

Figure S1. ML phylogeny of *Talaromyces* sect. *Talaromyces* inferred from BenA dataset. Bootstrap values $\geq 70\%$ (left) or posterior probability values ≥ 0.95 (right) are indicated at nodes. Asterisk denotes 100% bootstrap or 1.00 posterior probability.

Figure S2. ML phylogeny of *Talaromyces* sect. *Talaromyces* inferred from CaM dataset. Bootstrap values $\geq 70\%$ (left) or posterior probability values ≥ 0.95 (right) are indicated at nodes. Asterisk denotes 100% bootstrap or 1.00 posterior probability.

Figure S3. ML phylogeny of *Talaromyces* sect. *Talaromyces* inferred from RPB2 dataset. Bootstrap values $\geq 70\%$ (left) or posterior probability values ≥ 0.95 (right) are indicated at nodes. Asterisk denotes 100% bootstrap or 1.00 posterior probability.