

Dirk Grlich

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120
papers

20,288
citations

71
h-index

128
g-index

128
ext. papers

22,199
ext. citations

14.6
avg, IF

6.82
L-index

| # | Paper | IF | Citations |
|-----|--|------|-----------|
| 120 | Transport between the cell nucleus and the cytoplasm. <i>Annual Review of Cell and Developmental Biology</i> , 1999 , 15, 607-60 | 12.6 | 1685 |
| 119 | Nucleocytoplasmic transport. <i>Science</i> , 1996 , 271, 1513-8 | 33.3 | 1090 |
| 118 | Exportin 5 is a RanGTP-dependent dsRNA-binding protein that mediates nuclear export of pre-miRNAs. <i>Rna</i> , 2004 , 10, 185-91 | 5.8 | 965 |
| 117 | Isolation of a protein that is essential for the first step of nuclear protein import. <i>Cell</i> , 1994 , 79, 767-78 | 56.2 | 638 |
| 116 | Kinetic analysis of translocation through nuclear pore complexes. <i>EMBO Journal</i> , 2001 , 20, 1320-30 | 13 | 565 |
| 115 | Protein translocation into proteoliposomes reconstituted from purified components of the endoplasmic reticulum membrane. <i>Cell</i> , 1993 , 75, 615-30 | 56.2 | 561 |
| 114 | Export of importin alpha from the nucleus is mediated by a specific nuclear transport factor. <i>Cell</i> , 1997 , 90, 1061-71 | 56.2 | 525 |
| 113 | The asymmetric distribution of the constituents of the Ran system is essential for transport into and out of the nucleus. <i>EMBO Journal</i> , 1997 , 16, 6535-47 | 13 | 503 |
| 112 | FG-rich repeats of nuclear pore proteins form a three-dimensional meshwork with hydrogel-like properties. <i>Science</i> , 2006 , 314, 815-7 | 33.3 | 432 |
| 111 | Distinct functions for the two importin subunits in nuclear protein import. <i>Nature</i> , 1995 , 377, 246-8 | 50.4 | 426 |
| 110 | Two different subunits of importin cooperate to recognize nuclear localization signals and bind them to the nuclear envelope. <i>Current Biology</i> , 1995 , 5, 383-92 | 6.3 | 425 |
| 109 | A mammalian homolog of SEC61p and SECYp is associated with ribosomes and nascent polypeptides during translocation. <i>Cell</i> , 1992 , 71, 489-503 | 56.2 | 412 |
| 108 | The permeability barrier of nuclear pore complexes appears to operate via hydrophobic exclusion. <i>EMBO Journal</i> , 2002 , 21, 2664-71 | 13 | 406 |
| 107 | Importin beta, transportin, RanBP5 and RanBP7 mediate nuclear import of ribosomal proteins in mammalian cells. <i>EMBO Journal</i> , 1998 , 17, 4491-502 | 13 | 396 |
| 106 | A novel class of RanGTP binding proteins. <i>Journal of Cell Biology</i> , 1997 , 138, 65-80 | 7.3 | 374 |
| 105 | A saturated FG-repeat hydrogel can reproduce the permeability properties of nuclear pore complexes. <i>Cell</i> , 2007 , 130, 512-23 | 56.2 | 364 |
| 104 | NTF2 mediates nuclear import of Ran. <i>EMBO Journal</i> , 1998 , 17, 6587-98 | 13 | 343 |

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| 103 | Identification of a tRNA-specific nuclear export receptor. <i>Molecular Cell</i> , 1998 , 1, 359-69 | 17.6 | 324 |
| 102 | Dominant-negative mutants of importin-beta block multiple pathways of import and export through the nuclear pore complex. <i>EMBO Journal</i> , 1997 , 16, 1153-63 | 13 | 310 |
| 101 | Structural view of the Ran-Importin beta interaction at 2.3 A resolution. <i>Cell</i> , 1999 , 97, 635-46 | 56.2 | 291 |
| 100 | A protein of the endoplasmic reticulum involved early in polypeptide translocation. <i>Nature</i> , 1992 , 357, 47-52 | 50.4 | 281 |
| 99 | Evidence for distinct substrate specificities of importin alpha family members in nuclear protein import. <i>Molecular and Cellular Biology</i> , 1999 , 19, 7782-91 | 4.8 | 277 |
| 98 | The C-terminal domain of TAP interacts with the nuclear pore complex and promotes export of specific CTE-bearing RNA substrates. <i>Rna</i> , 2000 , 6, 136-58 | 5.8 | 268 |
| 97 | Transport into and out of the cell nucleus. <i>EMBO Journal</i> , 1998 , 17, 2721-7 | 13 | 258 |
| 96 | Nuclear protein import. <i>Current Opinion in Cell Biology</i> , 1997 , 9, 412-9 | 9 | 257 |
| 95 | Evolutionary conservation of components of the protein translocation complex. <i>Nature</i> , 1994 , 367, 654-7 | 50.4 | 253 |
| 94 | Characterisation of the passive permeability barrier of nuclear pore complexes. <i>EMBO Journal</i> , 2009 , 28, 2541-53 | 13 | 244 |
| 93 | Exportin 6: a novel nuclear export receptor that is specific for profilin.actin complexes. <i>EMBO Journal</i> , 2003 , 22, 5928-40 | 13 | 230 |
| 92 | Transport Selectivity of Nuclear Pores, Phase Separation, and Membraneless Organelles. <i>Trends in Biochemical Sciences</i> , 2016 , 41, 46-61 | 10.3 | 226 |
| 91 | Importins fulfil a dual function as nuclear import receptors and cytoplasmic chaperones for exposed basic domains. <i>EMBO Journal</i> , 2002 , 21, 377-86 | 13 | 220 |
| 90 | The importin beta/importin 7 heterodimer is a functional nuclear import receptor for histone H1. <i>EMBO Journal</i> , 1999 , 18, 2411-23 | 13 | 206 |
| 89 | RanBP1 is crucial for the release of RanGTP from importin beta-related nuclear transport factors. <i>FEBS Letters</i> , 1997 , 419, 249-54 | 3.8 | 201 |
| 88 | The permeability of reconstituted nuclear pores provides direct evidence for the selective phase model. <i>Cell</i> , 2012 , 150, 738-51 | 56.2 | 200 |
| 87 | Exp5 exports eEF1A via tRNA from nuclei and synergizes with other transport pathways to confine translation to the cytoplasm. <i>EMBO Journal</i> , 2002 , 21, 6205-15 | 13 | 193 |
| 86 | Characterization of Ran-driven cargo transport and the RanGTPase system by kinetic measurements and computer simulation. <i>EMBO Journal</i> , 2003 , 22, 1088-100 | 13 | 182 |

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| 85 | NES consensus redefined by structures of PKI-type and Rev-type nuclear export signals bound to CRM1. <i>Nature Structural and Molecular Biology</i> , 2010 , 17, 1367-76 | 17.6 | 180 |
| 84 | Importin provides a link between nuclear protein import and U snRNA export. <i>Cell</i> , 1996 , 87, 21-32 | 56.2 | 178 |
| 83 | Importin 13: a novel mediator of nuclear import and export. <i>EMBO Journal</i> , 2001 , 20, 3685-94 | 13 | 171 |
| 82 | Nup98 FG domains from diverse species spontaneously phase-separate into particles with nuclear pore-like permselectivity. <i>ELife</i> , 2015 , 4, | 8.9 | 166 |
| 81 | Crystal structure of the nuclear export receptor CRM1 in complex with Snurportin1 and RanGTP. <i>Science</i> , 2009 , 324, 1087-91 | 33.3 | 165 |
| 80 | Binding of ribosomes to the rough endoplasmic reticulum mediated by the Sec61p-complex. <i>Journal of Cell Biology</i> , 1994 , 126, 925-34 | 7.3 | 163 |
| 79 | Acetylation of importin-alpha nuclear import factors by CBP/p300. <i>Current Biology</i> , 2000 , 10, 467-70 | 6.3 | 162 |
| 78 | Exportin 4: a mediator of a novel nuclear export pathway in higher eukaryotes. <i>EMBO Journal</i> , 2000 , 19, 4362-71 | 13 | 151 |
| 77 | CRM1-mediated recycling of snurportin 1 to the cytoplasm. <i>Journal of Cell Biology</i> , 1999 , 145, 255-64 | 7.3 | 150 |
| 76 | Ran-dependent nuclear export mediators: a structural perspective. <i>EMBO Journal</i> , 2011 , 30, 3457-74 | 13 | 149 |
| 75 | Interaction between NTF2 and xFxFG-containing nucleoporins is required to mediate nuclear import of RanGDP. <i>Journal of Molecular Biology</i> , 1999 , 293, 579-93 | 6.5 | 149 |
| 74 | A selective block of nuclear actin export stabilizes the giant nuclei of <i>Xenopus</i> oocytes. <i>Nature Cell Biology</i> , 2006 , 8, 257-63 | 23.4 | 143 |
| 73 | Yrb4p, a yeast ran-GTP-binding protein involved in import of ribosomal protein L25 into the nucleus. <i>EMBO Journal</i> , 1997 , 16, 6237-49 | 13 | 142 |
| 72 | Nuclear import of HIV-1 intracellular reverse transcription complexes is mediated by importin 7. <i>EMBO Journal</i> , 2003 , 22, 3675-85 | 13 | 141 |
| 71 | Amyloid-like interactions within nucleoporin FG hydrogels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 6281-5 | 11.5 | 136 |
| 70 | Systematic analysis of barrier-forming FG hydrogels from <i>Xenopus</i> nuclear pore complexes. <i>EMBO Journal</i> , 2013 , 32, 204-18 | 13 | 134 |
| 69 | Nanobodies: site-specific labeling for super-resolution imaging, rapid epitope-mapping and native protein complex isolation. <i>ELife</i> , 2015 , 4, e11349 | 8.9 | 133 |
| 68 | NDC1: a crucial membrane-integral nucleoporin of metazoan nuclear pore complexes. <i>Journal of Cell Biology</i> , 2006 , 173, 509-19 | 7.3 | 133 |

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| 67 | A deep proteomics perspective on CRM1-mediated nuclear export and nucleocytoplasmic partitioning. <i>ELife</i> , 2015 , 4, | 8.9 | 125 |
| 66 | A tetrameric complex of membrane proteins in the endoplasmic reticulum. <i>FEBS Journal</i> , 1993 , 214, 375-81 | | 123 |
| 65 | Myelin membrane assembly is driven by a phase transition of myelin basic proteins into a cohesive protein meshwork. <i>PLoS Biology</i> , 2013 , 11, e1001577 | 9.7 | 120 |
| 64 | The translocation of transportin-cargo complexes through nuclear pores is independent of both Ran and energy. <i>Current Biology</i> , 1999 , 9, 47-50 | 6.3 | 113 |
| 63 | Coordination of tRNA nuclear export with processing of tRNA. <i>Rna</i> , 1999 , 5, 539-49 | 5.8 | 105 |
| 62 | A yeast cap binding protein complex (yCBC) acts at an early step in pre-mRNA splicing. <i>Nucleic Acids Research</i> , 1996 , 24, 3332-6 | 20.1 | 98 |
| 61 | The identification of proteins in the proximity of signal-anchor sequences during their targeting to and insertion into the membrane of the ER. <i>Journal of Cell Biology</i> , 1991 , 113, 35-44 | 7.3 | 95 |
| 60 | FG/FxFG as well as GLFG repeats form a selective permeability barrier with self-healing properties. <i>EMBO Journal</i> , 2009 , 28, 2554-67 | 13 | 93 |
| 59 | NuSAP, a mitotic RanGTP target that stabilizes and cross-links microtubules. <i>Molecular Biology of the Cell</i> , 2006 , 17, 2646-60 | 3.5 | 93 |
| 58 | Sec61p is adjacent to nascent type I and type II signal-anchor proteins during their membrane insertion. <i>Journal of Cell Biology</i> , 1993 , 121, 743-50 | 7.3 | 93 |
| 57 | Caspases mediate nucleoporin cleavage, but not early redistribution of nuclear transport factors and modulation of nuclear permeability in apoptosis. <i>Cell Death and Differentiation</i> , 2001 , 8, 495-505 | 12.7 | 89 |
| 56 | Ultrathin nucleoporin phenylalanine-glycine repeat films and their interaction with nuclear transport receptors. <i>EMBO Reports</i> , 2010 , 11, 366-72 | 6.5 | 86 |
| 55 | The signal sequence receptor has a second subunit and is part of a translocation complex in the endoplasmic reticulum as probed by bifunctional reagents. <i>Journal of Cell Biology</i> , 1990 , 111, 2283-94 | 7.3 | 86 |
| 54 | Crystal structure of the metazoan Nup62-Nup58-Nup54 nucleoporin complex. <i>Science</i> , 2015 , 350, 106-10 | 33.3 | 78 |
| 53 | Ran-binding protein 5 (RanBP5) is related to the nuclear transport factor importin-beta but interacts differently with RanBP1. <i>Molecular and Cellular Biology</i> , 1997 , 17, 5087-96 | 4.8 | 75 |
| 52 | Exportin 7 defines a novel general nuclear export pathway. <i>EMBO Journal</i> , 2004 , 23, 3227-36 | 13 | 75 |
| 51 | Strong signal increase in STED fluorescence microscopy by imaging regions of subdiffraction extent. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 2125-2130 | 11.5 | 71 |
| 50 | Import of DNA into mammalian nuclei by proteins originating from a plant pathogenic bacterium. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1999 , 96, 3729-33 | 11.5 | 71 |

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| 49 | A new set of highly efficient, tag-cleaving proteases for purifying recombinant proteins. <i>Journal of Chromatography A</i> , 2014 , 1337, 95-105 | 4.5 | 70 |
| 48 | Surface Properties Determining Passage Rates of Proteins through Nuclear Pores. <i>Cell</i> , 2018 , 174, 202-217.e9 | 17.2 | 70 |
| 47 | A toolbox of anti-mouse and anti-rabbit IgG secondary nanobodies. <i>Journal of Cell Biology</i> , 2018 , 217, 1143-1154 | 7.3 | 65 |
| 46 | Exportin 4 mediates a novel nuclear import pathway for Sox family transcription factors. <i>Journal of Cell Biology</i> , 2009 , 185, 27-34 | 7.3 | 64 |
| 45 | Structural analysis of large protein complexes using solvent paramagnetic relaxation enhancements. <i>Angewandte Chemie - International Edition</i> , 2011 , 50, 3993-7 | 16.4 | 62 |
| 44 | Different structural and kinetic requirements for the interaction of Ran with the Ran-binding domains from RanBP2 and importin-beta. <i>Biochemistry</i> , 2000 , 39, 11629-39 | 3.2 | 59 |
| 43 | Structural basis for the cytoskeletal association of Bcr-Abl/c-Abl. <i>Molecular Cell</i> , 2005 , 19, 461-73 | 17.6 | 57 |
| 42 | Nuclear import of RPA in <i>Xenopus</i> egg extracts requires a novel protein XRIPalpha but not importin alpha. <i>EMBO Journal</i> , 1999 , 18, 4348-58 | 13 | 55 |
| 41 | Nuclear pore complex assembly and maintenance in POM121- and gp210-deficient cells. <i>Journal of Cell Biology</i> , 2006 , 173, 477-83 | 7.3 | 54 |
| 40 | Inducible expression of coding and inhibitory RNAs from retargetable genomic loci. <i>Nucleic Acids Research</i> , 2009 , 37, e50 | 20.1 | 51 |
| 39 | Transport of hypoxia-inducible factor HIF-1alpha into the nucleus involves importins 4 and 7. <i>Biochemical and Biophysical Research Communications</i> , 2009 , 390, 235-40 | 3.4 | 50 |
| 38 | The nuclear F-actin interactome of <i>Xenopus</i> oocytes reveals an actin-bundling kinesin that is essential for meiotic cytokinesis. <i>EMBO Journal</i> , 2013 , 32, 1886-902 | 13 | 46 |
| 37 | The Sec61 complex is essential for the insertion of proteins into the membrane of the endoplasmic reticulum. <i>FEBS Letters</i> , 1995 , 362, 126-30 | 3.8 | 46 |
| 36 | A physical model describing the interaction of nuclear transport receptors with FG nucleoporin domain assemblies. <i>ELife</i> , 2016 , 5, | 8.9 | 46 |
| 35 | Identification of two novel RanGTP-binding proteins belonging to the importin beta superfamily. <i>Journal of Biological Chemistry</i> , 2000 , 275, 40163-8 | 5.4 | 42 |
| 34 | The Ketel gene encodes a <i>Drosophila</i> homologue of importin-beta. <i>Genetics</i> , 2000 , 156, 1889-900 | 4 | 40 |
| 33 | Histones to the cytosol: exportin 7 is essential for normal terminal erythroid nuclear maturation. <i>Blood</i> , 2014 , 124, 1931-40 | 2.2 | 38 |
| 32 | Adenoviral E1A protein nuclear import is preferentially mediated by importin alpha3 in vitro. <i>Virology</i> , 2001 , 289, 186-91 | 3.6 | 34 |

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| 31 | Cohesiveness tunes assembly and morphology of FG nucleoporin domain meshworks - Implications for nuclear pore permeability. <i>Biophysical Journal</i> , 2013 , 105, 1860-70 | 2.9 | 33 |
| 30 | A Ran-binding motif in nuclear pore proteins. <i>Trends in Cell Biology</i> , 1995 , 5, 192-3 | 18.3 | 31 |
| 29 | Probing the molecular environment of translocating polypeptide chains by cross-linking. <i>Methods in Cell Biology</i> , 1991 , 34, 241-62 | 1.8 | 30 |
| 28 | Purification of protein complexes of defined subunit stoichiometry using a set of orthogonal, tag-cleaving proteases. <i>Journal of Chromatography A</i> , 2014 , 1337, 106-15 | 4.5 | 28 |
| 27 | Structure of the exportin Xpo4 in complex with RanGTP and the hypusine-containing translation factor eIF5A. <i>Nature Communications</i> , 2016 , 7, 11952 | 17.4 | 27 |
| 26 | F-Actin Interactome Reveals Vimentin as a Key Regulator of Actin Organization and Cell Mechanics in Mitosis. <i>Developmental Cell</i> , 2020 , 52, 210-222.e7 | 10.2 | 26 |
| 25 | Xpo7 is a broad-spectrum exportin and a nuclear import receptor. <i>Journal of Cell Biology</i> , 2018 , 217, 2329-2340 | 9.3 | 25 |
| 24 | Effects of the Bowen-Conradi syndrome mutation in EMG1 on its nuclear import, stability and nucleolar recruitment. <i>Human Molecular Genetics</i> , 2016 , 25, 5353-5364 | 5.6 | 23 |
| 23 | Reversible Immobilization of Proteins in Sensors and Solid-State Nanopores. <i>Small</i> , 2018 , 14, e1703357 | 11 | 22 |
| 22 | Regulatory roles of the nuclear envelope. <i>Experimental Cell Research</i> , 1996 , 229, 204-11 | 4.2 | 22 |
| 21 | Structural characterization of nanoscale meshworks within a nucleoporin FG hydrogel. <i>Biomacromolecules</i> , 2012 , 13, 1882-9 | 6.9 | 19 |
| 20 | Neutralization of SARS-CoV-2 by highly potent, hyperthermostable, and mutation-tolerant nanobodies. <i>EMBO Journal</i> , 2021 , 40, e107985 | 13 | 19 |
| 19 | Spatial structure of disordered proteins dictates conductance and selectivity in nuclear pore complex mimics. <i>ELife</i> , 2018 , 7, | 8.9 | 15 |
| 18 | The folate antagonist methotrexate diminishes replication of the coronavirus SARS-CoV-2 and enhances the antiviral efficacy of remdesivir in cell culture models. <i>Virus Research</i> , 2021 , 302, 198469 | 6.4 | 11 |
| 17 | Structural Analysis of Large Protein Complexes Using Solvent Paramagnetic Relaxation Enhancements. <i>Angewandte Chemie</i> , 2011 , 123, 4079-4083 | 3.6 | 10 |
| 16 | Engineered SUMO/protease system identifies Pdr6 as a bidirectional nuclear transport receptor. <i>Journal of Cell Biology</i> , 2019 , 218, 2006-2020 | 7.3 | 6 |
| 15 | Structural basis for the nuclear import and export functions of the biportin Pdr6/Kap122. <i>Journal of Cell Biology</i> , 2019 , 218, 1839-1852 | 7.3 | 5 |
| 14 | The folate antagonist methotrexate diminishes replication of the coronavirus SARS-CoV-2 and enhances the antiviral efficacy of remdesivir in cell culture models | | 5 |

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| 13 | The <i>Xenopus laevis</i> Atg4B Protease: Insights into Substrate Recognition and Application for Tag Removal from Proteins Expressed in Pro- and Eukaryotic Hosts. <i>PLoS ONE</i> , 2015 , 10, e0125099 | 3.7 | 3 |
| 12 | Components and mechanism of protein translocation across the ER membrane. <i>Antonie Van Leeuwenhoek</i> , 1992 , 61, 119-22 | 2.1 | 3 |
| 11 | A toolbox of anti-mouse and rabbit IgG secondary nanobodies | | 2 |
| 10 | Mechanical control of nuclear import by Importin-7 is regulated by its dominant cargo YAP.. <i>Nature Communications</i> , 2022 , 13, 1174 | 17.4 | 2 |
| 9 | Recapitulation of selective nuclear import and export with a perfectly repeated 12mer GLFG peptide. <i>Nature Communications</i> , 2021 , 12, 4047 | 17.4 | 1 |
| 8 | Nanobodies combined with DNA-PAINT super-resolution reveal a staggered titin nano-architecture in flight muscles | | 1 |
| 7 | A nanobody toolbox to investigate localisation and dynamics of <i>Drosophila</i> titins | | 1 |
| 6 | The copper(II)-binding tripeptide GHK, a valuable crystallization and phasing tag for macromolecular crystallography. <i>Acta Crystallographica Section D: Structural Biology</i> , 2020 , 76, 1222-1232 | 5.5 | 0 |
| 5 | A Method to Quantify Molecular Diffusion within Thin Solvated Polymer Films: A Case Study on Films of Natively Unfolded Nucleoporins. <i>ACS Nano</i> , 2020 , 14, 9938-9952 | 16.7 | 0 |
| 4 | Atomic resolution dynamics of cohesive interactions in phase-separated Nup98 FG domains.. <i>Nature Communications</i> , 2022 , 13, 1494 | 17.4 | 0 |
| 3 | Inhibitors of dihydroorotate dehydrogenase cooperate with Molnupiravir and N4-hydroxycytidine to suppress SARS-CoV-2 replication.. <i>IScience</i> , 2022 , 104293 | 6.1 | 0 |
| 2 | Nucleocytoplasmic Transport 2002 , 293-321 | | |
| 1 | Erythroid-Specific Variant of the Nuclear Exportin Xpo7 Conserved Only in Mammals May Explain Functional Differences Between Mammalian Definitive and Lower Vertebrate (or Primitive) Erythropoiesis. <i>Blood</i> , 2016 , 128, 2440-2440 | 2.2 | |