**Dr. Jesus Alcazar, Janssen**

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**Registration link:**

<https://us06web.zoom.us/webinar/register/WN_Vh44ogJfTruqHqc1iaxnsw>

**Enabling High Throughput Chemistry in Flow to Access Novel Chemical Space for Drug Discovery**

Enabling chemical space is a key element for Drug Discovery.[[1]](#footnote-1) However, methodologies to build molecules in a medicinal chemistry setting is limited and has not been changed over the last years.[[2]](#footnote-2) There is a clear need to develop new methodologies for such transformations that can be applicable in a Drug Discovery setting.[[3]](#footnote-3)

Continuous flow chemistry has recently emerged as a novel chemical tool that can help chemists to access chemistries not suitable in batch and make them real alternatives in synthetic pathways. In this way it enables access to novel chemical space not available by traditional batch procedures. The enablement of automation in flow devices has supported the development of High Throughput Flow Chemistry as a tool for Drug Discovery.

In this presentation we are going to disclose how advantages of flow chemistry can be translated to methodologies that can help medicinal chemist access novel chemical space. How flow chemistry can impact in this way Drug Discovery, how these tools can then be automated for library synthesis and access this new chemical space in a high throughput format. We will also disclose some ideas about how the future will look like.[[4]](#footnote-4)



1. (a) Flow Chemistry in Drug Discovery (Ed.: Alcázar, J.; de la Hoz, A.; Díaz-ortiz, A.), Topics in Medicinal Chemistry 38. **2021**, Nature, Gewerbestrasse, Switzerland; (b) Meyers, J.; Carte, M.; Mok, N. Y.; Brown, N. *Future Med. Chem.* **2016**, *8*, 1753; (c) Tsukamoto, T. *ACS Med. Chem. Lett.* **2013**, *4*, 369; (d) Walters, W. P.; Green, J.; Weiss, J. R.; Murcko, M. A. *J. Med. Chem.* **2011**, *54*, 6405. [↑](#footnote-ref-1)
2. López, E.; Linares, M. L.; Alcázar, J. *Future med. Chem.* **2020**, *12*, 1547. [↑](#footnote-ref-2)
3. (a) Roughley, S. D.; Jordan, A. M. *J. Med. Chem.* **2011**, *54*, 3451; (b) Brown, G. D.; Boström, J. *J. Med. Chem.* **2016**, *59*, 4443; (c) Wang, Y.; Haight, I.; Gupta, R.; Vasudevan, A. *J. Med. Chem.* **2021**, *64*, 17115; (d) Dombrowski, A. W.; Aguirre, A. L.; Shrestha, A.; Sarris, K. A.; Wang, Y. *J. Org. Chem.* **2021**, DOI: 10.1021/acs.joc.1c01427. [↑](#footnote-ref-3)
4. (a) Pijper, B.; Abdiaj, I.; Mazuela, J.; Linares, M.L.; Gómez, J.E.; Rodriguez, R.; Chaves Arquero, B.; Palao, E.; Cañellas, S; Alcázar, J. *Chem Catal.* **2024**, *4*, 101118; (b) Oksdath-Mansilla, G.; Bisogno, F.R.; Pijper, B.; Alcázar, J. *Chem Catal.* **2023**, *3*, 100487; (c) Pijper, B.; Alcázar, J.; Oksdath-Mansilla, G.; Bisogno, F.R. *Chem Catal.* **2023**, *3*, 100488 [↑](#footnote-ref-4)