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Improving Valvulopathy Prediction by Qualifying 5-HT2B Functional Assay Technologies

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Valvulopathy is one of the most dramatic side effects appearing upon chronic use of some 5-HT_{2B} agonists. Stimulation of Valvular Interstitial Cells with some 5HT_{2B} agonists induces an abnormal proliferation of those cells while other agonists do not produce such effect. A recent paper from **Papoian T *et al*. (Toxicol Pathol 2017; 45:381-388),** presented at the 2018 SPS meeting, suggested that monitoring stimulation of mitogen activated protein kinase (MAPK) pathway was a better predictor of valvulopathy occurrence than the other three classical readouts (IP accumulation, calcium release, and beta-arrestin translocation). Eurofins Discovery set up an assay that follows MAPK activation upon 5-HT_{2B} receptor stimulation using the same cell line in which IP accumulation is already monitored. We compared the data obtained with the two readouts for various valvulopathogens or not. Results are presented here.