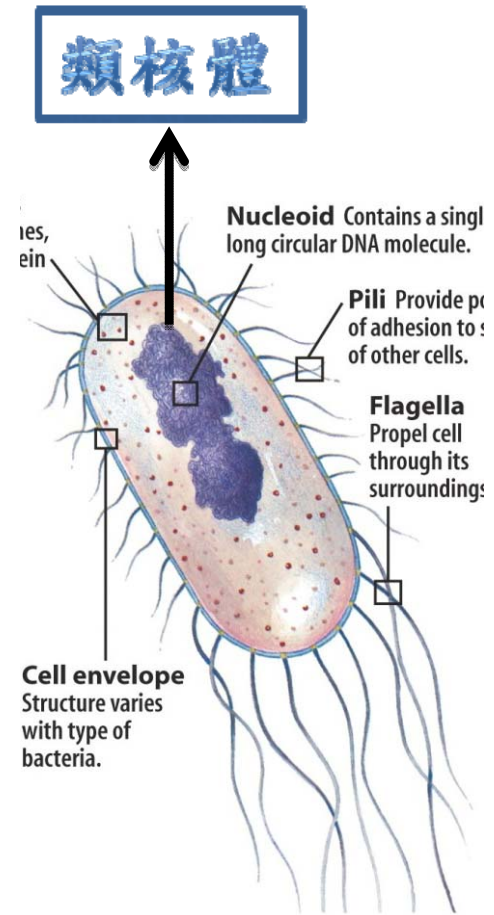
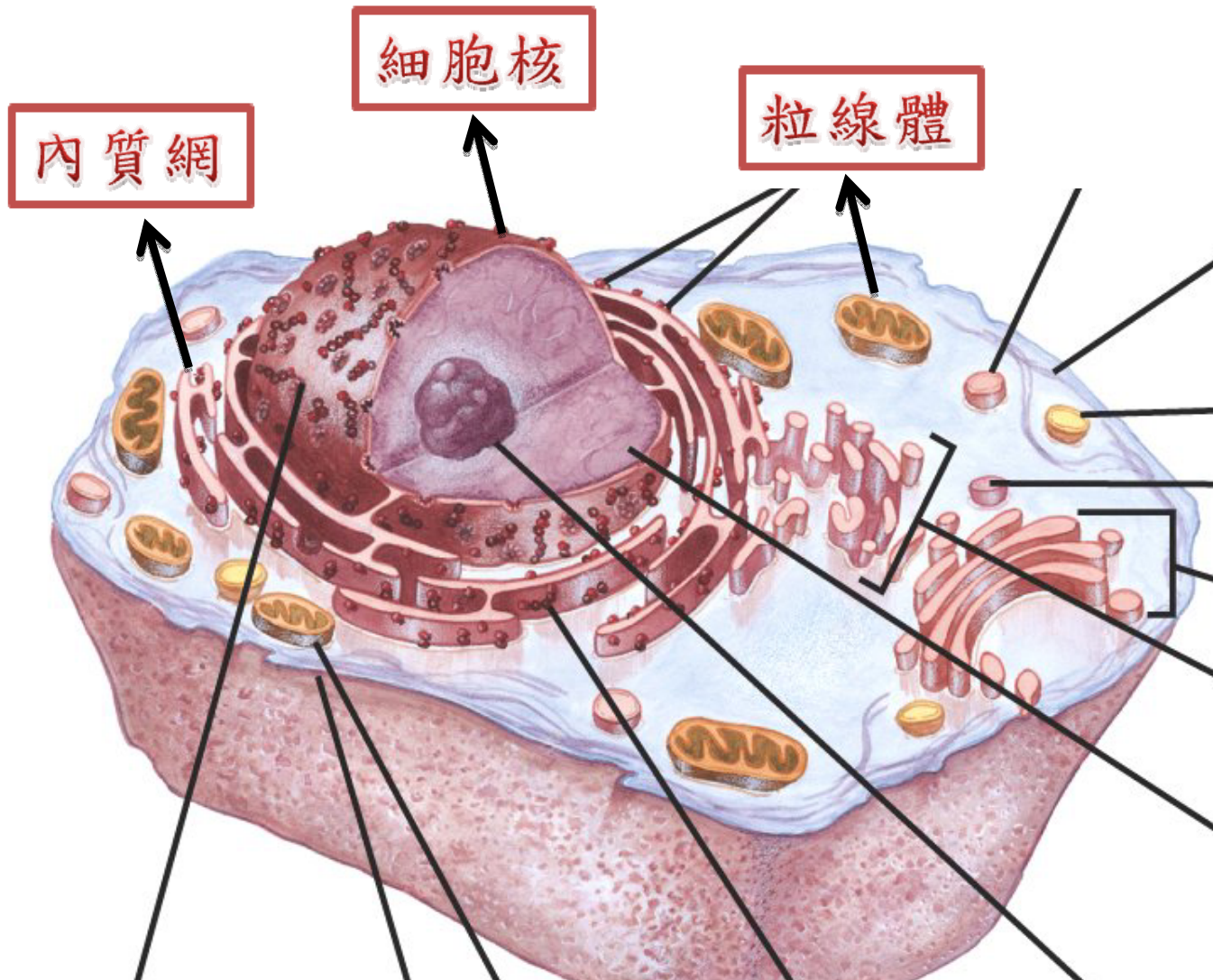
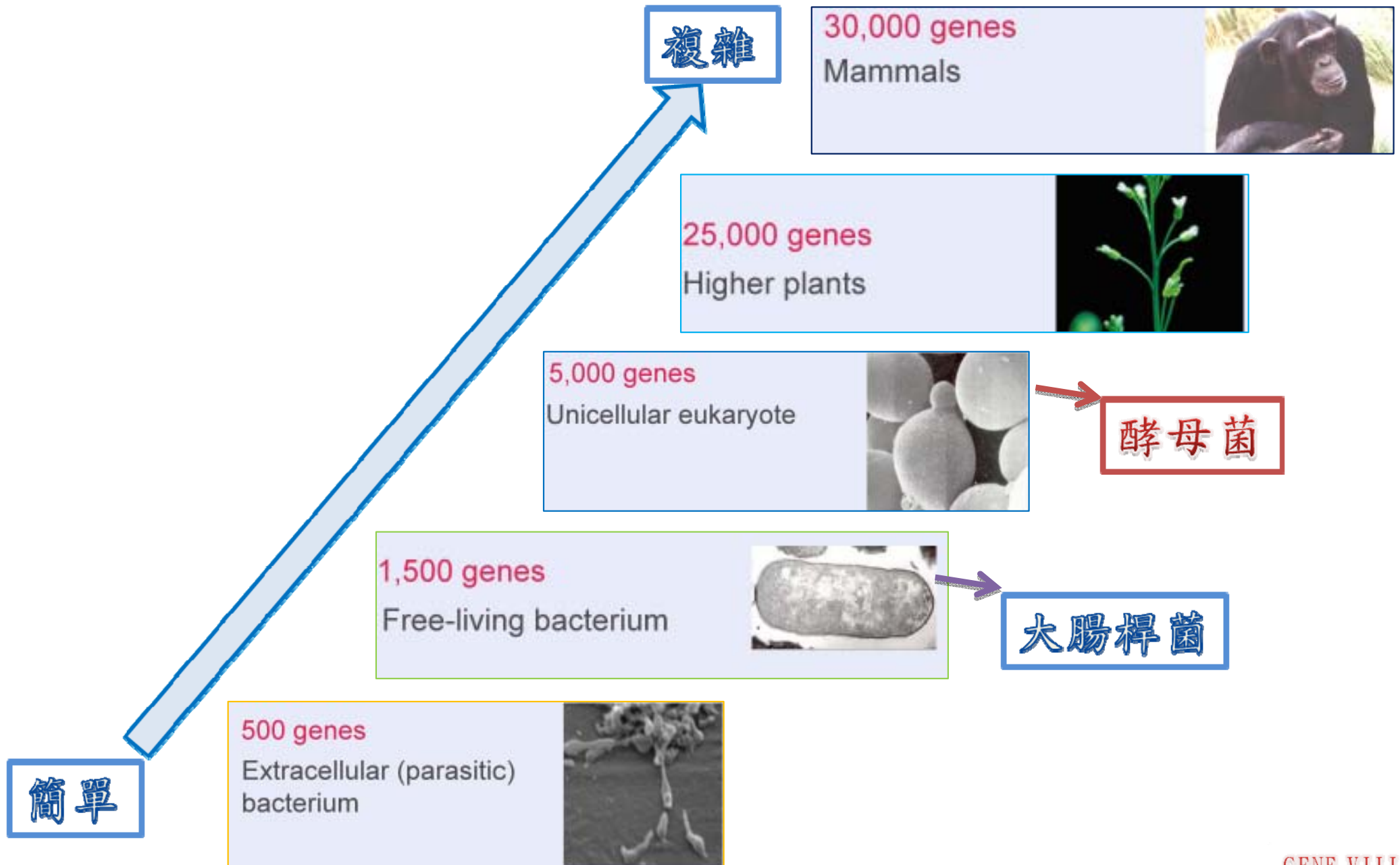


原核細胞和真核細胞的差異

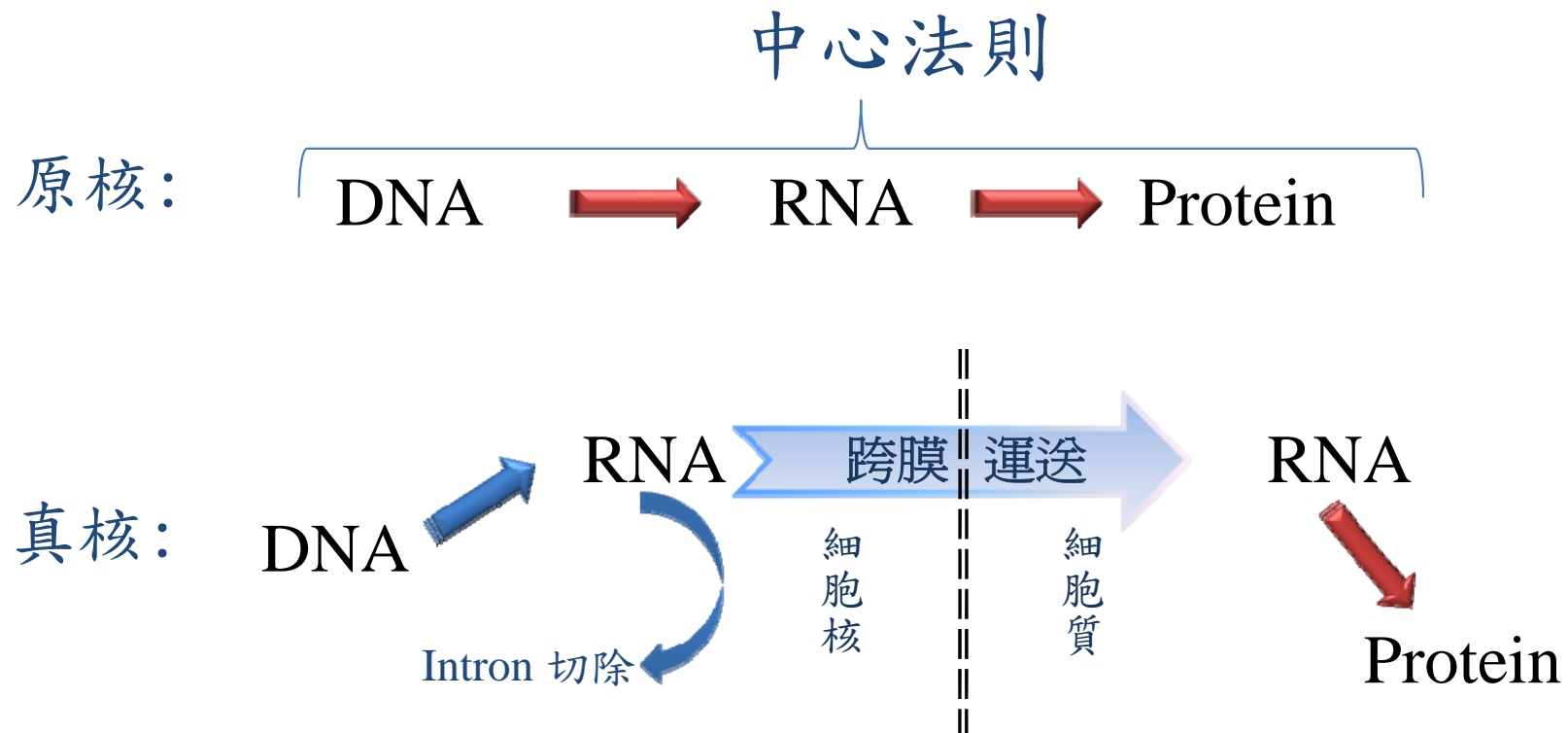


微生物有多少基因？



原核細菌基因表達較快速？

1. 原核細菌的基因不具有內引子 (intron) 因此省略切除內引子的過程。
2. 原核細菌不具有細胞核，轉錄完成之 RNA 可以馬上製造蛋白質。但真核生物需要將 RNA 運送到細胞質才能生產蛋白質。



人類和微生物關係密切的證據

Major findings reported in the rough drafts of the human genome (人類基因計畫報告書)

-
- More than 90% of the genome has been sequenced; gaps, large and small, remain to be filled in.
 - Estimated number of protein-coding genes ranges from 30,000 to 40,000.
 - Only 1.1–1.5% of the genome codes for proteins.
 - There are wide variations in features of individual chromosomes (eg, in gene number per Mb, SNP density, GC content, numbers of transposable elements and CpG islands, recombination rate).
 - Approximately 100 coding regions have been copied and moved by RNA-based transposons.
 - Approximately 200 genes may be derived from bacteria by lateral transfer.
 - More than 3 million SNPs have been identified.
-

三域系統

真核生物、原核細菌、古細菌

古細菌特色：

與細菌不同，只有一層細胞膜而缺少細胞壁，但細胞膜具有醚脂類結構，而能適應極地環境。