

His formula is correct for $h \neq 0$. If unify both cases ($h = 0$ and $h \neq 0$) and simplify the expression the final value of Gamma is the following:

$$\Gamma = \frac{2e^{-r_f\tau}}{x\sigma\sqrt{\tau}}n(b_1) - \phi\eta e^{-ra\tau} \left(\frac{x}{K}\right)^{-h} \frac{1-h}{x} N(-\phi\eta(b_1 - h\sigma\sqrt{\tau})). \quad (1)$$

So, the only missprint in Your formula is that the emphasized (with red color above) factor is missing.