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Toxicological analyses using the IROA protocol

Any toxic event ultimately represents a disruption of homeostasis, which may be viewed either at the level of the epigenome, the transcriptome, or the metabolome. In almost all cases the metabolome is the earliest responder. The route by which homeostasis is disrupted will depend initially on the mechanism of action of the toxin and converge into one or more irrecoverable (fatal) disruptions. Between the initial and fatal disruptions are a number of possible states. In this study we examine the metabolomic response of yeast to three well characterized toxins, Ketoconazole, Terbinafine, and 5-fluorocytosine, as an initial attempt to see if the IROA protocol provides a reasonable approach to differentiating the response of these classes of compounds.

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