

## Dr. Rosemary Stuart's Publications

- 2009** Jia, L., Kaur, J. and Stuart, R.A. 2009. Mapping the yeast Oxa1-mitochondrial ribosome interface: identification of MrpL40, a ribosomal protein in close proximity to Oxa1 and critical for OXPHOS complex assembly. *Eukaryot. Cell*, 8, 1792-1802.
- Stuart, R.A. 2009. Supercomplex organization of the yeast respiratory chain complexes and the ADP/ATP carrier proteins. *Methods in Enzymol.*, 456:191-208.
- 2008** Yao, H., Stuart, R.A., Cai, S. and Sem, D. 2008. Structural Characterization of the transmembrane domain from Subunit e (Su e) of yeast F<sub>1</sub>F<sub>0</sub>-ATP synthase: a helical GXXXG motif located just under the micelle surface. *Biochemistry*. 47:1910-1917.
- Saddar, S., Dienhart, M. and Stuart, R.A. 2008. The F<sub>1</sub>F<sub>0</sub>-ATP synthase complex influences the assembly state of the cytochrome bc<sub>1</sub>-cytochrome oxidase supercomplex and its association with the TIM23 machinery. *J. Biol. Chem.*, 283: 6677-6686.
- Wittig, I, Velours, J., Stuart, R. and Schägger, H. 2008. Characterization of domain interfaces in monomeric and dimeric ATP synthase. *Mol. Cell. Proteomics*, 7:995-1004.
- Dienhart, M.K. and Stuart, R.A. 2008. The yeast Aac2 protein exists in physical association with the cytochrome bc<sub>1</sub>-COX supercomplex and the TIM23 machinery. *Mol. Biol. Cell.*, 19:3934-3943.
- 2007** Jia, L., M. K. Dienhart, and R.A. Stuart. 2007. Oxa1 directly interacts with Atp9 and mediates its assembly into the mitochondria F<sub>1</sub>F<sub>0</sub>-ATP synthase complex. *Mol. Biol. Cell*. 18:1897-1908.
- 2006** Gallas, M.R., M.K. Dienhart, R.A. Stuart, and R.M. Long. 2006. Characterization of Mmp37p, a *Saccharomyces cerevisiae* mitochondrial matrix protein with a role in mitochondrial protein import. *Mol. Biol. Cell.*, 9:4051-4062.
- 2005** Everard-Gigot, V., Dunn, C.D., Dolan, B.M\*, Brunner, S., Jensen, R.E. and R.A. Stuart, 2005. Functional analysis of subunit e of the yeast F<sub>1</sub>F<sub>0</sub>-ATP synthase: the importance of the N-terminal membrane anchor region. *Eukaryotic Cell*, 4:346-355. \* denotes undergraduate student.
- Saddar, S. and R.A. Stuart, 2005. The yeast F<sub>1</sub>F<sub>0</sub>-ATP synthase: Analysis of the molecular organization of subunit g and the importance of a conserved GXXXG motif. *J. Biol. Chem.*, 280:24435-24442.
- 2003** Pfeiffer, K., V. Gohil, R.A. Stuart, C. Hunte, U. Brandt, M.L. Greenberg and H. Schägger. 2003. Cardiolipin stabilizes respiratory chain supercomplexes. *J. Biol. Chem.*, 278:52873-52880.
- Jia, L., M. Dienhart, M. Schramp\*, M. McCauley\*, K. Hell and R.A. Stuart. 2003. Yeast Oxa1 interacts with mitochondrial ribosomes: the importance of the C-terminal region of Oxa1. *EMBO J.*, 22:6438-6447. Note \* indicates undergraduate students supported by NSF REU grant.
- 2002** Dienhart, M., K. Pfeiffer, H. Schägger and R.A. Stuart. 2002. Formation of the yeast F<sub>1</sub>F<sub>0</sub>-ATP synthase dimeric complex does not require the ATPase inhibitor protein, Inh1. *J. Biol. Chem.*, 277, 39289-39295.
- Brunner, S., V. Everard-Gigot and R.A. Stuart. 2002. Su e of the yeast F<sub>1</sub>F<sub>0</sub>-ATP synthase forms homo-dimers. *J. Biol. Chem.*, 277, 48484-48489.
- 2001** Hell, K., W. Neupert and R.A. Stuart. 2001. Oxa1p acts as a general membrane insertion machinery for proteins encoded by mitochondrial DNA. *EMBO J.* 20:1281-1288.

Preuss, M., K. Leonhard, K. Hell, R.A. Stuart, W. Neupert and J.M. Herrmann. 2001 Mba1, a novel component of the mitochondrial protein export machinery of the yeast *Saccharomyces cerevisiae*. *J. Cell Biol.*, 153:1085-1096.

**2000** Hell, K., A. Tzagoloff, W. Neupert and R.A. Stuart. 2000. Identification of Cox20p, a novel protein involved in the maturation and assembly of cytochrome oxidase subunit 2. *J. Biol. Chem.*, 275:4571-4578.

Cruciat, C., S. Brunner, F. Baumann, W. Neupert and R.A. Stuart. 2000. The cytochrome *bc*<sub>1</sub> and cytochrome *c* oxidase complexes associate to form a single supracomplex in yeast mitochondria. *J. Biol. Chem.*, 275:18093-18098.

At Marquette University

---

**1999** Arnold, I., K. Pfeiffer, W. Neupert, R.A. Stuart and H. Schagger. 1999. ATP synthase of yeast mitochondria: isolation of subunit j and disruption of the ATP18 gene. *J. Biol. Chem.* 274:36-40.

Cruciat, C.M., K. Hell, H. Fölsch, W. Neupert and R.A. Stuart. 1999. Bcs1p, an AAA-family member, is a chaperone for the assembly of the cytochrome *bc*<sub>1</sub> complex. *EMBO J.*, 18:5226-5233.

Rojo, E.E., B. Guiard, W. Neupert and R.A. Stuart. 1999. N-terminal tail export from the mitochondrial matrix: Adherence to the prokaryotic "positive-inside" rule of membrane protein topology. *J. Biol. Chem.*, 274:19617-19622.

Lee, C., J. Sedman, W. Neupert and R.A. Stuart. 1999. The DNA helicase, Hmi1p is transported into mitochondria by a C-terminal targeting signal. *J. Biol. Chem.*, 274:20937-20942.

**1998** Hell, K., J.M. Herrmann, E. Pratje, W. Neupert and R.A. Stuart. 1998. Oxa1p, an essential component of the novel N-tail protein export machinery in mitochondria. *Proc. Natl. Acad. Sci.*, 95:2250-2255.

Sirrenberg, C., M. Endres, H. Fölsch, R.A. Stuart, W. Neupert and M. Brunner. 1998. Carrier protein import into mitochondria mediated by the intermembrane space proteins Tim10/Mrs11 and Tim12/Mrs5. *Nature*, 391:912-915.

Arnold, I., H. Fölsch, W. Neupert and R.A. Stuart. 1998. Two distinct and independent mitochondrial targeting signals function in the sorting of an inner membrane protein cytochrome *c*<sub>1</sub>. *J. Biol. Chem.*, 273:1469-1476.

Fölsch, H., B. Gaume, M. Brunner, W. Neupert and R.A. Stuart. 1998. C-terminal to N-terminal translocation of preproteins into mitochondria. *EMBO J.* 17, 6508-6515.

Arnold, I., K. Pfeiffer, W. Neupert, R.A. Stuart, R.A. and H. Schagger. 1998. Yeast mitochondrial F<sub>1</sub>F<sub>o</sub>-ATP synthase exists as a dimer: identification of three dimer specific subunits. *EMBO J.* 17:7170-7178.

Rojo, E.E., B. Guiard, W. Neupert and R.A. Stuart. 1998. Sorting of D-lactate dehydrogenase to the inner membrane of mitochondria: analysis of topogenic signal and energetic requirements. *J. Biol. Chem.*, 273:8040-8047.

**1997** Arnold, I., M.F. Bauer, M. Brunner, W. Neupert and R.A. Stuart. 1997. The novel subunit e of the yeast mitochondrial F<sub>1</sub>F<sub>o</sub>-ATPase is identical to Tim11. *FEBS Lett.*, 411:195-200.

Helde, R., B. Wieseler, E. Wachter, A. Neubüser, H.K. Hoffschulte, T. Hengelage, K.L. Schmitz, R.A. Stuart and M. Müller. 1997. Comparative characterization of SecA from the  $\alpha$ -subclass purple bacterium *Rhodobacter capsulatus* and *Escherichia coli* reveals differences in membrane and precursor specificity. *J. Bact.*, 179:4003-4012.

- Gruhler, A., I. Arnold, T. Seytter, E.M. Schwarz, W. Neupert, W. and R.A. Stuart. 1997. N-terminal hydrophobic sorting signals of preproteins confer mitochondrial hsp70 independence for import into mitochondria. *J. Biol. Chem.*, 272:17410-17415.
- Herrmann, J.M., W. Neupert and R.A. Stuart, R.A. 1997. Insertion into the mitochondrial inner membrane of a polytopic protein the nuclear encoded Oxa1p. *EMBO J.*, 16:2217-2226.
- Hell, K., J.M. Herrmann, E. Pratje, W. Neupert and R.A. Stuart. 1997. Oxa1p mediates the export of the N- and C-termini of preCoxII from the mitochondrial matrix to the intermembrane space. *FEBS Lett.*, 418:367-370.
- 1996** Fölsch, H., B. Guiard, W. Neupert and R.A. Stuart. 1996. Internal targeting signal of the BCS1 protein: a novel mechanism import into mitochondrial. *EMBO J.*, 15:479-487.
- Leonhard, K., J.M. Herrmann, R.A. Stuart, G. Mannhaupt, W. Neupert and T. Langer. 1996. AAA proteases with catalytic sites on opposite membrane surfaces co-operate in the ATP-dependent degradation of inner membrane proteins in mitochondria. *EMBO J.*, 15:4218-4229.
- 1995** Gruhler, A., H. Ono, H., B. Guiard, W. Neupert and R.A. Stuart. 1995. A novel intermediate on the import pathway of cytochrome  $b_2$  into mitochondria: evidence for conservative sorting. *EMBO J.* 14:1349-1359.
- Rojo, E.E., R.A. Stuart and W. Neupert. 1995. Conservative sorting of  $F_0$ -ATPase subunit 9: Export from matrix requires  $\Delta$ pH across inner membrane and matrix ATP. *EMBO J.*, 14:3445-3451.
- Ono, H., A. Gruhler, R.A. Stuart, B. Guiard, E. Schwarz and W. Neupert. 1995. Sorting of cytochrome  $b_2$  to the intermembrane space of mitochondria: kinetic analysis of intermediates demonstrates passage through the matrix. *J. Biol. Chem.*, 270:16932-16938.
- Herrmann, J.M., H. Koll, R.A. Cook, W. Neupert and R.A. Stuart. 1995. Topogenesis of cytochrome oxidase subunit II: mechanisms of protein export from the mitochondrial matrix. *J. Biol. Chem.*, 270:27079-27086.
- 1994** Stuart, R.A., A. Gruhler, I. van der Klei, B. Guiard, H. Koll and W. Neupert. 1994. The requirement of matrix ATP for the import of precursor proteins into the mitochondrial matrix and intermembrane space. *Eur. J. Biochem.* 220:9-18.
- Herrmann, J.M., R.A. Stuart, E.A. Craig and W. Neupert, W. 1994. Mitochondrial Hsp70 a molecular chaperone for proteins encoded by mitochondrial DNA. *J. Cell Biol.* 127:893-902.
- 1993** Stuart, R.A., D. Mackay, J. Adamczewski, J. and G. Warren. 1993. Inhibition of intra-Golgi transport *in vitro* by mitotic kinase. *J. Biol. Chem.*, 268:4050-4054.
- Cyr, D.M., R.A. Stuart and W. Neupert. 1993. A matrix ATP requirement for presequence translocation across the inner membrane of mitochondria. *J. Biol. Chem.* 268:23751-23754.
- 1992** Lill, R., R.A. Stuart, M.E. Drygas, F.E. Nargang and W. Neupert. 1992. Import of cytochrome  $c$  heme lyase into mitochondria: A novel pathway into the intermembrane space. *EMBO J.* 11: 449-456.
- 1990** Stuart, R.A., D.W. Nicholson and W. Neupert, W. 1990. Early steps in mitochondrial protein import: Receptor functions can be substituted by the membrane insertion activity of apocytochrome  $c$ . *Cell*, 60:31-43.

Stuart, R.A., D.W. Nicholson, U. Wienhues and W. Neupert. 1990. Import of apocytochrome *c* into the mitochondrial intermembrane space along a cytochrome *c<sub>1</sub>* sorting pathway. *J. Biol. Chem.* 265:33:20210-20219.

**1989**

Nicholson, D.W., R.A. Stuart and W. Neupert, W. 1989. Biogenesis of cytochrome *c<sub>1</sub>*: Role of cytochrome *c<sub>1</sub>* heme lyase and of the two proteolytic processing steps during import into mitochondria. *J. Biol. Chem.* 264:10156-10168.

**1987**

Stuart, R.A., W. Neupert and M. Tropschug. 1987. Deficiency in mRNA splicing in a cytochrome *c* mutant of *Neurospora crassa*: Importance of carboxy-terminus for import of apocytochrome *c* into mitochondria. *EMBO J.* 6:2131-2137.