Personal details

Name: Florian Schur
Date of Birth: 04.12.1986
Nationality: Austria

Higher education/training

2016-2017 Postdoctoral Fellow at the European Molecular Biology Laboratory, Heidelberg, Germany

2012-2016 Dr. rer. nat., Ruprecht-Karls University, Heidelberg and the European Molecular Biology Laboratory (EMBL), Germany (degree: Summa cum laude)
Thesis title: "Structural studies of immature HIV-1 capsid by high-resolution cryo-electron tomography"

2006-2012 Mag. rer. nat. Molecular Biology (equivalent to a Master degree)
University of Vienna, Austria

2006 Certified paramedic training in the Austrian Armed Forces and the Red Cross Austria

Positions

2016-2017 Postdoctoral fellow, EMBL, SCB Unit, Heidelberg, Germany, laboratory of Dr. John Briggs

2012-2016 Phd-student, EMBL, Structural & Computational Biology (SCB) Unit, Heidelberg, Germany, laboratory of Dr. John Briggs

2010-2012 Diploma student/Research technician, IMBA, Vienna, Austria, laboratory of Prof. Dr. John-Victor Small

2010 Research intern, Research Center for Molecular Medicine of the Austrian Academy of Sciences (CeMM), Vienna, Austria, laboratory of Prof. Dr. Giulio Superti-Furga

2009 Research intern, Medical University Vienna, Clinical Department for Haematology and Haemostaseology, laboratory of Prof. Dr. Peter Valent

2009 Research intern, Institute of Molecular Biotechnology of the Austrian Academy of Sciences (IMBA), Vienna, Austria, laboratory of Prof. Dr. John-Victor Small

Languages

- German (native)
- English (fluent in oral and written language)
- French (advanced in oral and written language)
- Spanish (basic in oral and written language)
- Latin and Ancient-Greek

Conferences/Courses

2011 26th Annual European Cytoskeleton Forum, "Actin-Based Motility: From Molecules to Model Organisms", Stresa, Italy, poster

2011 Collective behavior in active agent system, from experiments to models" workshop, Toulouse, France, conference presentation

2014 Gordon Research Conference "Three-dimensional Electron Microscopy", Girona, Spain, poster

2015 14th Molecular Medicine Partnership Unit (MMPU) public research day, Heidelberg University, Heidelberg, Germany presentation

2015 Gordon Research Conference "Three-dimensional Electron Microscopy", New London/New Hampshire, U.S.A., poster and presentation

2015 16th Molecular Medicine Partnership Unit (MMPU) public research day, Heidelberg University, Heidelberg, Germany presentation

2016 Gordon Research Conference "Three-dimensional Electron Microscopy", Hong Kong, China, poster

2016 IRNCAS - 10th International Retroviral NucleoCapsid protein and Assembly Symposium, Montpellier, France, poster

2016 Current Challenges in Integrated Structural Biology Symposium, IGMBC, Illkirch, France, invited talk

2016 Methods and Techniques in integrated structural biology: beyond black boxes: workshop, IGMBC, Illkirch, France, invited talk

2017 International workshop of Advanced Image Processing of Cryo-Electron Microscopy, workshop, Beijing, China, invited talk

Honors

2011 FEBS Youth Travel Fund award

2011 Poster prize, 26th Annual European Cytoskeleton Forum, "Actin-Based Motility: From Molecules to Model Organisms", Stresa/Italy

2016 Journal of Structural Biology, Paper of the year award 2016

Publications

1. 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
2. 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
3. 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.
4. 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.
5. 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
6. 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.
7. 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.
8. 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
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
10. 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
11. 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. DOI: 10.1016/j.jsb.2017. 07.007

Reviews

1. Mattei S*, Schur FKM**, Briggs JA, (2016). Retrovirus maturation-an extraordinary structural transformation. **Current Opinion in Virology** 18, 27-35.

*equal contribution