ADP-ribose analogues: synthetic strategy towards inhibitors for viral macrodomains: SARS-CoV-2

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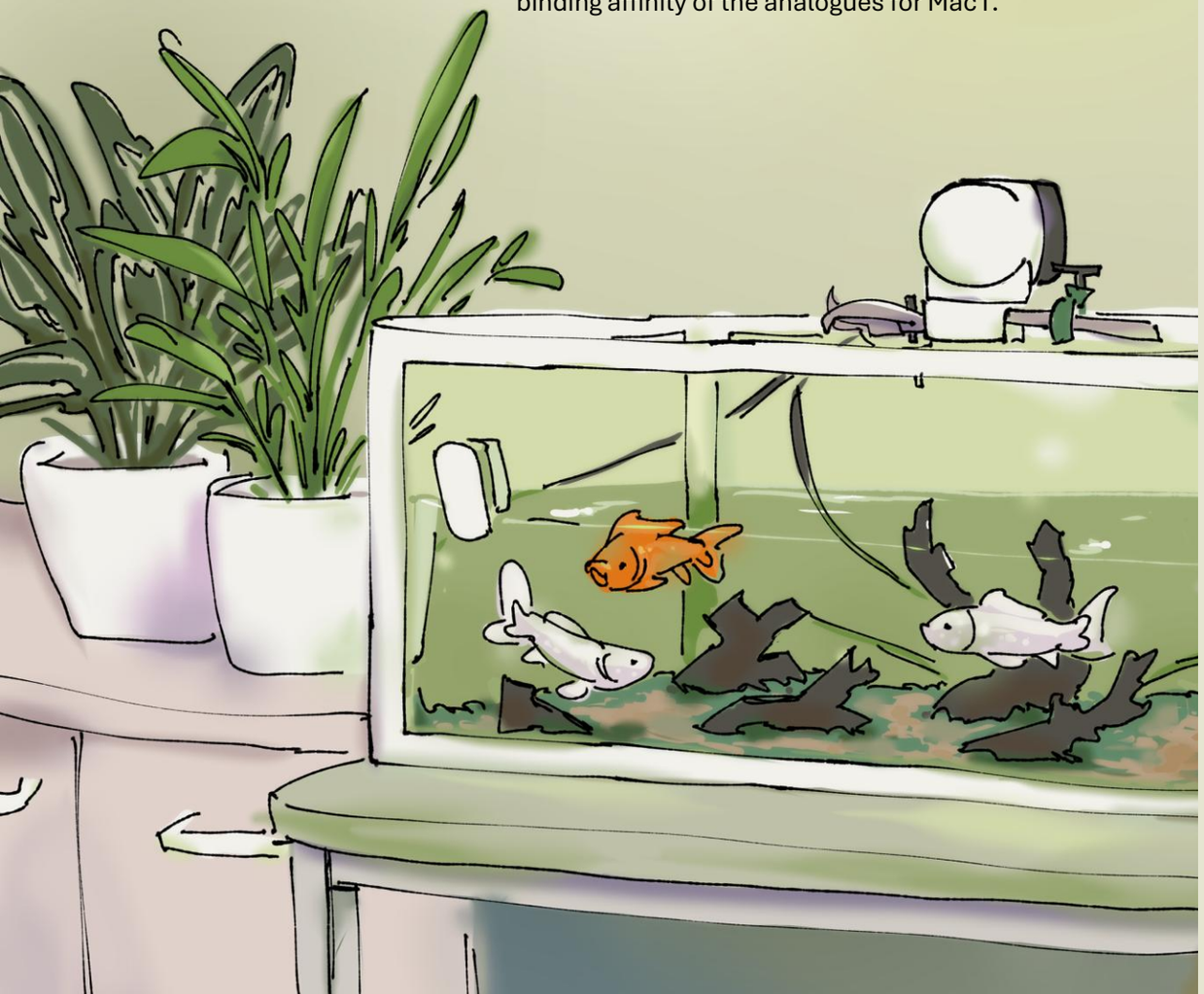
Since the global COVID-19 pandemic, the coronavirus responsible (SARS-CoV-2) has been extensively probed for promising protein targets to establish drug-based therapies. One of these protein targets, the macrodomain known as Mac1, binds the post-translational modification adenosine-diphosphate-ribose (ADP-ribose) and removes it from important immunological signalling molecules. This process, critical for the propagation of the virus, can be inhibited by introducing a molecule that binds better to Mac1 than the ADP-ribose, namely, an ADP-ribose analogue.

In his thesis titled **ADP-ribose analogues** the author Koen J. Rijpkema explores the different facets of the ADP-ribose molecule and the way that structurally changing these facets through synthetic organic chemistry has an influence on the binding affinity of the analogues for Mac1.



ADP-ribose analogues

by Koen Rijpkema