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Subhash Subedi* (sxs2754@louisiana.edu), P.O. Box 41315, Lafayette, LA 70504, and
Aghalaya S. Vatsala. *Blow-up Results for One Dimensional Caputo Fractional Reaction
Diffusion Equation.*

We study the blow up problems for ordinary Caputo fractional differential equation and the time dependent Caputo-fractional reaction diffusion equation in one dimensional space. We establish that the solution of the differential equation of integer order can be used as a tool to construct a lower solution to the equation of the fractional order, under suitable condition. Hence, we obtain the blow up of the solution of the differential equation of integer order implies that the blow up of the solution of the differential equation of fractional order. For that purpose, we use the known comparison results of Caputo ordinary fractional and Caputo fractional reaction diffusion equation. (Received September 17, 2018)