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**Pradeep Godar Chhetri\*** (pgc9509@louisiana.edu), P.O.Box 40384, Lafayette, LA 70504, and  
**Aghalaya S Vatsala.** *Existence of the Solution in the Large for the Caputo Fractional Reaction  
Diffusion Equation by Picard's method.*

In this work, we have developed Picard's iterative method to prove the existence and uniqueness of the solution of the nonlinear Caputo fractional reaction diffusion equation in one dimensional space. The order of the fractional time derivative  $q$  is such that  $0.5 \leq q \leq 1$ . The existence result has been proved by a priori assuming the solution is bounded. The method has also been extended to the Caputo fractional reaction diffusion system. (Received September 20, 2018)