# NOTE ON APPLICATION OF FRACTIONAL CALCULUS AND SUBORDINATION TO $p$-VALENT FUNCTIONS

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**Abstract.** For $p$-valent functions of the form $f(z) = z^p - \sum\limits_{k=n+p}^{\infty} a_k z^k$ that satisfies the condition

$$\frac{z(U_z^{(\lambda,p)} f(z))'}{f_t(z)} \prec \frac{p + (\gamma p + (\alpha - \gamma)(p - \eta) \sin \theta) z}{1 + \gamma z}$$

we will find coefficient inequalities, distortion bounds, radii of starlikeness and convexity, and some properties on this class.

**MSC 2000.** 30C45, 30C50.

**Key words.** $p$- valent function, subordination, radii of starlikeness and convexity, arithmetic mean.

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