Localizatio
ph
Ar
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Background: Even though
least accessible in soil. So
this restraint by acquisio

n, functional a
hysiological ro
nion Transport
*rabidopsis thal

Jacob Kuruvilla

Molecular Genetics and Physiology

n inorganic Phospahte (iP) is a
plants have evolved an array o
n and recycling of Pi which

nalysis and
le of
ter 3
iana)

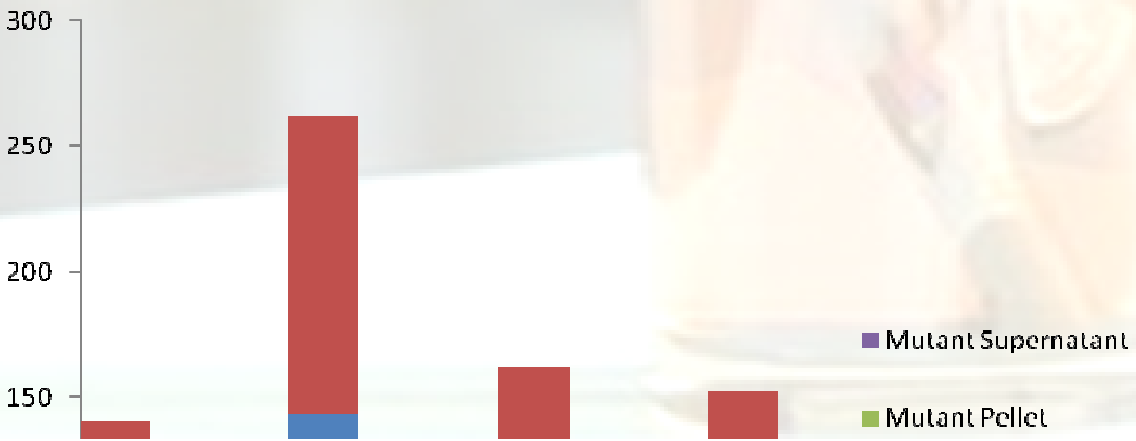
pivotal macronutrient, it is
f strategies to cope up with
is made possible by Pi

transporters, like Anion tra

Aim: Screen out mutants, s

-3 and verify Pi transport b

Fig 1: Wild type and mutant (30 % larger) *Arabidopsis thaliana.*



nsporter 3 (ANTR-3).
standardize root plastid prepera
y radioactive assays.

Results

tion, localization of ANTR

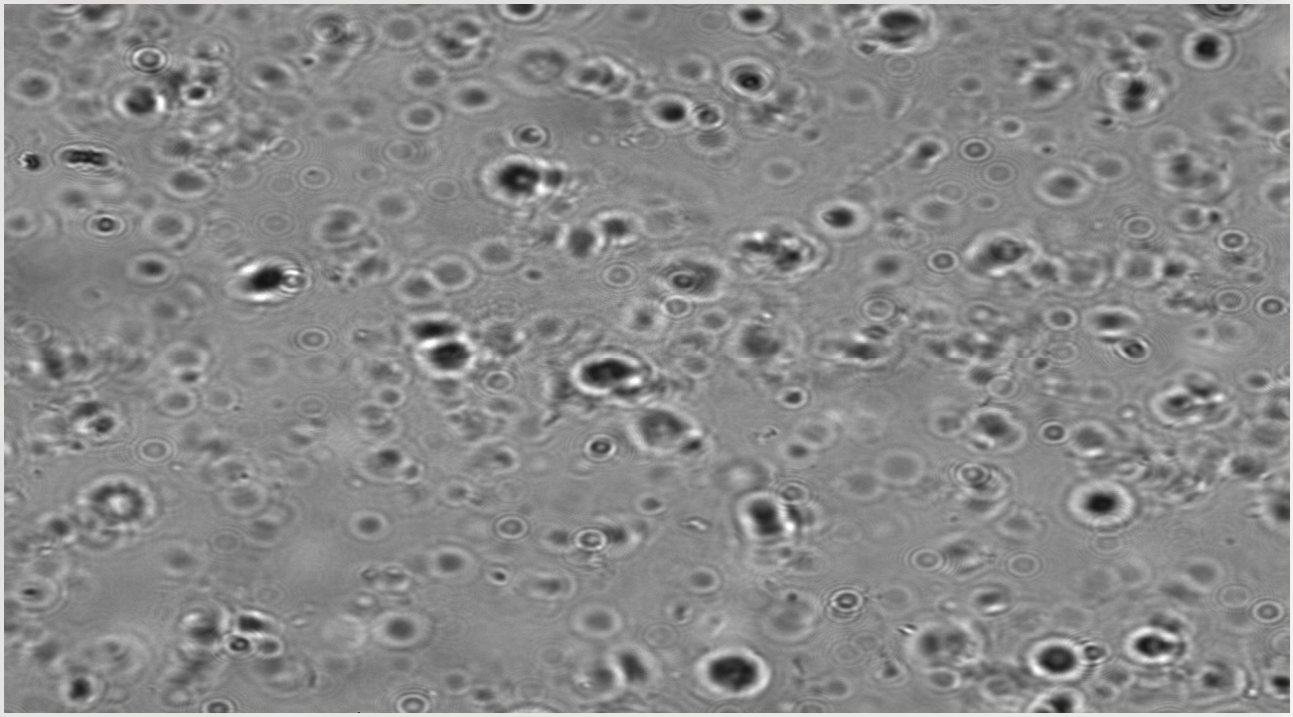


Fig 2: Root plastid preperation under Phase contrast microscope.

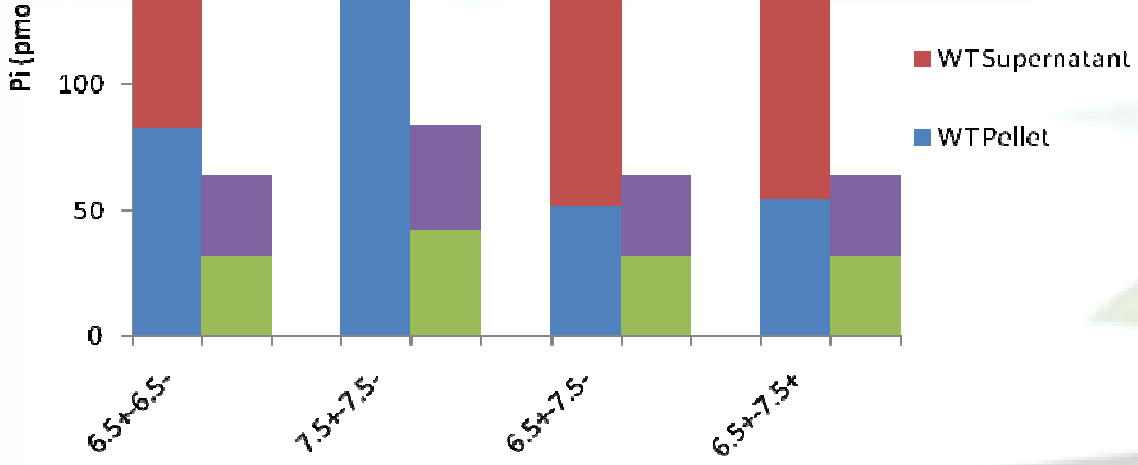


Fig 5: Bar graph plotted against ratio of iP in pellet and supernatent during back exchange.

Conclusion:

- 30 % larger ANTR-3 m
- ANTR-3 is a phosphat gradient playing a vital r

M & M: Bioinformatics plastids, Western Blottin

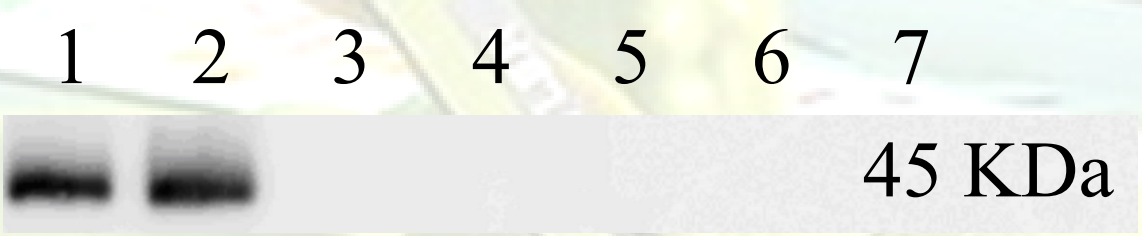


Fig 3: Western blot of root plastids.wild-type and *antr*1 mutant in lane 1 and 2. Lanes 3-5 has *antr-i,* and *p*.

nutants indicate sink (roots)-sou

e transporter dependent on eith

ole in many biochemical proce

, PCR, Agarose gel electrophor

g, Radioactive transport experi

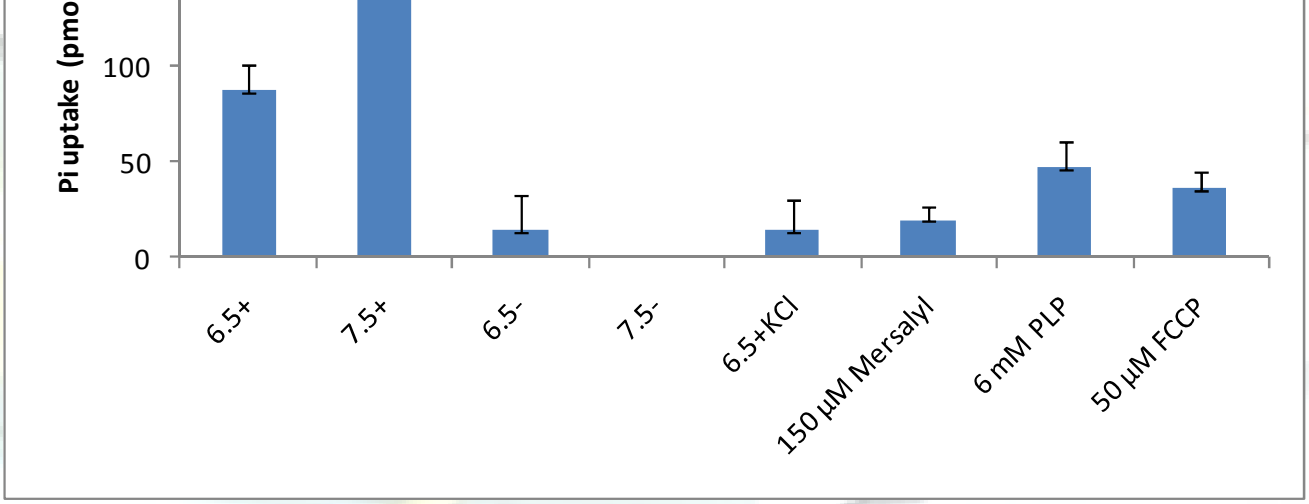


Fig 4: Bar graph plotted with different conditions and the total ANTR3 contribution during transport experiments.

urce (leaves) disbalance.

er a proton or Na+

sses..

esis, Isolation of root

ments.