

## CURRICULUM VITAE

**Michel O. Steinmetz**

Professor of Biochemistry

Head of Division a.i.

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### PERSONAL INFORMATION

Nationality: Swiss

Date of Birth: 16<sup>th</sup> January 1967

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### EDUCATION

**1992-1996:** **Ph.D. in Biochemistry**, M.E. Müller-Institut, Biozentrum, University of Basel, Switzerland. *Summa cum laude* graduation.

**1987-1992:** **Diploma in Biochemistry**, Biozentrum, University of Basel, Switzerland.  
Thesis at Ciba-Geigy AG, Basel, Switzerland.

**1983-1987:** **Matura Typus C**, Mathematisch Naturwissenschaftliches Gymnasium, Basel, Switzerland.

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### PROFESSIONAL EXPERIENCE

**Since 2024:** **Head of Division a.i.**, Division of Biology and Chemistry, Paul Scherrer Institut, Villigen PSI, Switzerland.

**Since 2006:** **Research Group Leader**, Laboratory of Biomolecular Research, Paul Scherrer Institut, Villigen PSI, Switzerland.

**2018 - 2024:** **Head of Laboratory**, Laboratory of Biomolecular Research, Paul Scherrer Institut, Villigen PSI, Switzerland.

**2019-2020:** **Head of Laboratory a.i.**, Laboratory of Nanoscale Biology, Paul Scherrer Institut, Villigen PSI, Switzerland.

- 2006-2010:** **Head of “High-Throughput Platform: From Gene to Structure”**, Laboratory of Biomolecular Research, Paul Scherrer Institut, Villigen PSI, Switzerland.
- 2000-2005:** **Research Scientist**, Laboratory of Biomolecular Research, Paul Scherrer Institut, Villigen PSI, Switzerland.
- 1998-2000:** **Post Doctoral Fellow**, Novartis Pharma AG, Functional Genomics Area, Protein Sciences Unit, Basel, Switzerland.
- 1996-1998:** **Post Doctoral Fellow**, M.E. Müller-Institut at the Biozentrum of the University of Basel, Switzerland.
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## **INSTITUTIONAL RESPONSIBILITIES**

- Since 2019:** Deputy Head of Division, Division of Biology and Chemistry, Paul Scherrer Institut, Villigen PSI, Switzerland.
- Since 2017:** Project Leader “Chemical Ordering and Management System @PSI”, Paul Scherrer Institut
- Since 2016:** Responsible for the “Vocational Training in Chemistry and Chemical Management” group at the Paul Scherrer Institut
- 2021-2022:** Deputy Head of Laboratory, Laboratory of Nanoscale Biology, Paul Scherrer Institut, Villigen PSI, Switzerland.
- 2018-2019:** Deputy Head of Laboratory, Laboratory of Nanoscale Biology, Paul Scherrer Institut, Villigen PSI, Switzerland.
- 2013-2018:** Deputy Head of Laboratory, Laboratory of Biomolecular Research, Paul Scherrer Institut, Villigen PSI, Switzerland.
- 2009-2017:** Member of the Research Commission of the Paul Scherrer Institut
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## **AWARDS AND HONOURS**

- 2020:** Bonus of Excellence award of the Swiss National Science Foundation (SNF).
- 2012:** Promotion to Titularprofessor (Honorary Professor) at the faculty of science of the University of Basel, Switzerland.
- 2011:** Bonus of Excellence award of the Swiss National Science Foundation (SNF).
- 2010:** Elected member of the European Molecular Biology Organization (EMBO).
- 1999:** Amerbach-Prize of the University of Basel, Switzerland, for outstanding research achievements.
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## **RESEARCH GRANTS**

### **Basic research projects (7756 kCHF in total)**

- 2021:** SNI Argovia Grant HPDET-EM (PI)
- 2020:** FNSNF Grant 310030\_192566 incl. “Bonus of Excellence” award (PI)
- 2020:** FNSNF Sinergia Grant CRSII5\_189940 (PI)
- 2016:** R'equip FNSNF Grant 316030\_170802 (co-PI)
- 2016:** ANR Grant AAPG 2016 (co-PI)
- 2016:** FNSNF Grant 31003A\_166608 (PI)
- 2015:** COST Action CM1407 (PI)

- 2013:** SystemsX.ch RTD Grant (PI)
- 2012:** FNSNF "Bonus of Excellence" Grant 31003B\_138659 (PI)
- 2011:** Novartis Grant Nr. 11A03 (PI)
- 2011:** SystemsX BIP Grant (PI)
- 2010:** R'equip FNSNF Grant 316030\_133810 (co-PI)
- 2009:** FNSNF Sinergia Grant CRSII3\_125463 (PI)
- 2008:** FNSNF Grant 3100A0-122545 (PI)
- 2008:** R'equip FNSNF Grant 326000\_121315 (co-PI)
- 2005:** FNSNF Grant 3100A0-109423 (PI)
- 2002:** ETHZ Grant TH-42/02-2 (PI)
- 2001:** FNSNF Grant 31-64978.01 (PI)

#### **Industry projects (1845 kCHF in total)**

- 2025:** BPGbio, Inc (PI)
- 2022:** Terra Australis Pharmaceuticals PTY LTD (PI)
- 2019:** PTC Therapeutics, Inc. (PI)
- 2018:** BeyondSpring Pharmaceuticals, Inc. (PI)
- 2017:** BeyondSpring Pharmaceuticals, Inc. (PI)
- 2015:** Vertex, Inc. (PI)
- 2015:** SutroBiopharma, Inc. (PI)
- 2014:** Therillia, Inc. (PI)
- 2014:** Pharma Mar, Inc. (PI)
- 2013:** Seattle Genetics, Inc. (PI)
- 2013:** Esai, Inc. (PI)
- 2010:** Basilea, Inc. (PI)

#### **PSI projects (1490 kCHF in total)**

- 2008:** FoKo\_BIO/SLS (co-PI)
- 2005:** FoKo\_BIO (co-PI)

#### **Postdoctoral fellowships obtained by group members**

- 2021:** PSI-FELLOW/COFUND Fellowship
- 2017:** PSI-FELLOW/COFUND Fellowship
- 2014:** PSI-FELLOW/COFUND Fellowship
- 2014:** Marie Curie IEF Fellowship
- 2014:** EMBO Long-term Fellowship
- 2012:** EMBO Long-term Fellowship
- 2011:** PSI Förderprogramm für Wiedereinsteigerinnen
- 2007:** FEBS Long-term Fellowship

#### **COMMUNITY SERVICES**

- 2021:** Editor of *Current Opinion in Structural Biology* issue 66, 2021 entitled "Centrosomal Organization and Assemblies"
- 2018:** Member of the Evaluation Board of the Subcellular Structure and Cellular Dynamics Unit (UMR144), Institut Curie, Paris, France
- 2015:** Member of the Evaluation Board of the Cell and Development Biology program of the Center of Genomic Regulation (CRG), Barcelona, Spain
- 2014:** Member of the Eribulin Preclinical Advisory Board of Eisai Inc., New York, USA

**2013 - 2016:** Member of the EMBO Membership Commission  
**2009:** Member of the Evaluation Board of the Laboratory of Structure et Activité des Biomolécules Normales et Pathologiques, University of Evry Val d'Essonne, Evry, France

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## **ORGANISATIONAL ACTIVITIES**

**2016:** Organizer of the EMBO Symposium 'Microtubules: From atoms to complex systems'  
**2012:** Organizer of the EMBO Conference 'Microtubules: Structure, Regulation and Functions'  
**2010:** Founder and organizer of the EMBO Conference 'Microtubules: Structure, Regulation and Functions'

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## **SUMMARY OF MAIN SCIENTIFIC ACHIEVEMENTS**

Steinmetz is an established expert in the microtubule cytoskeleton field. Since he joined the Paul Scherrer Institut (PSI) in the year 2000, he contributed important results to the structure-function relationship of microtubules and their interacting proteins and drugs. His work resulted in the publication of more than 170 papers in high profile scientific journals including Nature, Science, and Cell. Major scientific achievements of the Steinmetz group are:

- The development of a tubulin structural biology pipeline that allows elucidating the mechanisms of action of tubulin-binding drugs to high resolution by X-ray crystallography. This achievement laid down the basis for the rational engineering of next generation of antitubulin drugs for the treatment of cancer.
- The discovery of a universal "Microtubule tip Localization Signal" (MtLS). The concept of MtLS allowed rationalizing the localization behavior of a large number of microtubule associated proteins, the so called microtubule plus-end tracking proteins (+TIPs) in all eukaryotes.
- The structural elucidation of the reader, writer and eraser of the tubulin tyrosination cycle. Since the cycle is crucial for normal brain development, this achievement laid down a unique basis for the development of drugs to treat neurological disorders.
- The deciphering of the structural basis of the universal nine-fold radial symmetry of centrioles and consequently of cilia and flagella. The work provided for the first time a basis to decipher the mechanism of centriole formation at the atomic level.

A central aspect of Steinmetz's research is the use of an interdisciplinary structural biology, computational, biophysical, biochemical, cell biology and chemistry approach to tackle challenging biological questions. For achieving his goals, he makes use of a large network of academic and industrial collaborations around the globe.

## LIST OF PUBLICATIONS

ISI Web of Science (January 2024): h-index, 63; Total number of citations, 13'222

Google Scholar (January 2024): h-index, 75; Total number of citations, 19'494

\*Shared corresponding author

### 2024

191. Meier, S.M., **Steinmetz, M.O.\***, Barral, Y.\*  
Microtubule specialization by +TIP networks: from mechanisms to functional implications.  
Trends in Biochemical Sciences, in press

### 2023

190. Wranik, M., Kepa, M.W., 1, Beale, E.V., James, D., Bertrand, Q., Weinert, T., Furrer, A., Glover, H., Gashi, D., Carrillo, M., Kondo, Y., Stipp, R.T., Khusainov, G., Nass, K., Ozerov, D., Cirelli, C., Johnson, P.J.M., Dworkowski, F., Beale, J.H., Stubbs, S., Zamofing, T., Schneider, M., Krauskopf, K., Gao, L., Thorn-Seshold, O., Bostedt, C., Bacellar, C., **Steinmetz, M.O.**, Milne, C., Standfuss, J.  
A multi-reservoir extruder for time-resolved serial protein crystallography and compound screening at X-ray free-electron lasers.  
Nat. Comm., 14:7956 (2023).
189. Chen, X., Portran, D., Widmer, L.A., Stangier, M.M., Czub, M.P., Liakopoulos, D., Stelling, J., **Steinmetz, M.O.**, Barral, Y.  
The motor domain of the kinesin Kip2 promotes microtubule polymerization at microtubule tips.  
J. Cell Biol., 222:e202110126 (2023).
188. Wranik, M., Weinert, T., Slavov, C., Masini, T., Furrer, A., Gaillard, N., Gioia, D., Ferrarotti, M., James, D., Glover, H., Carrillo, M., Kekilli, D., Stipp, R., Skopintsev, P., Brünle, S., Mühlethaler, T., Beale, J., Gashi, D., Nass, K., Ozerov, D., Johnson, P.J.M., Cirelli, C., Bacellar, C., Braun, M., Wang, M., Dworkowski, F., Milne, C., Cavalli, A., Wachtveitl, J., **Steinmetz, M.O.\***, Standfuss, J.\*  
Molecular snapshots of drug release from tubulin over eleven orders of magnitude in time.  
Nat. Comm., 14:903 (2023).
187. Prota, A.E., Lucena-Agell, D., Ma, Y., Estévez-Gallego, J., Roca, C., Josa-Prado, F., Goossens, K., Giménez-Abián, J.F., Li, S., Canales, A., Bargsten, K., Andreu, J.M., Altmann, K.-H., Gaillard, N., Kamimura, S., Mühlethaler, T., Oliva, M.A., **Steinmetz, M.O.**, Fang, W.-S., Díaz, J.F.  
Structural insight into the stabilization of microtubules by taxanes.  
Elife, 12:e84791 (2023).
186. Meier, S.M., Farcas, A.-M., Kumar, A., Ijavi, M., Bill, R.T., Stelling, J., Dufresne, E.R., **Steinmetz, M.O.\***, Barral, Y.\*  
Multivalency ensures cohesion and persistence of a microtubule +TIP-body at the plus-end of a single specialized microtubule in yeast.  
Nat. Cell Biol., 25, 56-67 (2023).
185. Ramirez-Rios, S., Choi, S.R., Sanyal, C., Blum, T.B., Bosc, C., Krichen, F., Denarier, E., Soleilhac, J.-M., Blot, B., Janke, C., Stoppin-Mellet, V., Magiera, M.M., Arnal, I., **Steinmetz, M.O.\***, Moutin, M.-J.\*  
VASH1-SVBP and VASH2-SVBP generate different deetyrosination profiles on microtubules.  
J. Cell Biol., 222:e202205096 (2023).

## 2022

184. Guyomar, C., Ku, S., Heumann, J., Bousquet, C., Guilloux, G., Gaillard, N., Heichette, C., Duchesne, L., **Steinmetz, M.O.**, Gibeaux, R., Chrétien, D.  
Structural heterogeneity of the microtubule lattice  
*Elife*, 11:e8302 (2022).
183. Estévez-Gallego, J., Alvarez-Bernad, B., Pera, B., Wullschleger, C., Raes, O., Menche, D., Martinez, J.C., Lucena-Agell, D., Prota, A.E.; Bonato, F., Bargsten, K., Cornelus, J., Giménez-Abián, J.F., Northcote, P., **Steinmetz, M.O.**, Kamimura, S., Altmann, K.-H., Paterson, I., Gago, F., Van der Eycken, J., Díaz, J.F., Olivia, A.M.  
Chemical modulation of microtubule structure through the laulimalide/peloruside site.  
*Structure*, 31, 88-99.e5 (2022).
182. Barreca, M., Spanò, V., Rocca, R., Bivacqua, R., Abel, A.C., Maruca, A., Montalbano, A., Raimondi, M.V., Tarantelli, C., Gaudio, E., Cascione, L., Rinaldi, A., Bai, R., **Steinmetz, M.O.**, Prota, A.E., Alcaro, S., Hamel, E., Bertoni, F., Barraja, P.  
Development of [1,2]oxazoloisindoles tubulin polymerization inhibitors: Further chemical modifications and potential therapeutic effects against lymphomas  
*Eur. J. Med. Chem.*, 243:114744 (2022).
181. Montel de la Roche, N., Mühlethaler, T., Concetta Di Martino, R.M., Ortega, J.A., Gioia, D., Roy, B., Prota, A.E., **Steinmetz, M.O.\***, Cavalli, A.\*  
Novel fragment-derived colchicine-site binders as microtubule-destabilizing agents.  
*Eur. J. Med. Chem.*, 241, 114614 (2022).
180. Mühlethaler, T., Milanos, L., Ortega, J.A., Blum, T.B., Gioia, D., Roy, B., Prota, A.E., Cavalli, A., **Steinmetz, M.O.**  
Rational Design of a Novel Tubulin Inhibitor with a Unique Mechanism of Action.  
*Angewandte Chemie Int. Ed.*, 61, e202204052 (2022).
179. Mühlethaler, T., Gioia, D., Prota, A.E., Sharpe, M.E., Cavalli, A., **Steinmetz, M.O.**  
XChem Fragment screening finds new binding sites on vital tubulin protein.  
*Diamond Light Source Annual Review 2021/22*, 26-27 (2022).
178. Mühlethaler, T., Olieric, N., Ehrhard, V.A., Wranik, M., Standfuss, J., Sharma, A., Prota, A.E., **Steinmetz, M.O.**  
Crystallization systems for the high-resolution structural analysis of tubulin-ligand complexes.  
*Meth. Mol. Biol.*, 2430, 349-374 (2022).
177. Gao, L., Meiring, J.C.M., Varady, A., Ruider, I.E., Heise, C., Wranik, M., Velasco, C.D., Taylor, J.A., Terni, B., Standfuss, J., Cabernard, C.C., Llobet, A., **Steinmetz, M.O.**, Bausch, A.R., Distel, M., Thorn-Seshold, J., Akhmanova, A., Thorn-Seshold, O.  
In vivo photocontrol of microtubule dynamics and integrity, migration and mitosis, by the potent GFP-imaging-compatible photoswitchable reagents SBTubA4P and SBTub2M.  
*J. Am. Chem. Soc.*, 144, 5614-5628 (2022).

## 2021

176. Ogunmolu, F.E., Moradi, S., Volkov, V.A., van Hoorn, C., Wu, J., Andrea, N., Hua, S., Jiang, K., Vakonakis, I., Potočnjak, M., Herzog, F., Gigant, B., Gudimchuk, N., Stecker, K.E., Dogterom, M., **Steinmetz, M.O.\***, Akhmanova, A.\*  
Microtubule plus-end regulation by centriolar cap proteins.  
bioRxiv 2021.12.29.474442

175. Gaillard, N., Sharma, A., Abbaali, I., Liu, T., Shilliday, F., Cook, A.D., Ehrhard, V., Bangera, M., Roberts, A.J., Moores, C.A., Morrissette, N., **Steinmetz, M.O.**  
Inhibiting parasite proliferation using a rationally designed anti-tubulin agent.  
EMBO Mol. Med., 13:e13818 (2021).
174. Yong, C., Devine, S.M., Abel, A.-C., Tomlins, S.D., Muthiah, D., Gao, X., Callaghan, R., **Steinmetz, M.O.**, Prota, A.E., Capuano, B., Scammells, P.J.  
1,3-Benzodioxole Modified Noscapine Analogues: Synthesis, Antiproliferative Activity and Tubulin Bound Structure.  
ChemMedChem, 16, 2882-2894 (2021).
173. Kumar, A., Meier, S.M., Farcas, A.-M., Manatschal, C., Barral, Y., **Steinmetz, M.O.**  
Structure and regulation of the microtubule plus-end tracking protein Kar9.  
Structure, 29, 1266-1278 (2021).
172. Mühlethaler, T., Gioia, D., Prota, A.E., Sharpe, M.E., Cavalli, A., **Steinmetz, M.O.**  
Comprehensive analysis of binding sites in tubulin.  
Angewandte Chemie Int. Ed., 60, 13331-13342 (2021).
171. Lee, K.S., **Steinmetz, M.O.**  
Centrosomes in the spotlight: from organization to function to role in disease.  
Curr. Opin. Struct. Biol., 66, iii-v (2021)
170. Ijavi, M., Style, R.W., Emmanouilidis, L., Meier, S., Kumar, A., Allain, F.H.T., Barral, Y., Steinmetz, M.O., Dufresne, E.R.  
Surface tensiometry of phase separated protein and polymer droplets by the sessile drop method.  
Soft Matter, 17, 1655-1662 (2021)
169. Gao, L., Meiring, J.C.M., Kraus, Y., Wranik, M., Weinert, T., Pritzl, S.D., Bingham, R., Ntoulidou, E., Jansen, K.I., Olieric, N., Standfuss, J., Kapitein, L.C., Lohmüller, T., Ahlfeld, J., Akhmanova, A., **Steinmetz, M.O.**, Thorn-Seshold, O.  
A robust, GFP-orthogonal photoswitchable inhibitor scaffold extends optical control over the microtubule cytoskeleton.  
Cell Chem. Biol., 28, 228-241.e6 (2021)
168. Sharma, A., Olieric, N., **Steinmetz, M.O.**  
Centriole length control  
Curr. Opin. Struct. Biol., 66, 89-95 (2021)

## 2020

167. Atherton, J., Hummel, J.J.A., Olieric, N., Locke, J., Peña, A., Rosenfeld, S.S., **Steinmetz, M.O.**, Hoogenraad, C.C., Moores, C.A.  
Mechanism of kinesin inhibition by kinesin binding protein.  
Elife, 9:e61481 (2020)
166. Steib, E., Laporte, M.H., Gambarotto, D., Olieric, N., Zheng, C., Borgers, S., Olieric, V., Le Guennec, M., Koll, F., Tassin, A.-M., **Steinmetz, M.O.**, Guichard, P., Virginie, H.  
WDR90 is a centriolar microtubule wall protein important for centriole architecture integrity.  
Elife, 9:e57205 (2020).

165. Nass, K., Cheng, R., Vera, L., Mozzanica, A, Redford, S., Ozerov, D., Basu, S., James, D., Knopp, G., Cirelli, C., Martiel, I., Casadei, C., Weinert, T., Nogly, P., Skopintsev, P., Usov, I., Leonarski, F., Geng, T., Rappas, M., Doré, A.S., Cook, R., Shirazi, S.N., Dworkowski, F., Sharpe, M., Olieric, N., Bacellar, C., Bohinc, R., **Steinmetz, M.O.**, Schertler, G., Abela, R., Patthey, L., Schmitt, B., Hennig, M., Standfuss, J., Wang, M., Milne, C.J.  
Advances in long-wavelength native phasing at X-ray free-electron lasers.  
IUCrJ, 7, 965-975 (2020)
164. Jost, M., Chen, Y., Gilbert, L.A., Horlbeck, M.A., Krenning, L., Menchon, G., Rai, A., Cho, M.Y., Stern, J.J., Prota, A.E., Kampmann, M., Akhmanova, A., **Steinmetz, M.O.**, Tanenbaum, M.E., Weissman, J.S.  
Pharmaceutical-Grade Rigosertib Is a Microtubule-Destabilizing Agent.  
Mol. Cell, 79, 191-198 (2020).
163. Oliva, M.A., Prota, A.E., Rodríguez-Salarichs, J., Gu, W., Bennani, Y.L., Jiménez-Barbero, J., Bargsten, K., Canales, A., **Steinmetz, M.O.**, Díaz, J.F.  
Structural basis of noscapine activation for tubulin binding.  
J. Med. Chem., 63, 8495-8501 (2020).
162. Guo, B., Rodríguez-Gabin, A., Prota, A.E., Mühlethaler, T., Zhang, N., Ye, K., **Steinmetz, M.O.**, Horwitz, S.B., Smith III, A.B., McDaid, H.M.  
Structural refinement of the tubulin ligand (+)-discodermolide to attenuate chemotherapy-mediated senescence.  
Mol. Pharm., 98, 156-167 (2020).
161. Fiedler, T., Fabrice, T.N., Studer, V., Vinet, A., Faltova, L., Kammerer, R.A., **Steinmetz, M.O.**, Sharpe, T., Pieters, J.  
Homodimerization of coronin A through the C-terminal coiled coil domain is essential for multicellular differentiation of dictyostelium discoideum.  
FEBS Lett., 594, 2116–2127 (2020).
161. Estévez-Gallegoa, J., Josa-Pradoa, F., Kub, S., Bueya, R.M., Balaguera, F.A., Prota, A.E., Lucena-Agella, D., Kamma-Lorgere, C., Yagi, T., Iwamoto, H., Duschesne, L., Barasoain, I., **Steinmetz, M.O.**, Chrétien, D., Kamimura, S., Díaz, F., Oliva, M.A.  
Structural model for differential cap maturation at growing microtubule ends.  
eLife, e50155 (2020).
160. Rodríguez-García, R., Volkov, V.A., Chen, C.-Y., Katrukha, E.A., Olieric, N., Aher, A., Grigoriev, I., López, M.P., **Steinmetz, M.O.**, Kapitein, L.C., Koenderink, G., Dogterom, M., Akhmanova, A.  
Mechanisms of motor-independent membrane remodeling driven by dynamic microtubules.  
Curr. Biol., S0960-9822(20)30036-1 (2020).
158. Rai, A., Liu, T., Glauser, S., Katrukha, E.A., Estévez-Gallego, J., Rodríguez-García, R., Fang, W.-S., Díaz, J.F., **Steinmetz, M.O.**, Altmann, K.-H., Kapitein, L.C., Moores, C.A., Akhmanova, A.  
Taxanes convert regions of perturbed microtubule growth into rescue sites.  
Nat. Mat., 19, 355-365 (2020).

## 2019

159. Atherton, J., Luo, Y., Xiang, S., Yang, C., Rai, A., Jiang, K., Stangier, M., Vemu, A., Cook, A.D., Wang, S., Roll-Mecak, A., **Steinmetz, M.O.**, Akhmanova, A., Baldus, M., Moores, C.A.  
Structural determinants of microtubule minus end preference in CAMSAP CCK domains.  
Nat. Comm., 10:5236 (2019).



157. Cury, N.M., Mühlethaler, T., Laranjeira, A.B.A., Canevarolo, R.R., Zenatti, P.P., Lucena-Agell, D., Barasoain, I., Song, C., Sun, D., Dovat, S., Yunes, R.A., Prota, A.E., **Steinmetz, M.O.**, Díaz, J.F., Yunes, J.A.  
Structural basis of new colchicine binding site acylhydrazones with promising activity against acute lymphoblastic leukemia and multidrug resistant cells.  
*iScience*, 21, 95-109 (2019).
156. Chen, X., Widmer, L.A., Stangier, M.M., **Steinmetz, M.O.**, Stelling, J., Barral, Y.  
Remote control of microtubule plus-end dynamics and function from the minus-end.  
*eLife*, e48627 (2019).
155. Kashyap, A.S., Zhao, Y., Fernandez-Rodriguez, L., Monaco, G., Trefny, M.P., Yoshida, N., Martin, K., Sharma, A., Olieric, N., Shah, P., Stanczak, M., Kirchhammer, N., Park, S.-M., Wieckowski, S., Laubli, H., Zagani, R., Kasenda, B., **Steinmetz, M.O.**, Reinecker, H.-C., Zippelius, A.  
GEFH1 signaling upon microtubule destabilization is required for dendritic cell activation and specific anti-tumor responses.  
*Cell Rep.*, 28, 3367-3380 (2019).
154. La Sala, G., Olieric, N., Sharma, A., Viti, F., de Asis Balaguer Perez, F., Huang, L., Tonra, J.R., Lloyd, G.K., Decherchi, S., Díaz, J.F., **Steinmetz, M.O.\***, Cavalli, A\*.  
Structure, Thermodynamics, and Kinetics of Plinabulin Binding to two Tubulin Isotypes.  
*Chem*, 5, 2969–2986 (2019).
153. Patterson, J.C., Joughin, B.A., Prota, A.E., Mühlethaler, T., Jonas, O.H., Whitman, M.A., Varmeh, S., Chen, S., Balk, S.P., **Steinmetz, M.O.**, Lauffenburger, D.A., Yaffe, M.B.  
VISAGE Reveals a Targetable Mitotic Vulnerability in Cancer Cells  
*Cell Syst.*, 9, 74-92 (2019).
152. Faltova, L., Jiang, K., Frey, D., Wu, Y., Capitani, G., Prota, A.E., Akhmanova, A.\* , **Steinmetz, M.O.\*** , Kammerer, R.A.\*  
Crystal structure of a heterotetrameric katanin p60:p80 complex  
*Structure*, 27, 1375–1383 (2019).
151. Akhmanova, A.\* , **Steinmetz, M.O.\***  
Microtubule minus-end regulation at a glance.  
*J. Cell Sci.*, 132, pii: jcs227850 (2019).
150. Wang, N., Bosc, C., Choi, S.R., Boulan, B., Peris, L., Olieric, N., Bao, H., Krichen, F., Chen, L., Andrieux, A., Olieric, V., Moutin, M.-J.\* , **Steinmetz, M.O.\*** , Huang, H.\*  
Structural basis of tubulin detyrosination by the vasohibin-SVBP enzyme complex.  
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