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Gene therapy monkey business

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Adeno-associated viruses (AAVs) belong to the *Paraviridae* family and are being developed as potential vectors for human gene therapy. In the Early Edition of the *Proceedings of the National Academy of Sciences*, Gao *et al.* report the isolation of novel non-human primate AAVs. They aligned known primate and non-primate AAV genome sequences and selected conserved regions for amplification by PCR. This allowed them to isolate two new viruses, AAV7 and AAV8, from the DNA of rhesus monkey heart tissues. Gao *et al.*, then produced AAV vectors packaged with AAV7 and AAV8 capsid proteins and tested the chimeric virions; the non-human AAV reacted poorly with antibodies against human AAV serotypes. Furthermore, when they looked at *in vivo* performance they found that the new viruses were very efficient gene-delivery vectors for mouse skeletal muscle and liver. The low immunogenicity and favourable tropism of these vectors suggest that they may be useful tools for human gene therapy applications.

References

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