

# Manubot Rootstock: Manuscript Title

## Research Plan

### Authors

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- John Doe
- Jane Roe

## Introduction

### Determine the mechanism by which highly enriched $\text{PtdIns}P_2$ domains are stabilized

Recent studies have shown that submicron domains of  $\text{PtdIns}(4,5)P_2$  exist *in vivo* at physiological levels of monovalent and divalent cations.

These clusters reach a stable size around 80 nm.

$\text{PtdIns}(4,5)P_2$  carries a large negative charge.

We have shown that  $\text{Ca}^{2+}$  is able to stabilize these clusters, in a limited fashion.

We have recently shown how  $\text{Ca}^{2+}$  can initiate the formation of clusters, however, it is not clear how clusters grow until they reach ~ 80 nm.

## References

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