

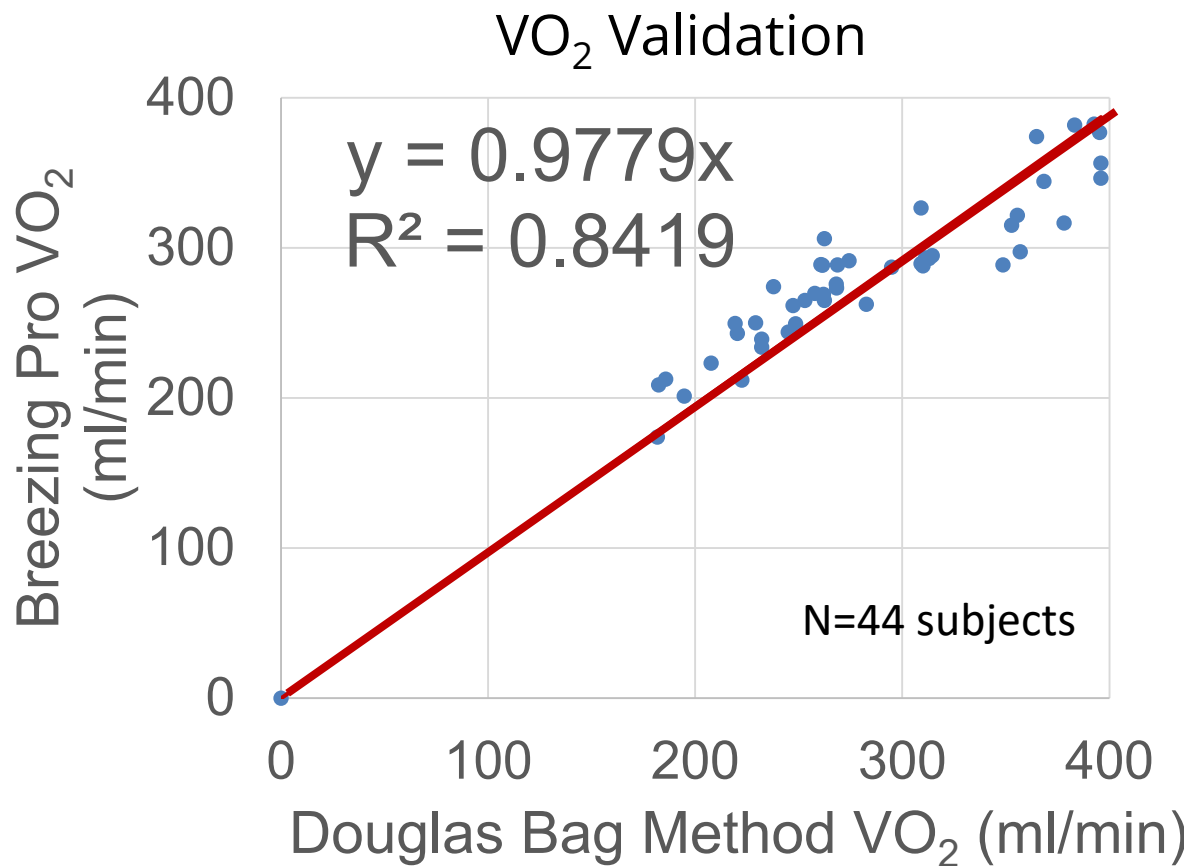
Case Study #4

How accurate can we measure Resting Metabolic Rate (RMR) or Resting Energy Expenditure (REE) with a mobile indirect calorimeter?

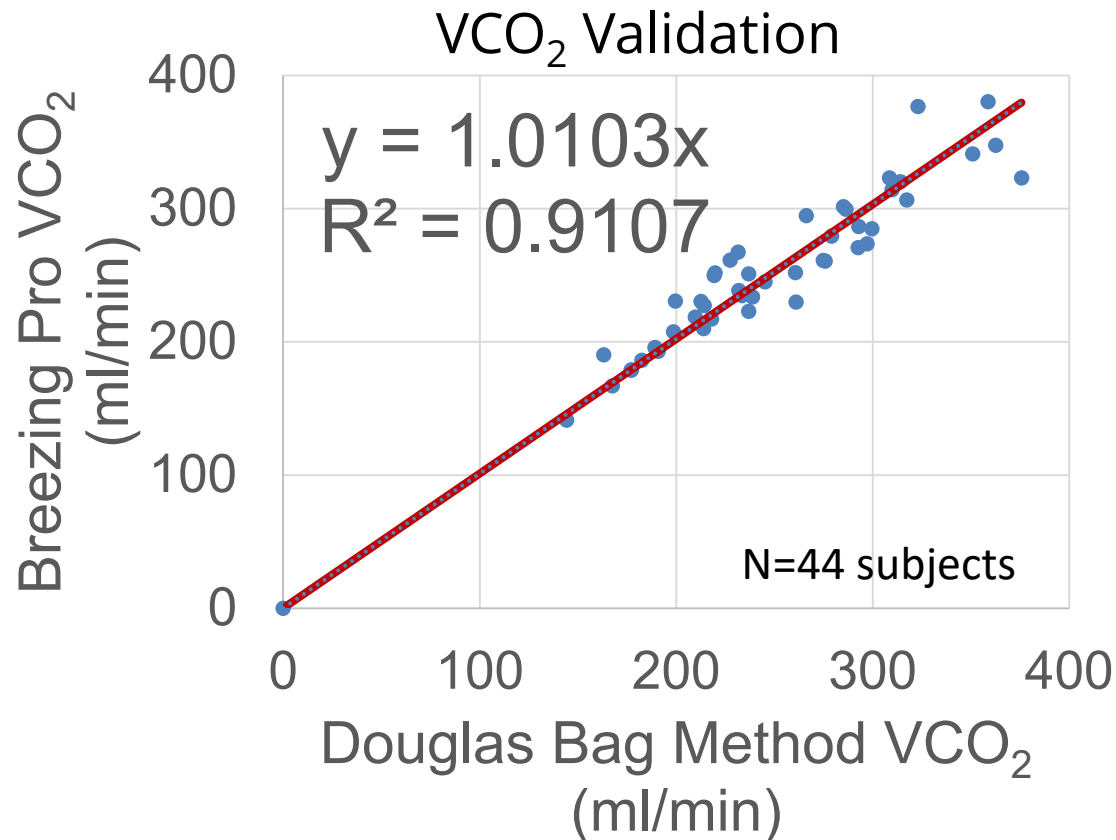
Indirect Calorimeter: The wearable mask – Breezing Pro



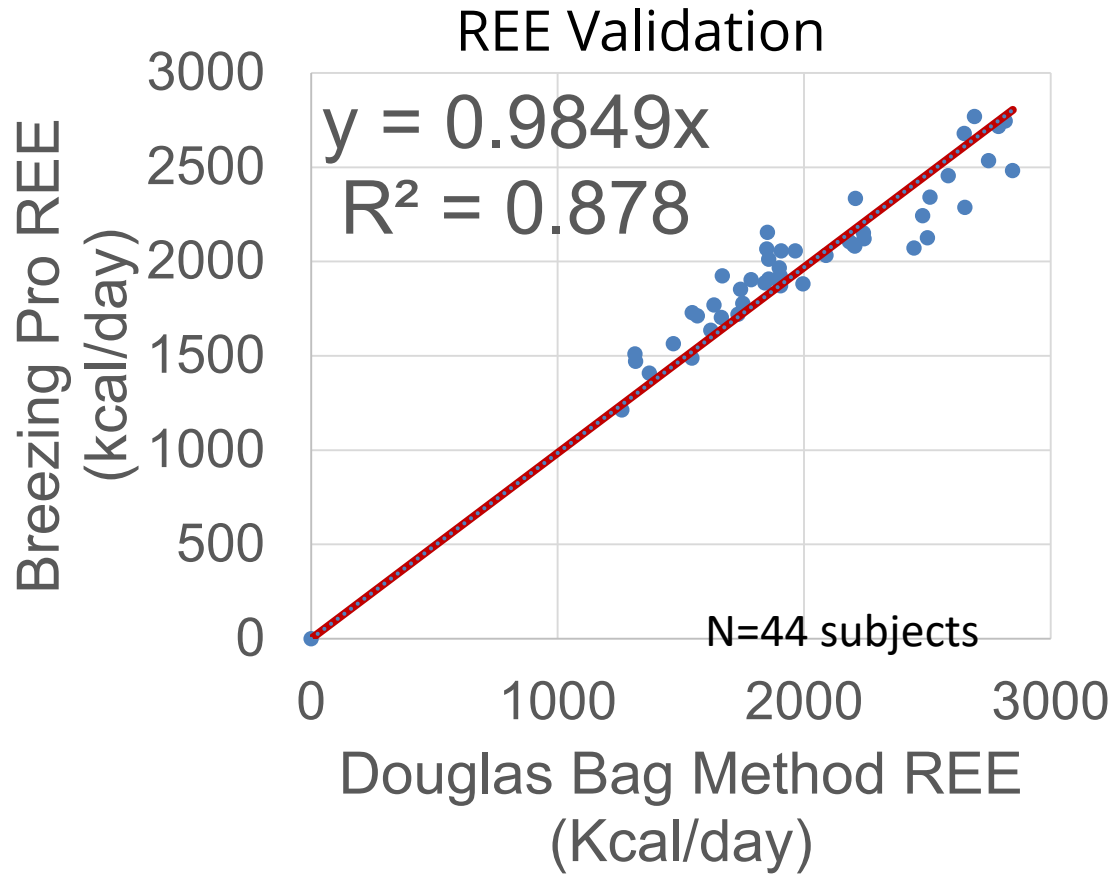
Validation Study: Wearable mask vs. Douglas Bag Method (single sensor batch)



Validation Study: Wearable mask vs. Douglas Bag Method (single sensor batch)

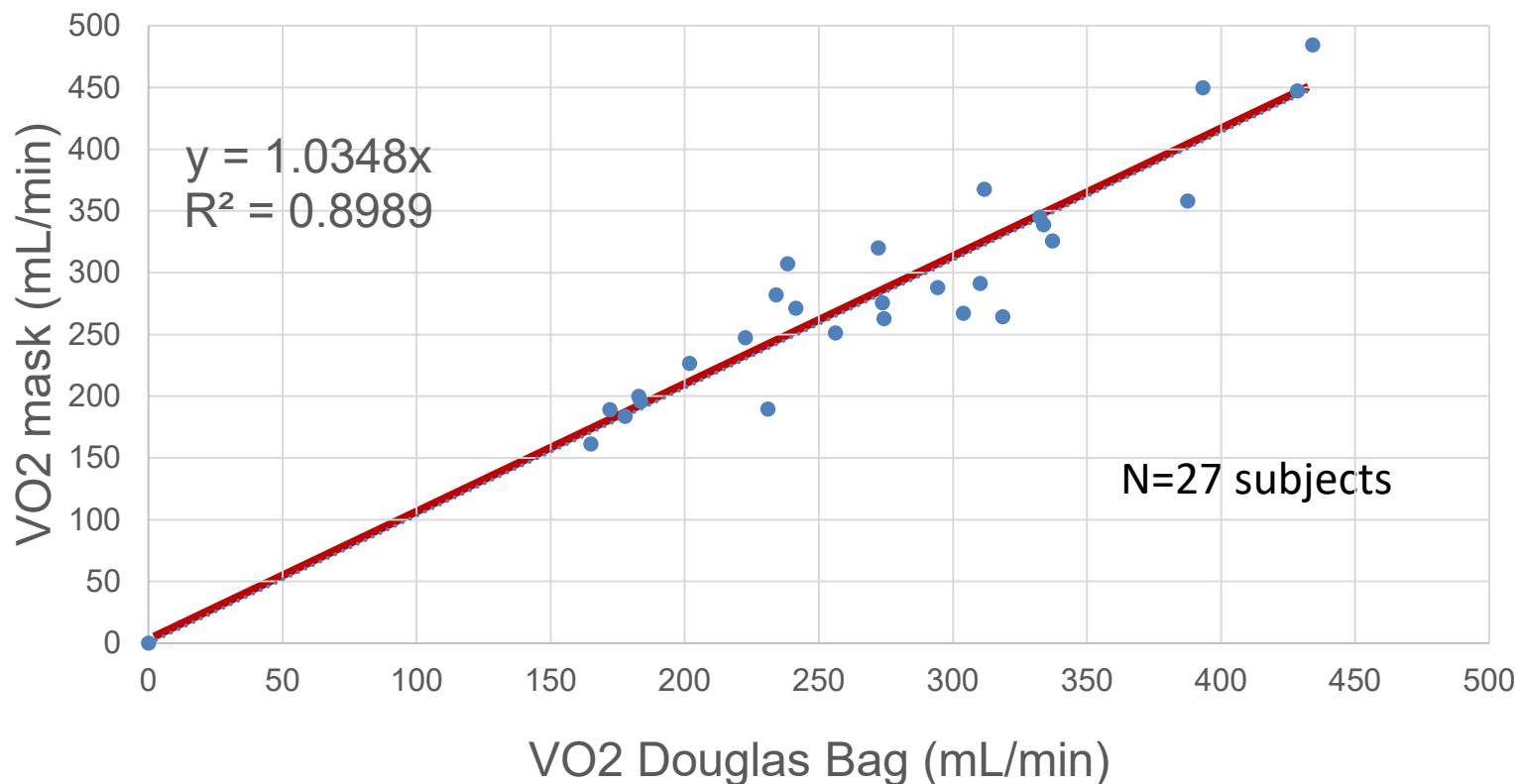


Validation Study: Wearable mask vs. Douglas Bag Method (single sensor batch)



Validation Study: Wearable mask vs. Douglas Bag Method (4 sensor batches*)

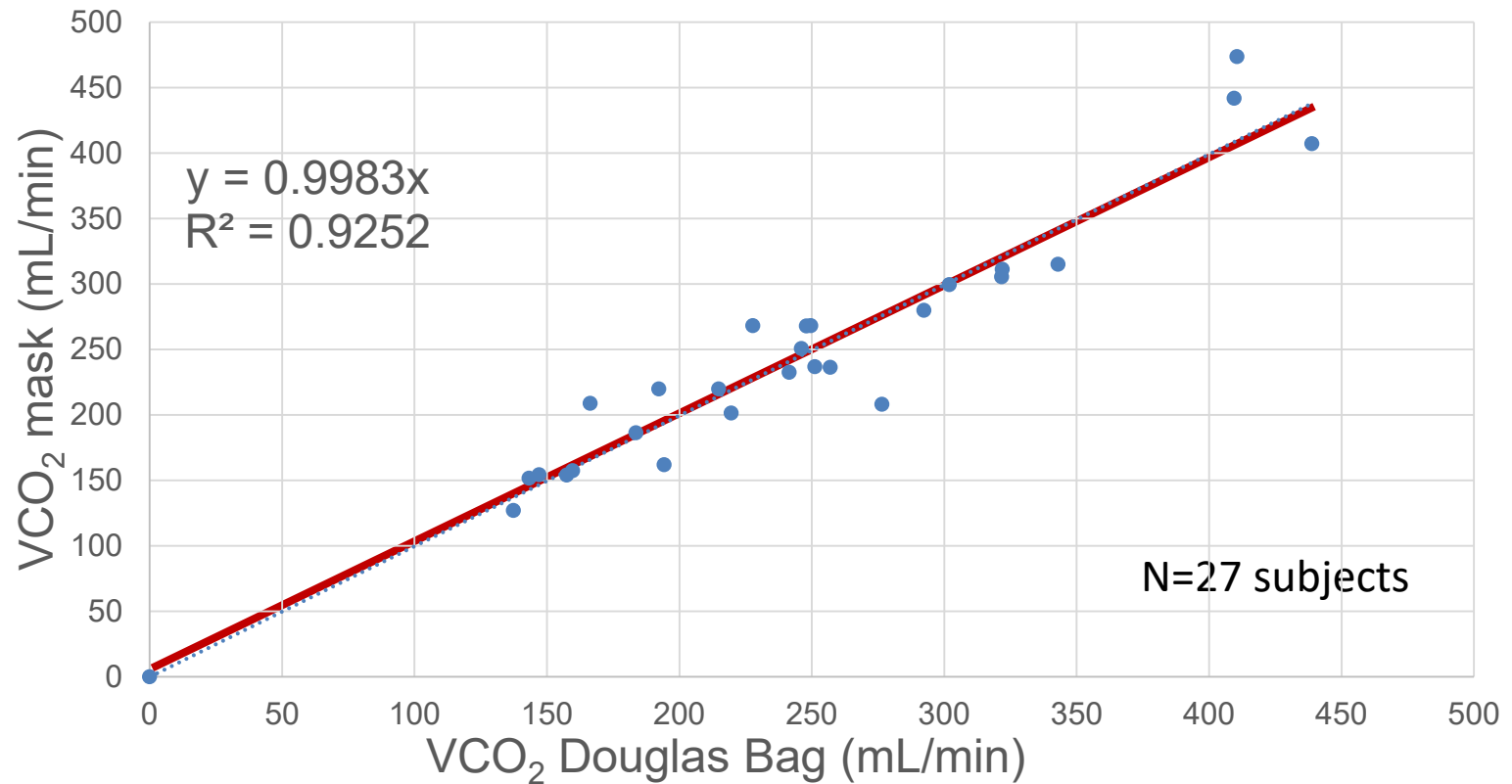
VO₂ Validation



* Different batches from the previous one (N=44)

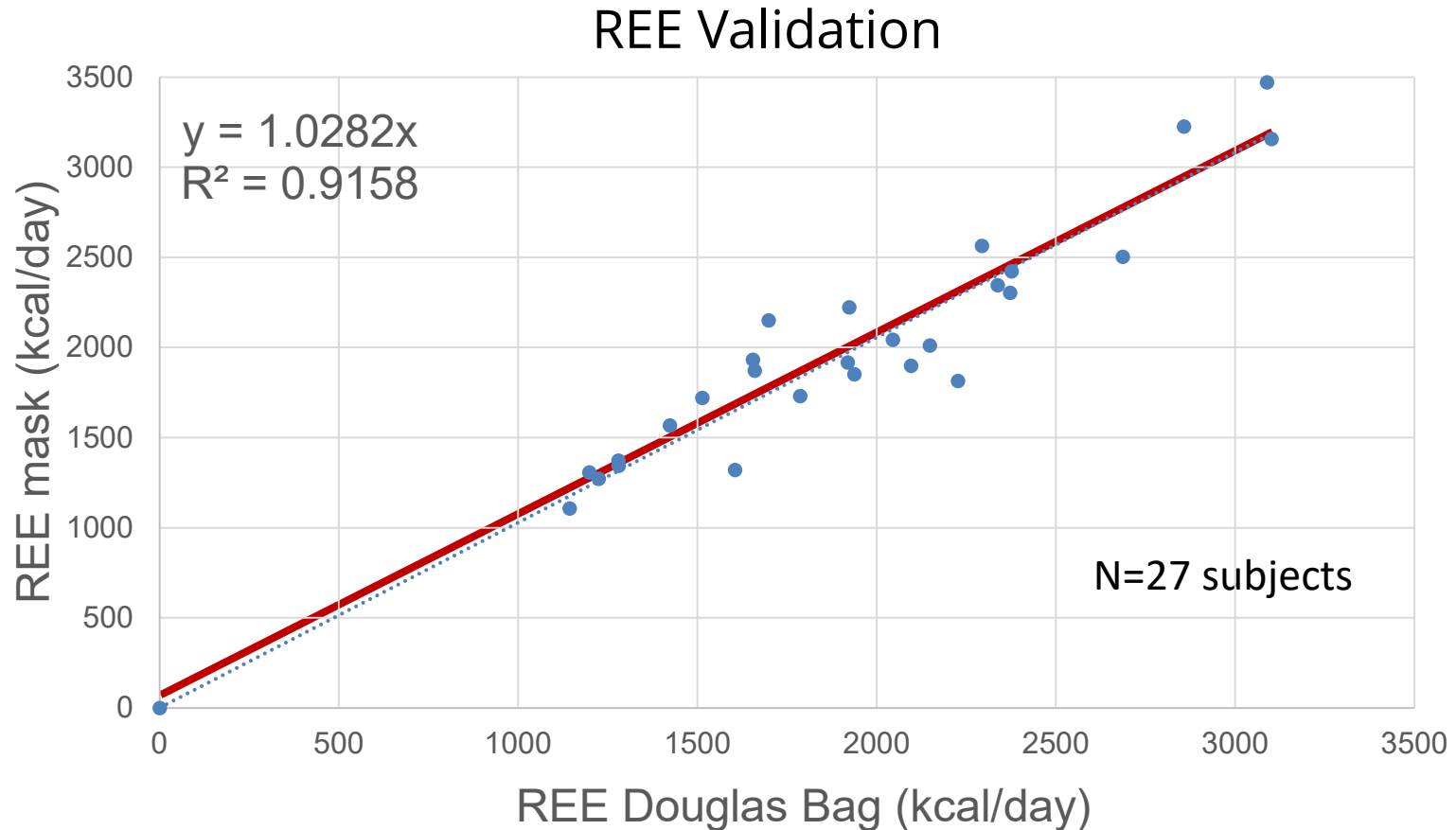
Validation Study: Wearable mask vs. Douglas Bag Method (multiple sensor batches*)

VCO₂ Validation



* Different batches from the previous one (N=44)

Validation Study: Wearable mask vs. Douglas Bag Method (multiple sensor batches*)



* Different batches from the previous one (N=44)

<http://www.peertechz.com/Obesity-Diabetes-Metabolic-Syndrome/GJODMS-2-107.php>

(publication with the sensing technology)

Validation Study: Wearable mask vs. Medical Graphics (Ultima system)



Collaboration with Dr. Doina Kulick and Dr. Bruce Johnson, Mayo Clinic Arizona



Dr. Doina Kulick, Executive Wellness Program
Dr. Bruce Johnson, Exercise and Disease Physiology



Dr. Johnson wearing Breezing Pro
during study



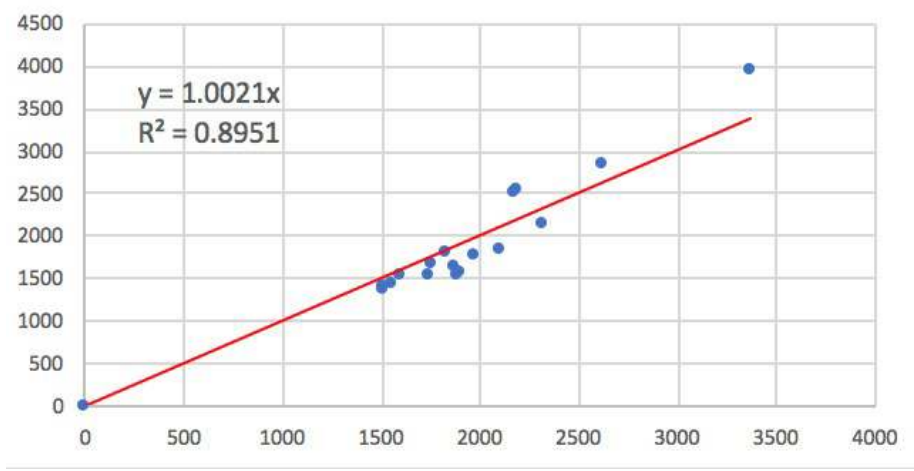
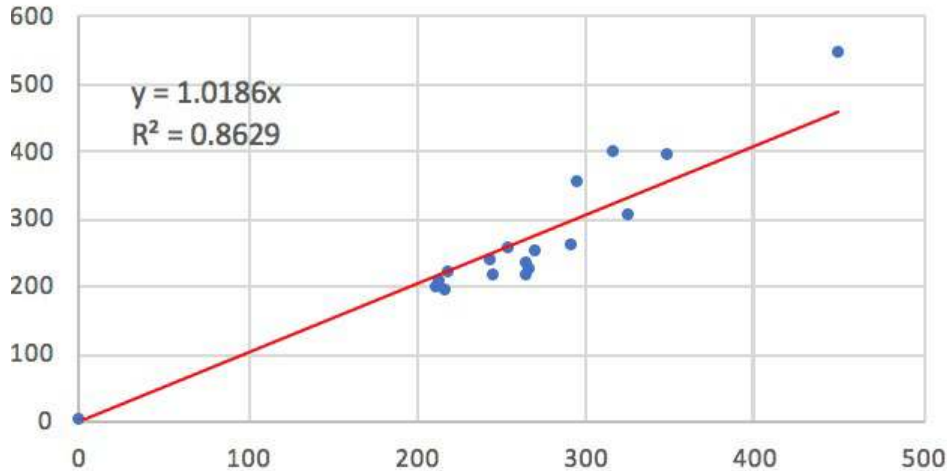
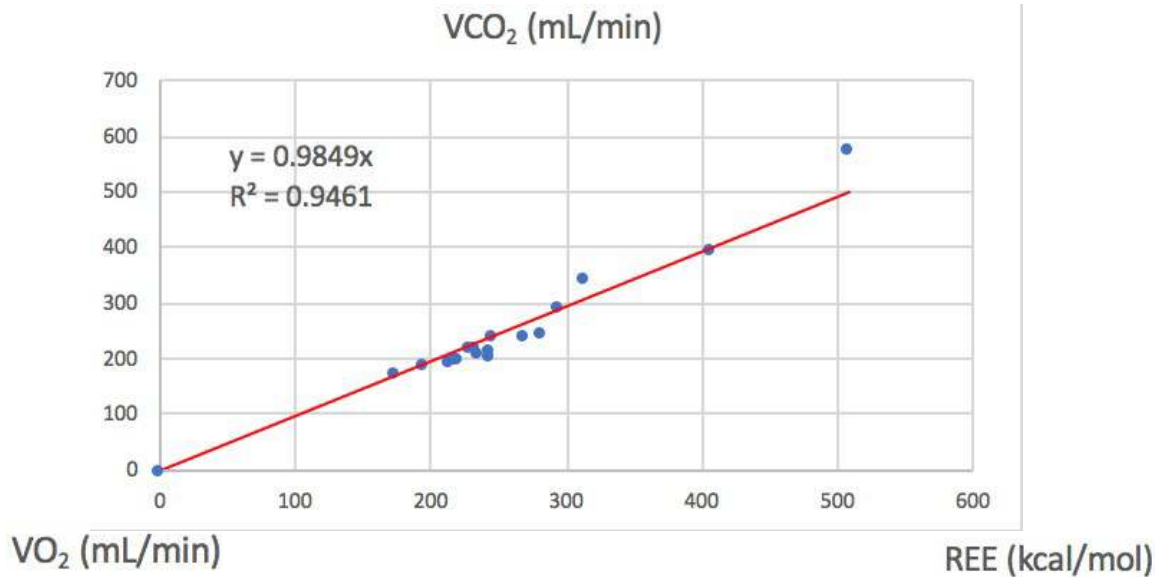
sensor

mask



✓ Comparison with Medical Graphics Metabolic cart on-going

Validation Study: Wearable mask vs. Medical Graphics (Ultima system)



Analytical validation study conclusion

- ✓ Total of subjects tested: 90+ with Gold standard method and Breath-by-Breath reference metabolic cart.
- ✓ The wearable device for VO_2 , VCO_2 , and Resting Energy Expenditure (EE) demonstrated between 90-100% accuracy with 95% confidence interval.

Other Institutions using Breezing



Harvard U
Boston Metro, MA



Indiana U
Bloomington, IN



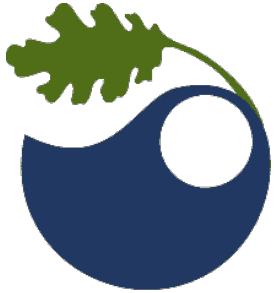
U of Minnesota
Minneapolis Metro, MN



Penn State U
State College, PA



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New York City, NY



Bren School Enviro Sci & Mngmnt
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Thank YOU !

Questions to:

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