

INVENTION REPORT AND RECORD

INVENTOR(S) :

Name Barbara E. Thelenfeld Position Assoc. Director - Recombinant DNA  
Home Address 250 E 39th St NY NY 10016 Telephone 986-0667  
Name Kenneth H. Johnston Position Director - Cell Biology & Immunology  
Home Address 95 Horatio St. NY NY 10014 Telephone 675-0086

[Include additional names and addresses on a separate sheet.]

DESCRIPTIVE TITLE OF INVENTION:

Binding of Nucleic Acids to polystyrene matrices for use as a template for in vitro hybridization and subsequent detection.  
GRANT/CONTRACT (if any):

Sponsor \_\_\_\_\_ Award Number \_\_\_\_\_  
Principal Investigator \_\_\_\_\_

LAB/DEPARTMENT WHERE DEVELOPED:

Recombinant DNA / Cell Biology & Immunology

DESCRIPTION OF INVENTION:

A. State, as fully as possible, what the invention is, including: materials or components used; operative and preferred ranges of process parameters and concentrations of chemical compounds; and foreseeable uses of the invention.

Nucleic acids can be bound to polystyrene matrices and can then serve as templates for hybridization of suitably labelled probes. To circumvent the nonuniformity of polystyrene from various sources, addition of amino substituted hydrophobic polymers (eg. dodecylamine) will result in a uniform binding from batch to batch. The extent of hybridization can be determined by a sequential antibody-enzyme reaction, and enzyme activity monitored colorimetrically.

*The presence of specific genome.*

B. Records Supporting Invention. Identify records which establish dates of conception and reduction to practice, including identity of person who prepared record and its present location. Attach copies if possible. Note additional supporting evidence. If the invention or a significant aspect of the invention is not supported by written records, briefly describe how the date of invention can be established and identify earliest written record.

notebook -

C. Fill in the following dates:

1. Conception 2/22/82
2. First disclosure to another 2/22/82
3. First written record 5/26/82
4. First experiment demonstrating the invention 5/26/82

D. This invention is a(n):  process  chemical compound  
 electronic circuit  mixture of chemical compounds  
 apparatus  therapeutic method  other

E. This invention is useful as a diagnostic method to detect infectious particles

F. The problem which this invention solves is quantitation of in vitro nucleic acid hybridization

PRIOR ART:

"Prior art" is any apparatus, description, publication or communication which pertains to the area or field of the invention and which description, publication or communication occurred or was made prior to the date of conception of the invention by the inventor(s).

A. The prior art most relevant to the area or field of the invention is:

Enzyme linked immunosorbent assay (ELISA)

B. This invention differs from the prior art specified in Par. A in the following ways or manner:

nucleic acid  
~~DNA~~ is the template

C. This invention provides the following advantages over the prior art specified in Par. A:

nucleic acid as template

DISCLOSURE OF INVENTION:

Has the invention or any product derived therefrom been:

1. Described in a printed publication? NO Date \_\_\_\_\_
2. Described in an oral presentation? NO Date \_\_\_\_\_
3. Sold, offered for sale, or used in public? NO Date \_\_\_\_\_
4. Are any of 1 through 3 contemplated in the near future and, if so, when? \_\_\_\_\_

5. If the answer to any of 1 through 4 is yes, provide detailed information, including copies of manuscripts, published articles, abstracts, etc.

CONTACTS/AGREEMENTS WITH COMMERCIAL CONCERNS (include name of person contacted and copies of pertinent agreements)

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SIGNATURE OF INVENTOR(S)

*Barbara E. Crawford*  
*Kenneth H. Johnson*

Witnesses: Disclosed to and understood by me:

Date: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_