadhukha, S. Prabha, M.Sanaú, S.A. Rotenberg, J. W. Ramos,\* and **M. Contel**.\* *Chem. Sci.* **2015**, 6, 5269 (open access).
49. 'Design, Synthesis and Characterisation of Chimeric Ruthenium(II)-Gold(I) Complexes showing Enhanced Cytotoxic Properties'. L. Massai, J. Fernández-Gallardo, A. Guerri, A. Arcangelic, S. Pillozzic, **M. Contel**,\* and L. Messori.\* *Dalton Trans.* **2015**, 44, 11067.
48. 'Hydrogen Bonding and Anticancer Properties of Water-Soluble Chiral p-cymene Ru(II) Compounds with Amino-Oxime Ligands'. Y. Benebdelouahab, L. Muñoz-Moreno, M. Frik, I. de la Cueva-Alique, M.A. El Amrani, **M. Contel**, A.M. Bajo, T. Cuenca, E. Royo.\* *Eur. J. Inorg. Chem.* **2015**, 2295.
47. '*In Vitro* and *In Vivo* Evaluation of Water-soluble Iminophosphorane Ruthenium(II) Compounds. A Potential Chemotherapeutic Agent for Triple Negative Breast Cancer'. M. Frik, A. Martinez, B.T. Elie, O. Gonzalo, D. Ramirez de Mingo, M. Sanaú, R. Sánchez-Delgado, T. Sadhukha, S. Prabha, J.W. Ramos, I. Marzo\*, and **M. Contel**.\* *J. Med. Chem.* **2014**, 57, 9995.
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45. 'Auranofin and Related Heterometallic Gold(I)-Thiolates as Potent Inhibitors of Methicillin-Resistant Staphylococcus aureus Bacterial Strains'. Y. Hokai, B. Jurkowicz, J. Fernández-Gallardo, N. Zakirkhodjaev, M. Sanaú, T.R. Muth, and **M. Contel**.\* *J. Inorg. Biochem.* **2014**, 138, 81.
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43. 'Potential Anticancer Heterometallic Fe–Au and Fe–Pd Agents: Initial Mechanistic Insights'. N. Lease, V. Vasilevski, M. Carreira, A. de Almeida, M. Sanaú, P. Hirva, A. Casini,\* and **M. Contel**.\* *J. Med. Chem.* **2013**, 56, 5806.

42. 'Organometallic Palladium Complexes with a Water-Soluble Iminophosphorane Ligand as Potential Anticancer Agents' M. Carreira, R. Calvo-Sanjuán, M. Sanaú, I. Marzo, and **M. Contel**.\* *Organometallics*. **2012**, 31, 5572 (Special issue on Organometallics in Medicine and Biology).
41. "Cytotoxic Hydrophilic iminophosphorane coordination compounds of d8 metals. Studies of their Interactions with DNA and HSA". M. Carreira, R. Calvo-Sanjuán, M. Sanaú, X. Zhao, R. Magliozzo, I. Marzo, and **M. Contel**.\* *J. Inorg. Biochem.* **2012**, 116, 204.
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39. 'Fluorous Hydrosilylation'. M. Carreira, and **M. Contel**.\* *Top. Curr. Chem.* **2012**, 308, 247-274. Invited Chapter to the Special Volume on Fluorous Chemistry (Ed. I.T. Horváth).
38. 'Reactivity of Unsaturated 5(4*H*)-oxazolones with Hg(II) Acetate. Synthesis of Methyl *N*-benzoylamino-3-arylacrylates'. G.-D. Roiban, T. Soler, **M. Contel**, I. Grosu, C. Cativiela, and E.P. Urriolabeitia. *Synth. Commun.* **2012**, 42, 195. Published on line Oct 2011.
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35. 'Group 11 Metal Compounds with Tripodal Bis(imidazole) Thioether Ligands. Applications as Catalysts in the Oxidation of Alkenes and as Antimicrobial Agents'. F. Liu, R. Amis, E. Hwang, A. Varela-Ramirez, R.J. Aguilera, R. Ovalle, and **M. Contel**.\* *Molecules* (invitation to a special issue on Pincer Complexes). **2011**, 16, 6701.
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32. 'Gold Chemistry, Applications and Future Directions in the Life Sciences'. Ed. Fabian Mohr. Wiley-VCH 2009. Book Review. **M. Contel**.\* *Angew. Chem. Int. Ed.* **2010**, 49, 250.; *Angew.Chem.* **2010**, 122, 258.
31. 'Water Soluble Phosphane-Gold(I) Complexes. Applications as Recyclable Catalysts in a Three-Component Coupling Reaction and as Anticancer and Antimicrobial Agents'. B.T. Elie, C. Levine, Iban Ubarretxena-Belandia, A. Varela, R. Aguilera, R. Ovalle, and **M. Contel**.\* *Eur. J. Inorg. Chem.* **2009**, 3421.
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### Before Joining Brooklyn College

25. 'Fluorous Phosphine Assisted Recycling of Gold Catalysts for Hydrosilylation of Aldehydes'. D. Lantos, **M. Contel**\*, A. Larrea, D. Szabó, and I.T. Horváth.\* *QSAR Comb. Sci.*, **2006**, 25, 719.

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