Future work for this project could go in a few directions. The primary objectives to reach for in any future work would be to optimize muscle exhausting and leg return, reduce weight of entire robot, test elastic muscle connections, remove need for ramp and untether the robot.

One step taken in the future would include optimizing muscle exhaust and spring return of the muscles. With these things optimized, while the tiger is in air it could retract it's extended legs into a squatting/sitting position in order to land. This would allow the robot to meet one of the previously unmet needs of landing safely and being prepared to jump again without human interaction.

Another major move in future improvements would be to make the frame and legs out of a lighter weight material or make the frame less heavy in general. This weight reduction would cause an increase in jump distance and height. It may also improve landing. Options for weight reduction that could be attempted would be a conversion to all carbon fiber parts, reduction in aluminum used, or possibly using wood for a body frame.

Testing the advantages of elastic muscle connections would be constructive future work. Finding the correct elastic material for muscle connections could more readily mimic biological muscles. This would add to the accuracy of our bio-mimicking robot. It also has the potential to increase fluidity and power of our jumps. Initial tests would ideally be done with a material with the same spring force of a biological tendon from a cat.

An improvement that could be very simple is getting the robot to jump forward without using a ramp. Suggestions for accomplishing this objective include adding friction pads to the hind "feet" of the tiger robot and adjusting hard stops in both the hind and front legs of the robot. Adding friction pads would prevent the robots "feet" from kicking out backwards as seen in testing videos, and instead use that motion to propel the robot forward. Changing the location of hard stops for the legs could aid in aiming the robot at the correct angle for forward and upward motion once the hind legs have better traction with the ground. This combination of testing would be crucial in improving the robots jump.

Lastly, after all other methods of jump improvement have been researched and implemented efforts should be made to untether the robot from the air supply. This would only be able to be accomplished through improving jump quality with the other means discussed previously. Air tanks and regulators suitable for our airflow network would need to be researched. Most likely this investigation would lead to highly expensive options. A brief look into aluminum tanks of air was made and could present a real option.