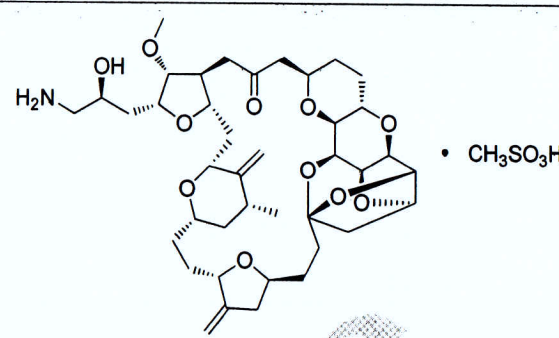


### CERTIFICATE OF ANALYSIS

<i>Name</i>		<i>Structure</i>	
(2R,3R,3aS,7R,8aS,9S,10aR,11S,12R,13aR,13bS,15S,18S,21S,24S,26R,28R,29aS)-2-(2S-3-amino-2-hydroxypropyl)hexacosahydro-3-methoxy-26-methyl-20,27-bis(methylene)-11,15-18,21-24,28-triepoxy-7,9-ethano-12,15-methano-9H,15H-furo[3,2-i]furo[2',3'-5,6]pyrano[4,3-b][1,4]dioxacyclo-pentacosin-5(4H)-one, methanesulfonate(salt)			
<b>CAS No.</b>	441045-17-6		
<b>Quantity</b>	1.5g		
<b>Batch No.</b>	ER-18121001	<b>Production Date</b>	2018.12.10
<b>The original batch No.</b>	N/A	<b>Test Date</b>	2018.12.14
<b>Analytical Report No.</b>	ANA180209	<b>Report Date</b>	2018.12.18
<b>MOA No.</b>	MOA-RD-ER(01)	<b>Retest Date</b>	2020.12.09

<i>Items</i>	<i>Specifications</i>	<i>Results</i>
<b>Appearance</b>	White to off-white solid	White solid
<b>Specific rotation</b>	-160° ~ -210°	-191°
<b>Identification</b>	IR: Sample spectrum corresponds to that of standard spectrum.	Conform
	HPLC: The retention time of sample solution should correspond to that of standard solution.	Conform
<b>Related substances</b>	Impurity A NMT 0.15%	ND
	Impurity B NMT 0.15%	ND
	Impurity C NMT 0.30%	0.05%
	Individual unknown maximum impurity NMT 0.10%	0.03%
	Total impurities NMT 1.0%	0.08%
<b>Methanesulfonic acid</b>	9.8% ~ 12.2% (on anhydrous and solvents-free basis)	11.0%
<b>Residual solvents</b>	Pentane NMT 30000ppm	2547ppm
	Acetonitrile NMT 2000ppm	205ppm
	Dichloromethane NMT 2000ppm	88ppm
	Cyclopentane NMT 1000ppm	ND
	2,2-Dimethylbutane NMT 1000ppm	ND
	2-Methylbutane NMT 1000ppm	ND
<b>Water</b>	NMT 3.0%	2.8%
<b>Heavy metals</b>	Cr NMT 10ppm	Conform
	Ni NMT 10ppm	Conform
	Al NMT 10ppm	Conform
	Sm NMT 10ppm	Conform
<b>Assay</b>	98.0% ~ 102.0% (on anhydrous and solvents-free basis)	99.8%
<b>Conclusion</b>	The product conforms to the above specifications.	
<b>Storage condition</b>	Store at a temperature -20°C and avoid light.	

**Manufacturer:** BrightGene Bio-Medical Technology Co., Ltd.

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Compiled by: *Handwritten signature*  
 Date: 2018.12.18

Approved by: *Handwritten signature*  
 Date: *Handwritten date*  
