

**Publications:**

1. Mesa, P., Deniaud, A., Montoya, G.\* & Schaffitzel, C.\* (2013) Directly from the source: Endogenous preparations of molecular machines. *Curr. Opin. Struct. Biol.*, in press.
2. Bieniossek, C., Papai, G., Schaffitzel, C., Garzoni, F., Chaillet, M., Scheer, E., Papadopoulos, P., Tora, L., Schultz, P. & Berger, I. (2013) The architecture of human general transcription factor TFIID core complex. *Nature*, doi:10.1038/nature11791.  
Comment in : *Nat. Rev. Mol. Cell Biol.* 14, 66 (February 2013) | doi:10.1038/nrm3520
3. Lunin, V.Y., Lunina, N.L., Casutt, M.S., Knoops, K., Schaffitzel, C., Steuber, J., Fritz, G. & Baumstark, M.W. (2012) *Ab Initio* Phasing and Low Resolution Structure Determination of Na<sup>+</sup>-Pumping NADH: Ubiquinone Oxidoreductase from *Vibrio cholera*. *Acta Crystallogr. Section D Biol. Crystallogr.* D68, 724-731.
4. Knoops, K., Schoehn, G. & Schaffitzel, C.\* (2012) Cryo-electron microscopy of ribosomal complexes in cotranslational folding, targeting and translocation. *Wiley Interdiscip. Rev. RNA* 3, 429-441.
5. Vijayachandran, L.S., Viola, C., Garzoni, F., Trowitzsch, S., Bieniossek, C., Chaillet, M., Schaffitzel, C., Busso, D., Romier, C., Poterszman, A., Richmond T.J. & Berger, I., (2011) Robots, Pipelines, Polyproteins: Enabling Multiprotein Expression in Prokaryotic and Eukaryotic Cells. *J. Struct. Biol.* 175, 198-208.
6. Estrozi, L.F., Boehringer, D., Shan, S.O., Ban, N. & Schaffitzel, C.\* (2011) Structure of the *E. coli* Co-translational Targeting Complex in the Stable *Early* Conformation. *Nat. Struct. Mol. Biol.* 18, 88-90.
7. Von Loeffelholz, O., Botte, M., & Schaffitzel, C. (2011) *Escherichia coli* Cotranslational Targeting and Translocation. In: *Encyclopedia of Life Sciences (ELS)*, John Wiley & Sons, Ltd: Chichester, DOI: 10.1002/9780470015902.a0023170.
8. Schaffitzel, C., Postberg, J., Paeschke, K. & Lipps, H.J. (2010) Probing Telomeric G-Quadruplex DNA Structures in Cells with In Vitro Generated Single-Chain Antibody Fragments. In: G-Quadruplex DNA: Methods and Protocols. Ed.: P. Baumann, Springer Protocols, Series: *Methods Mol. Biol.*, Vol. 608, Chapter 11, 159-181.
9. Nie, Y., Bieniossek, C., Frey, D., Olieric, N., Schaffitzel, C., Steinmetz, M.O. & Berger, I. (2009). ACEMBLing multigene expression vectors by recombineering. *Nat. Protocols*. [http://www.natureprotocols.com/2009/05/08/acembling\\_multigene\\_expression.php](http://www.natureprotocols.com/2009/05/08/acembling_multigene_expression.php).
10. Kohler, R., Boehringer, D., Greber, B., Bingel-Erlenmeyer, R., Collinson, I., Schaffitzel, C.\* & Ban, N.\* (2009) YidC and Oxal form dimeric insertion pores on the translating ribosome. *Mol. Cell* 34, 344-353.  
\* corresponding author
11. Bieniossek, C., Nie, Y., Frey, D., Olieric, N., Schaffitzel, C., Collinson, I., Berger, P., Romier, C., Richmond, T.J., Steinmetz, M.O., & Berger, I. (2009) Automated unrestricted multigene recombineering for multiprotein complex production. *Nat. Methods* 6, 447-450.
12. Zhang, X., Schaffitzel, C., Ban, N. & Shan, S.O. (2009) Multiple conformational switches in a GTPase complex control co-translational protein targeting *Proc. Natl. Acad. Sci. U.S.A.* 106, 1754-1759.
13. Jiang, L., Schaffitzel, C., Bingel-Erlenmeyer, R., Ban, N., Korber, P., Koning, R.I., Plaisier, J.R. & Abrahams, J.P. (2009) Recycling of Aborted Ribosomal 50S Subunit-Nascent Chain-tRNA Complexes by the Heat Shock Protein Hsp15. *J. Mol. Biol.* 386, 1357-1367.
14. Merz, F., Boehringer, D., Schaffitzel, C., Preissler, S., Hoffmann, A., Maier, T., Rutowska, A., Lozza, J., Ban, N., Bukau, B. & Deuerling, E. (2008) Molecular mechanism and structure of Trigger Factor bound to the translating ribosome. *EMBO J.* 27, 1622-1632.

15. Bingel-Erlenmeyer, R., Kohler, R., Kramer, G., Sandikci, A., Antolic, S., Maier, T., Schaffitzel, C., Wiedmann, B., Bukau, B. & Ban, N. (2008) A peptide-deformylase complex reveals mechanism of nascent chain processing. *Nature* 452, 108-111.  
  
Comment in *Structure* (2008), 16, 498-500.
16. Rutowska, A., Mayer, M.P., Hoffmann, A., Merz, F., Zachmann-Brand, B., Schaffitzel, C., Ban, N., Deuerling, E. & Bukau, B. (2008) Dynamics of trigger factor interaction with translating ribosomes. *J. Biol. Chem.* 283, 4124-4132.
17. Fitzgerald, D.J., Schaffitzel, C., Berger, P., Wellinger, R., Bieniossek, C., Richmond, T.J. & Berger I. (2007) Multiprotein expression strategy for structural biology of eukaryotic complexes. *Structure* 15, 275-279.
18. Schaffitzel, C.\* & Ban, N.\* (2007) Generation of ribosome nascent chain complexes for structural and functional studies. *J. Struct. Biol.*, 159, 302-310.  
  
\* corresponding author
19. Gemperli, A.C., Schaffitzel, C., Jacob, C. & Steuber, J. (2007) Transport of Na(+) and K (+) by an antiporter-related subunit from the *Escherichia coli* NADH dehydrogenase I produced in *Saccharomyces cerevisiae*. *Arch. Microbiol.* 188, 509-521.
20. Berger, I., Schaffitzel, C. & Bieniossek, C. (2007) Nucleic Acid Science – The Ecitement of Discovery: Annual Symposium of the Chemical Society Zürich CGZ, Zürich, October 26, 2007. *Chimia* 61, 837-841.
21. Fitzgerald, D.J., Berger, P., Schaffitzel, C., Yamada, K., Richmond, T.J. & Berger, I. (2006) Protein complex expression by using multigene baculoviral vectors. *Nature Methods* 3, 1021-1032.
22. Schaffitzel, C., Oswald, M., Berger, I., Ishikawa, T., Abrahams, J.P., Koerten, H.K., Koning, R.I. & Ban, N. (2006) Structure of the *E. coli* signal recognition particle bound to a translating ribosome. *Nature* 444, 503-506.
23. Mitra, K., Schaffitzel, C., Fabiola, F., Chapman, M., Ban, N. & Frank, J. (2006) Elongation arrest by SecM via a cascade of ribosomal RNA rearrangements. *Mol. Cell* 22, 533-543.
24. Berger, P., Berger, I., Schaffitzel, C., Tersar, K., Volkmer, B. & Suter, U. (2006) Multi-level regulation of myotubularin-related protein-2 phosphatase activity by myotubularin-related protein-13/set-binding factor-2. *Hum. Mol. Genet.* 15, 569-579.
25. Mitra<sup>1</sup>, K., Schaffitzel<sup>1</sup>, C., Shaikh, T., Tama, F., Jenni, S., Brooks III, C.L., Ban, N. & Frank, J. (2005) Structure of the *E. coli* protein-conducting channel bound to a translating ribosome. *Nature* 438, 318-324.  
  
<sup>1</sup> contributed equally  
  
Comment in *Nature* (2005) 438, 299-300.
26. Berger<sup>1</sup>, P., Schaffitzel<sup>1</sup>, C., Berger, I., Ban, N. & Suter, U. (2003) Membrane association of myotubularin-related protein 2 is mediated by a pleckstrin homology-GRAM domain and a coiled-coil dimerization module. *Proc. Natl. Acad. Sci. U.S.A.* 100, 12177-12182.  
  
<sup>1</sup> contributed equally
27. Berger, I., Bieniossek, C., Schaffitzel, C., Hassler, M., Santelli, E. & Richmond, T.J. (2003) Direct interaction of Ca<sup>2+</sup>/calmodulin inhibits histone deacetylase 5 repressor core binding to myocyte enhancer factor 2. *J. Biol. Chem.* 278, 17625-35.
28. Jonsson, F., Postberg, J., Schaffitzel, C. & Lipps, H.J. (2002) Organization of the macronuclear gene-sized pieces of stichotrichous ciliates into a higher order structure via telomere-matrix interactions. *Chromosome Res.* 10, 445-453.

29. Schaffitzel, C., Berger, I., Postberg, J., Hanes, J., Lipps, H.J. & Plückthun, A. (2001). *In vitro* generated antibodies specific for telomeric guanine-quadruplex DNA react with *Styloynchia lemnae* macronuclei. *Proc. Natl. Acad. Sci. U.S.A.* 98, 8572-8577.
30. Schaffitzel, C. & Plückthun, A. (2001) Protein-fold Evolution in the Test Tube. *Trends Biochem. Sci.* 26, 577-579.
31. Schaffitzel, C. & Berger, I. (2001) Viersträngige DNA in eukaryotischen Zellen. *BioSpektrum*, Spektrum Akademischer Verlag, Heidelberg, 6, 18-20.
32. Hanes<sup>1</sup>, J., Schaffitzel<sup>1</sup>, C., Knappik, A. & Plückthun, A. (2000). Picomolar affinity antibodies from a fully synthetic naive library selected and evolved by ribosome display. *Nature Biotechnol.* 18, 1287-1292.  
<sup>1</sup> contributed equally
33. Hanes, J., Jermutus, L., Schaffitzel, C. & Plückthun, A. (1999). Comparison of *Escherichia coli* and rabbit reticulocyte ribosome display systems. *FEBS Lett.* 450, 105-110.
34. Schaffitzel, C., Hanes, J., Jermutus, L. & Plückthun, A. (1999). Ribosome display: an *in vitro* method for selection and evolution of antibodies from libraries. *J. Immunol. Methods* 231, 119-135.
35. Schaffitzel, C., Berg, M., Dimroth, P. & Pos, K.M. (1998). Identification of a Na<sup>+</sup>-dependent malonate transporter of *Malonomonas rubra* and its dependence on two separate genes. *J. Bacteriol.* 180, 2689-2693.

#### Book Articles:

36. Schaffitzel, C. & Ban, N. (2006) Ribosome, high resolution structure and function. In: *Proteins: From Analytics to Structural Genomics*. Ed.: R. Meyers, Wiley-VCH, Weinheim, Vol. 1, Chapter 17, 487-514.
37. Schaffitzel, C., Zahnd, C., Amstutz, P., Luginbühl, B. & Plückthun, A. (2005) *In vitro* Selection and Evolution of Protein-Ligand Interactions by Ribosome Display. In: *Protein-Protein Interactions: A Molecular Cloning Manual*. 2<sup>nd</sup> edition. Eds: E. Golemis & P. Adams, Cold Spring Harbor Laboratory Press, New York. Chapter 27.
38. Schaffitzel, C. & Ban, N. (2005) The ribosome, high resolution structure and function. In: *Encyclopedia of Molecular Cell Biology and Molecular Medicine*. 2<sup>nd</sup> edition. Ed.: R. Meyers, Wiley-VCH, Weinheim, Vol. 12, pp.483-512.
39. Schaffitzel, C. & Ban, N. (2004) Structural Basis of Protein Synthesis. In: *Supramolecular Structure and Function 8*. Ed.: G. Prifat-Mryljak, Kluwer Academic/ Plenum Publishers, New York, U.S.A. Chapter 1, 1-13.
40. Plückthun, A., Schaffitzel, C., Hanes, J. & Jermutus, L. (2000). *In vitro* selection and evolution of proteins. *Adv. Protein Chem.* 55, 367-403.
41. Schaffitzel, C., Zahnd, C., Amstutz, P., Luginbühl, B. & Plückthun, A. (2002) *In vitro* Selection and Evolution of Protein-Ligand Interactions by Ribosome Display. In: *Protein-Protein Interactions: A Molecular Cloning Manual*. Cold Spring Harbor Laboratory Press, New York, Chapter 30.

#### Other Publications:

42. Schaffitzel, C & Berger, I. (2003) „Biochemical Methods“ (Recension) *Nachr. Chem. Tech. Lab.* 9, 1078.
43. Berger-Schaffitzel, C. (2006) „Eigenschaften von Aminosäuren“. [www.educ.ethz.ch](http://www.educ.ethz.ch).
44. Berger-Schaffitzel, C., Habilitation ETH Zürich (2008): “Gene Expression: From Ciliate Chromatin Organization to *E.coli* Co-translational Targeting and Translocation”.
45. Schaffitzel, C., Dissertation University of Zürich (2001): “Ribosome Display - *In vitro* Selection and Evolution of High Affinity Antibodies against Proteins and Nucleic Acids”.