A significant need remains for a means of preventing BKV infection and associated pathologies. Researchers at the National Cancer Institute, NIH, have developed compositions and therapeutic methods for pre-vaccination of organ transplant recipients against BKV and prognostic methods to identify patients that may benefit from the vaccination. Methods for producing a BKV vaccine against all four known BKV serotypes are in development.

**Potential Commercial Applications:**
- An effective multivalent BKV vaccine to prevent BKV-associated pathologies of the urinary tract and bladder.
- A prognostic kit to determine clinical benefit.
- Tests for identifying renal transplant donors and recipients.

**Competitive Advantages:**
- A successful proof-of-principle study in mice has been conducted.
- The inventors have identified the major virulent BKV serotype.
- No vaccine for BKV infection currently exists.
- If BKV is linked to cancer, the technology might be relevant to vaccines applicable to the general public.

**Development Stage:**
- Early-stage.
- Pre-clinical.
- In vitro data available.
- In vivo data available (animal).

**Inventors:** Christopher Buck and Diana Pastrana (NCI).

**Publication:** In preparation.


**Licensing Contact:** Patrick McCue, PhD; 301–435–5590; mccuepat@mail.nih.gov.

**Collaborative Research Opportunity:**

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A Novel Optomechanical Module that Enables a Conventional Inverted Microscope To Provide Selective Plane Illumination Microscopy (iSPIM)

Description of Technology: The invention describes an optomechanical module that, when engaged with a conventional inverted microscope, provides selective plane illumination microscopy (iSPIM). The module is coupled to the translational base of the microscope whereby a SPIM excitation objective is engaged to one portion of the mount body, and a SPIM detection objective (having a longitudinal axis perpendicular to that of the excitation objective) is engaged to another portion of the mount body. Such a system offers the advantages of SPIM (optically sectioned, high-speed volumetric interrogation of living samples), enabling the study of developmental or neuronal dynamics at high frame rates, while maintaining the flexibility and sample geometry of commercially available inverted microscopes (thus additionally allowing cell and gene therapy applications and multicenter clinical trials. For collaboration opportunities, please contact John Hewes, PhD, at hewes@mail.nih.gov.

A Vaccine for Shigella sonnei For Both Children and Adults

Description of Technology: There is currently no vaccine widely available for shigellosis, which affects over 150 million people worldwide and causes over 1 million deaths a year, mostly children. The present invention discloses a novel immunogen to be used in a vaccine for both children and adults. The immunogen, a low-molecular mass O–SP-core fragment, generates high antibody responses in animal studies, which means reduced number of vaccinations. The immunogen is easy to isolate for ease of manufacturing. Additionally, the methods of manufacturing, times and protocols of preventing and/or treating Shigellosis had been carried out in the present invention.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health, Public Health Service, HHS.

ACTION: Notice.

SUMMARY: The inventions listed below are owned by an agency of the U.S. Government and are available for licensing in the U.S. in accordance with 35 U.S.C. 207 to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

ADDRESSES: Licensing information and copies of the U.S. patent applications listed below may be obtained by writing to the indicated licensing contact at the Office of Technology Transfer, National Institutes of Health.