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## **LIST OF SYMBOLS AND ABBREVIATIONS**

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|                                 |   |   |
|---------------------------------|---|---|
| API                             | : | Active pharmaceutical ingredients                 |
| APCI                            | : | Atmospheric pressure chemical ionization          |
| Avg                             | : | Average   |
| BP                              | : | British pharmacopocia                             |
| CI                              | : | Chemical ionization                               |
| ESI                             | : | Electron spray ionization                         |
| Fig                             | : | Figure  |
| GC                              | : | Gas chromatography                                |
| GC-MS                           | : | Gas chromatography-mass spectroscopy              |
| HILIC                           | : | Hydrophilic interaction liquid chromatography     |
| HPLC                            | : | High-performance liquid chromatography            |
| IC                              | : | Ion chromatography                                |
| ICH                             | : | International conference on harmonization         |
| IP                              | : | Indian pharmacopocia                              |
| IUPAC                           | : | International union of pure and applied chemistry |
| KBr                             | : | Potassium bromide                                 |
| M                               | : | Molar   |
| MCA                             | : | Medicines control agency                          |
| NPLC                            | : | Normal phase liquid chromatography                |
| N                               | : | Normal  |
| $\text{mL}\cdot\text{min}^{-1}$ | : | Millilitre per minute                             |
| mL                              | : | Millilitre  |
| mm                              | : | Millimeter  |

|                |   |   |
|----------------|---|---|
| m/z            | : | Mass to charge  |
| MHz            | : | Mega hertz  |
| nm             | : | Nanometer   |
| ng             | : | Nanogram  |
| psi            | : | Pounds per square inch  |
| v/v            | : | Volume per volume   |
| w/w            | : | Weight per weight   |
| μm             | : | Micrometer  |
| μL             | : | Microlitre  |
| μg             | : | Microgram   |
| %              | : | Percent   |
| σ              | : | Sigma   |
| °C             | : | Degree centigrade   |
| ±              | : | Plus-minus sign   |
| <              | : | Less than   |
| OPA            | : | Ortho phosphoric acid   |
| AR             | : | Analytical reagent  |
| %RSD           | : | Percentage of relative standard deviation   |
| LC             | : | Liquid chromatography   |
| LOD            | : | Limit of detection  |
| LOQ            | : | Limit of quantification   |
| r <sup>2</sup> | : | Correlation coefficient   |
| ACN            | : | Acetonitrile  |
| RT             | : | Retention time  |
| σ/S            | : | σ is the standard deviation of the response and S is the slope of the calibration curve |

### **Drugs selected for the present investigation**

1. ERL : Everolimus
2. BLT : Belinostat
3. CRB : Ceritinib
4. SAR : Saroglitazar
5. CBT : Cobicistat
6. ELT : Elvitegravir
7. IBR : Ibrutinib
8. DAP : Dapoxetine hydrochloride
9. AZL : Azelnidipine

### **Techniques Selected For The Present Investigation**

1. RP-HPLC : Reversed phase high performance liquid chromatography
2. UV : Ultra violet-spectrophotometry
3. FT-IR : Fourier transform infrared spectroscopy
4. NMR : Nuclear magnetic resonance spectroscopy
5. LC-MS/MS : Liquid chromatography-tandem mass spectrometry

# Dedication



*This thesis is lovingly dedicated to my parents and also to my beloved life partner **Smt K, Saroja**. Their support, encouragement, and constant love have sustained me throughout my life.*

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## LIST OF PUBLISHED PAPERS

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- ❖ “Stability- Indicating RP-HPLC Method for the Estimation of Everolimus in Pharmaceutical Formulations”, *American Journal of PharmTech Research*, 2015, 5(2), p:332 – 344.
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