3. (6.3)

$$(e^{iH})^\dagger = \left(\sum_{n=0}^{\infty} \frac{1}{n!} i^n H^n\right)^\dagger = \sum_{n=0}^{\infty} \frac{1}{n!} (i^\dagger)^n (H^n)^\dagger = \sum_{n=0}^{\infty} \frac{1}{n!} (-i)^n (H^\dagger)^n$$

$$= \sum_{n=0}^{\infty} \frac{1}{n!} (-i)^n H^n$$

$$= e^{-iH} \quad \checkmark$$