Curriculum Vitae
Florian Schur

Assistant Professor (tenure track)
Institute of Science and Technology (IST) Austria
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Research topics

- Structural Biology of Cell Migration
- Structural Virology
- *In situ* Structural Biology
- Cryo-electron tomography method development

Research achievements in numbers

- 17 papers in peer-reviewed journals
- Two (one-first author) publications in Nature, one first-author publication in Science, one review in Current Opinion in Virology, one review in Current opinion in Structural Biology, one book chapter in Advances in Virus Research
- Paper of the Year Award 2016 in Journal of Structural Biology

Education

2012-2016	Dr. rer. nat., EMBL Heidelberg and University of Heidelberg, Germany
2006-2012	Mag. rer. nat., Molecular Biology, University of Vienna, Austria
2006	Certified paramedic, Red Cross Austria and Austrian Armed Forces

Current Position

Since 2020	Scientific Head Electron Microscopy Facility, IST Austria
Since 2017	Tenure Track Assistant Professor, IST Austria, Structural Biology of Cell Migration and Viral Infection

Previous Positions

2016-2017	Postdoctoral Researcher, EMBL Heidelberg, Germany, Supervisor: Dr. John Briggs
2012-2016	PhD student, EMBL Heidelberg, Germany, Supervisor: Dr. John Briggs
2010-2012	Undergraduate student researcher, IMBA Vienna, Austria, Supervisor: Prof. Dr. John-Victor Small

Awards and Distinctions

2020	FWF Standalone research grant – Structure and Isoform diversity of the Arp2/3 complex
2018	FWF Standalone research grant – Structural conservation and diversity in retroviral capsid
2016	Journal of Structural Biology, Paper of the Year Award 2016
2016	F1000 Article recommendation
2013	F1000 Article recommendation

Talks and Seminars

2020	Department of Chemistry & Biochemistry, University of Delaware, Delaware, USA
2020	Microscopy & MicroAnalysis 2020, virtual meeting, Session: “The promise of cryo-ET”
2020	Seminar Series ‘Modern Concepts in Structural Biology’, Vienna Biocenter, Vienna, Austria
2020	AustroVirology Symposium, Children's Cancer Research Institute (CCRI), Vienna, Austria
2020	Department of Molecular Biology and Genetics, Cornell University, USA
2019	Laboratory of Biomolecular Research, Paul-Scherrer Institute, Villingen, Switzerland
2019	Inauguration symposium of the Thermo Fisher Scientific BSL2, Keynote, Brno, Czech Republic
2019	Department of Pharmacology and Toxicology, University of Veterinary Medicine, Vienna, Austria
2019	iNEXT workshop on Integrated Methodologies and Approaches for Structural Biology, Brno, Czech Republic
2018	Postgraduate School of Molecular Medicine Autumn School, Małopolska Centre of Biotechnology, Krakow, Poland
2018	International Conference of the Korean Society for Structural Biology, Jeju Island, Republic of Korea
2018	1st CEITEC symposium on recent advances in cryo-electron microscopy, CEITEC, Brno, Czech Republic
2018	3rd International Symposium on Cryo-3D Image Analysis, Lake Tahoe, USA
2018	International InCeM Symposium “Measuring and Modeling Cell Migration”, Vienna, Austria
2018	FWF Integrative Structural Biology (ISB) International PhD Program Recess, Austria
2017	Helmholtz Centre for Infection Research, Braunschweig, Germany
2016	Institute of Genetics and Molecular and Cellular Biology, Illkirch, France
2016	Current Challenges in Integrated Structural Biology Symposium, Institute of Genetics and Molecular and Cellular Biology, Illkirch, France
2011	Collective behavior in active agent system, from experiments to models, Université Paul Sabatier, Toulouse, France

Presentations/Teaching at Workshops or Universities

2020 *Protein Preparation for Structural Biology* lecture series, Biozentrum, University of Basel, Switzerland
2020 Vienna Cryo-EM Winter school, Vienna Biocenter, Vienna, Austria
2019 Advanced workshop on cryo-electron tomography, Vienna Biocenter, Vienna, Austria
2017 Dynamo Subtomogram averaging workshop, C-CINA, Basel, Switzerland
2017 International workshop of Advanced Image Processing of Cryo-Electron Microscopy (IWAIP), Beijing, China
2016 Methods and Techniques in structural biology: beyond black boxes, Institute of Genetics and Molecular and Cellular Biology, Illkirch, France

Conferences/Symposium organization

2019 IST Austria Cryo-EM inauguration symposium

Service to the international community

Reviewing for access to cryo-EM facilities and infrastructure

2017- Member of the Review panel for iNEXT (H2020) infrastructure access proposals
2019- Member of the Cryo-EM Review panel of the National Cryo-EM center at the SOLARIS synchrotron, Krakow, Poland

Reviewing for academic journals

Science (AAAS), Scientific Reports (NPG), Nature Communications (NPG), Oncogene (NPG), Communications Biology (NPG), Journal of Structural Biology (Elsevier), Cell Reports (Cell Press), Viruses (MDPI), Advanced Biosystems (Wiley)

Reviewing for Funding organisations

UK Research and Innovation (BBSRC)

Publication summary

17 papers in peer-reviewed journals
1 book chapter
Total number of citations: **1297** (Google Scholar)
Google Scholar https://scholar.google.at/citations?user=--Kc1ZoAAAAJ&hl=de
ORCID 0000-0003-4790-8078

All publications

1. Fäßler F*, Zens B*., Hauschild R, **Schur FKM**#, (2020), 3D printed cell culture grid holders for improved cellular specimen preparation in cryo-electron microscopy**,** Journal of Structural Biology. doi.org/10.1016/j.jsb.2020.107633
2. Dick RA*#, Xu C, Morado DR, Kravchuk V, Ricana CL, Lyddon TD, Broad AM, Feathers JR, Johnson MC, Vogt VM, Perilla JR, Briggs JAG, **Schur FKM*#** (2020). Structures of immature EIAV Gag lattices reveal a conserved role for IP6 in lentivirus assembly. PLOS Pathogens. 16, e1008277, doi:10.1371/journal.ppat.1008277
3. Obr M, **Schur FKM**# (2019). Structural Analysis of pleomorphic and asymmetric viruses using cryo-electron tomography and subtomogram averaging, in: Rey, F.A. (Ed.), Advances in Virus Research*, doi: 10.1016/bs.aivir.2019.07.008*
4. **Schur FKM**#, (2019), Toward high-resolution in situ structural biology with cryo-electron tomography and subtomogram averaging, Current Opinion in Structural Biology 58, 1-9, doi: 10.1016/j.sbi.2019.03.018
5. Qu K, Glass B, Doležal M, **Schur FKM**, Murciano B, Rein A, Rumlová M, Ruml T, Kräusslich H-G, Briggs JAG, (2018). Structure and architecture of immature and mature murine leukemia virus capsids. Proceedings of the National Academy of Sciences. 115(50), E11751–E11760, doi: 10.1073/pnas.1811580115
6. Dick RA, Zadrozny KK, Xu C, ***Schur FKM***, Lyddon TD, Ricana CL, Wagner JM, Perilla JR, Ganser-Pornillos BK, Johnson MC, Pornillos O, Vogt VM, (2018) Inositol phosphates are assembly co-factors for HIV-1, *Nature* 560:509-512. doi: 10.1038/s41586-018-0396-4
7. Turonova B, ***Schur FKM***, Wan W, Briggs JAG, (2017) Efficient 3D-CTF correction for cryo-electron tomography using NovaCTF improves subtomogram averaging resolution to 3.4 Å, Journal of Structural Biology. 199(3); 187-105. doi:10.1016/j.jsb.2017.07.007
8. Leithner A, Eichner A, Müller J, Reversat A, Brown M, Schwarz J, Merrin J, de Gorter DJ, ***Schur F***, Bayerl J, de Vries I, Wieser S, Hauschild R, Lai FPL, Moser M, Kerjaschki D, Rottner K, Small JV, Stradal TEB, Sixt M, (2016), Diversified actin protrusions promote environmental exploration but are dispensable for locomotion of leukocytes, Nat. Cell. Biol., 8(11):1253-1259. doi:10.1038/ncb3426
9. ***Schur FKM,*** Obr M, Hagen WJH, Wan W, Jakobi AJ, Kirkpatrick JM, Sachse C, Kräusslich H-G, Briggs JAG, (2016), An atomic model of HIV-1 capsid-SP1 reveals structures regulating assembly and maturation, Science, 353(6298):506-508. doi: 10.1126/science.aaf9620
10. Mattei S*, ***Schur FKM*,*** Briggs JA, (2016). Retrovirus maturation-an extraordinary structural transformation. Current Opinion in Virology 18, 27-35. doi:10.1016/j.coviro.2016.02.008
11. Füzik T, Píchalová R, ***Schur, FKM***, Strohalmová K, Křížová I, Hadravová, R, Rumlová M, Briggs JAG, Ulbrich P, Ruml T, (2016). Nucleic Acid Binding by Mason–Pfizer Monkey Virus CA Promotes Virus Assembly and Genome Packaging. Journal of Virology 90(9):4593-603. doi: 10.1128/JVI.03197-15
12. ***Schur FKM*,*** Dick RA*, Hagen WJH, Vogt VM, Briggs JAG. (2015). The structure of the immature-like Rous sarcoma virus Gag particles reveals a structural role for the p10 domain in assembly. Journal of Virology. 89(20):10294-302. doi: 10.1128/JVI.01502-15
13. ***Schur FKM***, Hagen WJ, Rumlová M, Ruml T, Müller B, Kräusslich HG, Briggs JA. (2015). Structure of the immature HIV-1 capsid in intact virus particles at 8.8 Å resolution. *Nature* 517:505-508. doi:10.1038/nature13838
14. Bharat TA, Castillo Menendez LR, Hagen WJ, Lux V, Igonet S, Schorb M, ***Schur FKM***, Kräusslich HG, Briggs JA. (2014). Cryo-electron microscopy of tubular arrays of HIV-1 Gag resolves structures essential for immature virus assembly**.** *Proc. Natl. Acad. Sci. U.S.A.* 111(22):8233-8238. doi: 10.1073/pnas.1401455111
15. ***Schur FKM***, Hagen WJ, de Marco A, Briggs JA. (2013) Determination of protein structure at 8.5A resolution using cryo-electron tomography and sub-tomogram averaging. *Journal of Structural Biology.* 184(3):394-400. doi: 10.1016/j.jsb.2013.10.015

16. Koestler SA, Steffen A, Nemethova M, Winterhoff M, Luo N, Holleboom JM, Krupp J, Jacob, S, Vinzenz M, ***Schur F***, Schlüter K, Gunning PW, Winkler C, Schmeiser C, Faix J, Stradal TEB, Small JV, Rottner K. (2013). Arp2/3 complex is essential for actin network treadmilling as well as for targeting of capping protein and cofilin. Molecular Biology of the Cell. 24, 2861-2875. doi: 10.1091/mbc.E12-12-0857

17. Steffen A, Ladwein M, Dimchev GA, Hein A, Schwenkmezger L, Arens S, Ladwein KI, Holleboom JM, ***Schur F***, Small JV, Schwarz J, Gerhard R, Faix J, Stradal TEB, Brakebusch C, Rottner K, (2013). Rac function is crucial for cell migration but is not required for spreading and focal adhesion formation. Journal of Cell Science. 126, 4572-4588. doi: 10.1242/jcs.118232

18. Vinzenz M, Nemethova M, **Schur F**, Mueller J, Narita A, Urban E, Winkler C, Schmeiser C, Koestler SA, Rottner K, Resch GP, Maeda Y, Small JV. (2012). Actin branching in the initiation and maintenance of lamellipodia. Journal of Cell Science. 125, 2775-85, doi:10.1242/jcs.107623

*equal contribution
#corresponding author