Effects of aging on mitochondrial function in the bladder detrusor and mucosal tissue of female mice

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INTRODUCTION

- Bladder dysfunction associated with aging is a common pathophysiology experienced by women worldwide.
- Little is known about aging and its effects on the bladder's ability to perform mitochondrial respiration.
- Our objective is to quantify the differences in mitochondrial respiratory abilities of bladder detrusor and mucosal tissues in young and old female mice.

METHODS

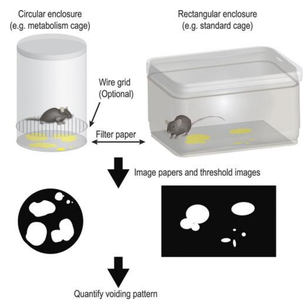
Animals

Female♀ C57bl/6NJ mice

- Young– 10wk old
- Old – 2 years old

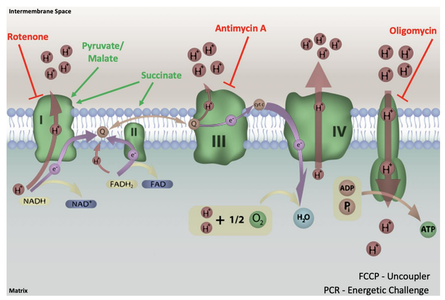
Void Spot Assays

- Used to determine *in vivo* bladder function between young and old groups



High Resolution Respirometry

- Using Oroboros Oxygraph-2K Machines
- Used to assess mitochondrial respiration in mucosal and detrusor tissue samples of old and young mice.



Does **aging** decrease **mitochondrial respiration** within the female bladder?

RESULTS

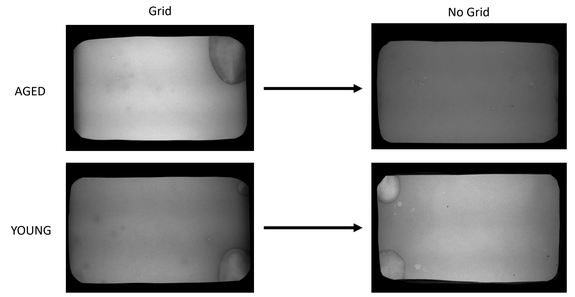


Figure 1. Void spot assays performed without a grid increase number of voids.

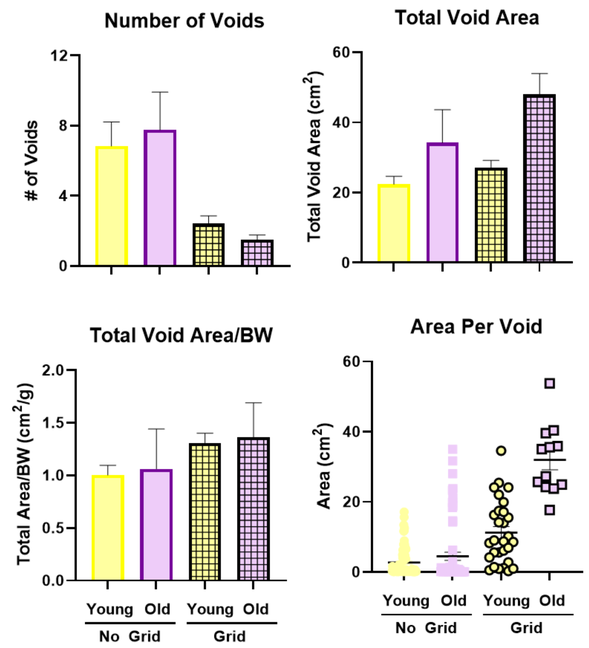


Figure 2. Data was quantified as the number of voids (A), area per void (B), total void area (C), and total void area normalized to body weight (D). Data are mean ± SEM. n=4-6/group.

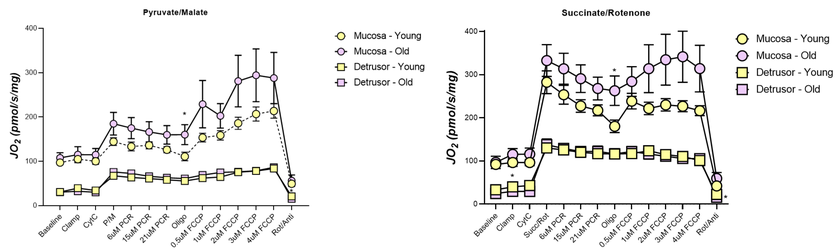


Figure 3. Detrusor and mucosal mitochondrial respiration shows no decrease in aged mice.

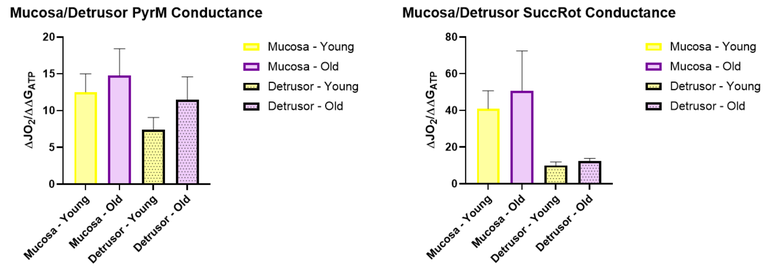


Figure 4. Respiratory conductance shows no difference in aged bladder tissue.