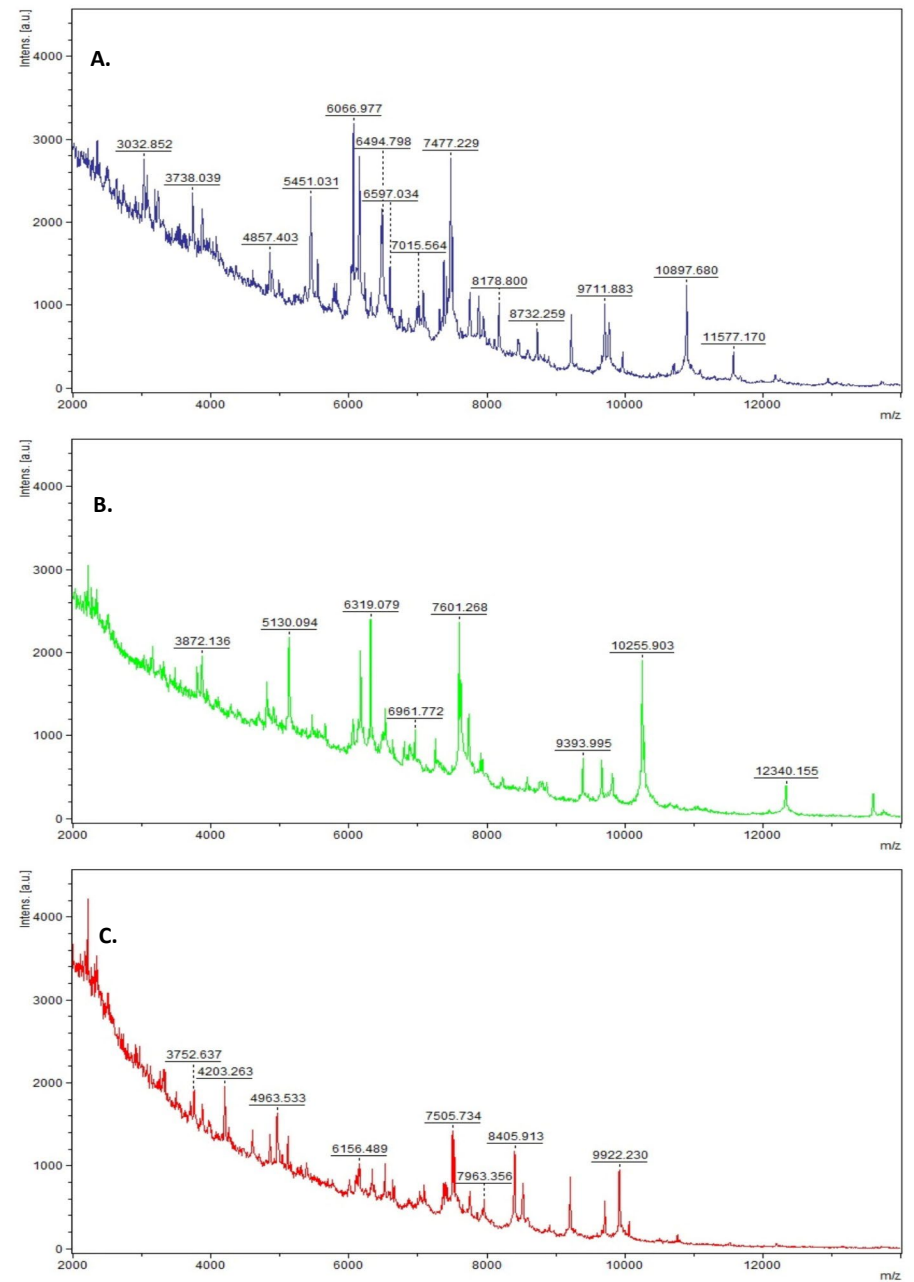
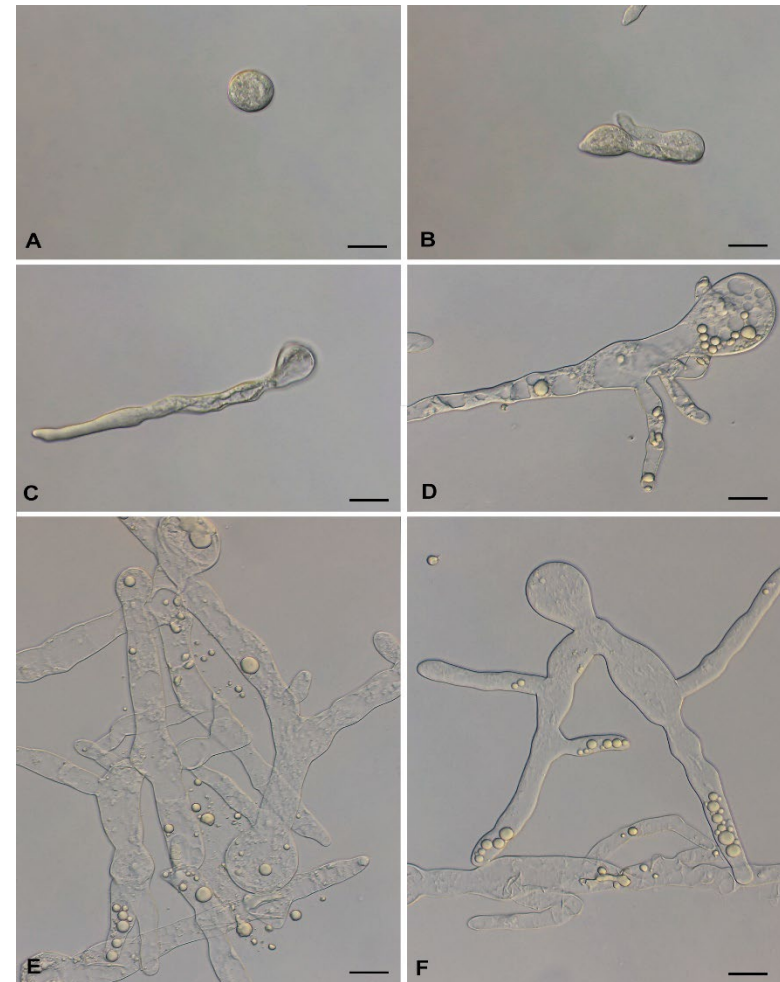
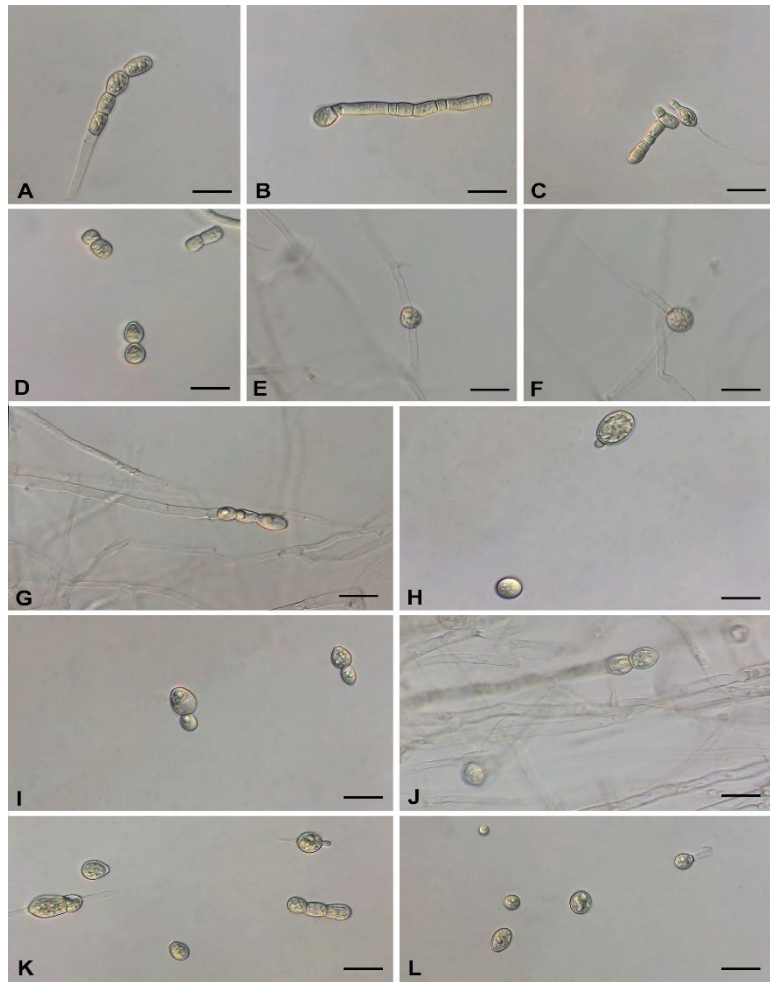
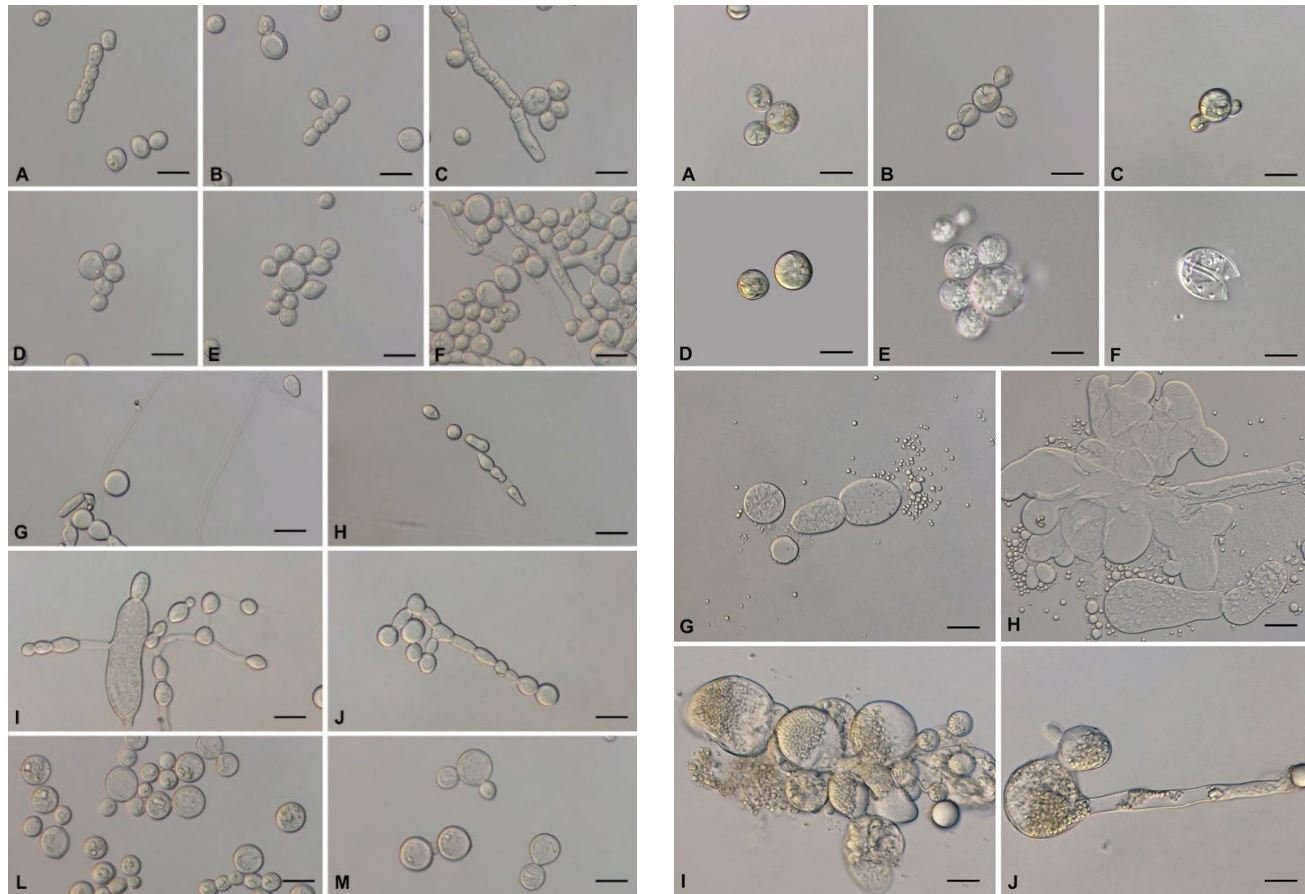


Supplementary Figure 1. MALDI-TOF spectral profiles and characteristic peaks of three *Mucor* species in the mass range of 2 to 20 kDa: A. *Mucor circinelloides* (CBS 151457), B. *Mucor kunryangiensis* (CNUFC CY223), C. *Mucor germinans* (SM1517, CBS 121458). The mass spectra were obtained using the FlexAnalysis software (v. 3.4, Bruker Daltonics Inc.), performing baseline corrected, smoothed and normalized analyses.

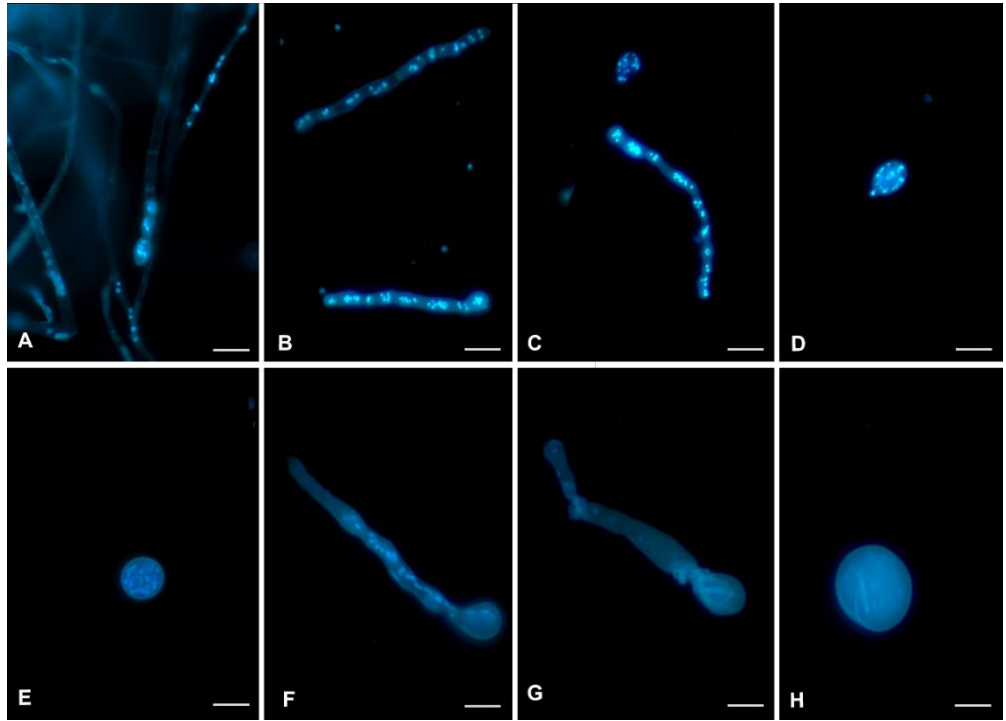




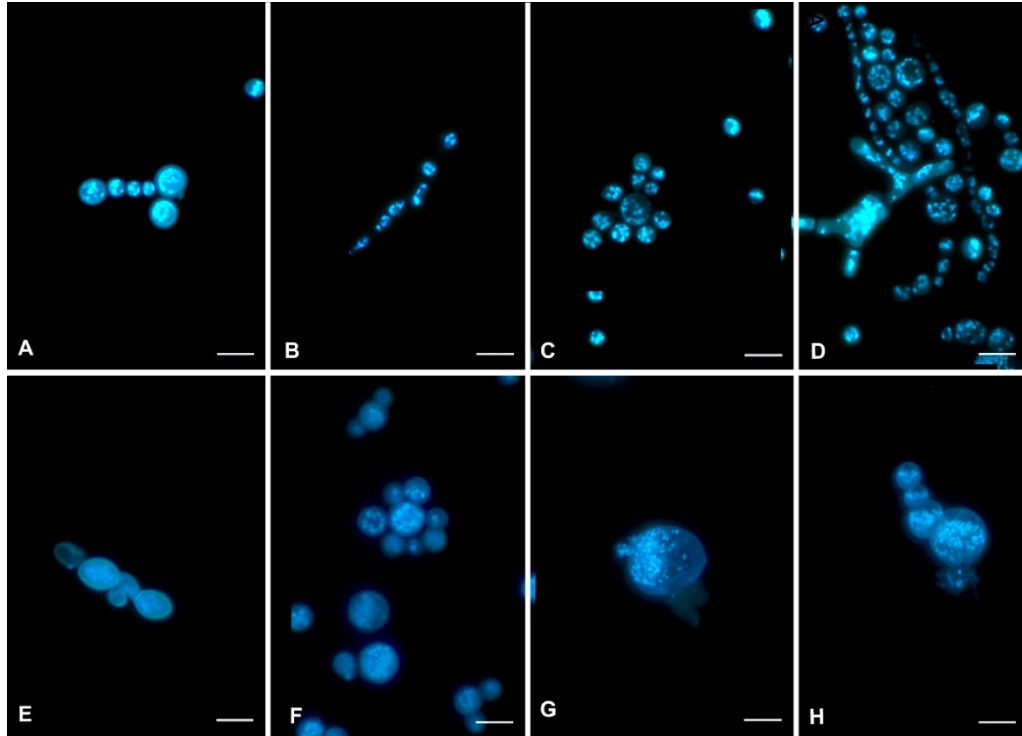
Supplementary Figure 2. The characteristics of dimorphism in *Mucor circinelloides* at 25°C (left panel) and 37°C (right panel). Left panel (A-F, the process of transition from filamentous to arthrospores to yeast like cells cultured at 25°C in RPMI 1640 without glucose. A, formation of septum hyphae. B and C, arthrospores. D, yeast-like cells. E and F, chlamydospores. G and I, predominantly filamentous form and budding yeast-like cells occasionally appearing in RPMI 1640 with 2% glucose. J-L, arthrospores and yeast like cells in RPMI 1640 with 4% glucose). **Right panel** (A and B, swollen cell and germ tube forming cells. C and D, inflated germ tube cells. E and F, cell with continuous swelling, rupture and death). Scale bars = 10 μ m.



Supplementary Figure 3. The characteristics of dimorphism in *Mucor kunryangriensis* at 25°C (left panel) and 37°C (right panel). Left panel (A-F, the process of the yeast-like cell production cultured in RPMI 1640 without glucose. A-C, arthrospore formation and budding arthrospores. D-F, yeast-like cells. G-J, the process of the yeast-like cell production in RPMI 1640 with 2% glucose. G, occasional appearing hyphae (not clearly visible). H-J, arthrospores. L and M, yeast-like cells formed in RPMI 1640 with 4% glucose. Scale bars = 10 μm. Right panel (A-F, yeast-like cell production 37°C in RPMI1640 without glucose. G-J, cell with continuous swelling, rupture and death in RPMI1640 with 2% glucose and 4% glucose in 37°C). Scale bars = 10 μm.



Supplementary Figure 4. *Mucor circinelloides* multi-nucleate cells at 25°C and 37°C after fluorescent Hoechst 33258 staining. A-D. *Mucor circinelloides* at 25°C. A. Hyphae, B and C. Arthrospores.



Supplementary Figure 5. *Mucor kunryangriensis* multi-nucleate cells at 25°C and 37°C after fluorescent Hoechst 33258 staining. A-D. *Mucor kunryangriensis* at 25°C. A and B. Budding arthrospores, C. Yeast-like cells. E-F. *Mucor kunryangriensis* at 37°C. E and F. Yeast-like cells. G-H. Dead cells. Scale bars = 10 μ m.