

## Applications

- Insulin resistance
- Obesity
- Diabetes
- PCOS
- Metabolic disorders (pre-diabetes, dysglycemia)

## Advantages

- Early diagnostic
- Development of a potential early therapeutic
- Easy and straightforward to examine

## Inventors

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## Contact

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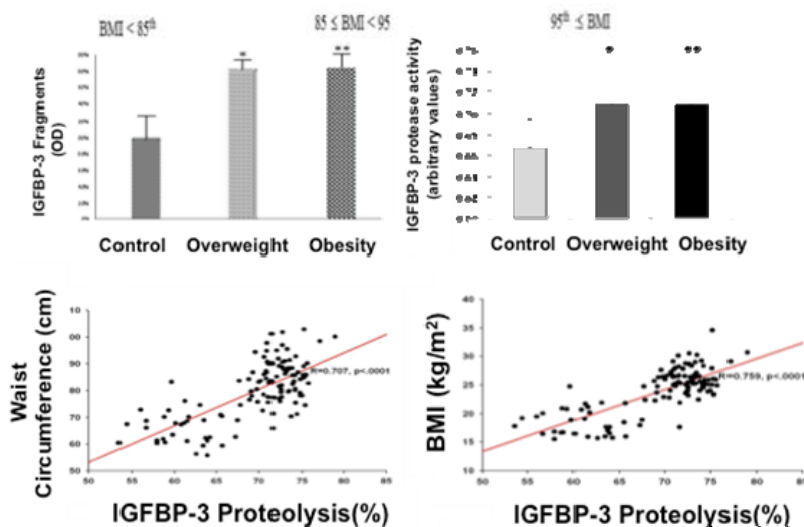
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## Market Need

It is estimated that approximately 25% of the USA adult population have insulin resistance, which further leads to obesity, type 2 diabetes and other metabolic disorders. Currently, the only available diagnosis of insulin resistance focuses on blood glucose/insulin level and does not allow for early detection and potential prevention of this condition.

## Technology Summary

This technology describes potential early diagnostic and therapeutic for insulin resistance, diabetes and obesity-induced metabolic disorders. Dr. Oh has shown that increasing degradation of Insulin-like Growth Factor-Binding Protein 3 (IGFBP-3) was found in circulation during progression from lean to overweight/obese condition in patients, resulting in systemic insulin resistance (Fig. below). Neutrophil proteases and IGFBP-3 proteolysis can be used as a potential biomarker for disease progression from high-risk state of developing diabetes to Type 2 Diabetes Mellitus (T2DM). Furthermore, clinically available neutrophil protease inhibitors could be used as an early intervention for obesity-induced disorders, such as prediabetes, dysglycemia and diabetes.



## Technology Status

Patent pending: U.S. and foreign rights are available.

*In vitro* and *in vivo* data available.

This technology is available for licensing to industry for further development and commercialization.