New models for proliferation and migration of cells

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In this talk we propose three new models for cell proliferation and migration. The models are based on different biological hypotheses and consider the length of the cell cycle as an explicit parameter.
The corresponding systems of non linear delayed mean field equations are compared with individual based stochastic simulations in biologically realistic parameter ranges.

[1] R. E. Baker et al., Experimental and modelling investigation of monolayer development with clustering, *Bull Math Biol* (2013) **75** 871-889.

[2] R. E. Baker, G. Röst, Global dynamics of a new delay logistic equation, *Preprint*