

# Recovery of Raw Egg from Boiled Egg by **CHAPERONE**

Yangzi CHEN

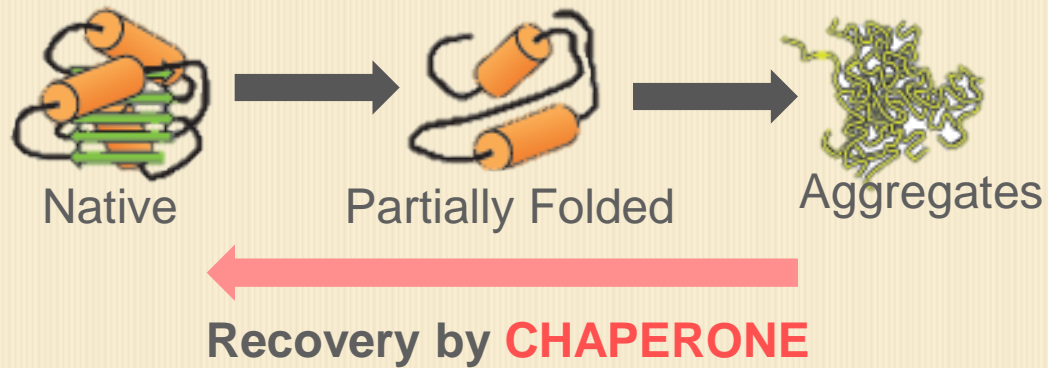
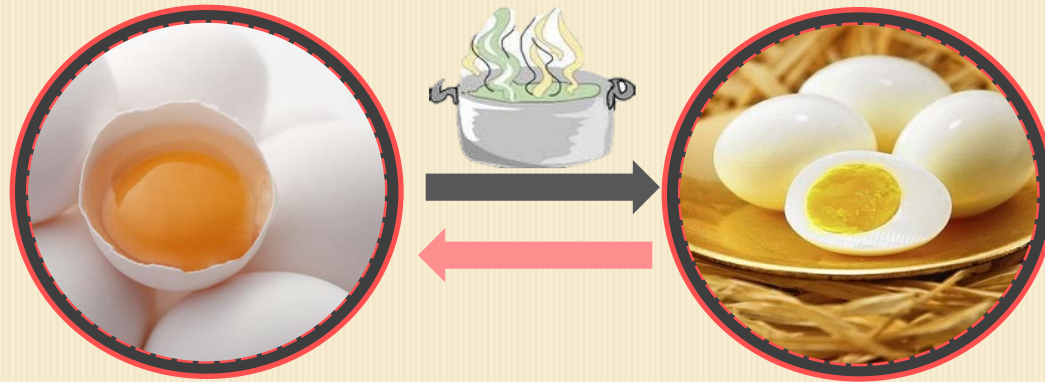
ID#15R55021

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# ★ Protein Renaturation ★



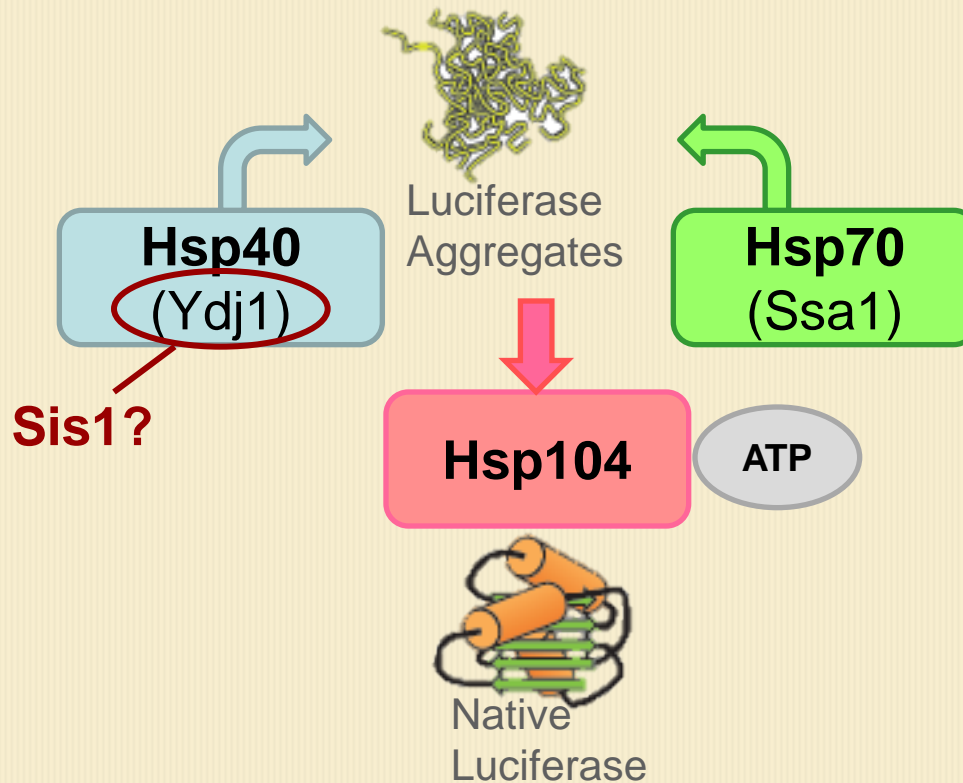
# Chaperone

## What do you know about chaperones?



- ❑ Nickname: Heat Shock Protein
- ❑ Chaperones can:
  - Promote protein folding
  - Prevent the accumulation of aggregated proteins
  - Help the denatured protein refold
- ❑ Different chaperone families with cooperation with each other

## “Hsp40/70/104” Disaggregation System



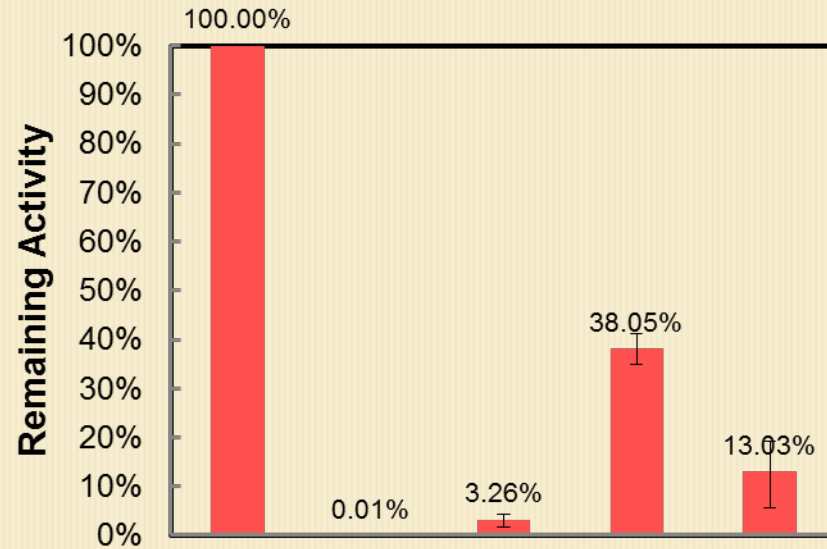
### System:

- Hsp70/40 bind first to prevent the accumulation of large-size aggregates and recruit Hsp104
- Hsp104 bind later to reactivate the substrates

# Sis1 is effective!

**Concentration:**  
Ssa1=2 $\mu$ M  
Sis1=1 $\mu$ M  
Hsp104=1 $\mu$ M

## Results

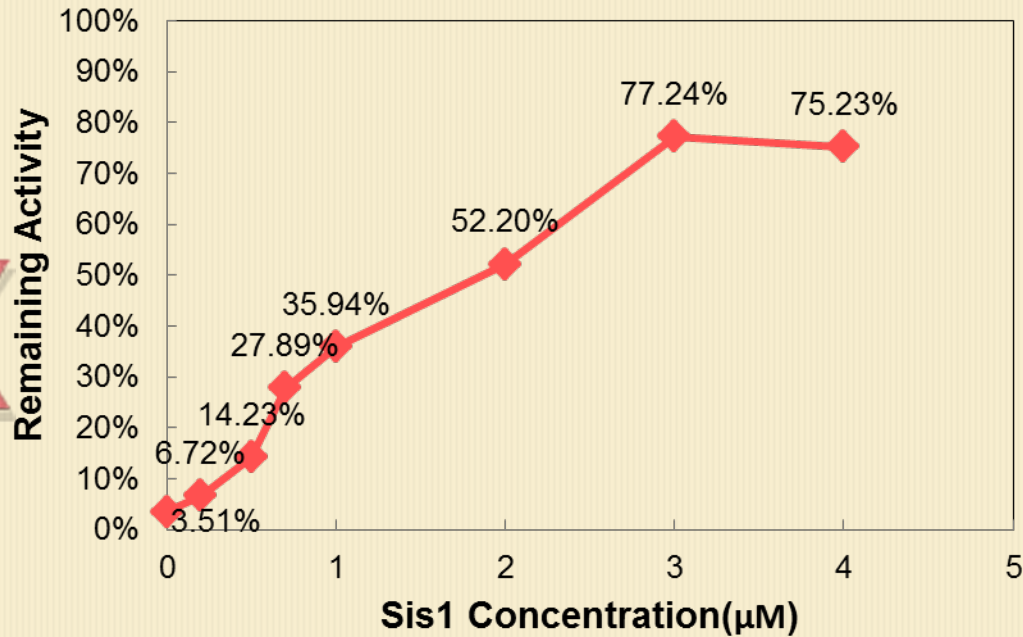


Native	+	-	-	-	-
Aggregation	-	+	+	+	+
Ssa1	-	-	+	+	+
Sis1	-	-	+	+	-
Ydj1	-	-	-	-	+
Hsp104	-	-	-	+	+

(+: exist; -: absent)

# Sis1's affinity

**Results**



**Constant  
Concentration:**  
Ssa1=2 $\mu\text{M}$   
Hsp104=1 $\mu\text{M}$

**Apparent  $K_m$  of Sis1  $\approx 1.2$**

# Life in Tokyo

Thank you, Taguchi Sensei and cute lab members  
loving Campus Asia friends and teachers!  
I had a sweet time in Tokyo because of you! ❤️



THANK YOU!

