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**Jean Michel Tchuenche\*** ([valnn@mail.skannet.com](mailto:valnn@mail.skannet.com)), Mathematics Department, University of Ibadan, Ibadan - Oyo State, NIGERIA. *A note on the Mac Kendrick von Forster type model in a population with genotype structure.* Preliminary report.

Using an evolution equation approach, the dynamical behaviour of some biological systems can best be described by a set of first order partial differential equations of the Mac Kendrick Von Forster type. An attempt is made to solve the latter by the Laplace Transform (LT) method, which has a great advantage over the method of characteristics, in the sense that it gives the result in a more compact form, including the Heaviside function, thus exhibiting the right continuity of the solution on  $\mathbb{R}^+$ . In the case of a genetic disease such as Sickle Cell Anaemia (SCA), the population naturally divides into three genotypic groups, namely, Normal (AA), Carriers (AS), and Sicklers (SS). Therefore, the equations of population dynamics and renewal equations are derived based on genotype structure. (Received August 29, 2000)