PKN reconstruction **Experimental design construction** ARG2 BCL3 Cell 5S RNA 7SK A1BG ... ZZZ3 CDX1 EGR1 Gene expression Gene list GATA3 E3.1.447 E3.1.448 data NANOG E3.53.34 Pseudo-perturbation PKN construction pyBRAvo ASP generation Cell Class E5.3.55 A ... A E7.9.573 A E6.8.771 B ... B E7.9.568 B Pseudo-Class A **PKN** perturbations Class B Readout difference PKN reduction Python Python maximization Cell Class E5.3.55 A ... A E7.9.573 A E6.8.771 B ... B E7.9.568 B Reduced Experimental Class A PKN design Class B BNs inference Caspo Families of **Boolean Networks** BNs for Class A BNs for Classe B **BNs** inference