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**Subordinate Solutions of a Differential Equation**

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**Abstract.** In 2003, Ruscheweyh and Suffridge settled a conjecture of Pólya and Schoenberg on subordination of the de la Vallée Poussin means of an analytic function by defining a continuous extension of the de la Vallée Poussin means using a differential equation. We extend this differential equation to a more general setting and observe that a similar subordination result with convex functions holds. Through an integral operator of Bernardi, particular convex subordination chains are constructed with specified limiting functions. Finally, we show the importance of convexity by producing an example of a family of starlike solutions that fails to be a subordination chain.

**Keywords.** de la Vallée Poussin means, subordination chain, differential equation, integral operator.

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