

# THREE ESSAYS ON LOCATION ASPECTS IN BIOTECHNOLOGY ENTREPRENEURSHIP

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## ABSTRACT

Mainly due to the potential of knowledge spillovers facilitated by spatial proximity biotechnology firms may benefit from the spatial collocation of similar firms so that they increase their venture capital funds. Essay 1 employs a spatial autoregressive model and finds that venture capital accumulation is augmented by the collocation of biotechnology and venture capital firms within an about 10 miles radius. Spatial externalities wane considerably outside the 10 miles radius and exhaust themselves at about 20 miles.

Despite the importance of federal money as the primary source of R&D in biotechnology, relative little research has analyzed the marginal contribution of federal dollars on local firm births. Essay 2 employs a Poisson count data fixed effects model and finds that federal financial outlays towards a region's universities and established private firms eventually translate to increased firm birth rate for the region in question. The empirical results also suggest that private firms are considerably more conducive in spurring local birth rate than universities and research institutes/hospitals.

Given the rise of the entrepreneurial university and its focus on local economic development, Essay 3 analyzes factors affecting academic faculty to start their biotechnology firm(s) locally. The estimated results of an ordered logit model highlight the importance of regional, institutional and personal attributes.