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George A. Anastassiou* (ganastss@memphis.edu), Department of Mathematical Sciences, Memphis, TN 38152. *Foundations of Nabla Fractional Calculus on Time Scales and Inequalities*. Preliminary report.

Here we develop the Nabla Fractional Calculus on Time Scales. Then we produce related integral inequalities of types: Poincaré, Sobolev, Opial, Ostrowski and Hilbert-Pachpatte. Finally we give inequalities applications on the time scales \mathbb{R}, \mathbb{Z} . (Received July 25, 2010)