MJFF has partnered with GeneDetect and Vigene Biosciences to make available the well-characterized adeno-associated viral vector expressing human A53T alpha-synuclein to model Parkinson’s disease. This viral vector has been characterized in the mouse, rat, and non-human primate for ability to express alpha-synuclein, induce nigrostriatal degeneration, and model Parkinson’s disease pathology (see Publications section). The current lot has been validated to ensure performance similar to the previously published batches. Viral vectors were designed and generated by GeneDetect, validated by Atuka, Inc., and are now available for purchase at Vigene Biosciences. Validation data is included below.

### Human A53T Alpha-Synuclein Viral Vector

**Transgene** | **Viral Vector Nomenclature** | **Catalog #**
--- | --- | ---
Human A53T aSyn | AAV1/2-CMV/CBA-Human A53T aSyn-WPRE-BGH-polyA | GD1001-RV
Empty Vector Control | AAV1/2-CMV/CBA-Null/Empty-WPRE-BGH-polyA | GD1004-RV

### Neurochemical and Motor Deficit Analyses

#### Cylinder Task

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>End Point</th>
<th>TH+ Cells in SNpc</th>
<th>DAT Binding</th>
<th>TH Activity</th>
<th>DA Turnover</th>
</tr>
</thead>
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<td>43 DPI</td>
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<tr>
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<td>43 DPI</td>
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</tbody>
</table>

#### DA Turnover

![Graph showing DA turnover](image)

#### TH Activity

![Graph showing TH activity](image)

#### DAT Binding

![Graph showing DAT binding](image)

#### TH+ Cells in SNpc

![Graph showing TH+ cells in SNpc](image)

### References