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**Irene Hueter\*** ([hueter@math.ufl.edu](mailto:hueter@math.ufl.edu)), Department of Mathematics, University of Florida, 358 Little Hall, PO Box 118105, Gainesville, FL 32611-8105. *Growth and Spatial Dispersal Behavior of the Contact Process.*

The anisotropic contact process on a homogeneous tree, involving a random population whose members interact, move and reproduce in space, is an example for a stochastic process that exhibits rich subadditivity and connectivity properties. The former are crucial in obtaining convergence in distribution of the stochastic process of limit points to a stationary non-Markovian process (that we identify) in the intermediate regime. The latter are useful to show that the log of the size of infected ends of the tree has critical exponent  $1/2$  at the global/local survival phase transition. We will discuss some essential ingredients and consequences of these results, pertaining to the growth and spatial dispersal of the population of the process at fixed time. (Received October 01, 2000)