

Discloser Identifier: 737710

Disclosure Purpose: 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer Inc.	Employment	Self
<p><i>Title:</i> Senior Vice President and Chief Scientific Officer Vaccines Research and Development <i>Position Description:</i> <i>Additional Information:</i></p>		
Pfizer Inc.	Stock	Self
<i>Additional Information:</i>		
Pfizer Inc.	Stock Option	Self
<i>Additional Information:</i>		

### Intellectual Property

Type	Is Licensed	Interest Held By
Patent - Compositions and Methods for Eliciting an Immune	-	Self
<p><i>Description:</i> Compositions and Methods for Eliciting an Immune Response Against Clostridium Difficile <i>Patent Number:</i> PCT/IB2018/057076 <i>Patent Status:</i> <i>Filing Jurisdiction:</i> <i>Licensees:</i> <i>Patent Holder:</i> <i>Additional Information:</i></p>		
Patent - Immunogenic Compositions Of Staphylococcus Aureus	-	Self
<p><i>Description:</i> Immunogenic Compositions Of Staphylococcus Aureus Antigens <i>Patent Number:</i> PCT/US2010/039510 <i>Patent Status:</i> <i>Filing Jurisdiction:</i> <i>Licensees:</i> <i>Patent Holder:</i> <i>Additional Information:</i></p>		
Patent - Compositions Comprising Three OspA Fusion Protein	-	Self
<p><i>Description:</i> Compositions Comprising Three OspA Fusion Proteins For Medical Use <i>Patent Number:</i> PCT/US2021/026599 <i>Patent Status:</i> <i>Filing Jurisdiction:</i> <i>Licensees:</i> <i>Patent Holder:</i> <i>Additional Information:</i></p>		
Patent - Compositions and Methods for Eliciting an Immune	-	Self

Type	Is Licensed	Interest Held By
<p><i>Description:</i> Compositions and Methods for Eliciting an Immune Response Against Clostridium Difficile</p> <p><i>Patent Status:</i></p> <p><i>Filing Jurisdiction:</i></p> <p><i>Licensees:</i></p> <p><i>Additional Information:</i></p>	<p><i>Patent Number:</i> PCT/IB2020/053005</p> <p><i>Patent Holder:</i></p>	
<p>Patent - Neisseria Meningitidis Compositions And Methods T</p>	-	Self
<p><i>Description:</i> Neisseria Meningitidis Compositions And Methods Thereof</p> <p><i>Patent Status:</i></p> <p><i>Filing Jurisdiction:</i></p> <p><i>Licensees:</i></p> <p><i>Additional Information:</i></p>	<p><i>Patent Number:</i> PCT/IB2014/064091</p> <p><i>Patent Holder:</i></p>	
<p>Patent - Group B Streptococcus Polysaccharide-Protein Conj</p>	-	Self
<p><i>Description:</i> Group B Streptococcus Polysaccharide-Protein Conjugates, Methods For Producing Conjugates, Immunogen</p> <p><i>Patent Status:</i></p> <p><i>Filing Jurisdiction:</i></p> <p><i>Licensees:</i></p> <p><i>Additional Information:</i></p>	<p><i>Patent Number:</i> PCT/IB2016/052455</p> <p><i>Patent Holder:</i></p>	
<p>Patent - Compositions And Methods For Preparing Staphyloco</p>	-	Self
<p><i>Description:</i> Compositions And Methods For Preparing Staphylococcus Aureus Serotype 5 And 8 Capsular Polysaccharid</p> <p><i>Patent Status:</i></p> <p><i>Filing Jurisdiction:</i></p> <p><i>Licensees:</i></p> <p><i>Additional Information:</i></p>	<p><i>Patent Number:</i> PCT/US2010/039473</p> <p><i>Patent Holder:</i></p>	
<p>Patent - Neisseria Meningitidis Compositions and Methods T</p>	-	Self
<p><i>Description:</i> Neisseria Meningitidis Compositions and Methods Thereof</p> <p><i>Patent Status:</i></p> <p><i>Filing Jurisdiction:</i></p> <p><i>Licensees:</i></p> <p><i>Additional Information:</i></p>	<p><i>Patent Number:</i> PCT/IB2013/051791</p> <p><i>Patent Holder:</i></p>	
<p>Patent - Immunogenic Polysaccharide Protein Conjugated Com</p>	-	Self
<p><i>Description:</i> Immunogenic Polysaccharide Protein Conjugated Comprising A Polysaccharide Derived From B Streptococc</p> <p><i>Patent Status:</i></p> <p><i>Filing Jurisdiction:</i></p> <p><i>Licensees:</i></p> <p><i>Additional Information:</i></p>	<p><i>Patent Number:</i> PCT/IB2017/056830</p> <p><i>Patent Holder:</i></p>	
<p>Patent - Neisseria Meningitidis Compositions And Methods T</p>	-	Self
<p><i>Description:</i> Neisseria Meningitidis Compositions And Methods Thereof</p> <p><i>Patent Status:</i></p> <p><i>Filing Jurisdiction:</i></p> <p><i>Licensees:</i></p> <p><i>Additional Information:</i></p>	<p><i>Patent Number:</i> PCT/IB2016/050829</p> <p><i>Patent Holder:</i></p>	
<p>Patent - Compositions And Methods Of Use Of ORF 554 From B</p>	-	Self
<p><i>Description:</i> Compositions And Methods Of Use Of ORF 554 From Beta Hemolytic Streptococcal Strains</p> <p><i>Patent Status:</i></p> <p><i>Filing Jurisdiction:</i></p> <p><i>Licensees:</i></p> <p><i>Additional Information:</i></p>	<p><i>Patent Number:</i> PCT/US2009/047886</p> <p><i>Patent Holder:</i></p>	

Type	Is Licensed	Interest Held By
Patent - Escherichia Coli Compositions and Methods Thereof	-	Self
<p><i>Description:</i> Escherichia Coli Compositions and Methods Thereof      <i>Patent Number:</i> PCT/IB2019/057025  <i>Patent Status:</i>      <i>Patent Holder:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p>		
Patent - Compositions Relating To A Mutant Clostridium Dif	-	Self
<p><i>Description:</i> Compositions Relating To A Mutant Clostridium Difficile Toxin And Methods Thereof      <i>Patent Number:</i> PCT/IB2012/051999  <i>Patent Status:</i>      <i>Patent Holder:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p>		
Patent - Escherichia Coli Compositions and Methods Thereof	-	Self
<p><i>Description:</i> Escherichia Coli Compositions and Methods Thereof      <i>Patent Number:</i> PCT/IB2021/059820  <i>Patent Status:</i>      <i>Patent Holder:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p>		
Patent - Neisseria Meningitidis Compositions And Methods T	-	Self
<p><i>Description:</i> Neisseria Meningitidis Compositions And Methods Thereof      <i>Patent Number:</i> PCT/IB2020/050988  <i>Patent Status:</i>      <i>Patent Holder:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p>		
Patent - Immunogenic Compositions Comprising Conjugated Ca	-	Self
<p><i>Description:</i> Immunogenic Compositions Comprising Conjugated Capsular Saccharide Antigens And Uses Thereof      <i>Patent Number:</i> PCT/IB2022/054914  <i>Patent Status:</i>      <i>Patent Holder:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p>		
Patent - Neisseria Meningitidis Compositions And Methods T	-	Self
<p><i>Description:</i> Neisseria Meningitidis Compositions And Methods Thereof      <i>Patent Number:</i> PCT/IB2018/050563  <i>Patent Status:</i>      <i>Patent Holder:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p>		
Patent - Compositions And Methods Of Use Of ORF1358 From B	-	Self
<p><i>Description:</i> Compositions And Methods Of Use Of ORF1358 From Beta-hemolytic Streptococcal Strains      <i>Patent Number:</i> PCT/US2009/047902  <i>Patent Status:</i>      <i>Patent Holder:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p>		
Patent - Vaccination Against Bacterial And Betacoronavirus	-	Self
<p><i>Description:</i> Vaccination Against Bacterial And Betacoronavirus Infections      <i>Patent Number:</i> PCT/IB2022/053951  <i>Patent Status:</i>      <i>Patent Holder:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p>		

Type	Is Licensed	Interest Held By
Patent - Neisseria Meningitidis Compositions And Methods T	-	Self
<p><i>Description:</i> Neisseria Meningitidis Compositions And Methods Thereof  <i>Patent Status:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p> <p><i>Patent Number:</i> PCT/IB2020/058928  <i>Patent Holder:</i></p>		
Patent - Immunogenic Compositions Against Clostridioides (	-	Self
<p><i>Description:</i> Immunogenic Compositions Against Clostridioides (Clostridium) Difficile  And Methods Thereof  <i>Patent Status:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p> <p><i>Patent Number:</i> PCT/IB2021/055373  <i>Patent Holder:</i></p>		
Patent - Immunogenic compositions for use in pneumococcal	-	Self
<p><i>Description:</i> Immunogenic compositions for use in pneumococcal vaccines  <i>Patent Status:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p> <p><i>Patent Number:</i> PCT/IB2021/060097  <i>Patent Holder:</i></p>		
Patent - Non-Lipidated Variants of Neisseria Meningitidis	-	Self
<p><i>Description:</i> Non-Lipidated Variants of Neisseria Meningitidis ORF2086 Antigens  <i>Patent Status:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p> <p><i>Patent Number:</i> PCT/IB2011/053934  <i>Patent Holder:</i></p>		
Patent - Immunogenic Fusion Polypeptides	-	Self
<p><i>Description:</i> Immunogenic Fusion Polypeptides  <i>Patent Status:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p> <p><i>Patent Number:</i> PCT/IB2014/059462  <i>Patent Holder:</i></p>		
Patent - Compositions and Methods Relating to a Mutant Clo	-	Self
<p><i>Description:</i> Compositions and Methods Relating to a Mutant Clostridium Difficile  Toxin  <i>Patent Status:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p> <p><i>Patent Number:</i> PCT/IB2013/059183  <i>Patent Holder:</i></p>		
Patent - Immunogenic Compositions Comprising Conjugated Ca	-	Self
<p><i>Description:</i> Immunogenic Compositions Comprising Conjugated Capsular  Saccharide Antigens, Kits Comprising the Sam  <i>Patent Status:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p> <p><i>Patent Number:</i> PCT/IB2020/053280  <i>Patent Holder:</i></p>		
Patent - Group B Streptococcus Polysaccharide-protein Conj	-	Self
<p><i>Description:</i> Group B Streptococcus Polysaccharide-protein Conjugates, Methods  for Producing Conjugates, Immunogen  <i>Patent Status:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p> <p><i>Patent Number:</i> PCT/IB2021/057714  <i>Patent Holder:</i></p>		

Type	Is Licensed	Interest Held By
Patent - Immunogenic Compositions Comprising Conjugated Ca	-	Self
<p><i>Description:</i> Immunogenic Compositions Comprising Conjugated Capsular Saccharide Antigens and Uses Thereof  <i>Patent Status:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p> <p><i>Patent Number:</i> PCT/IB2022/054920  <i>Patent Holder:</i></p>		
Patent - Multicomponent Immunogenic Composition For The Pr	-	Self
<p><i>Description:</i> Multicomponent Immunogenic Composition For The Prevention Of Beta-hemolytic Streptococcal (BHS) Dise  <i>Patent Status:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p> <p><i>Patent Number:</i> PCT/US2009/063268  <i>Patent Holder:</i></p>		
Patent - Escherichia Coli Compositions And Methods Thereof	-	Self
<p><i>Description:</i> Escherichia Coli Compositions And Methods Thereof  <i>Patent Status:</i>  <i>Filing Jurisdiction:</i>  <i>Licensees:</i>  <i>Additional Information:</i></p> <p><i>Patent Number:</i> PCT/IB2020/060081  <i>Patent Holder:</i></p>		

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.

**Discloser Identifier:** 1001987

**Disclosure Purpose:** 22-14916

## Summary of Interests

I do not have any interests to disclose at this time.

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.

David Cooper

Discloser Identifier: 970668

Disclosure Purpose: 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer	Employment	Self
<i>Title:</i> Executive Director <i>Additional Information:</i>		<i>Position Description:</i> Vaccine Researcher
Pfizer	Stock	Self
<i>Additional Information:</i>		
Pfizer	Stock Option	Self
Additional Information:		

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.

Mark Cutler

Discloser Identifier: 996941

Disclosure Purpose: 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer Inc.	Employment	Self
<i>Title:</i> Senior Director  <i>Additional Information:</i>		<i>Position Description:</i> Head of External Laboratory and Reagent Management. Responsible to oversee external clinical serology and manage all external serology contract activities for clinical programs.

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.



Discloser Identifier: 627453

Disclosure Purpose: 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer	Employment	Self
<i>Title:</i> Senior Vice President <i>Additional Information:</i>		<i>Position Description:</i> Vaccine Clinical Research and Development Worldwide Research Development and Medical
Pfizer	Stock	Self
<i>Additional Information:</i>		
Pfizer	Stock Option	Self
<i>Additional Information:</i>		

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.

Discloser Identifier: 970660

Disclosure Purpose: 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer	Employment	Self
<i>Title:</i> Vice President <i>Additional Information:</i> Full time employee		<i>Position Description:</i> Vaccine Clinical Research and Development
Pfizer	Stock	Self
<i>Additional Information:</i>		
Pfizer	Stock Option	Self
Additional Information:		

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.

Discloser Identifier: 1063634

Disclosure Purpose: 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer Inc.	Grant / Contract	Self
<i>Recipient Name:</i> <i>Grant / Contract Description:</i> <i>Additional Information:</i>		<i>Recipient Type:</i> <i>Grant / Contract Purpose:</i>

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.

Dung-Yang Lee

**Discloser Identifier:** 1103757

**Disclosure Purpose:** 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer Inc.	Employment	Self
<i>Title:</i> Associate Director <i>Additional Information:</i>		<i>Position Description:</i> Study Biostatistician

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.

Discloser Identifier: 1001991

Disclosure Purpose: 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
BioNTech SE	Employment	Self
<i>Title:</i> <i>Additional Information:</i>		<i>Position Description:</i>
BioNTech SE	Stock	Self
<i>Additional Information:</i>		

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.

Sohil Patel

**Discloser Identifier:** 1103756

**Disclosure Purpose:** 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer Inc.	Employment	Self
<i>Title:</i> Director, Medical Monitor <i>Additional Information:</i>		<i>Position Description:</i> Clinical development physician in Vaccines Research & Development

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.

**Discloser Identifier:** 970674

**Disclosure Purpose:** 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
biontech	Fiduciary Officer	Self
<i>Official Title:</i> Chief Executive Officer, Co-Founder <i>Additional Information:</i>		<i>Position Description:</i> Member of the Board
biontech	Stock	Self
<i>Additional Information:</i>		
biontech	Stock Option	Self
Additional Information:		

### Intellectual Property

Type	Is Licensed	Interest Held By
Patent - 3 UTR Sequences for stabilisation of mRNA	-	Self
<i>Description:</i> 3 UTR Sequences for stabilisation of mRNA <i>Patent Status:</i> Pending <i>Filing Jurisdiction:</i> USA <i>Licensees:</i>		<i>Patent Number:</i> EPPCT/EP2015/073180, US 20190071682 <i>Patent Holder:</i> Previous Institution
Licensee	Title	Date
biontech		
<i>Additional Information:</i> I am co-inventors on various patents on RNA Technologies, both pending and granted, which have been filed over a period of 10+ years, some of which are licensed to third parties. Jurisdictions are Broad including US, EU, Asia.		

### Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

22-14916.R2 - Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.





Pei-Yong Shi

Discloser Identifier: 717400

Disclosure Purpose: 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer Inc.	Grant / Contract	Self
<i>Recipient Name:</i> Pei-Yong Shi <i>Grant / Contract Description:</i> Contract <i>Additional Information:</i> Sample testing		<i>Recipient Type:</i> Institution <i>Grant / Contract Purpose:</i> Research

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No

## Certification

I certify that the information provided in this disclosure is complete and accurate.

Kena Swanson

Discloser Identifier: 970664

Disclosure Purpose: 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer	Employment	Self
<i>Title:</i> Vice President, Viral Vaccines <i>Additional Information:</i>		<i>Position Description:</i> vaccine research and development
Pfizer	Stock	Self
<i>Additional Information:</i>		

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

Yes.

a. **Please list the other authors' names here.**

Jing Zou, Chaitanya Kurhade, Sohil Patel, Nicholas Kitchin, Kristin Tompkins, Mark Cutler, David Cooper, Qi Yang, Hui Cai, Alexander Muik, Ying Zhang, Dung-Yang Lee, Ugur Sahin, Annaliesa S. Anderson, William C. Gruber, Xuping Xie, Pei-Yong Shi

## Certification

I certify that the information provided in this disclosure is complete and accurate.

Kristin Tompkins

Discloser Identifier: 970671

Disclosure Purpose: 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer Inc.	Employment	Self
<i>Title:</i> Associate Director <i>Additional Information:</i> Salary		<i>Position Description:</i> Oversee preclinical in vivo studies, laboratory management
Pfizer Inc.	Stock	Self
<i>Additional Information:</i>		
Pfizer Inc.	Stock Option	Self
Additional Information:		

## Additional Questions

1. Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?

No.

2. What is the manuscript title?

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. Are you the corresponding author?

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.

Xuping Xie

**Discloser Identifier:** 996937

**Disclosure Purpose:** 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer Inc.	Grant / Contract	Self

*Recipient Name:* Xuping Xie  
*Grant / Contract Description:* Pfizer's contract supports the testing of the specimens  
*Additional Information:*

*Recipient Type:* Institution  
*Grant / Contract Purpose:* Research

### Intellectual Property

Type	Is Licensed	Interest Held By
Patent - Reverse genetic system of SARS-CoV-2	-	Self

*Description:* Reverse genetic system of SARS-CoV-2  
*Patent Status:* Provisional  
*Filing Jurisdiction:* USA  
*Licensees:*

*Patent Number:* 63/015,257  
*Patent Holder:* Current Institution

Licensee	Title	Date
Pfizer Inc.		

*Additional Information:*

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.



**Discloser Identifier:** 1026187

**Disclosure Purpose:** 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer Inc.	Stock	Self
<i>Additional Information:</i>		

## Additional Questions

**1. Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

**2. What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

**3. Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.

Discloser Identifier: 1098362

Disclosure Purpose: 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer Inc.	Employment	Self
<i>Title:</i> Director <i>Additional Information:</i>		<i>Position Description:</i> Biostatistics

## Additional Questions

1. **Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

2. **What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

3. **Are you the corresponding author?**

No.

## Certification

I certify that the information provided in this disclosure is complete and accurate.

**Discloser Identifier:** 996939

**Disclosure Purpose:** 22-14916

## Summary of Interests

### Company or Organization

Entity	Type	Interest Held By
Pfizer Inc.	Grant / Contract	Self
<i>Recipient Name:</i> Jing Zou <i>Grant / Contract Description:</i> Pfizer's contract supports the testing of the specimens <i>Additional Information:</i>		<i>Recipient Type:</i> Institution <i>Grant / Contract Purpose:</i> Research

## Additional Questions

**1. Are there other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, what you wrote in the submitted work?**

No.

**2. What is the manuscript title?**

Improved Neutralization of Omicron BA.4/5, BA.4.6, BA.2.75.2, BQ.1.1, and XBB.1 with Bivalent BA.4/5 Vaccine

**3. Are you the corresponding author?**

No.

## Certification

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