

The subject invention provides a modified release solid oral dosage form comprising a therapeutically effective amount of Pridopidine or a pharmaceutically acceptable salt thereof, and at least one pharmaceutically acceptable rate controlling excipient, wherein the solid oral dosage form provides an in vivo plasma pridopidine concentration profile having a Mean C_{\max} of about 1,400 ng/ml or less. The subject invention also provides a method of treating an individual afflicted with a neurodegenerative disease or disease related to dopamine, comprising once daily administration of a modified release solid oral dosage form.