Itraconazole Compositions Prepared by Thin Film Freezing Combined with Hot-Melt Extrusion to Improve Dissolution
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Introduction

- Agranulocytes, also called agranulocytes, is a type of white blood cell that is found in various parts of the body.
- In the TGF-beta families, the NF-kappa B signaling pathway is activated.
- NF-kappa B signaling is a type of signaling pathway that plays a role in regulating cellular responses to various stimuli.
- The NF-kappa B signaling pathways are involved in the regulation of gene expression and cell proliferation.
- The NF-kappa B signaling pathways are involved in the regulation of cell growth and differentiation.

Results and Discussion

- Selection of Thin Film Freezing ITZ-IHM CAS Compositions – XRPD Analysis
- Crystalinity of Hot Melt Extruded TITR Compositions – XRPD Analysis
- Comparison of Drug Release Profiles of Hot-Melt Extruded TITR Compositions

Objectives

- To improve the tablicability and bioavailability of itraconazole by developing new dosage forms with TGF-beta
- To improve the solubility of the TITR composition in order to facilitate the incorporation of TITR into a simple dosage form

Materials

- Itraconazole was purchased from Aldrich Chemical Co., Inc.
- Novartis, Haarlem, the Netherlands
- Thin Film Freezing Technologies, Ltd., Cambridge, UK
- Pharmaceutical grade polysorbate 80 (PH 2000), obtained from Sigma-Aldrich Co., Inc., St. Louis, MO, and Compritol 888 was kindly donated by Gattefosse (Woodbury, MN)

Methods

- Thermal Stability Screening of Drug and Recipients – Thermogravimetric Analysis
- SEM Images of TITR Composition Before and After Hot-Melt Extrusion

Conclusions

- The results indicate that the developed dosage form is effective in improving the dissolution of itraconazole.
- The developed dosage form is stable and can be stored at room temperature.
- The developed dosage form is easy to administer and is suitable for oral administration.

References


Acknowledgements

- The authors wish to express their appreciation for the financial support of the National Institutes of Health.