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(71) Applicants: UNIVERSITY OF MASSACHUSETTS
[US/US]; One Beacon Street, 31st Floor, Boston,
MA 02108 (US). SICHUAN UNIVERISTY [CN/CN];
Shuncheng St., 252, Qingyang District, Sichuan, Chengdu,
610017 (CN).

(72) Inventors: GAO, Guangping; 4 Edward Dunn Way, West-
borough, MA 01581 (US). XU, Guangchao; 7 Pocono
Road, Worcester, MA 01605 (US). TAI, Phillip; 51 Al-
varado Ave., Apt 203, Worcester, MA 01604 (US). WEI,
Yuquan; Gaopent Street, Keyuan Street Road 4, No. 1,
Chengdu, Sichuan, 610041 (CN). LUO, Li; 7 Pocono Road,
Worcester, MA 01605 (US).

(74) Agent: MACDONALD, Kevin et al.; Wolf, Greenfield &
Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210-2206
(US).

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(54) Title: AAV CAPSIDS VARIANTS AND USES THEREOF

(57) Abstract: Aspects of the disclosure relate to compositions and methods for delivering a transgene (e.g., a transgene encoding one or more gene products) to a target cell. The disclosure is based, in part, on adeno-associated virus (AAV) capsid protein variants characterized by tropisms for certain cell types (e.g., neurons, muscle cells, bone cells, heart cells, etc.). In some embodiments, recombinant A A Vs (rAAVs) comprising the capsid protein variants (e.g., AAVv66, SEQ ID NO: 1) are more efficiently packaged than rAAVs having certain wild-type AAV capsid proteins. Methods of delivering an rAAV comprising the AAV capsid protein variants are also described by the disclosure.

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