

Ulrich Brandt

Publications 2006-2018

(last updated April 2018)

Guerrero-Castillo S, Baertling F, Kownatzki D, Wessels HJ, Arnold S, **Brandt U**, Nijtmans L (2017) The assembly pathway of mitochondrial respiratory chain complex I. *Cell Metab* 25:128-139. <http://dx.doi.org/10.1016/j.cmet.2016.09.002>

Van Damme T, Gardeitchik T, Mohamed M, Guerrero-Castillo S, Freisinger P, Guillemin B, Kariminejad A, Dalloyaux D, Van Kraaij S, Lefeber DJ, Syx D, Steyaert W, De Rycke R, Hoischen A, Kamsteeg EJ, Wong SY, van Scherpenzeel M, Jamali P, **Brandt U**, Nijtmans L, Korenke GC, Chung BHY, Mak CCY, Hausser I, Kornak U, Fischer-Zirnsak B, Strom TM, Meitinger T, Alanay Y, Utine GE, Leung PKC, Ghaderi-Sohi S, Coucke P, Symoens S, De Paepe A, Thiel C, Haack TB, Malfait F, Morava E, Callewaert B, Wevers RA (2017) Mutations in ATP6V1E1 or ATP6V1A Cause Autosomal-Recessive Cutis Laxa. *Am J Hum Genet* 100:216-227. <http://dx.doi.org/10.1016/j.ajhg.2016.12.010>

Birkenmeier K, Drose S, Wittig I, Winkelmann R, Kafer V, Doring C, Hartmann S, Wenz T, Reichert AS, **Brandt U**, Hansmann ML (2016) Hodgkin and Reed-Sternberg cells of classical Hodgkin lymphoma are highly dependent on oxidative phosphorylation. *Int J Cancer* 138:2231-2246. <http://dx.doi.org/10.1002/ijc.29934>

Brandt U, Zickermann V (2016) Preface to complex I special issue. *Biochimica Et Biophysica Acta-Bioenergetics* 1857:861-862. <http://dx.doi.org/10.1016/j.bbabi.2016.04.006>

D'Imprima E, Mills DJ, Parey K, **Brandt U**, Kühlbrandt W, Zickermann V, Vonck J (2016) Cryo-EM structure of respiratory complex I reveals a link to mitochondrial sulfur metabolism. *Biochim Biophys Acta-Bioenerg* 1857:1935-1942. <http://dx.doi.org/10.1016/j.bbabi.2016.09.014>

Huynen MA, Mühlmeister M, Gotthardt K, Guerrero-Castillo S, **Brandt U** (2016) Evolution and structural organization of the mitochondrial contact site (MICOS) complex and the mitochondrial intermembrane space bridging (MIB) complex. *Biochim Biophys Acta-Mol Cell Res* 1863:91-101. <http://dx.doi.org/10.1016/j.bbamcr.2015.10.009>

König T, Troder SE, Bakka K, Korwitz A, Richter-Dennerlein R, Lampe PA, Patron M, Mühlmeister M, Guerrero-Castillo S, **Brandt U**, Decker T, Lauria I, Paggio A, Rizzuto R, Rugarli EI, De Stefani D, Langer T (2016) The *m*-AAA protease associated with neurodegeneration limits MCU activity in mitochondria. *Mol Cell* 64:148-162. <http://dx.doi.org/10.1016/j.molcel.2016.08.020>

Sanchez-Caballero L, Ruzzenente B, Bianchi L, Assouline Z, Barcia G, Metodiev MD, Rio M, Funalot B, van den Brand MAM, Guerrero-Castillo S, Molenaar JP, Koolen D, **Brandt U**, Rodenburg RJ, Nijtmans LG, Rotig A (2016) Mutations in complex I assembly factor TMEM126B result in muscle weakness and isolated complex I deficiency. *Am J Hum Genet* 99:208-216. <http://dx.doi.org/10.1016/j.ajhg.2016.05.022>

Wai T, Saita S, Nolte H, Müller S, König T, Richter-Dennerlein R, Sprenger HG, Madrenas J, Mühlmeister M, **Brandt U**, Krüger M, Langer T (2016) The membrane scaffold SLP2 anchors a proteolytic hub in mitochondria containing PARL and the *i*-AAA protease YME1L. *EMBO Rep* 17:1844-1856. <http://dx.doi.org/10.15252/embr.201642698>

Wirth C, **Brandt U**, Hunte C, Zickermann V (2016) Structure and function of mitochondrial complex I. *BBA-Bioenergetics* 1857:902-914. <http://dx.doi.org/10.1016/j.bbabi.2016.02.013>

Bleier L, Wittig I, Heide H, Steger M, **Brandt U**, Drose S (2015) Generator-specific targets of mitochondrial reactive oxygen species. *Free radical biology & medicine* 78:1-10. <http://dx.doi.org/10.1016/j.freeradbiomed.2014.10.511>

Giese H, Ackermann J, Heide H, Bleier L, Drose S, Wittig I, **Brandt U**, Koch I (2015) NOVA: a software to analyze complexome profiling data. *Bioinformatics (Oxford, England)* 31:440-441. <http://dx.doi.org/10.1093/bioinformatics/btu623>

Kmita K, Wirth C, Warnau J, Guerrero-Castillo S, Hunte C, Hummer G, Kaila VRI, Zwicker K, **Brandt U**, Zickermann V (2015) Accessory NUMM (NDUFS6) subunit harbors a Zn-binding site and is essential for biogenesis of mitochondrial complex I. *P Natl Acad Sci USA* 112:5685-5690. <http://dx.doi.org/10.1073/pnas.1424353112>

Schirris TJJ, Renkema GH, Ritschel T, Voermans NC, Bilos A, van Engelen BGM, **Brandt U**, Koopman WJH, Beyrath JD, Rodenburg RJ, Willems P, Smeitink JAM, Russel FGM (2015) Statin-induced myopathy is associated with mitochondrial complex III inhibition. *Cell Metab* 22:399-407. <http://dx.doi.org/10.1016/j.cmet.2015.08.002>

Zickermann V, Wirth C, Nasiri H, Siegmund K, Schwalbe H, Hunte C, **Brandt U** (2015) Mechanistic insight from the crystal structure of mitochondrial complex I. *Science* 347:44-49. <http://dx.doi.org/10.1126/science.1259859>

Angerer H, Radermacher M, Malkowska M, Steger M, Zwicker K, Heide H, Wittig I, **Brandt U**, Zickermann V (2014) The LYR protein subunit NB4M/NDUFA6 of mitochondrial complex I anchors an acyl carrier protein and is essential for catalytic activity. *P Natl Acad Sci USA* 111:5207-5212. <http://dx.doi.org/10.1073/pnas.1322438111>

Dröse S, **Brandt U**, Wittig I (2014) Mitochondrial respiratory chain complexes as sources and targets of thiol-based redox-regulation. *BBA-Proteins Proteomics* 1844:1344-1354. <http://dx.doi.org/10.1016/j.bbapap.2014.02.006>

Guillaud F, Drose S, Kowald A, **Brandt U**, Klipp E (2014) Superoxide production by cytochrome bc(1) complex: A mathematical model. *Biochim Biophys Acta-Bioenerg* 1837:1643-1652. <http://dx.doi.org/10.1016/j.bbabi.2014.05.358>

Parganlija D, Klinkenberg M, Dominguez-Bautista J, Hetzel M, Gispert S, Chimi MA, Dröse S, Mai S, **Brandt U**, Auburger G, Jendrach M (2014) Loss of PINK1 impairs stress-induced autophagy and cell survival. *PLOS ONE* 9:e95288. <http://dx.doi.org/10.1371/journal.pone.0095288>

Brandt U (2013) Inside view of a giant proton pump. *Angew Chem Int Edit* 52:7358-7360. <http://dx.doi.org/10.1002/anie.201303403>

Chimi MA, Dröse S, Wittig I, Heide H, Steger M, Werner A, Hamann A, Osiewacz HD, **Brandt U** (2013) Age-related changes in the mitochondrial proteome of the fungus *Podospora anserina* analyzed by 2D-DIGE and LC-MS/MS. *J Proteomics* 91:358-374. <http://dx.doi.org/10.1016/j.jprot.2013.07.008>

de Rezende FFRF, Lima AML, Wittig I, Heide HH, Niland SN, **Brandt UB**, Schroder KS, Eble JAE (2013) Redox regulation of alpha 7 beta 1 integrin by H₂O₂ in smooth muscle cells. *Int J Exp Pathol* 94:A11-A11.

Gispert S, Parganlija D, Klinkenberg M, Dröse S, Wittig I, Mittelbronn M, Grzmil P, Koob S, Hamann A, Walter M, Buchel F, Adler T, de Angelis MH, Busch DH, Zell A, Reichert AS, **Brandt U**, Osiewacz HD, Jendrach M, Auburger G (2013) Loss of mitochondrial peptidase *C1pp* leads to infertility, hearing loss plus growth retardation via accumulation of CLPX, mtDNA and inflammatory factors. *Hum Mol Genet* 22:4871-4887. <http://dx.doi.org/10.1093/hmg/ddt338>

Weber TA, Koob S, Heide H, Wittig I, Head B, van der Blik A, **Brandt U**, Mittelbronn M, Reichert AS (2013) APOOL is a cardiolipin-binding constituent of the mitofilin/MINOS protein complex determining cristae morphology in mammalian mitochondria. *PLOS ONE* 8:e63683. <http://dx.doi.org/10.1371/journal.pone.0063683>

Angerer H, Nasiri HR, NiedergesaSs V, Kersch S, Schwalbe H, **Brandt U** (2012) Tracing the tail of ubiquinone in mitochondrial complex I. *BBA-Bioenergetics* 1817:1776-1784.

Auburger G, Klinkenberg M, Drost J, Marcus K, Morales-Gordo B, Kunz WS, **Brandt U**, Broccoli V, Reichmann H, Gispert S, Jendrach M (2012) Primary skin fibroblasts as a model of parkinson's disease. *Mol Neurobiol* 46:20-27. <http://dx.doi.org/10.1007/s12035-012-8245-1>

Dröse S, **Brandt U** (2012) Molecular mechanisms of superoxide production by the mitochondrial respiratory chain. *Adv Exp Med Biol* 748:145-69.

Heide H, Bleier L, Steger M, Ackermann J, Dröse S, Schwamb B, Zörnig M, Reichert AS, Koch I, Wittig I, **Brandt U** (2012) Complexome profiling identifies TMEM126B as a component of the mitochondrial complex I assembly complex. *Cell Metab* 16:538-549. <http://dx.doi.org/10.1016/j.cmet.2012.08.009>

Leuner K, Schutt T, Kurz C, Eckert SH, Schiller C, Occhipinti A, Mai S, Jendrach M, Eckert GP, Kruse SE, Palmiter RD, **Brandt U**, Dröse S, Wittig I, Willem M, Haass C, Reichert AS, Müller WE (2012) Mitochondrion-derived reactive oxygen species lead to enhanced amyloid beta formation. *Antioxid Redox Signal* 16:1421-1433. <http://dx.doi.org/10.1089/ars.2011.4173>

Ruzzenente B, Metodiev MD, Wredenber A, Bratic A, Park CB, Camara Y, Milenkovic D, Zickermann V, Wibom R, Hultenby K, Erdjument-Bromage H, Tempst P, **Brandt U**, Stewart JB, Gustafsson CM, Larsson NG (2012) LRPPRC is necessary for polyadenylation and coordination of translation of mitochondrial mRNAs. *EMBO J* 31:443-456. <http://dx.doi.org/10.1038/emboj.2011.392>

Scheving R, Wittig I, Heide H, Albuquerque B, Steger M, **Brandt U**, Tegeder I (2012) Protein S-nitrosylation and denitrosylation in the mouse spinal cord upon injury of the sciatic nerve. *J Proteomics* 75:3987-4004.

Zhou QQ, Dowling A, Heide H, Wöhnert J, **Brandt U**, Baum J, French-Constant R, Bode HB (2012) Xenotrivalpeptides A-Q: Depsipeptide diversification in *Xenorhabdus*. *J Nat Prod* 75:1717-1722. <http://dx.doi.org/10.1021/np300279g>

Angerer H, Zwicker K, Wumaier Z, Sokolova L, Heide H, Steger M, Kaiser S, Nubel E, Brutschy B, Radermacher M, **Brandt U**, Zickermann V (2011) A scaffold of accessory subunits links the peripheral arm and the distal proton-pumping module of mitochondrial complex I. *Biochem J* 437:279-288. <http://dx.doi.org/10.1042/bj20110359>

Brandt U (2011) A two-state stabilization-change mechanism for proton-pumping complex I. *BBA-Bioenergetics* 1807:1364-1369. <http://dx.doi.org/10.1016/j.bbabi.2011.04.006>

Dröse S, Bleier L, **Brandt U** (2011) A common mechanism links differently acting complex II inhibitors to cardioprotection: modulation of mitochondrial reactive oxygen species production. *Mol Pharmacol* 79:814-822. <http://dx.doi.org/10.1124/mol.110.070342>

Dröse S, Krack S, Sokolova L, Zwicker K, Barth HD, Morgner N, Heide H, Steger M, Nubel E, Zickermann V, Kerscher S, Brutschy B, Radermacher M, **Brandt U** (2011) Functional dissection of the proton pumping modules of mitochondrial complex I. *PLoS Biol* 9:e1001128. <http://dx.doi.org/10.1371/journal.pbio.1001128>

Hartmann N, Reichwald K, Wittig I, Dröse S, Schmeisser S, Luck C, Hahn C, Graf M, Gausmann U, Terzibasi E, Cellierino A, Ristow M, **Brandt U**, Platzer M, Englert C (2011) Mitochondrial DNA copy number and function decrease with age in the short-lived fish *Nothobranchius furzeri*. *Aging Cell* 10:824-831. <http://dx.doi.org/10.1111/j.1474-9726.2011.00723.x>

Ladig R, Sommer MS, Hahn A, Leisegang MS, Papatotiriou DG, Ibrahim M, Elkehal R, Karas M, Zickermann V, Gutensohn M, **Brandt U**, Klösigen RB, Schleiff E (2011) A high-definition native polyacrylamide gel electrophoresis system for the analysis of membrane complexes. *Plant J* 67:181-194. <http://dx.doi.org/10.1111/j.1365-313X.2011.04577.x>

Weil A, Luce K, Drose S, Wittig I, **Brandt U**, Osiewacz HD (2011) Unmasking a temperature-dependent effect of the *P. anserina* i-AAA protease on aging and development. *Cell Cycle* 10:4280-4290. <http://dx.doi.org/10.4161/cc.10.24.18560>

- Clason T, Ruiz T, Schägger H, Peng G, Zickermann V, **Brandt U**, Michel H, Radermacher M (2010) The structure of eukaryotic and prokaryotic complex I. *J Struct Biol* 169:81-88.
- Dobrynin K, Abdrakhmanova A, Richers S, Hunte C, Kerscher S, **Brandt U** (2010) Characterization of two different acyl carrier proteins in complex I from *Yarrowia lipolytica*. *BBA-Bioenergetics* 1797:152-159.
- Hunte C, Zickermann V, **Brandt U** (2010) Functional modules and structural basis of conformational coupling in mitochondrial complex I. *Science* 329:448-451. <http://dx.doi.org/10.1126/science.1191046>
- Lyubenova S, Maly T, Zwicker K, **Brandt U**, Ludwig B, Prisner TF (2010) Multifrequency pulsed electron paramagnetic resonance on metalloproteins. *Accounts Chem Res* 43:181-189. <http://dx.doi.org/10.1021/ar900050d>
- Namgaladze D, Preiss S, Dröse S, **Brandt U**, Brüne B (2010) Phospholipase A2-modified low density lipoprotein induces mitochondrial uncoupling and lowers reactive oxygen species in phagocytes. *Atherosclerosis* 208:142-147.
- Sokolova L, Wittig I, Barth HD, Schägger H, Brutschy B, **Brandt U** (2010) Laser-induced liquid bead ion desorption-MS of protein complexes from blue-native gels, a sensitive top-down proteomic approach. *Proteomics* 10:1401-1407.
- Tocilescu MA, Zickermann V, Zwicker K, **Brandt U** (2010) Quinone binding and reduction by respiratory complex I. *BBA-Bioenergetics* 1797:1883-1890. <http://dx.doi.org/10.1016/j.bbabi.2010.05.009>
- Zickermann V, Angerer H, Ding MG, Nubel E, **Brandt U** (2010) Small single transmembrane domain (STMD) proteins organize the hydrophobic subunits of large membrane protein complexes. *FEBS Lett* 584:2516-2525. <http://dx.doi.org/10.1016/j.febslet.2010.04.021>
- Abdel-Rahman U, Risteski P, Tizi K, Kerscher S, Bejati S, Zwicker K, Scholz M, **Brandt U**, Moritz A (2009) Hypoxic reoxygenation during initial reperfusion attenuates cardiac dysfunction and limits ischemia-reperfusion injury after cardioplegic arrest in a porcine model. *J Thorac Cardiovasc Sur* 137:978-982. <http://dx.doi.org/10.1016/j.jtcvs.2008.09.025>
- Dröse S, Hanley PJ, **Brandt U** (2009) Ambivalent effects of diazoxide on mitochondrial ROS production at respiratory chain complexes I and III. *BBA-Bioenergetics* 1790:558-565.
- Haendeler J, Drose S, Buchner N, Jakob S, Altschmied J, Goy C, Spyridopoulos I, Zeiher AM, **Brandt U**, Dimmeler S (2009) Mitochondrial telomerase reverse transcriptase binds to and protects mitochondrial DNA and function from damage. *Arterioscl Thromb Vas* 29:929-935. <http://dx.doi.org/10.1161/atvbaha.109.185546>
- Hauptmann S, Scherping I, Dröse S, **Brandt U**, Schulz KL, Jendrach M, Leuner K, Eckert A, Müller WE (2009) Mitochondrial dysfunction: An early event in Alzheimer pathology accumulates with age in AD transgenic mice. *Neurobiol Aging* 30:1574-1586.
- Ludwig B, Michel H, **Brandt U** (2009) Structures and mechanisms in molecular bioenergetics preface. *BBA-Bioenergetics* 1787:561-562. <http://dx.doi.org/10.1016/j.bbabi.2009.05.004>
- Maly T, Zwicker K, Cernescu A, **Brandt U**, Prisner TF (2009) New pulsed EPR methods and their application to characterize mitochondrial complex I. *BBA-Bioenergetics* 1787:584-592.
- Nübel E, Wittig I, Kerscher S, **Brandt U**, Schägger H (2009) Two-dimensional native electrophoretic analysis of respiratory supercomplexes from *Yarrowia lipolytica*. *Proteomics* 9:2408-2418.
- Rhein V, Song XM, Wiesner A, Ittner LM, Baysang G, Meier F, Ozmen L, Bluethmann H, Drose S, **Brandt U**, Savaskan E, Czech C, Gotz J, Eckert A (2009) Amyloid-beta and tau synergistically impair the oxidative phosphorylation system in triple transgenic Alzheimer's disease mice. *P Natl Acad Sci USA* 106:20057-20062. <http://dx.doi.org/10.1073/pnas.0905529106>

Sheftel AD, Stehling O, Pierik AJ, Netz DJA, Kerscher S, Elsasser HP, Wittig I, Balk J, **Brandt U**, Lill R (2009) Human ind1, an iron-sulfur cluster assembly factor for respiratory complex I. *Mol Cell Biol* 29:6059-6073.

Zickermann V, Kerscher S, Zwicker K, Tocilescu MA, Radermacher M, **Brandt U** (2009) Architecture of complex I and its implications for electron transfer and proton pumping. *BBA-Bioenergetics* 1787:574-583.

Bych K, Kerscher S, Netz DJA, Pierik AJ, Zwicker K, Huynen MA, Lill R, **Brandt U**, Balk J (2008) The iron-sulphur protein Ind1 is required for effective complex I assembly. *EMBO J* 27:1736-1746.

Dröse S, **Brandt U** (2008) The mechanism of mitochondrial superoxide production by the cytochrome bc(1) complex. *J Biol Chem* 283:21649-21654. <http://dx.doi.org/10.1074/jbc.M803236200>

Eckert A, Hauptmann S, Scherping I, Meinhardt J, Rhein V, Drose S, **Brandt U**, Fandrich M, Muller WE, Gotz J (2008) Oligomeric and fibrillar species of beta-amyloid (A beta 42) both impair mitochondrial function in P301L tau transgenic mice. *J Mol Med* 86:1255-1267. <http://dx.doi.org/10.1007/s00109-008-0391-6>

Galkin A, Meyer B, Wittig I, Karas M, Schägger H, Vinogradov A, **Brandt U** (2008) Identification of the mitochondrial ND3 subunit as a structural component involved in the active/deactive enzyme transition of respiratory complex I. *J Biol Chem* 283:20907-20913. <http://dx.doi.org/10.1074/jbc.M803190200>

Kerscher S, Drose S, Zickermann V, **Brandt U** (2008) The three families of respiratory NADH dehydrogenases. *Results Probl Cell Differ* 45:185-222.

Lin SS, Kerscher S, Saleh A, **Brandt U**, Gross U, Bohne W (2008) The Toxoplasma gondii type-II NADH dehydrogenase TgNDH2-I is inhibited by 1-hydroxy-2-alkyl-4(1H)quinolones. *BBA-Bioenergetics* 1777:1455-1462. <http://dx.doi.org/10.1016/j.bbabi.2008.08.006>

Morgner N, Zickermann V, Kerscher S, Wittig I, Abdrakhmanova A, Barth HD, Brutschy B, **Brandt U** (2008) Subunit mass fingerprinting of mitochondrial complex I. *BBA-Bioenergetics* 1777:1384-1391. <http://dx.doi.org/10.1016/j.bbabi.2008.08.001>

Zickermann V, Drose S, Tocilescu MA, Zwicker K, Kerscher S, **Brandt U** (2008) Challenges in elucidating structure and mechanism of proton pumping NADH:ubiquinone oxidoreductase (complex I). *J Bioenerg Biomembr* 40:475-483. <http://dx.doi.org/10.1007/s10863-008-9171-9>

Clason T, Zickermann V, Ruiz T, **Brandt U**, Radermacher M (2007) Direct localization of the 51 and 24 kDa subunits of mitochondrial complex I by three-dimensional difference imaging. *J Struct Biol* 159:433-442.

Hoepken HH, Gispert S, Morales B, Wingerter O, Del Turco D, Mulsch A, Nussbaum RL, Muller K, Drose S, **Brandt U**, Deller T, Wirth B, Kudin AP, Kunz WS, Auburger G (2007) Mitochondrial dysfunction, peroxidation damage and changes in glutathione metabolism in PARK6. *Neurobiol Dis* 25:401-411.

Soller M, Drose S, **Brandt U**, Brune B, von Knethen A (2007) Mechanism of thiazolidinedione-dependent cell death in Jurkat T cells. *Mol Pharmacol* 71:1535-1544.

Tocilescu MA, Fendel U, Zwicker K, Kerscher S, **Brandt U** (2007) Exploring the ubiquinone binding cavity of respiratory complex I. *J Biol Chem* 282:29514-29520.

Zickermann V, Zwicker K, Tocilescu MA, Kerscher S, **Brandt U** (2007) Characterization of a subcomplex of mitochondrial NADH : ubiquinone oxidoreductase (complex I) lacking the flavoprotein part of the N-module. *BBA-Bioenergetics* 1767:393-400.

Abdrakhmanova A, Zwicker K, Kerscher S, Zickermann V, **Brandt U** (2006) Tight binding of NADPH to the 39-kDa subunit of complex I is not required for catalytic activity but stabilizes the multiprotein complex. *BBA-Bioenergetics* 1757:1676-1682.

Brandt U (2006) Energy converting NADH : Quinone oxidoreductase (Complex I). *Annu Rev Biochem* 75:69-92.

Carrozzo R, Wittig I, Santorelli FM, Bertini E, Hofmann S, **Brandt U**, Schägger H (2006) Subcomplexes of human ATP synthase mark mitochondrial biosynthesis disorders. *Ann Neurol* 59:265-275. <http://dx.doi.org/10.1002/ana.20729>

Derbre S, Duval R, Roue G, Garofano A, Poupon E, **Brandt U**, Susin SA, Hocquemiller R (2006) Semisynthesis and screening of a small library of pro-apoptotic squamocin analogues: Selection and study of a benzoquinone hybrid with an improved biological profile. *ChemMedChem* 1:118-129. <http://dx.doi.org/10.1002/cmdc.200500011>

Dröse S, **Brandt U**, Hanley PJ (2006) K⁺-independent actions of diazoxide question the role of inner membrane K-ATP channels in mitochondrial cytoprotective signaling. *J Biol Chem* 281:23733-23739. <http://dx.doi.org/10.1074/jbc.M602570200>

Duval RA, Lewin G, Peris E, Chahboune N, Garofano A, Drose S, Cortes D, **Brandt U**, Hocquemiller R (2006) Heterocyclic analogues of squamocin as inhibitors of mitochondrial complex I. On the role of the terminal lactone of annonaceous acetogenins. *Biochemistry* 45:2721-2728. <http://dx.doi.org/10.1021/bi051261u>

Duval RA, Poupon E, Romero V, Peris E, Lewin G, Cortes D, **Brandt U**, Hocquemiller R (2006) Analogues of cytotoxic squamocin using reliable reactions: new insights into the reactivity and role of the alpha,beta-unsaturated lactone of the annonaceous acetogenins. *Tetrahedron* 62:6248-6257. <http://dx.doi.org/10.1016/j.tet.2006.04.066>

Galkin A, Dröse S, **Brandt U** (2006) The proton pumping stoichiometry of purified mitochondrial complex I reconstituted into proteoliposomes. *BBA-Bioenergetics* 1757:1575-1581.

Garofano A, Eschemann A, **Brandt U**, Kerscher S (2006) Substrate-inducible versions of internal alternative NADH: ubiquinone oxidoreductase from *Yarrowia lipolytica*. *Yeast* 23:1129-1136.

Maly T, Grgic L, Zwicker K, Zickermann V, **Brandt U**, Prisner TF (2006) Cluster N1 of complex I from *Yarrowia lipolytica* studied by pulsed EPR spectroscopy. *J Biol Inorg Chem* 11:343-350. <http://dx.doi.org/10.1007/s00775-006-0081-1>

Marshall D, Fisher N, Grigic L, Zickermann V, **Brandt U**, Shannon RJ, Hirst J, Lawrence R, Rich PR (2006) ATR-FTIR redox difference spectroscopy of *Yarrowia lipolytica* and bovine complex I. *Biochemistry* 45:5458-5467. <http://dx.doi.org/10.1021/bi052561e>

Radermacher M, Ruiz T, Clason T, Benjamin S, **Brandt U**, Zickermann V (2006) The three-dimensional structure of complex I from *Yarrowia lipolytica*: A highly dynamic enzyme. *J Struct Biol* 154:269-279. <http://dx.doi.org/10.1016/j.jsb.2006.02.011>

Schwab MA, Sauer SW, Okun JG, Nijtmans LGJ, Rodenburg RJT, van den Heuvel LP, Drose S, **Brandt U**, Hoffmann GF, Ter Laak H, Kolker S, Smeitink JAM (2006) Secondary mitochondrial dysfunction in propionic aciduria: a pathogenic role for endogenous mitochondrial toxins. *Biochem J* 398:107-112. <http://dx.doi.org/10.1042/bj20060221>

Zwicker K, Galkin A, Drose S, Grgic L, Kerscher S, **Brandt U** (2006) The redox-Bohr group associated with iron-sulfur cluster N2 of complex I. *J Biol Chem* 281:23013-23017. <http://dx.doi.org/10.1074/jbc.M603442200>