

## Valparaiso University ValpoScholar

---

Symposium on Undergraduate Research and  
Creative Expression (SOURCE)

Office of Sponsored and Undergraduate Research

---

2011

# Evidence for the impact of Reactive oxygen species on the control of branching in *Neurospora crassa*

Jacob Yablonowski

Alex Zapata

Michael Watters

Follow this and additional works at: <https://scholar.valpo.edu/cus>

 Part of the [Chemistry Commons](#)

---

### Recommended Citation

Yablonowski, Jacob; Zapata, Alex; and Watters, Michael, "Evidence for the impact of Reactive oxygen species on the control of branching in *Neurospora crassa*" (2011). *Symposium on Undergraduate Research and Creative Expression (SOURCE)*. 89.  
<https://scholar.valpo.edu/cus/89>

This Poster Presentation is brought to you for free and open access by the Office of Sponsored and Undergraduate Research at ValpoScholar. It has been accepted for inclusion in Symposium on Undergraduate Research and Creative Expression (SOURCE) by an authorized administrator of ValpoScholar. For more information, please contact a ValpoScholar staff member at [scholar@valpo.edu](mailto:scholar@valpo.edu).

## **Evidence for the impact of Reactive oxygen species on the control of branching in *Neurospora crassa*.**

*Authors:* Jacob Yablonowski, Alex Zapata and Michael Watters

*Affiliation:* Biology

In preliminary screens, several functions, most notably, genes involved in the control of reactive oxygen species (ROS), were identified as playing a role in the process of growth rate compensation of branch density. The maintenance of branch density under growth at various temperatures was examined in a selection of mutants in genes known to be important in the control of ROS. In all ROS control mutants tested, growth was shown to branch tighter when grown at higher temperatures (which result in faster growth rates) and looser when grown at lower temperatures (which results in slower growth rates). This can be contrasted with wild-type *Neurospora* which branches at the same density under both conditions. We also tested the impact of environmental agents which lower the concentration of ROS on branching. In tests, various water soluble anti-oxidants (ie reducing agents); Ascorbic Acid (aka Vitamin C) and Glutathione produced unusual branching patterns in wild-type *Neurospora* strains exposed.

*Information about the Authors:*

*Faculty Sponsor:* Michael Watters

*Student Contact:* michael.watters@valpo.edu