# Synthesis of a 7-substituted farnesyl analog

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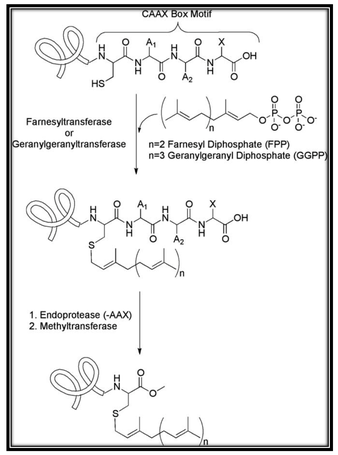
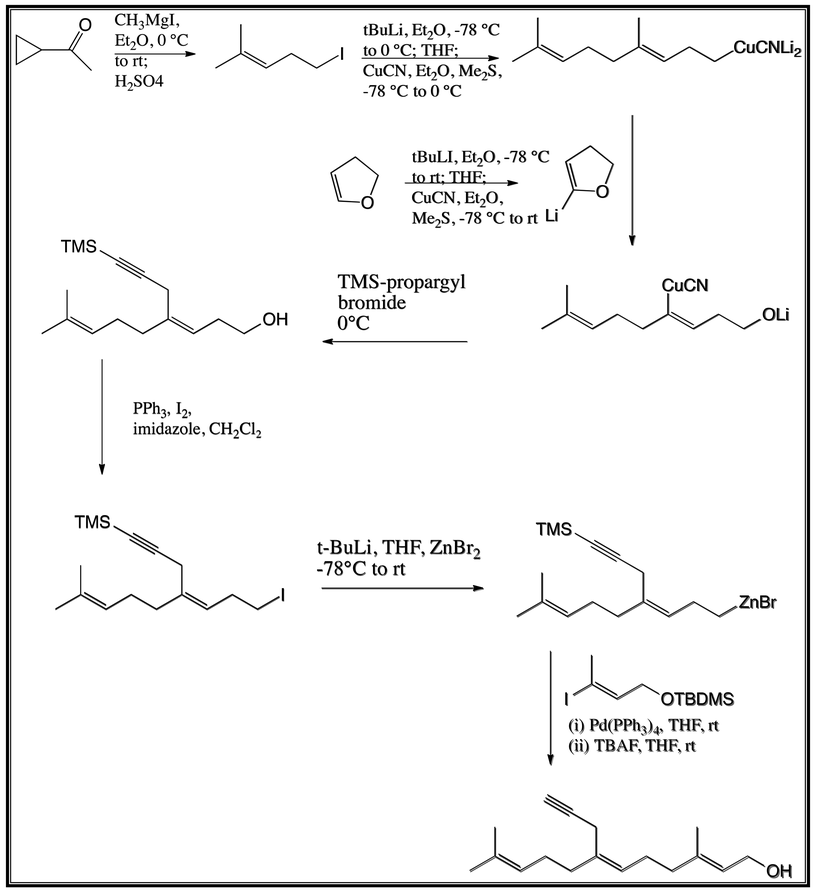
## Protein Prenylation

- Post-translational modification
- Occurs in most eukaryotic cells
- ~2% of mammalian proteome is prenylated
- Necessary for membrane targeting and proper functioning
- Ras subfamily: Protein subfamily of small GTPases involved in cell signaling
- Mutated Ras: responsible for ~30% of cancers

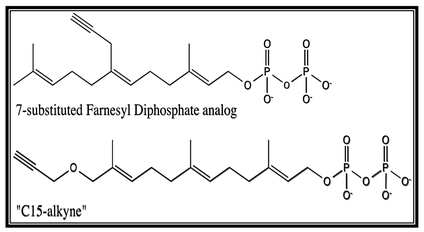



## Synthetic Route




## Scope of the Project

- Both of C15-alkyne and the proposed 7-substituted analog have an alkyne group, which allows for tagging of peptides via “click-chemistry”
- Different analogs may farnesylate some Caax-box peptide sequences but not others, making use of multiple analogs advantageous in attempts at identifying the prenylated proteome




## References

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