

# PDGrapher Baseline Models Comparison (A549, fold 0)

Model	R <sup>2</sup> Top-20	R <sup>2</sup> Top-40	R <sup>2</sup> Top-80	Status
<b>OUR IMPLEMENTATIONS</b>				
PerGeneLinear	0.7636	0.7554	0.7447	EXCEEDS paper
ChemCPA	0.7056	0.6893	0.6680	~95% of paper
scGen	0.7002	0.6775	0.6582	~94% of paper
Biolord (tuned)	0.6769	0.6442	0.6062	~93% of paper
Biolord (default)	0.6164	0.5537	0.4844	~85% of paper
CellOT_PCA100	0.4603	0.4551	0.4501	Best CellOT
MeanShift	0.3116	0.3006	0.2976	Basic baseline
CellOT (no PCA)	0.0885	-	-	Matches paper
NoChange	0.0000	0.0000	0.0000	Baseline (DE=0)
<b>PAPER RESULTS (A549)</b>				
scGen (paper)	0.7402	0.7502	0.7547	
ChemCPA (paper)	0.7442	0.7577	0.7645	
Biolord (paper)	0.7248	0.7362	0.7432	
PDGrapher (paper)	0.7031	0.7124	0.7184	
Baseline (paper)	0.6603	0.6665	0.6745	
CellOT (paper)	0.0031	0.0035	0.0036	