

CITATIONS

DUBprofiler – November 2024

The application of DUBprofiler™ to interrogate the selectivity of USP7 inhibitors by Vernalis, Servier Research Institute of Medicinal Chemistry, Budapest, Hungary and Institute de Recherche Servier, France.

1: Structure-Guided Discovery of Selective USP7 Inhibitors with *In Vivo* Activity

Attila Vasas, Lisa Ivanschitz, Balázs Molnár, Árpád Kiss, Lisa Baker, Andrea Fiumana, Alba Macias, James B. Murray, Emma Sanders, Neil Whitehead, Roderick E. Hubbard, Carine Saunier, Elodie Monceau, Anne Marie Girard, Marion Rousseau, Maia Chanrion, Didier Demarles, Olivier Geneste, Csaba Weber, Elodie Lewkowicz and Andras Kotschy

Journal of Medicinal Chemistry 67;21.
<https://pubs.acs.org/doi/10.1021/acs.jmedchem.4c01472>

The application of DUBprofiler™ to compare the potency and selectivity of the USP1 inhibitors, ML323 and KSQ-4279, by University of Glasgow in collaboration with Ubiquigent.

2: Structural and Biochemical Insights into the Mechanism of Action of the Clinical USP1 Inhibitor, KSQ-4279

Martin Luke Rennie, Mehmet Gundogdu, Connor Arkinson, Steven Liness, Sheelagh Frame, Helen Walden

J Med Chem. 2024 Sep 12; 67(17): 15557–15568.
Published online 2024 Aug 27. doi:
10.1021/acs.jmedchem.4c01184

The application of DUBprofiler™ to determine the selectivity of the USP7 inhibitor, FX1-3763, in a collaboration between Schrödinger, WuXi AppTec, Oregon Health & Science University, Portland, OR, USA.

3: Ubiquitin-specific protease 7 inhibitors reveal a differentiated mechanism of p53-driven anti-cancer activity

Alan S. Futran, Tao Lu, Katherine Amberg-Johnson, Jiayi Xu, Xiaoxiao Yang, Saidi He, Sarah Boyce, Jeffrey A. Bell, Robert Pelletier, Takao Suzuki, Xianhai Huang, Heng Qian, Liping Fang, Li Xing, Zhaowu Xu, Stephen E. Kurtz, Jeffrey W.

Tyner, Wayne Tang, Tao Guo, Karen Akinsanya, David Madge, Kristian K. Jensen

iScience. 2024 May 17; 27(5): 109693. Published online 2024 Apr 9. doi: 10.1016/j.isci.2024.109693

The application of DUBprofiler™ as part of a chemical toolkit to identify the specific DUBs with Fubi protease activity by the Max Planck Institute of Molecular Physiology and Technische Universität, Dortmund, Germany.

4: Molecular basis for ubiquitin/Fubi cross-reactivity in USP16 and USP36

Rachel O'Dea, Nafizul Kazi, Alicia Hoffmann-Benito, Zhou Zhao, Sarah Recknagel, Kim Wendrich, Petra Janning & Malte Gersch

Nat Chem Biol (July 2023).
<https://doi.org/10.1038/s41589-023-01388-1>

The application of DUBprofiler™ to demonstrate exquisite selectivity of USP1 inhibitor compound, I-138, by Tango Therapeutics

5: Ubiquitinated PCNA Drives USP1 Synthetic Lethality in Cancer

Antoine Simoneau, Justin L. Engel, Madhavi Bandi, Katherine Lazarides, Shangtao Liu, Samuel R. Meier, Ashley H. Choi, Hongxiang Zhang, Binzhang Shen, Lauren Martires, Deepali Gotur, Truc V. Pham, Fang Li, Lina Gu, Shanzhong Gong, Minjie Zhang, Erik Wilker, Xuewen Pan, Douglas A. Whittington, Scott Throner, John P. Maxwell, Yingnan Chen, Yi Yu, Alan Huang, Jannik N. Andersen & Tianshu Feng

Molecular Cancer Therapeutics – The Journal of Cancer Drug Discovery and Preclinical Development. Volume 22, Issue 2 (Feb 2023)
<https://doi.org/10.1158/1535-7163.MCT-22-0409>

The application of DUBprofiler™ to discover and characterize USP21 inhibitors by Bayer AG, Structural Genomics Consortium and Nuvisan

6: Discovery and Characterization of BAY-805, a Potent and Selective Inhibitor of Ubiquitin-Specific Protease USP21

Fabian Göricke, Victoria Vu, Leanna Smith, Ulrike Scheib, Raphael Böhm, Namik Akkilic, Gerd Wohlfahrt, Jörg Weiske, Ulf Bömer, Krzysztof Brzezinka, Niels Lindner, Philip Lienau, Stefan Gradl, Hartmut Beck, Peter J. Brown, Vijayaratnam Santhakumar, Masoud Vedadi, Dalia Barsyte-Lovejoy, Cheryl H. Arrowsmith, Norbert Schmees, and Kirstin Petersen

J. Med. Chem. 2023, 66, 5, 3431–3447 (Feb 2023)
<https://doi.org/10.1021/acs.jmedchem.2c01933>

The application of DUBprofiler™ to accelerate inhibitor discovery for deubiquitinating enzyme by the Dana-Farber Cancer Institute and Harvard Medical School

7: Accelerating inhibitor discovery for deubiquitinating enzymes

Wai Cheung Chan, Xiaoxi Liu, Robert S. Magin, Nicholas M. Girardi, Scott B. Ficarro, Wanyi Hu, Maria I. Tarazona Guzman, Cara A. Starnbach, Alejandra Felix, Guillaume Adelmant, Anthony C. Varca, Bin Hu, Ariana S. Bratt, Ethan DaSilva, Nathan J. Schauer, Isabella Jaen Maisonet, Emma K. Dolen, Anthony X. Ayala, Jarrod A. Marto & Sara J. Buhrlage

Nature Communications 08 February 2023
<https://doi.org/10.1038/s41467-023-36246-0>

The application of DUBprofiler™ to evaluate the selectivity of USP30 inhibitors by Eisai

8: High-content phenotypic screen to identify small molecule enhancers of Parkin-dependent ubiquitination and mitophagy

Roberta Tufi, Emily H. Clark, Tamaki Hoshikawa, Christiana Tsagkaraki, Jack Stanley, Kunitoshi Takeda, James M. Staddon, Thomas Briston

SLAS Discovery Volume 28, Issue 3, April 2023, Pages 73-87

<https://doi.org/10.1016/j.slasd.2022.12.004>

The application of DUBprofiler™ to evaluate/interrogate the selectivity of cyclic peptide inhibitors of USP22 by Johns Hopkins University and the University of Tokyo.

9: Potent macrocycle inhibitors of the human SAGA deubiquitinating module

Michael Morgan, Tatsuya Ikenoue, Hiroaki Suga, Cynthia Wolberger

Cell Chemical Biology. Volume 29, Issue 4, April 2022, Pages 544-554.e4,

<https://doi.org/10.1016/j.chembiol.2021.12.004>

The application of DUBprofiler™ in SARS-CoV-2 PLpro small molecule drug discovery by Walter and Eliza Hall Institute/Monash University/CSIRO/The University of Melbourne

10: Insights Into Drug Repurposing, as Well as Specificity and Compound Properties of Piperidine-Based SARS-CoV-2 PLpro Inhibitors

Dale J. Calleja, Nathan Kuchel, Bernadine G. C. Lu, Richard W. Birkinshaw, Theresa Klemm, Marcel Doerflinger, James P. Cooney, Liana Mackiewicz, Amanda E. Au, Yu Q. Yap, Timothy R

Blackmore, Kasiram Katneni, Elly Crighton, Janet Newman, Kate E. Jarman, Melissa J. Call, Bernhard C. Lechtenberg, Peter E. Czabotar, Marc Pellegrini, Susan A. Charman, Kym N. Lowes, Jeffrey P. Mitchell, Ueli Nachbur, Guillaume Lessene, David Komander

Front Chem. 2022; 10: 861209. Published online 2022 Apr 12.

<https://doi.org/10.3389/fchem.2022.861209>

PMCID: PMC9039177

The application of DUBprofiler™ in identifying novel DUB substrates by the Dana-Farber Cancer Institute and Harvard Medical School

11: Proteomics-Based Identification of DUB Substrates Using Selective Inhibitors

Jonathan W. Bushman, Katherine A. Donovan, Nathan J. Schauer, Xiaoxi Liu, Wanyi Hu, Anthony C. Varca and Sara J. Buhrlage

Cell Chem Biol. Author manuscript; available in PMC 2022 Jan 21. Published in final edited form as: Cell Chem Biol. 2021 Jan 21; 28(1): 78–87.e3. Published online 2020 Oct 1.

<https://doi.org/10.1016/j.chembiol.2020.09.005>

PMCID: PMC7855594

The application of DUBprofiler™ in identifying novel DUB substrates by University College London and Eisai

12: Investigation of USP30 inhibition to enhance Parkin-mediated mitophagy: tools and approaches

Eliona Tsefou, Alison S. Walker, Emily H. Clark, Amy R. Hicks, Christin Luft, Kunitoshi Takeda, Toru Watanabe, Bianca Ramazio, James M. Staddon, Thomas Briston, Robin Ketteler

Biochem J. 2021 Dec 10; 478(23): 4099–4118.
Prepublished online 2021 Oct 27. Published
online 2021 Dec 6.

<https://doi.org/10.1042/bcj20210508>

The application of DUBprofiler™ in identifying novel DUB substrates by the University of Liverpool and University of Sheffield

13: Benchmarking a highly selective USP30 inhibitor for enhancement of mitophagy and pexophagy

Emma V Rusilowicz-Jones, Francesco G Barone, Fernanda Martins Lopes, Elezabeth Stephen, Heather Mortiboys, Sylvie Urbé, Michael J Clague

Life Sci Alliance. 2022 Feb; 5(2): e202101287.
Published online 2021 Nov 29.

<https://doi.org/10.26508/lsa.202101287>

PMCID: PMC8645336

The application of DUBprofiler™ in identifying novel DUB substrates by the University of Liverpool, University of Oxford, FORMA Therapeutics, Max Planck Institute of Molecular Physiology, Technische Universität Dortmund, University of Sheffield, Walter and Eliza Hall Institute of Medical Research, University of Melbourne and University of Newcastle

14: USP30 sets a trigger threshold for PINK1–PARKIN amplification of mitochondrial ubiquitylation

Emma V Rusilowicz-Jones, Jane Jardine, Andreas Kallinos, Adan Pinto-Fernandez, Franziska Guenther, Mariacarmela Giurrandino, Francesco G Barone, Katy McCarron, Christopher J Burke, Alejandro Murad, Aitor Martinez, Elena Marcassa, Malte Gersch, Alexandre J Buckmelter, Katherine J Kayser-Bricker, Frederic Lamoliatte, Akshada Gajbhiye, Simon Davis, Hannah C Scott, Emma Murphy, Katherine England, Heather

Mortiboys, David Komander, Matthias Trost, Benedikt M Kessler, Stephanos Ioannidis, Michael K Ahljanian, Sylvie Urbé, Michael J Clague

Life Sci Alliance. 2020 Aug; 3(8): e202000768.
Published online 2020 Jul 7.

<https://doi.org/10.26508/lsa.202000768>

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The application of DUBprofiler™ in DUB targeting small molecule drug discovery by the Dana-Farber Cancer Institute and Harvard Medical School

15: Selective USP7 inhibition elicits cancer cell killing through a p53-dependent mechanism

Nathan J. Schauer, Xiaoxi Liu, Robert S. Magin, Laura M. Doherty, Wai Cheung Chan, Scott B. Ficarro, Wanyi Hu, Rebekka M. Roberts, Roxana E. Iacob, Björn Stolte, Andrew O. Giacomelli, Sumner Perera, Kyle McKay, Sarah A. Boswell, Ellen L. Weisberg, Arghya Ray, Dharminder Chauhan, Sirano Dhe-Paganon, Ken C. Anderson, James D. Griffin, Jianing Li, William C. Hahn, Peter K. Sorger, John R. Engen, Kimberly Stegmaier, Jarrod A. Marto, Sara J. Buhrlage

Sci Rep. 2020; 10: 5324. Published online 2020 Mar 24.

<https://doi.org/10.1038/s41598-020-62076-x>

PMCID: PMC7093416

The application of DUBprofiler™ in DUB targeting small molecule drug discovery by Almac Discovery and Queen's University

16: Identification and Structure-Guided Development of Pyrimidinone Based USP7 Inhibitors

Colin R. O'Dowd, Matthew D. Helm, J. S. Shane Rountree, Jakub T. Flasz, Elias Arkoudis, Hugues

Miel, Peter R. Hewitt, Linda Jordan, Oliver Barker, Caroline Hughes, Ewelina Rozycka, Eamon Cassidy, Keeva McClelland, Ewa Odrzywol, Natalie Page, Stephanie Feutren-Burton, Scarlett Dvorkin, Gerald Gavory, Timothy Harrison

ACS Med Chem Lett. 2018 Mar 8; 9(3): 238–243.
Published online 2018 Feb 21.
<https://doi.org/10.1021/acsmchemlett.7b00512>
PMCID: PMC5846043

The application of DUBprofiler™ in identifying novel DUB substrates by the Mitobridge, Inc. (an Astellas company) and Aurigene Discovery Technologies

17: Novel highly selective inhibitors of ubiquitin specific protease 30 (USP30) accelerate mitophagy

Arthur F Kluge, Bharat R Lagu, Pranab Maiti, Mahaboobi Jaleel, Michael Webb, Jyoti Malhotra, Ashley Mallat, P Akhila Srinivas, James E Thompson

Bioorg Med Chem Lett 2018 Aug 15;28(15):2655-2659. <https://doi.org/10.1016/j.bmcl.2018.05.013>

The application of DUBprofiler™ in DUB targeting small molecule drug discovery by Almac Discovery and Queen's University

18: Discovery and characterization of highly potent and selective allosteric USP7 inhibitors.

Gerald Gavory, Colin R O'Dowd, Matthew D Helm, Jakub Flasz, Elias Arkoudis, Anthony Dossang, Caroline Hughes, Eamon Cassidy, Keeva McClelland, Ewa Odrzywol, Natalie Page, Oliver Barker, Hugues Miel & Timothy Harrison

Nature Chemical Biology volume 14, pages 118–125 (2018) and (2017) Nat Chem Biol.
<https://doi.org/10.1038/nchembio.2528>

The application of DUBprofiler™ in DUB targeting small molecule drug discovery by the Dana-Farber Cancer Institute and Harvard Medical School

19: Structure-guided development of a potent and selective noncovalent active site inhibitor of USP7

Ilaria Lamberto, Xiaoxi Liu, Hyuk-Soo Seo, Nathan J Schauer, Roxana E Iacob, Wanyi Hu, Deepika Das, Tatiana Mikhailova, Ellen L Weisberg, John R Engen, Kenneth C Anderson, Dharminder Chauhan, Sirano Dhe-Paganon, Sara J Buhrlage

Cell Chem Biol. Author manuscript; available in PMC 2018 Dec 21. Published in final edited form as: Cell Chem Biol. 2017 Dec 21; 24(12): 1490–1500.e11. Published online 2017 Oct 19.
<https://doi.org/10.1016/j.chembiol.2017.09.003>
PMCID: PMC5749250

The application of DUBprofiler™ in DUB targeting small molecule drug discovery by the University of Pittsburgh

20: Targeting the deubiquitinase STAMBP inhibits NALP7 inflammasome activity

Joseph S. Bednash, Nathaniel Weathington, James Londino, Mauricio Rojas, Dexter L. Gulick, Robert Fort, SeungHye Han, Alison C. McKelvey, Bill B. Chen, Rama K. Mallampalli

Nat Commun. 2017; 8: 15203. Published online 2017 May 11.
<https://doi.org/10.1038/ncomms15203>
PMCID: PMC5437278

The application of DUBprofiler™ in DUB targeting small molecule drug discovery by Genentech

21: USP7 small-molecule inhibitors interfere with ubiquitin binding.

Lorna Kategaya, Paola Di Lello, Lionel Rougé, Richard Pastor, Kevin R Clark, Jason Drummond, Tracy Kleinheinz, Eva Lin, John-Paul Upton, Sumit Prakash, Johanna Heideker, Mark McClelland, Maria Stella Ritorto, Dario R Alessi, Matthias Trost, Travis W Bainbridge, Michael C M Kwok, Taylur P Ma, Zachary Stiffler, Bradley Brasher, Yinyan Tang, Priyadarshini Jaishankar, Brian R Hearn, Adam R Renslo, Michelle R Arkin, Frederick Cohen, Kebing Yu, Frank Peale, Florian Gnad, Matthew T Chang, Christiaan Klijn, Elizabeth Blackwood, Scott E Martin, William F Forrest, James A Ernst, Chudi Ndubaku, Xiaojing Wang, Maureen H Beresini, Vickie Tsui, Carsten Schwerdtfeger, Robert A Blake, Jeremy Murray, Till Maurer, Ingrid E Wertz Kategaya et al. (2017)

Nature. 550(7677):534-538.

<https://doi.org/10.1038/nature24006>

The application of DUBprofiler™ in DUB targeting small molecule drug discovery by Progenra, University of Connecticut and Yale University

22: USP7-Specific Inhibitors Target and Modify the Enzyme's Active Site via Distinct Chemical Mechanisms.

Alexandra Pozhidaeva, Gabrielle Valles, Feng Wang, Jian Wu, David E Sterner, Phuong Nguyen, Joseph Weinstock, K G Suresh Kumar, Jean Kanyo, Dennis Wright, Irina Bezsonova.

Cell Chem Biol. 2017 Dec 21;24(12):1501-1512.e5.

<https://doi.org/10.1016/j.chembiol.2017.09.004>

The application of DUBprofiler™ in DUB targeting small molecule drug discovery by FORMA Therapeutics

23: Molecular basis of USP7 inhibition by selective small-molecule inhibitors

Andrew P. Turnbull, Stephanos Ioannidis, Wojciech W. Krajewski, Adan Pinto-Fernandez, Claire Heride, Agnes C.L. Martin, Louise M. Tonkin, Elizabeth C. Townsend, Shane M. Buker, David R. Lancia, Jr, Justin A. Caravella, Angela V. Toms, Thomas M. Charlton, Johanna Lahdenranta, Erik Wilker, Bruce C. Follows, Nicola J. Evans, Lucy Stead, Cristina Alli, Vladislav V. Zarayskiy, Adam C. Talbot, Alexandre J. Buckmelter, Minghua Wang, Crystal L. McKinnon, Fabienne Saab, Joanna F. McGouran, Hannah Century, Malte Gersch, Marc S. Pittman, C. Gary Marshall, Tony M. Raynham, Mary Simcox, Lorna M.D. Stewart, Sheila B. McLoughlin, Jaime A. Escobedo, Kenneth W. Bair, Christopher J. Dinsmore, Tim R. Hammonds, Sunkyu Kim, Sylvie Urbé, Michael J. Clague, Benedikt M. Kessler, David Komander

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Published online 2017 Oct 18.

<https://doi.org/10.1038/nature24451>

PMCID: PMC6029662

The application of DUBprofiler™ in DUB targeting small molecule drug discovery by Almac Discovery and Astra Zeneca

24: Identification and characterisation of dual inhibitors of the USP25/28 Deubiquitinating enzyme subfamily.

Jonathan D Wrigley, Gerald Gavory, Iain Simpson, Marian Preston, Helen Plant, Jenna Bradley, Anne U Goeppert, Ewelina Rozycka,

Gareth Davies, Jarrod Walsh, Andrea Valentine, Keeva McClelland, Krzysztofa Ewa Odrzywol, Jonathan Renshaw, Joanna Boros, Jonathan Tart, Lindsey Leach, Thorsten Nowak, Richard A Ward, Timothy Harrison, David M Andrews, Wrigley et al. (2017)

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<https://doi.org/10.1021/acscchembio.7b00334>

The application of DUBprofiler™ in identifying novel DUB substrates by the Linköping University, Mayo Clinic, Karolinska Institute and Uppsala University

25: Synthesis and Evaluation of Derivatives of the Proteasome Deubiquitinase Inhibitor b-API5

Xin Wang, Pádraig D'Arcy, Thomas R. Caulfield, Aneel Paulus, Kasyapa Chitta, Chitralkha Mohanty, Joachim Gullbo, Asher Chanan-Khan, Stig Linder

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Published in final edited form as: Chem Biol Drug Des. 2015 Nov; 86(5): 1036–1048. Published online 2015 May 27.
<https://doi.org/10.1111/cbdd.12571> PMID: PMC4590650

The application of DUBprofiler™ in identifying novel DUB substrates by the Heinrich-Heine University, The Norwegian Radium Hospital and University of Oslo

26: Deubiquitinase inhibition by WP1130 leads to ULK1 aggregation and blockade of autophagy

Stefan Drießen, Niklas Berleth, Olena Friesen, Antje S Löffler, Philip Böhler, Nora Hieke, Fabian Stuhldreier, Christoph Peter, Kay O Schink, Sebastian W Schultz, Harald Stenmark, Petter Holland, Anne Simonsen, Sebastian Wesselborg, Björn Stork

Autophagy. 2015 Sep; 11(9): 1458–1470. Published online 2015 Jul 24.
<https://doi.org/10.1080/15548627.2015.1067359>

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