Amphotericin B (AmB) is the drug of choice for treating systemic fungal infections in humans. However, side effects include intense inflammation and fever. Three new lipid based AMB formulations (ABCD, LAMB, and ABLC) have been developed and show a variable reduction in side effects in patients compared to the current AmB drug (FZ). To understand the molecular basis for this, we used modern protein and genetic array technology in cell models to correlate the production of inflammatory proteins with clinical outcomes. The paper highlighted here is the first in a series to investigate cellular responses to these drugs.