# Table of Contents

## 1: Introduction
- 1.1 The Olfactory System in Terrestrial Vertebrates  
- 1.2 Pheromones  
- 1.3 Mating Barriers: The Link to Speciation  
- 1.4 Species-Specificity and the Evolution of V1R Repertoires in Mammals  
- 1.5 Parallels to Molecular Evolution in the Immune System  
- 1.6 This Investigation

## 2: Materials and Methods
- 2.1 BAC DNA Isolation  
- 2.2 Primer Design  
- 2.3 Probe Synthesis by PCR  
- 2.4 BAC Library Screening  
- 2.5 BAC-End Sequencing  
- 2.6 Southern Blotting

## 3: Results
- 3.1 Probe Design and Synthesis  
- 3.2 BAC Library Screening and Clone Identification  
- 3.3 BAC-End Sequencing  
- 3.4 Southern Blotting

## 4: Discussion
- 4.1 Mapping the Locus  
- 4.2 Future Directions  
- 4.3 Possible Results and Their Implications  
- 4.4 Conclusion

### Appendix A: BAC-End Sequences for *spretus* Clones

### References