CONCLUSION
6 Conclusion

The major outcomes of this study include

- RAPD-SCAR marker, P3 can be used as a qualitative diagnostic tool for identification of *Zingiber officinale* from crude drug samples and semi-processed formulations.
- Markers P1 and P2 which can be used along with marker P3 to identify *Z officinale*.
- SCAR marker P5 which is a putative *Zingiber* genus-specific marker

In general it is recommended that species specific markers are useful complementary tools for authentication of medicinal plant species, particularly when the adulterants and contaminants are known and well characterized at the DNA level. In case of formulations or multi-component mixtures it would be necessary to screen the designed primers with each of the components individually to look for cross-amplification. In case cross amplification is detected gradient-PCR experiments could be useful in determining the annealing temperature at which the target species is selectively amplified. Further, such molecular markers developed for important Ayurveda-based medicinal plants can be used as pharmacopoeial standards along with other methods such as chemical fingerprints, macroscopy and microscopy.