

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

THE TRUSTEES OF COLUMBIA )  
UNIVERSITY IN THE CITY OF )  
NEW YORK and QIAGEN )  
SCIENCES, LLC, )  
 ) Civil Action No. 19-1681-CFC  
Plaintiffs, )  
 )  
v. )  
 )  
ILLUMINA, INC., )  
 )  
Defendant. )  
 )

**DECLARATION OF JOHN KURIYAN, PH.D. IN SUPPORT OF  
PLAINTIFFS' OPENING CLAIM CONSTRUCTION BRIEF**

Columbia Ex. 2037  
Illumina, Inc. v. The Trustees  
of Columbia University  
in the City of New York  
IPR2020-01177

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**I. Professional Experience and Qualifications**

1. I am Professor and Howard Hughes Medical Institute investigator in the Department of Molecular and Cell Biology at the University of California, Berkeley, California. I am also a Professor in the Department of Chemistry at Berkeley. I joined the faculty of the University of California, Berkeley in 2001. I have been a Howard Hughes Medical Institute investigator since 1990. I am also a faculty scientist at Lawrence Berkeley National Laboratory, Berkeley, California (2001 to present).

2. Prior to the appointments in Berkeley, I was a Professor at The Rockefeller University, New York, New York (1987-2001). From 1993 to 2001, I was also the Patrick E. and Beatrice Haggerty Professor at the Rockefeller University.

3. I received my Ph.D. in Chemistry in 1986 from the Massachusetts Institute of Technology, Cambridge, Massachusetts. I was a post-doctoral fellow from 1986 to 1987 at Harvard University, Cambridge, Massachusetts.

4. I received my Bachelor of Science degree in Chemistry from Juniata College, Huntington, Pennsylvania in 1981. I also attended the University of Madras from 1977 to 1979.

5. I have extensive experience in the fields of molecular biology, biochemistry and structural biology. My laboratory's focus is on the structure and function of proteins involved in cellular signal transduction and DNA replication. My laboratory utilizes x-ray crystallography and electron microscopy, as well as biochemical, biophysical, and computational analyses to understand how various proteins function.

6. My research mainly focuses on the atomic-level structure and mechanism of the enzymes and molecular switches that carry out critical cellular regulatory processes, using x-ray crystallography and electron microscopy to determine the three-dimensional structures of proteins involved in those processes, as well as biochemical, biophysical, and cell biological analyses to elucidate protein mechanisms of action. One area of my special expertise involves the molecular structure of DNA polymerases.

7. Research in my laboratory has resulted in fundamental contributions to understanding the structural basis for high-speed DNA replication. Other breakthroughs include determining the auto-inhibited structures of several tyrosine kinases, including Src family kinases and elucidating the mechanism of allosteric activation of the kinase domains of the EGF receptor,

which have provided new insights that directly resulted in the development of novel therapies used in cancer and immune diseases.

8. My curriculum vitae, which describes in greater detail my professional experience and qualifications, is attached as Exhibit 1 (JA0176–94).

**I. Prior Expert Testimony**

9. During the preceding five years, I have not testified at deposition or at trial.

**II. Compensation**

10. I am being compensated for my work in connection with this litigation at my rate of \$650 per hour for the time I spend working on this matter.

**II. Materials Considered**

11. The opinions and conclusions I express in this report are based on my review of the patents-in-suit, U.S. Patent Nos. 10,407,458 (“458 Patent”), 10,407,459 (“459 Patent”), 10,435,742 (“742 Patent”), 10,457,984 (“984 Patent”) and 10,428,380 (“380 Patent”); portions of the prosecution file histories of those patents (“prosecution history”) that relate to the size of the capping groups; and materials listed in Exhibit 2 (JA0195–96).

12. My opinions and conclusions are also based on (1) my general knowledge of protein chemistry, structural biology and biochemistry, (2) my

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