

Dated: July 6, 2026.

Alycia Booth,

Federal Register Liaison, National Institutes of Health.

[FR Doc. 2026-13806 File 7-7-26; 8:45 am]

BILLING CODE 4167-05-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government Owned Invention Available for License: Generating Conditional and Reverse Conditional Loss-of-Function Alleles in Mouse Casq2

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: The *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD) is seeking potential licensees interested in further developing or utilizing these Casq2 mouse strains. As a research tool, patent protection is not being pursued for this technology. More information to access these strains can be found here: <https://www.jax.org/strain/036291> and <https://www.jax.org/strain/036290>.

FOR FURTHER INFORMATION CONTACT:

Inquiries related to this license opportunity should be directed to: Heather Gunas JD, MPH, Senior Technology Transfer Manager, NCI, Technology Transfer Center, Email: gunash@mail.nih.gov or Phone: 240-276-5530.

SUPPLEMENTARY INFORMATION: Cardiac calsequestrin (Casq2) plays an essential role in maintaining cardiac Ca²⁺ homeostasis. Human *CASQ2* mutations are associated with catecholaminergic polymorphic ventricular tachycardia (CPVT), a rare familial arrhythmogenic disorder within a group of diseases characterized as Sudden Arrhythmic Death.

The inventors have generated Casq2Flox and Casq2RevFlox mouse strains that model CPVT. The two novel strains successfully phenocopy aspects of CPVT, including stress-induced arrhythmias and reduced basal heart rates. The strains allow investigators to determine the importance of Casq2 gene function in specific tissues and at specific developmental time points. They also allow investigators to determine the efficacy of gene therapy and to address key mechanism questions. The materials are validated and fully functional.

This Notice is in accordance with 37 CFR 404.4 Authority to grant licenses.

NIH Reference Number: E-128-2024.

Related Technologies: N/A.

Product Type: Research Material/ Tool.

Therapeutic Area(s): Rare/Neglected Disease.

Development Stage: Validated and fully functional.

Publications:

- Knollmann BC, et al. *Casq2* deletion causes sarcoplasmic reticulum volume increase, premature Ca²⁺ release, and catecholaminergic polymorphic ventricular tachycardia. (PMID 16932808).

- Flores DJ, et al. Conditional ablation and conditional rescue models for Casq2 elucidate the role of development and of cell-type specific expression of Casq2 in the CPVT2 phenotype. (PMID 29452352).

- Blackwell DJ, et al. The Purkinje-myocardial junction is the anatomic origin of ventricular arrhythmia in CPVT. (PMID 34990403).

Patents: N/A.

Potential Commercial Applications:

- Study of Casq2 function.
- Study of calcium storage in cardiac muscle and CPVT.
- Determining the efficacy of gene therapy for CPVT pies.

Competitive Advantages:

- Only available conditional and reverse conditional loss-of-function alleles in mouse Casq2.

- Allows the study of Casq2 gene function in specific tissues and at specific developmental points.

Collaboration Opportunity: NICHD seeks licensing for further developing or utilizing these Casq2 mouse strains.

Dated: July 6, 2026.

Richard U. Rodriguez,

Associate Director, Technology Transfer Center, National Cancer Institute.

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government Owned Invention Available for License: Method of Detecting Circulating Cell-Free HPV 6 and 11 DNA in Patients Afflicted With Diseases Caused by Chronic HPV 6 or 11 Infection and Use Thereof

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: The National Cancer Institute (NCI) and Frederick National Laboratory for Cancer Research (FNLRCR) seek

research co-development partners and/or licensees for commercial development of a novel liquid biopsy diagnostic for non-invasive detection of cell-free HPV 6 and 11 DNA for recurrent respiratory papillomatosis (RRP).

FOR FURTHER INFORMATION CONTACT:

Inquiries related to this license opportunity should be directed to: Suna Gulay French, Ph.D., Technology Transfer Manager, NCI, Technology Transfer Center, Email: suna.gulay@nih.gov or Phone: 240-276-7424.

SUPPLEMENTARY INFORMATION: RRP, caused by chronic infection with human papillomavirus (HPV) types 6 and 11, is a rare but potentially fatal disease characterized by the growth of papillomas throughout the respiratory tract. While HPV 6/11 infections are common, affecting approximately 40% of U.S. adults, a subset of patients can develop a range of conditions from benign papillomas to dysplasia and invasive cancers. Current treatment for RRP typically involves repetitive surgical intervention or laser ablation to alleviate symptoms, which carries significant procedural risks. A recent breakthrough with a therapeutic HPV vaccine demonstrated that 51% of patients avoided surgery for at least a year, with some experiencing durable remission. However, there remains no reliable diagnostic tool to confirm viral clearance or guide systemic therapy decisions.

Researchers at the NCI and FNLRCR have developed a novel hybridization-based next-generation sequencing (NGS) liquid biopsy method to detect circulating cell-free HPV 6 and 11 DNA in the plasma of patients with RRP. This innovative approach uses the established relevance of circulating viral DNA as a valuable biomarker for disease monitoring and therapeutic decision-making in other virally-associated conditions. The method is designed to target multiple regions across the entire HPV 6 and 11 genomes. It employs a pull-down DNA technology to enhance coverage—overcoming limitations of fixed-primer PCR for small cell-free DNA fragments. While low-risk HPV-associated diseases like RRP exhibit less tumor cell turnover compared to advanced cancers, the inherent high vascularity of papillomas may facilitate the release of viral DNA into peripheral blood. This method offers a non-invasive, sensitive and potentially prognostic tool to aid in (1) diagnosis, (2) monitoring progression and (3) guiding systemic therapies such as HPV vaccination or predicting severity—including pulmonary risk.