

7. CONCLUSIONS

1. Expression of Pm-fortilin/TCTP (Figure 39).

1. Expression of Pm-fortilin/TCTP transcripts in infected shrimp.

- Pm-fortilin/TCTP expresses in both viral infected and non-infected shrimp but the transcript decreases in the moribund infected shrimp.

2. Expression of human-fortilin/TCTP or Pm-fortilin/TCTP in 5-FU-induced cell death.

- Human-fortilin/TCTP or Pm-fortilin/TCTP express in U2OS prevents cells from etoposide, staurosporine, cisplatin, hydroxyurea, and 5-FU-induced cell death.

2. siRNA system and Apoptosis assay (Figure 40).

1. Development of siRNA system to knockdown human-fortilin/TCTP and MCL1.

- Human-fortilin/TCTP and MCL1 are knocked down at 48 and 12 h after transfection, respectively.

- 25 nM of siRNA_{Human-fortilin/TCTP} and siRNA_{MCL1} are sufficient to knock down Human-fortilin/TCTP and MCL1, respectively.

- 25 nM of both siRNA, it is possible to knock down Human-fortilin/TCTP and MCL1 at the same time.

2. Expression and depletion of human-fortilin/TCTP or MCL1 in 5-FU-induced cell death.

- Expression of human-fortilin/TCTP or MCL1 in U2OS make cells resistant to 5-Fu.

- Depletion of human-fortilin/TCTP or MCL1 in U2OS make cells less resistant to 5-Fu.

3. The intracellular localization of human-fortilin/TCTP and MCL1 after depletion of their protein partner, MCL1 and human-fortilin/TCTP, respectively.

- By immunocytochemical analysis and subcellular fractionation;

- Human-fortilin/TCTP localizes predominantly in the nucleus and a small degree in cytosol.

- MCL1 localizes predominantly in cytosol and a small degree in the nucleus.

- The depletion of human-fortilin/TCTP and MCL1 does not change the intracellular localization of protein partner, MCL1 and human-fortilin/TCTP, respectively

4. Dose dependent protection of human-fortilin/TCTP or MCL1 in the absence of its protein partner MCL1 or human-fortilin/TCTP, respectively.

- The intracellular human-fortilin/TCTP level correlates with the degree of survival in U2OS monoclonal cell population and U2OS polyclonal cell population.

- The intracellular MCL1 level correlates with the degree of survival in U2OS monoclonal cell population and U2OS polyclonal cell population.

- Human-fortilin/TCTP does not require the presence of MCL1 to protect U2OS cells from 5-FU-induced cell death.

- MCL1 does not require the presence of human-fortilin/TCTP to protect U2OS cells from 5-FU-induced cell death.

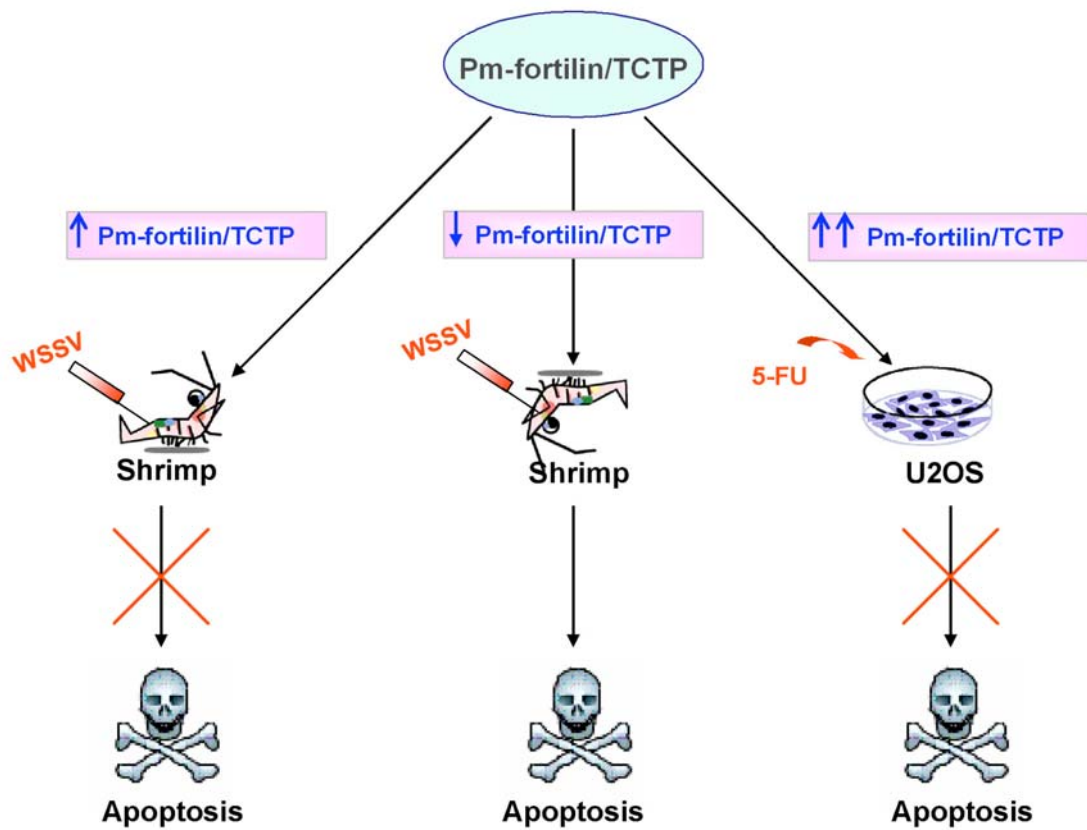


Figure 39. Conclusion of expression of Pm-fortilin/TCTP (Part I).

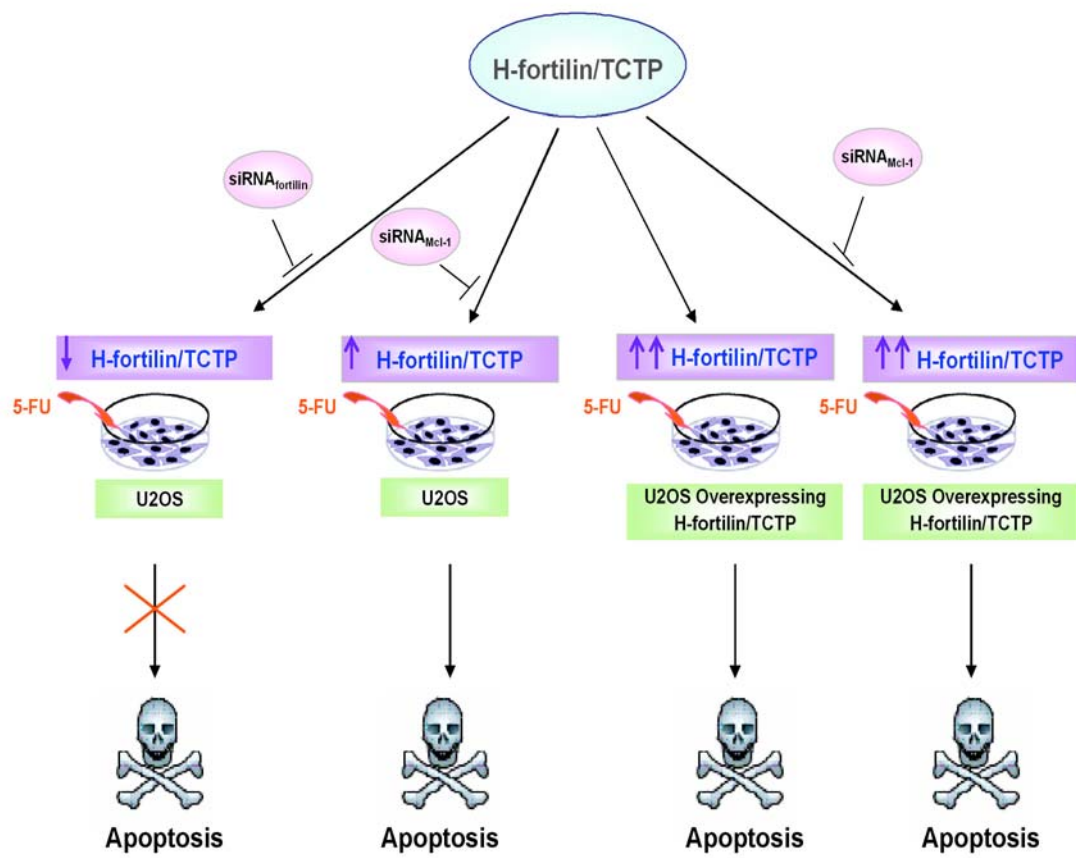


Figure 40. Conclusion of expression of human-fortilin/TCTP (Part II).