TWENTIETH AMENDMENT TO
ELSEVIER SUBSCRIPTION AGREEMENT

WHEREAS, the parties hereto have previously entered into an agreement dated 9 April 2014 (the "Agreement") as last amended on 11 June 2014 and wish to amend the Agreement as set forth in this amendment ("Amendment").

NOW, THEREFORE, in consideration of the mutual promises and covenants set forth below, and for such other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree to amend the Agreement as of the execution date below as set forth below and on Schedule 1.

Except as specifically amended hereby, all of the existing terms and conditions of the Agreement are hereby ratified. Capitalized terms used herein that are not otherwise defined shall have the meanings ascribed to them in the Agreement. To the extent any terms or conditions of the Agreement conflict with or are inconsistent with this Amendment, the terms of this Amendment shall prevail.

IN WITNESS WHEREOF, the parties have executed this Amendment by their respective, duly authorized representatives as of 12 June 2014.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA o/b/o
THE CALIFORNIA DIGITAL LIBRARY
(Subscriber)

[Signature]
Title: Executive Director

ELSEVIER B.V.
(Elsevier)

[Signature]
Title: Managing Director, Global Sales & Customer Marketing, Science & Technology

Amendment No 1-6779419532
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Subscribed Products – publisher</th>
<th>Access</th>
<th>2014 USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>ScienceDirect® online – Elsevier B.V.</td>
<td>sciencedirect.com</td>
<td></td>
</tr>
<tr>
<td>Elsevier Reference Works (perpetual access)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Encyclopedia of Analytical Science (Second Edition)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL FEES</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>