



## GEN86 – sRAGE as a circulating marker for thoracic aortic aneurysm and dissection

**OBJECTIVE:** To test sRAGE plasma levels in patients at risk to develop aneurysm and/or dissection and to correlate sRAGE levels with aortic structure and clinical outcomes.

### ORGANIZATION

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### BACKGROUND AND RATIONALE

Ascending/Thoracic Aortic Aneurysm (TAA) disease is a life threatening condition with high mortality related to its complication. Medical treatments can slow the enlargement of aneurysms, but only complex surgical repair of the ascending aorta prevents premature death resulting from dissection or rupture. More reliable clinical predictors are needed to distinguish patients at risk for dissection and to determine criteria that justify the risk of prophylactic surgical repair.

The goal of this study is to provide evidence that blood levels of the soluble form of the Receptor for Advanced Glycation End Products (sRAGE) could be used as a blood-based tool for evaluating the degree of degeneration of the ascending aorta; these findings may provide the solid foundation for the use of sRAGE as a risk stratification tool for adverse aortic events in aneurysmal patients.

### DESIGN

*Method:*

- Patients will be divided in different groups based on the diagnosis/genetic mutation.
- sRAGE levels will be quantified in plasma samples.
- Matched tissue sample, for patients who underwent ascending aorta surgery, will be used for histological analysis.

- For all patients, correlation between sRAGE values and clinical data (such as aortic size and aortic growth rate) will be performed.
- Statistical analysis will be performed using ANOVA; logistic regression and either binomial or multimodal analysis will be performed.

#### *Inclusion criteria:*

- Subjects with confirmed MFS, EDS (vascular), LDS, FBN1, BAV, FTAAD diagnosis; subjects <50 years of age with confirmed diagnosis of other aneurysms/dissections of the thoracic aorta
- Age 5 years or older

#### *Samples:*

- Plasma
- Tissue

#### *Data:*

- Organ system review
- Surgical
- Genetic
- Image
- Pregnancies
- Medication Use
- Family History
- Demographics

### CONCLUSIONS

#### *Results:*

- Pending