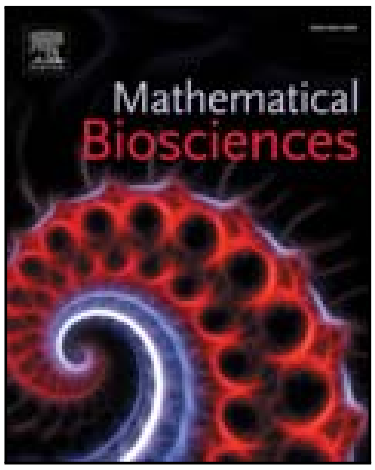

Fisher-KPP with time dependent diffusion is able to model cell-sheet activated and inhibited wound closure

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Highlights

- Fisher-KPP equation with constant diffusion fails to predict the wound closure fea- tures, in activated or inhibited assays
- A 2D Fisher-KPP equation with time dependent sigmoid diffusion is implemented
- Nonlinear parameter identification, and advanced image processing are used
- The 2D Fisher-KPP equation with time dependent diffusion accurately predicts, in activated and inhibited assays, the wound area and migration rate.
- On the contrary, proliferation rate should be taken constant, time dependent sigmoid proliferation rate yields inconsistent calibrated parameters.