

Prof. Matthias D'hooghe - publications in international journals with peer review

- 178) F. Morlion, K. Magdalenić, J. Van Camp, **M. D'hooghe**. "Heterocycle-substituted 1,5-benzothiazepines: biological properties and structure-activity relationships" *Monatsh. Chem.* **2024**, *155*, 535-549. (IF 1.8, rank 123/178)
- 177) K. Magdalenić, F. Morlion, S. De Jonghe, L. Persoons, D. Schols, C. Grootaert, J. Van Camp, **M. D'hooghe**. "Synthesis and cancer cell cytotoxicity of 2-heteroaryl-4-(4-heteroaryl-2-oxobut-3-en-1-ylidene)-substituted benzothiazepanes" *Tetrahedron* **2024**, *154*, 133884. (I.F. 2.1, rank 28/52)
- 176) J. Franceus, M. Steynen, Y. Allaert, K. Bredael, **M. D'hooghe**, T. Desmet. "High-yield synthesis of 2-O- α -D-glucosyl-D-glycerate by a bifunctional glycoside phosphorylase" *Appl. Microbiol. Biotechnol.* **2024**, *108*, 55. (I.F. 5.0, rank 36/158)
- 175) M. Boone, F. Artizzu, J. Goura, D. Mara, R. Van Deun, **M. D'hooghe**. "Lanthanide phosphonate coordination polymers" *Coord. Chem. Rev.* **2024**, *501*, 215525. (I.F. 20.6, rank 1/42)
- 174) T. Delmulle, S. Bovijn, S. Deketelaere, M. Castelein, T. Erauw, **M. D'hooghe**, W. K. Soetaert. "Engineering *Comamonas testosteroni* for the production of 2-pyrone-4,6-dicarboxylic acid as a promising building block" *Microb. Cell Factories* **2023**, *22*, 188. (I.F. 6.4, rank 20/156)
- 173) S. Geurs, D. Clarisse, K. De Bosscher, **M. D'hooghe**. "The zinc-binding group effect: lessons from non-hydroxamic acid vorinostat analogs" *J. Med. Chem.* **2023**, *66*, 7698-7729. (I.F. 8.039, rank 3/63)
- 172) K. Magdalenić, U. Ronse, S. De Jonghe, L. Persoons, D. Schols, J. De Munck, C. Grootaert, J. Van Camp, **M. D'hooghe**. "Synthesis and cancer cell cytotoxicity of 2-aryl-4-(4-aryl-2-oxobut-3-en-1-ylidene)-substituted benzothiazepanes" *Phytochem. Lett.* **2023**, *55*, 117-123 (I.F. 1.873, rank 134/239)
- 171) U. Ronse, K. Magdalenić, J. Van Camp, **M. D'hooghe**. "Synthesis of the 1,5-benzothiazepane scaffold – established methods and new developments" *ChemistryOpen* **2023**, *12*, e202200262. (IF 2.630, rank 109/179)
- 170) S. Deketelaere, G. Kaur, N. Piens, D. Deturck, R. Depestel, K. Van Hecke, C. V. Stevens, V. Kumar, **M. D'hooghe**. "Synthesis of 4-imidoyl-, 4-oxiranyl- and 4-propargyloxyphenyl-substituted β -lactam building blocks" *J. Heterocycl. Chem.* **2023**, *60*, 423-430. (IF 2.035, rank 35/57)
- 169) H. Salemi, M. Debruyne, V. Van Speybroeck, P. Van Der Voort, **M. D'hooghe**, C. V. Stevens. "Covalent organic framework supported palladium catalysts" *J. Mater. Chem. A* **2022**, *10*, 20707-20729. (IF 14.511, rank 14/172)
- 168) S. Geurs, D. Clarisse, F. Baele, J. Franceus, T. Desmet, K. De Bosscher, **M. D'hooghe**. "Identification of mercaptoacetamide-based HDAC6 inhibitors via a lean inhibitor strategy: screening, synthesis, and biological evaluation" *Chem. Commun.* **2022**, *58*, 6239-6242. (IF 6.065, rank 53/179)
- 167) K. Bredael, S. Geurs, D. Clarisse, K. De Bosscher, **M. D'hooghe**. "Carboxylic acid bioisosteres in medicinal chemistry: synthesis and properties" *J. Chem.* **2022**, 2164558. (IF 3.241, rank 93/179)
- 166) S. Deketelaere, E. Van Den Broeck, L. Cools, D. Deturck, H. Naeyaert, K. Van Hecke, C. V. Stevens, V. Van Speybroeck, **M. D'hooghe**. "Unexpected formation of 2,2-dichloro-N-(chloromethyl)acetamides during attempted Staudinger 2,2-dichloro- β -lactam synthesis" *Eur. J. Org. Chem.* **2021**, 5823-5830. (IF 3.261, rank 19/56)
- 165) T. Van de Walle, L. Cools, S. Mangelinckx, **M. D'hooghe**. "Recent contributions of quinolines to antimalarial and anticancer drug discovery research" *Eur. J. Med. Chem.* **2021**, *226*, 113865. (IF 7.088, rank 5/63)
- 164) J. Franceus, J. Lormans, L. Cools, **M. D'hooghe**, T. Desmet. "Evolution of phosphorylases from *N*-acetylglucosaminidases in family GH3" *ACS Catal.* **2021**, *11*, 6225-6233. (IF 12.350, rank 12/159)
- 163) A. Theppawong, G. Kaur, V. Kumar, J. Van Camp, **M. D'hooghe**. "Synthetic strategies in curcumin chemistry focused on anticancer applications" *Arkivoc* **2020**, *vii*, 257-305. (IF 1.003, rank 45/57)
- 162) T. Van de Walle, M. Briand, A. Mitrović, I. Sosič, S. Gobec, J. Kos, L. Persoons, D. Daelemans, S. De Jonghe, Z. Ubiparip, T. Desmet, K. Van Hecke, S. Mangelinckx, **M. D'hooghe**. "Synthesis of novel nitroxoline analogs with potent cathepsin B exopeptidase inhibitory activity" *ChemMedChem* **2020**, *15*, 2477-2490. (IF 3.124, rank 25/61)
- 161) T. Van de Walle, M. Boone, J. Van Puyvelde, J. Combrinck, P. J. Smith, K. Chibale, S. Mangelinckx, **M. D'hooghe**. "Synthesis and biological evaluation of novel quinoline-piperidine scaffolds as antiplasmodium agents" *Eur. J. Med. Chem.* **2020**, *198*, 112330. (IF 5.572, rank 5/61)
- 160) L. Decuyper, G. Kaur, C. Versyck, E. Blondeel, Y. Depetter, K. Van Hecke, **M. D'hooghe**. "Expedient synthesis of lupulones and their derivatization to 2,8-7H-dihydrochromen-7-ones" *ChemistryOpen* **2020**, *9*, 442-444. (IF 2.370, rank 90/177)
- 159) L. Ouchakour, M. Nonn, **M. D'hooghe**, L. Kiss. "A de novo synthetic method to the access of fluorine-containing benzazepanes" *J. Fluorine Chem.* **2020**, *232*, 109466. (IF 2.332, rank 19/45)
- 158) A. Minić, T. Van de Walle, K. Van Hecke, J. Combrinck, P. J. Smith, K. Chibale, **M. D'hooghe**. "Design and synthesis of novel ferrocene-quinoline conjugates and evaluation of their electrochemical and antiplasmodium properties" *Eur. J. Med. Chem.* **2020**, *187*, 111963. (IF 4.833, rank 5/61)

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- 157) L. Decuyper, M. Jukič, I. Sosič, A. M. Amoroso, O. Verlaine, B. Joris, S. Gobec, **M. D'hooghe**. "Synthesis and penicillin-binding protein inhibitory assessment of dipeptidic 4-phenyl- β -lactams from α -amino acid-derived imines" *Chem. Asian J.* **2020**, *15*, 51-55. (IF 3.698, rank 55/172)
- 156) T. Van de Walle, A. Theppawong, C. Grootaert, S. De Jonghe, L. Persoons, D. Daelemans, K. Van Hecke, J. Van Camp, **M. D'hooghe**. "Synthesis and cytotoxic evaluation of monocarbonyl curcuminoids and their pyrazoline derivatives" *Monatsh. Chem.* **2019**, *150*, 2045-2051. (IF 1.501, rank 112/172)
- 155) L. Decuyper, K. Magdalenić, M. Verstraete, M. Jukič, I. Sosič, E. Sauvage, A. M. Amoroso, O. Verlaine, B. Joris, S. Gobec, **M. D'hooghe**. " α -Unsaturated 3-amino-1-carboxymethyl- β -lactams as bacterial PBP inhibitors: synthesis and biochemical assessment" *Chem. Eur. J.* **2019**, *25*, 16128-16140. (IF 5.160, rank 37/172)
- 154) Y. Depetter, S. Geurs, J. Franceus, D. Knez, T. Desmet, K. De Bosscher, O. De Wever, S. Gobec, **M. D'hooghe**. "Synthesis of Indoline-Based Benzhydroxamic Acids as Potential HDAC6 Inhibitors" *ChemistrySelect* **2019**, *4*, 12308-12312. (IF 1.716, rank 107/172)
- 153) A. Theppawong, T. Van de Walle, K. Van Hecke, C. Grootaert, J. Van Camp, **M. D'hooghe**. "Synthesis of 1,4-thiazepane-based curcuminoids with promising anticancer activity" *Chem. Eur. J.* **2019**, *25*, 12583-12600. (IF 5.160, rank 37/172)
- 152) R. Van Kerrebroeck, P. Naert, T. S. A. Heugebaert, **M. D'hooghe**, C. V. Stevens. "Electrophilic Bromination in Flow: A Safe and Sustainable Alternative to the Use of Molecular Bromine in Batch" *Molecules* **2019**, *24*, 2116; doi:10.3390/molecules24112116. (IF 3.060, rank 68/172)
- 151) A. Theppawong, T. Van de Walle, C. Grootaert, K. Van Hecke, N. Catry, J. Van Camp, **M. D'hooghe**. "Synthesis of Non-symmetrical Nitrogen-containing Curcuminoids in the Pursuit of New Anticancer Candidates" *ChemistryOpen* **2019**, *8*, 236-247. (IF 2.205, rank 90/172)
- 150) Y. Depetter, S. Geurs, R. De Vreese, S. Goethals, E. Vandoorn, A. Laevens, J. Steenbrugge, E. Meyer, P. de Tullio, M. Bracke, **M. D'hooghe**, O. De Wever. "Selective pharmacological inhibitors of HDAC6 reveal biochemical activity but functional tolerance in cancer models" *Int. J. Cancer* **2019**, *145*, 735-747. (IF 4.982, rank 51/229)
- 149) L. Macha, **M. D'hooghe**, H.-J. Ha. "Deployment of aziridines for the synthesis of alkaloids and their derivatives" *Synthesis* **2019**, *51*, 1491-1515. (IF 2.867, rank 18/57)
- 148) H. Dao Thi, **M. D'hooghe**. "An update on the synthesis and reactivity of spiro-fused β -lactams" *ARKIVOC* **2018**, *vi*, 314-347. (IF 1.253, rank 40/57)
- 147) L. Decuyper, J. Franceus, S. Dhaene, M. Debruyne, K. Vandoorne, N. Piens, G. Dewitte, T. Desmet, **M. D'hooghe**. "A chemoenzymatic approach toward the synthesis of 3-O-(α/β)-glucosylated 3-hydroxy- β -lactams" *ACS Omega* **2018**, *3*, 15235-15245. (IF 2.584, rank 76/172)
- 146) L. Decuyper, S. Deketelaere, L. Vanparys, M. Jukič, I. Sosič, E. Sauvage, A. M. Amoroso, O. Verlaine, B. Joris, S. Gobec, **M. D'hooghe**. "In silico design and enantioselective synthesis of functionalized monocyclic 3-amino-1-carboxymethyl- β -lactams as inhibitors of penicillin-binding proteins of resistant bacteria" *Chem. Eur. J.* **2018**, *24*, 15254-15266. (IF 5.317, rank 29/166)
- 145) Y. Depetter, S. Geurs, F. Vanden Bussche, R. De Vreese, J. Franceus, T. Desmet, O. De Wever, **M. D'hooghe**. "Assessment of the trifluoromethyl ketone functionality as an alternative zinc-binding group for selective HDAC6 inhibition" *Med. Chem. Commun.* **2018**, *9*, 1011-1016. (IF 2.608, rank 29/60)
- 144) A. Theppawong, T. Van de Walle, C. Grootaert, M. Bultinck, T. Desmet, J. Van Camp, **M. D'hooghe**. "Synthesis of novel aza-aromatic curcuminoids with improved biological activities towards various cancer cell lines" *ChemistryOpen* **2018**, *7*, 381-392. (IF 2.918, rank 62/166)
- 143) J. Franceus, L. Decuyper, **M. D'hooghe**, T. Desmet. "Exploring the sequence diversity in glycoside hydrolase family 13_18 reveals a novel glucosylglycerol phosphorylase" *Appl. Microbiol. Biotechnol.* **2018**, *102*, 3183-3191. (IF 3.420, rank 44/160)
- 142) H. Dao Thi, H. Goossens, D. Hertsen, V. Otte, T. Van Nguyen, V. Van Speybroeck, **M. D'hooghe**. "Formation of fluorinated amido esters through unexpected C3-C4 bond fission in 4-trifluoromethyl-3-oxo- β -lactams" *Chem. Asian J.* **2018**, *13*, 421-431. (IF 4.083, rank 40/166)
- 141) H. Dao Thi, G. Le Nhat Thuy, S. Catak, V. Van Speybroeck, T. Van Nguyen, **M. D'hooghe**. "Use of 3-hydroxy-4-(trifluoromethyl)azetid-2-ones as building blocks for the preparation of trifluoromethyl-containing aminopropanes, 1,3-oxazinan(-2-ones), aziridines and 1,4-dioxan-2-ones" *Synthesis* **2018**, *50*, 1439-1456. (IF 2.650, rank 22/59) – Feature Article
- 140) E. B. Boydas, G. Tanriver, **M. D'hooghe**, H.-J. Ha, V. Van Speybroeck, S. Catak. "Theoretical Insight into the Regioselective Ring-Expansions of Bicyclic Aziridinium Ions" *Org. Biomol. Chem.* **2018**, *16*, 796-806. (IF 3.564, rank 14/59)
- 139) H. Dao Thi, T. Van Nguyen, **M. D'hooghe**. "Synthesis and reactivity of 4-(trifluoromethyl)azetid-2-ones" *Monatsh. Chem.* **2018**, *149*, 687-700. (IF 1.282, rank 106/166)

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- 138) L. Decuyper, M. Jukič, I. Sosič, A. Žula, **M. D'hooghe**, S. Gobec. "Antibacterial and β -lactamase inhibitory activity of monocyclic β -lactams" *Med. Res. Rev.* **2017**, *37*, 426-503. (IF 9.135, rank 2/59)
- 137) N. Piens, H. Goossens, D. Hertsen, S. Deketelaere, L. Crul, L. Demeurisse, J. De Moor, E. Van den Broeck, K. Mollet, K. Van Hecke, V. Van Speybroeck, **M. D'hooghe**. "Reactivity of 3-oxo- β -lactams with respect to primary amines – an experimental and computational approach" *Chem. Eur. J.* **2017**, *23*, 18002-18009. (IF 5.317, rank 29/166)
- 136) A. Minić, D. Stevanović, M. Vukićević, G. A. Bogdanović, **M. D'hooghe**, N. S. Radulović, R. D. Vukićević. "Synthesis of novel 4-ferrocenyl-1,2,3,4-tetrahydroquinolines and 4-ferrocenylquinolines via α -ferrocenyl carbenium ions as key intermediates" *Tetrahedron* **2017**, *73*, 6268-6274. (IF 2.651, rank 21/59)
- 135) J. Dolfen, E. Birsan Boydas, V. Van Speybroeck, S. Catak, K. Van Hecke, **M. D'hooghe**. "Asymmetric synthesis of 3,4-disubstituted 2-(trifluoromethyl)pyrrolidines through rearrangement of chiral 2-(2,2,2-trifluoro-1-hydroxyethyl)azetidines" *J. Org. Chem.* **2017**, *82*, 10092-10109. (IF 4.849, rank 8/59)
- 134) R. De Vreese, K. Muylaert, C. Maton, L. Dereu, F. Taillieu, T. Harth, R. Van Deun, H. Vrielinck, C. V. Stevens, **M. D'hooghe**. "Synthesis of bis-8-hydroxyquinolines via an imination or a Suzuki-Miyaura coupling approach" *Tetrahedron Lett.* **2017**, *58*, 3803-3807. (IF 2.193, rank 26/59)
- 133) N. Piens, **M. D'hooghe**. "Carbonylation of aziridines as a powerful tool for the synthesis of functionalized β -lactams" *Eur. J. Org. Chem.* **2017**, 5943-5960 (IF 2.834, rank 19/59)
- 132) J. Dolfen, K. Van Hecke, **M. D'hooghe**. "LiAlH₄-induced Thia-Aza-Payne Rearrangement of Functionalized 2-(Thiocyanatomethyl)aziridines into 2-(Aminomethyl)thiiranes as an Entry to 5-(Chloromethyl)thiazolidin-2-ones" *Eur. J. Org. Chem.* **2017**, 3229-3233 (IF 3.068, rank 17/59)
- 131) N. Piens, K. Van Hecke, D. Vogt, **M. D'hooghe**. "Cobalt carbonyl-catalyzed carbonylation of functionalized aziridines to versatile β -lactam building blocks" *Org. Biomol. Chem.* **2017**, *15*, 4816-4821 (IF 3.559, rank 14/59)
- 130) R. De Vreese, **M. D'hooghe**. "Synthesis and applications of benzohydroxamic acid-based histone deacetylase inhibitors" *Eur. J. Med. Chem.* **2017**, *135*, 174-195. (IF 3.902, rank 6/59)
- 129) S. Deketelaere, T. Van Nguyen, C. V. Stevens, **M. D'hooghe**. "Synthetic approaches toward monocyclic 3-amino- β -lactams" *ChemistryOpen* **2017**, *6*, 301-319. (IF 3.585, rank 43/163)
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- 127) J. Dolfen, **M. D'hooghe**. "Concise synthesis of 3-(aminomethyl)pyrrolidines via an In(OTf)₃-mediated ring rearrangement of 2-[2-(1-pyrrolin-2-yl)alkyl]aziridines" *Synthesis* **2017**, *49*, 2215-2222. (IF 2.652, rank 21/59)
- 126) R. De Vreese, L. Galle, Y. Depetter, J. Franceus, T. Desmet, K. Van Hecke, V. Benoy, L. Van Den Bosch, **M. D'hooghe**. "Synthesis of potent and selective HDAC6 inhibitors bearing a cyclohexane- or cycloheptane-annulated 1,5-benzothiazepine scaffold" *Chem. Eur. J.* **2017**, *23*, 128-136. (IF 5.771, rank 24/163)
- 125) N. Piens, W. Aelterman, **M. D'hooghe**, N. De Kimpe. "Use of alfa,omega-dichloroketimine building blocks for the construction of 1-azabicyclo[3.1.0]hexanes, piperidines, pyridines, pyrroles and tetrahydroindoles" *Synlett* **2017**, *28*, 207-213 (IF 2.323, rank 27/59).
- 124) N. Piens, S. De Craene, J. Franceus, K. Mollet, K. Van Hecke, T. Desmet, **M. D'hooghe**. "Diastereoselective synthesis of 3-acetoxy-4-(3-aryloxiran-2-yl)azetid-2-ones and their transformation into 3,4-oxolane-fused bicyclic β -lactams" *Org. Biomol. Chem.* **2016**, *14*, 11279-11288 (IF 3.559, rank 14/59)
- 123) A. Theppawong, R. De Vreese, L. Vannecke, C. Grootaert, J. Van Camp, **M. D'hooghe**. "Synthesis and biological assessment of novel N-(hydroxy/methoxy)alkyl β -enaminone curcuminoids" *Bioorg. Med. Chem. Lett.* **2016**, *26*, 5650-5656. (IF 2.486, rank 23/59)
- 122) H. Dao Thi, B. Danneels, T. Desmet, K. Van Hecke, T. Van Nguyen, **M. D'hooghe**. "Synthesis and application of 3-methylene-4-(trifluoromethyl)azetid-2-ones as novel building blocks for the preparation of mono- and spirocyclic 4-CF₃- β -lactams" *Asian J. Org. Chem.* **2016**, *5*, 1480-1491. (IF 3.275, rank 16/59)
- 121) J. Dolfen, N. N. Yadav, N. De Kimpe, **M. D'hooghe**, H.-J. Ha. "Bicyclic aziridinium ions in azaheterocyclic chemistry – preparation and synthetic application of 1-azoniabicyclo[n.1.0]alkanes" *Adv. Synth. Catal.* **2016**, *358*, 3485-3511. (IF 6.453, rank 1/71)
- 120) R. De Vreese, C. Grootaert, S. D'hoore, A. Theppawong, S. Van Damme, M. Van Bogaert, J. Van Camp, **M. D'hooghe**. "Synthesis of novel curcuminoids accommodating a central beta-enaminone motif and their impact on cell growth and oxidative stress" *Eur. J. Med. Chem.* **2016**, *123*, 727-736. (IF 3.902, rank 6/59)
- 119) L. Decuyper, N. Piens, J. Mincke, J. Bomon, B. De Schrijver, K. Mollet, K. De Winter, T. Desmet, **M. D'hooghe**. "A nitrilase-mediated entry to 4-carboxymethyl- β -lactams from chemically prepared 4-(cyanomethyl)azetid-2-ones" *RSC Adv.* **2016**, *6*, 54573-54579. (IF 3.289, rank 48/163)

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- 118) T. Verhaeghe, K. De Winter, M. Berland, R. De Vreese, **M. D'hooghe**, B. Offmann, T. Desmet. "Converting bulk sugars into prebiotics: semi-rational design of a transglucosidase with controlled selectivity" *Chem. Commun.* **2015**, 3687-3689. (IF 6.834)
- 117) J. Dolfen, K. Vervisch, N. De Kimpe, **M. D'hooghe**. "LiAlH₄-induced Selective Ring Rearrangement of 2-(2-Cyanoethyl)aziridines toward 2-(Aminomethyl)pyrrolidines and 3-Aminopiperidines as Eligible Heterocyclic Building Blocks" *Chem. Eur. J.* **2016**, *22*, 4945-4951. (IF 5.731)
- 116) R. De Vreese, Y. Depetter, T. Verhaeghe, T. Desmet, V. Benoy, W. Haeck, L. Van Den Bosch, **M. D'hooghe**. "Synthesis and SAR assessment of novel Tubathian analogs in the pursuit of potent and selective HDAC6 inhibitors" *Org. Biomol. Chem.* **2016**, *14*, 2537-2549 (IF 3.562)
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- 114) H. Dao Thi, L. Decuyper, K. Mollet, S. Kenis, N. De Kimpe, T. Van Nguyen, **M. D'hooghe** "Synthesis of trifluoromethylated azetidines, aminopropanes, 1,3-oxazinanes and 1,3-oxazinan-2-ones starting from 4-trifluoromethyl- β -lactam building blocks" *Synlett* **2016**, *27*, 1100-1105. (IF 2.419).
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- 108) A. Pejović, B. Danneels, T. Desmet, B. Thi Cham, T. Van Nguyen, N. S. Radulović, R. D. Vukićević, **M. D'hooghe**. "Synthesis and antimicrobial/cytotoxic assessment of ferrocenyl oxazinanes, oxazinan-2-ones and tetrahydropyrimidin-2-ones" *Synlett* **2015**, *26*, 1195-1200 (IF 2.419)
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