

Literature cited

1. MR Lewis and WH Lewis, Mitochondria in Tissue Culture. *Science* **39**, 330-333 (1914).
2. DC Chan, Mitochondria: dynamic organelles in disease, aging, and development. *Cell* **125**, 1241-1252 (2006).
3. H Chen and DC Chan, Mitochondrial dynamics--fusion, fission, movement, and mitophagy--in neurodegenerative diseases, *Hum Mol Genet* **18**:R169-76 (2009).
4. HR Waterham *et al.* A lethal defect of mitochondrial and peroxisomal fission. *N. Engl. J. Med.* **356**, 1736-1741 (2007).
5. H Ashrafi *et al.*, A mutation in the mitochondrial fission gene Dnm11 leads to cardiomyopathy, *PLoS Genet* **6**, e1001000 (2010) doi:10.1371/journal.pgen.1001000
6. SB Ong *et al.*, Inhibiting mitochondrial fission protects the heart against ischemia/reperfusion injury, *Circulation* **121**, 2012-22 (2010).
7. Y Fannjiang, WC Cheng, SJ Lee, B Qi, J Pevsner, JM McCaffery, **RB Hill**, G Basañez, and JM Hardwick, Mitochondrial fission proteins regulate programmed cell death in yeast., *Genes Dev* **18**, 2785-97 (2004).
8. RC Wells, LK Picton, SCP Williams, FJ Tan, and **RB Hill**, Direct binding of the dynamin-like GTPase, Dnm1, to mitochondrial dynamics protein Fis1 is negatively regulated by the Fis1 N-terminal arm, *J Biol Chem* **282**, 33769-75 (2007).
9. LK Picton†, S Casares†, AC Monahan, A Majumdar, and **RB Hill**, Evidence for conformational heterogeneity of fission protein Fis1 from *S. cerevisiae*, *Biochemistry* **21**, 6598-609 (2009). †co-first authors
10. RC Wells and **RB Hill**, The Fis1 cytosolic domain reversibly clusters lipid vesicles, *PLoS-1*, **6**, e21384 (2011).
11. JE Tooley, V Khangulov, JP Lees, JL Schlessman, M Bewley, A Héroux, J Bosch*, and **RB Hill***, 1.75 Å crystal structure of fission protein Fis1 from *Saccharomyces cerevisiae* reveals elusive interactions of the autoinhibitory domain, *Acta Cryst F* (in press). *co-corresponding authors
12. JP Lees, LK Picton, CM Manlandro, AZE Tan, S Casares, JM Flanagan, KG Fleming, and **RB Hill**, The N-terminal arm prevents homodimerization of fission protein Fis1 from *S. cerevisiae*, in process of addressing reviewers' concerns.
13. CM Manlandro, BJ Zimmerman, M Christie, and **RB Hill**, *hotspot*, an efficient yeast two-hybrid based screen to identify disruptive residues at multiple protein interfaces, manuscript in preparation.
14. **RB Hill**, TJ Barfield, JP Lees, D Toptygin, L Brand and KR MacKenzie, Reversible kinetic stabilization of a latent, but functional, state, manuscript in preparation.
15. LK Picton, JP Lees, and **RB Hill**, Autoinhibition of Fis1 regulates mitochondrial fission, manuscript in preparation.
16. FJ Tan, JE Zuckerman, AZ Fire, and **RB Hill**, Regulation of apoptosis by *C. elegans* CED-9 in the absence of the C-terminal transmembrane domain, *Cell Death Differ* **14**, 1925-35 (2007).

17. FJ Tan, M Husain, CM Manlandro, M Koppenol, AZ Fire, and **RB Hill**, CED-9 and mitochondrial homeostasis in *C. elegans* muscle. *J Cell Sci* **102**, 3373-82 (2008).
18. FJ Tan, JE Zuckerman, RC Wells, and **RB Hill**, The *C. elegans* B-cell lymphoma 2 (bcl-2) homolog Cell death abnormal 9 (CED-9) associates with and remodels lipid membranes, *Protein Sci* **20**, 62-74 (2011).
19. JA Dohm, SJ Lee, JM Hardwick, **RB Hill***, and AG Gittis*, The cytosolic domain of the human mitochondrial fission protein Fis1 adopts a TPR fold, *Proteins* **54**, 153-6 (2004). * co-corresponding authors
20. GR Thudupathy and **RB Hill**, Acid destabilization of the solution conformation of Bcl-XL does not drive its pH-dependent insertion into membranes, *Protein Sci* **15**, 248-57 (2006).
21. GR Thudupathy, JW Craig, V Kholodenko, A Schon, and **RB Hill**, Evidence that membrane insertion of the cytosolic domain of Bcl-XL is governed by an electrostatic mechanism, *J. Mol. Biol* **359**, 1045-58 (2006).
22. GR Thudupathy, O Terrones, JW Craig, G Basañez, and **RB Hill**, The N-terminal domain of Bcl-XL reversibly binds membranes in a pH-dependent manner, *Biochemistry* **45**, 14533-42 (2006).
23. CR Chang†, CM Manlandro†, D Arnoult, J Stadler, AE Posey, **RB Hill***, and C Blackstone*, A lethal *de novo* mutation in the middle domain of the dynamin-related GTPase Drp1 impairs higher-order assembly and mitochondrial division, *J Biol Chem* **285**, 32494-503 (2010). †co-first authors * co-corresponding authors
24. DV Jeyaraju, HM McBride, **RB Hill***, L Pellegrini*, A new proteolytic cascade converts mitochondrial Parl into an archetypal bacterial rhomboid, *Cell Death Differ* **18**, 1531-9 (2011). * co-corresponding authors
25. CM Manlandro, D Arnoult, J Stadler, C Blackstone*, and **RB Hill***, Fis1 directly recruits the fission mechanoenzyme Drp1 to sites of scission, manuscript in preparation. * co-corresponding authors
26. ME Soriano and L Scorrano, The interplay between BCL-2 family proteins and mitochondrial morphology in the regulation of apoptosis, *Adv Exp Med Biol* **687**, 97-114 (2010).
27. JE Johnson and RB Cornell, Amphitropic proteins: regulation by reversible membrane interactions, *Mol Membr Biol* **16**, 217-35 (1999).
28. SG Rolland, Y Lu, CN David, and B Conradt, The BCL-2-like protein CED-9 of *C. elegans* promotes FZO-1/Mfn1,2- and EAT-3/Opa1-dependent mitochondrial fusion, *J Cell Biol* **186**:525-40 (2009).
29. Y Lu, SG Rolland, and B Conradt, A molecular switch that governs mitochondrial fusion and fission mediated by the BCL2-like protein CED-9 of *Caenorhabditis elegans*, *Proc Natl Acad Sci* **108**:E813-22 (2011).