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#### Cover Story

The lead story in this issue of *Drug Discovery Today* is Camilly P. Pires de Mello, John Rumsey, Victoria Slaughter and James J. Hickman of Florida. This paper focuses on how after more than three decades of the Orphan Drug Act, drug development for rare diseases still remains a challenge. Human-on-a-chip holds the promise to drive orphan drug development to the next level.

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