



**SDI Review Form 1.6**

Journal Name:	<a href="#">Chemical Science International Journal</a>
Manuscript Number:	Ms_CSIJ_50645
Title of the Manuscript:	Selective Alteration of the Root Morphology of Arabidopsis thaliana by Synthetic Anion Transporters (SATs)
Type of the Article	

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

**PART 1: Review Comments**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Compulsory</b> REVISION comments		
<b>Minor</b> REVISION comments	<ol style="list-style-type: none"> <li>1. Please refer to plant hormone such as IAA. What are these SAT's compounds relate to plant hormones distribution?</li> <li>2. What is the relationship between SAT's and light? Please explain it more in depth.</li> <li>3. Please add the discussion your manuscript about the mechanism of SAT in plant root development.</li> <li>4. Please change the old references with the new one.</li> <li>5. Could you add some photos of your experiment?</li> </ol>	<p>1. We note in the text that the potency of the most active SAT peptide is far less active than indoleacetic acid (IAA). The focus of this study is not to identify a more potent plant hormone, but to assess whether disruption of anion homeostasis will alter plant growth in some measurable way. If I understand the second query, the reviewer wants to know about the distribution of the SAT peptides within the plant structure. Experimentally, this would require dissection of the plants and a microanalysis for the SATs within each plant element. Such a study would be complicated by the lack of a fluorescent indicator in the peptide structure. Inclusion of such an element would require validation of all of the insertion and transport properties established for the compounds presented. Even with such an effort, the labeled compound might not reflect the distribution of the unlabeled transporters. In any event, such a study would likely comprise an additional manuscript, and is well beyond the scope of the present research.</p> <p>2. As noted in the manuscript, germination and plant growth were generally unaffected by the SATs. The SATs described in the present manuscript are all aliphatic and therefore are not themselves subject to light absorption. The plant growth experiments were conducted in parallel with controls under standard lighting conditions. No effort was made to determine if there was any effect on or difference between experimental plants and controls in terms of photosynthesis. There was no visual sign to differentiate those plants that were exposed to a complexing agent and controls. Since no effect of light in the presence or absence of added transporter was observed, it is not possible to explain in more depth.</p>



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		3. We understand the mechanism of action to be alteration of ion homeostasis caused by hydrogen bonding between the serine hydroxyl groups and chloride anion. This is clearly stated in the manuscript. Any additional suggestions would be speculation. 5. We do not have photographs appropriate to this study.
<b>Optional/General</b> comments	Could be published with add more depth of discussion.	

**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<b>Are there ethical issues in this manuscript?</b>	<u><i>(If yes, Kindly please write down the ethical issues here in details)</i></u>	