

$k^a$	$\varepsilon^b$	<b>BIC score</b> $c$
2	0.05	-7869.314
2	0.1	-7767.491
2	0.2	-7759.997
2	0.3	-7729.563
3	0.05	-7868.416
3	0.1	-7735.850
3	0.2	-7620.549
3	0.3	-7562.661
4	0.05	-7868.416
4	0.1	-7735.850
4	0.2	-7687.373
4	0.3	-7623.140

Table S 8: The BIC scores of the MPNs learned from the RCC data in [11] with DiProg algorithm. As explained in Text S1 of the supplementary material the best value for  $\varepsilon$  that gives the biologically sound PNs is 0.2. For  $\varepsilon = 0.2$  the learned MPN with  $k = 3$  has the largest BIC score.

<sup>a</sup> Maximum number of vertices in hyperedges

<sup>b</sup> Value of  $\varepsilon$

<sup>c</sup> The BIC score of the learned General BNs by DiProg.