

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT7298345

SUBMISSION TYPE:	RESUBMISSION
NATURE OF CONVEYANCE:	ASSIGNMENT
RESUBMIT DOCUMENT ID:	507129728
CONVEYING PARTY DATA	
Name	Execution Date
IMKE ELIZABETH MULDER	02/20/2021
JOHN CRYAN	03/04/2021
SAMANTHA YUILLE	02/15/2021
SUAAD AHMED	02/15/2021
TED DINAN	03/02/2021
PARTHENA FOTIADOU	11/22/2017
ANNA ETTORRE	02/13/2021
AMY BETH HOLT	03/05/2021
RECEIVING PARTY DATA	
Name:	4D PHARMA RESEARCH LIMITED
Street Address:	LIFE SCIENCES INNOVATION BUILDING
Internal Address:	CORNHILL ROAD
City:	ABERDEEN
State/Country:	UNITED KINGDOM
Postal Code:	AB25 2ZS
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	17013026
CORRESPONDENCE DATA	
Fax Number:	(650)493-6811
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
Phone:	6504939300
Email:	patentdocket@wsgr.com, ccolbert@wsgr.com
Correspondent Name:	WILSON SONSINI GOODRICH & ROSATI
Address Line 1:	650 PAGE MILL ROAD
Address Line 4:	PALO ALTO, CALIFORNIA 94304
ATTORNEY DOCKET NUMBER:	56708-738.301

NAME OF SUBMITTER:	CHRISTINE M. COLBERT
SIGNATURE:	/Christine M. Colbert/
DATE SIGNED:	04/26/2022
Total Attachments: 26 source=56708_738_301_Executed_Assignment#page1.tif source=56708_738_301_Executed_Assignment#page2.tif source=56708_738_301_Executed_Assignment#page3.tif source=56708_738_301_Executed_Assignment#page4.tif source=56708_738_301_Executed_Assignment#page5.tif source=56708_738_301_Executed_Assignment#page6.tif source=56708_738_301_Executed_Assignment#page7.tif source=56708_738_301_Executed_Assignment#page8.tif source=56708_738_301_Executed_Assignment#page9.tif source=56708_738_301_Executed_Assignment#page10.tif source=56708_738_301_Executed_Assignment#page11.tif source=56708_738_301_Executed_Assignment#page12.tif source=56708_738_301_Executed_Assignment#page13.tif source=56708_738_301_Executed_Assignment#page14.tif source=56708_738_301_Executed_Assignment#page15.tif source=56708_738_301_Executed_Assignment#page16.tif source=56708_738_301_Executed_Assignment#page17.tif source=56708_738_301_Executed_Assignment#page18.tif source=56708_738_301_Executed_Assignment#page19.tif source=56708_738_301_Executed_Assignment#page20.tif source=56708_738_301_Executed_Assignment#page21.tif source=56708_738_301_Executed_Assignment#page22.tif source=56708_738_301_Executed_Assignment#page23.tif source=56708_738_301_Executed_Assignment#page24.tif source=56708_738_301_Executed_Assignment#page25.tif source=56708_738_301_Executed_Assignment#page26.tif	

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Dated 22/11/2017

(1) 4D PHARMA RESEARCH LIMITED

(2) Parthena Fotiadou

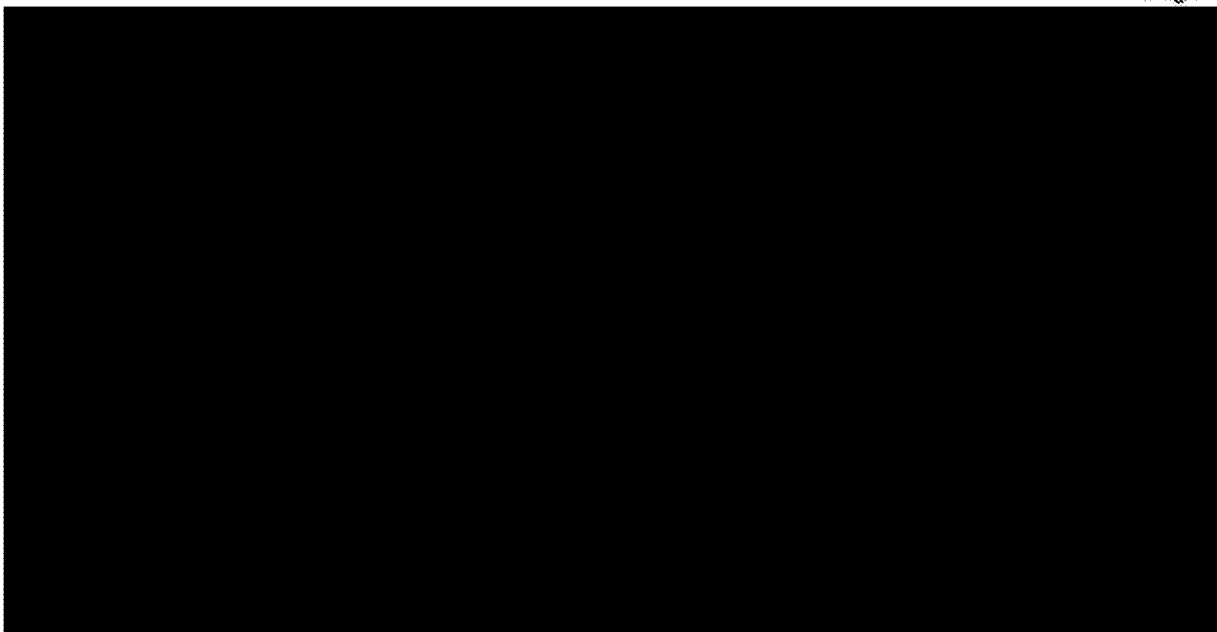
Service Agreement

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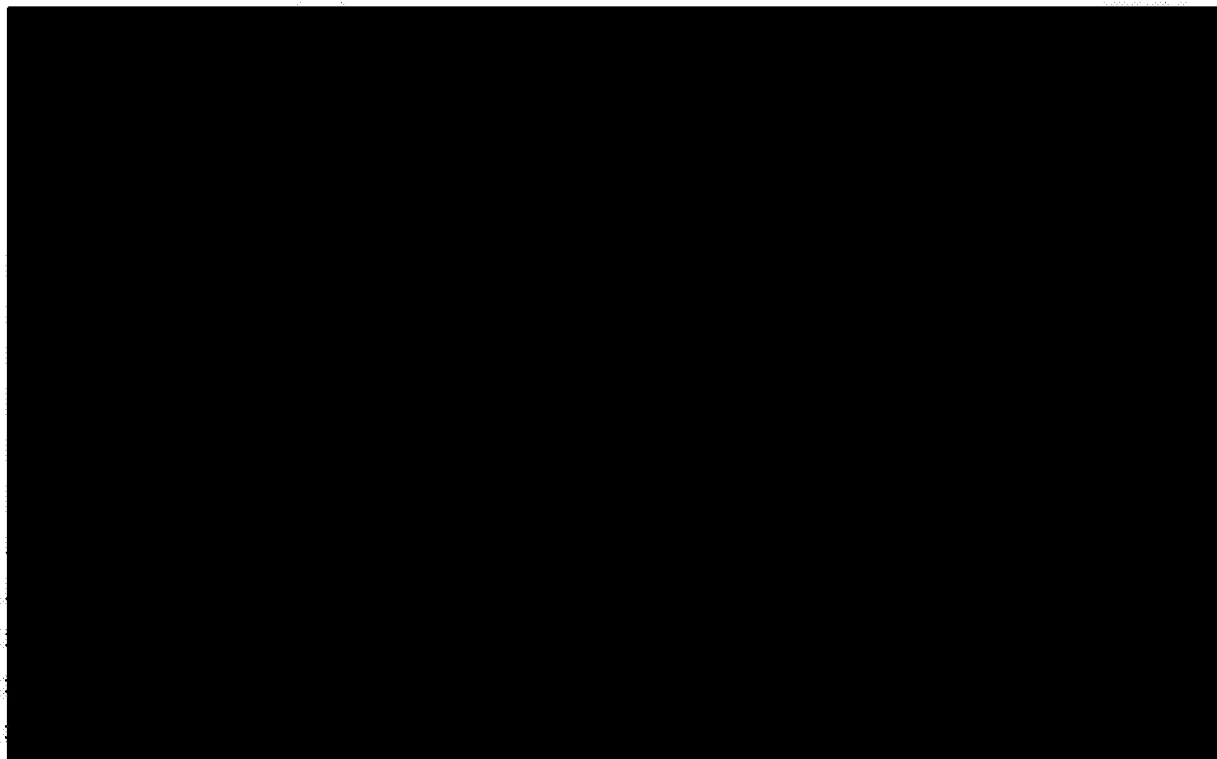
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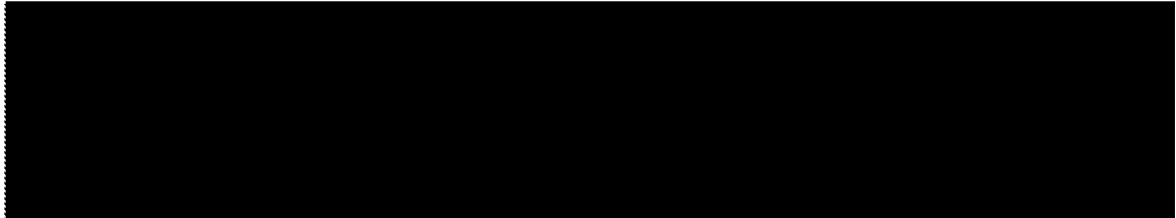
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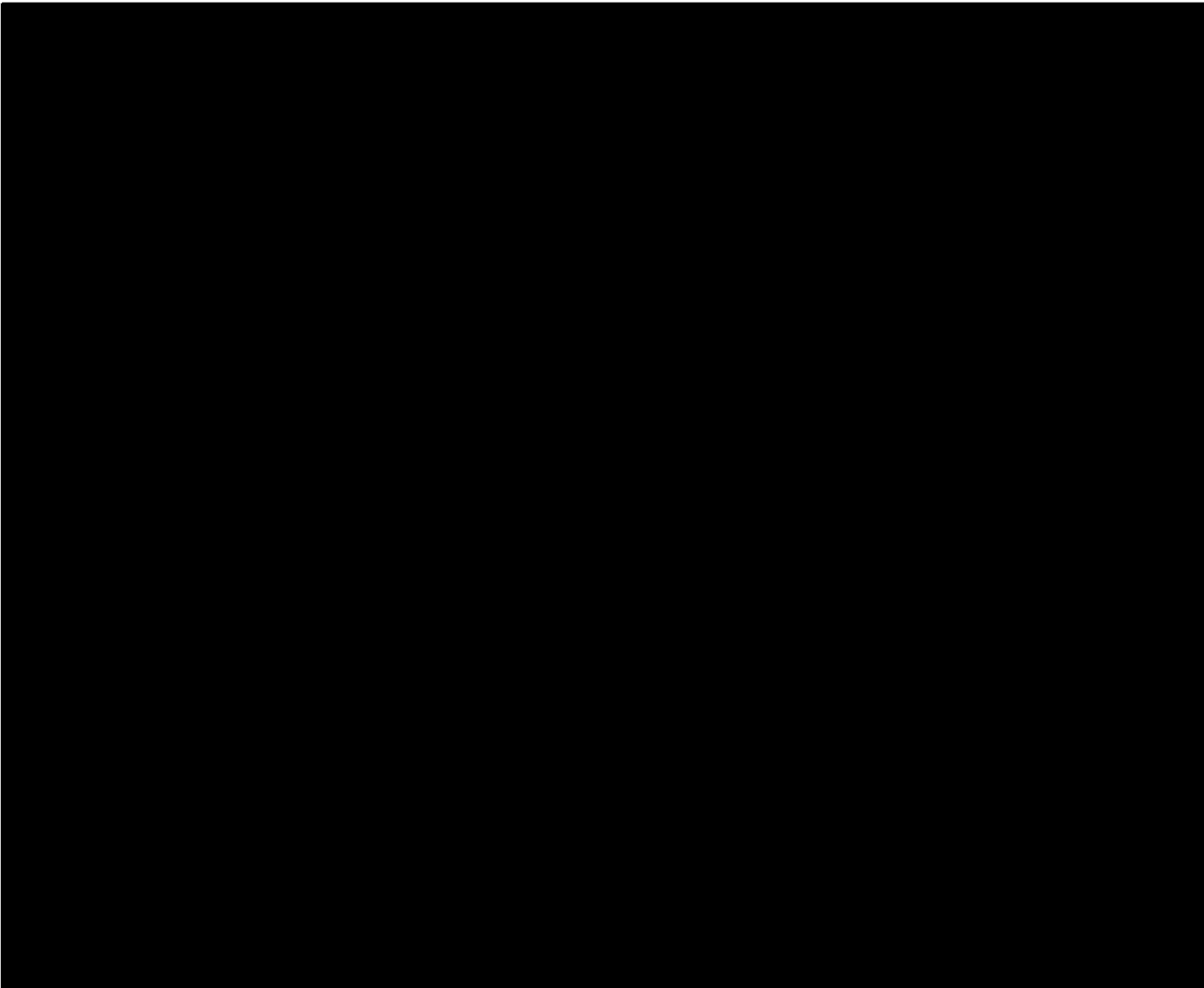
14. Intellectual Property 7



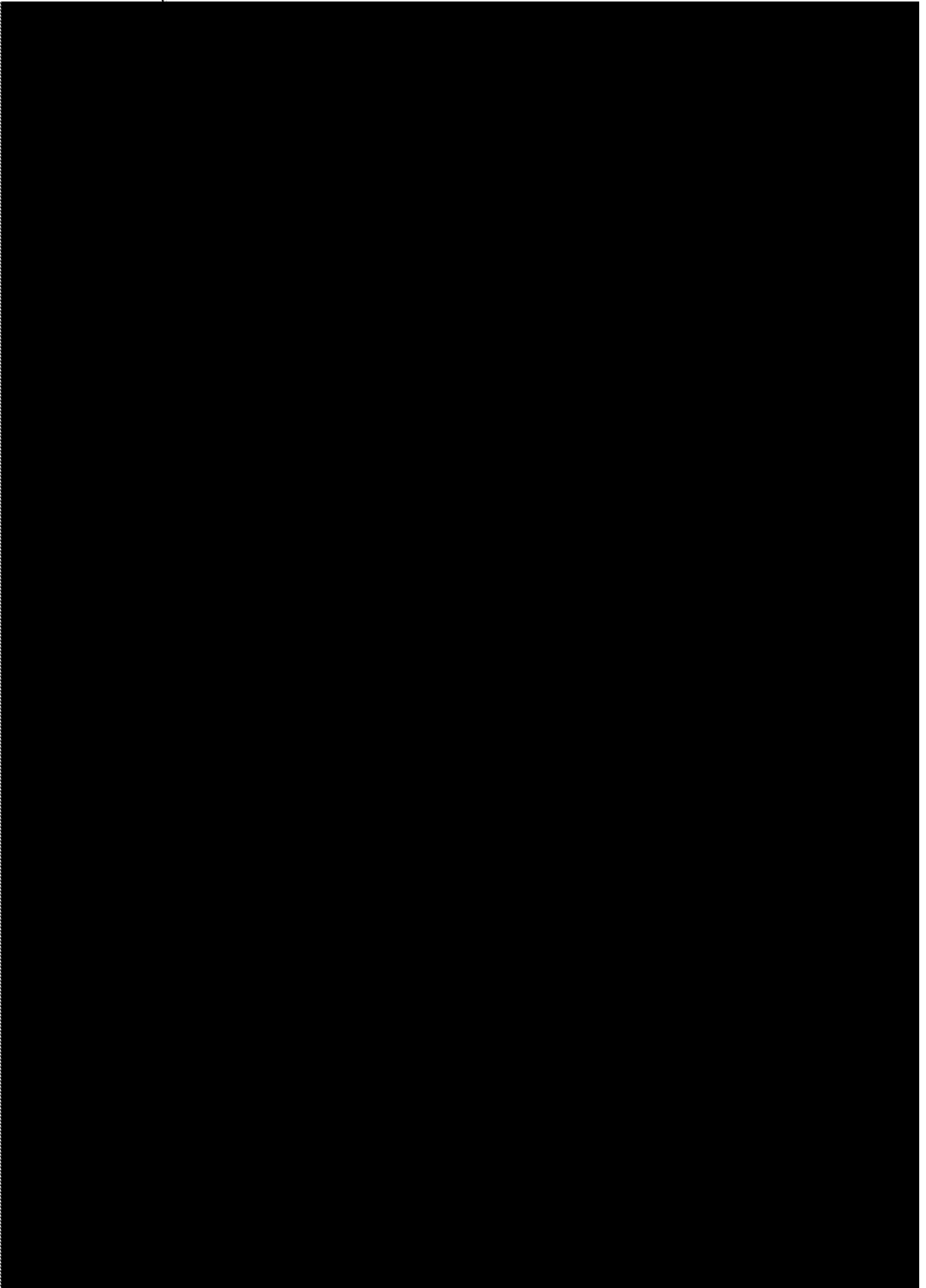


Intellectual Property Rights: patents, rights to inventions, copyright and related rights, trademarks, trade names and domain names, rights in get-up, rights in goodwill or to sue for passing off, unfair competition rights, rights in designs, rights in computer software, database rights, topography rights, rights in confidential information (including know-how and trade secrets) and any other intellectual property rights, in each case whether registered or unregistered and including all applications (or rights to apply) for, and renewals or extensions of, such rights and all similar or equivalent rights or forms of protection which subsist or will subsist now or in the future in any part of the world.

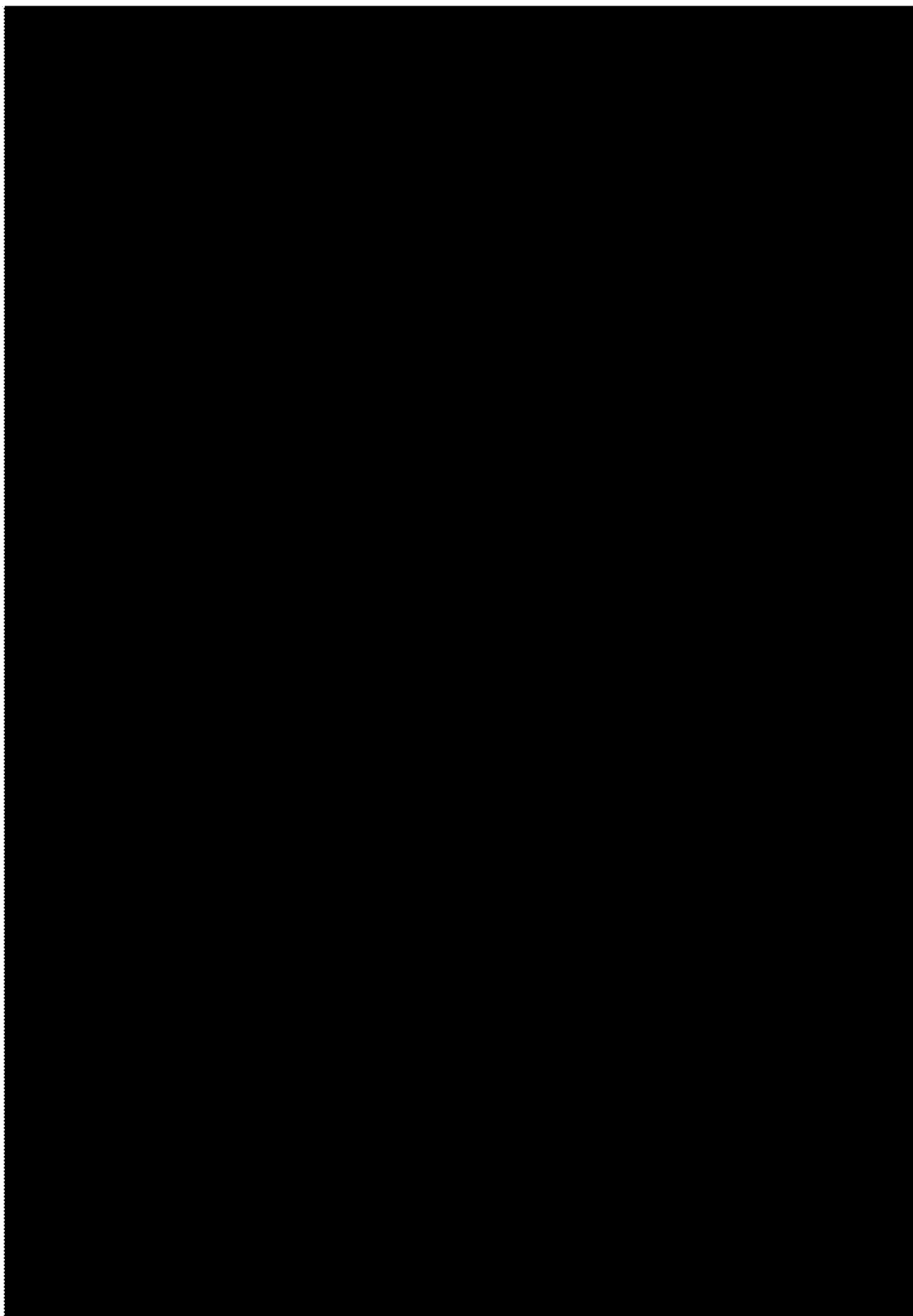
Invention: any invention, idea, discovery, development, improvement or innovation, whether or not patentable or capable of registration, and whether or not recorded in any medium.



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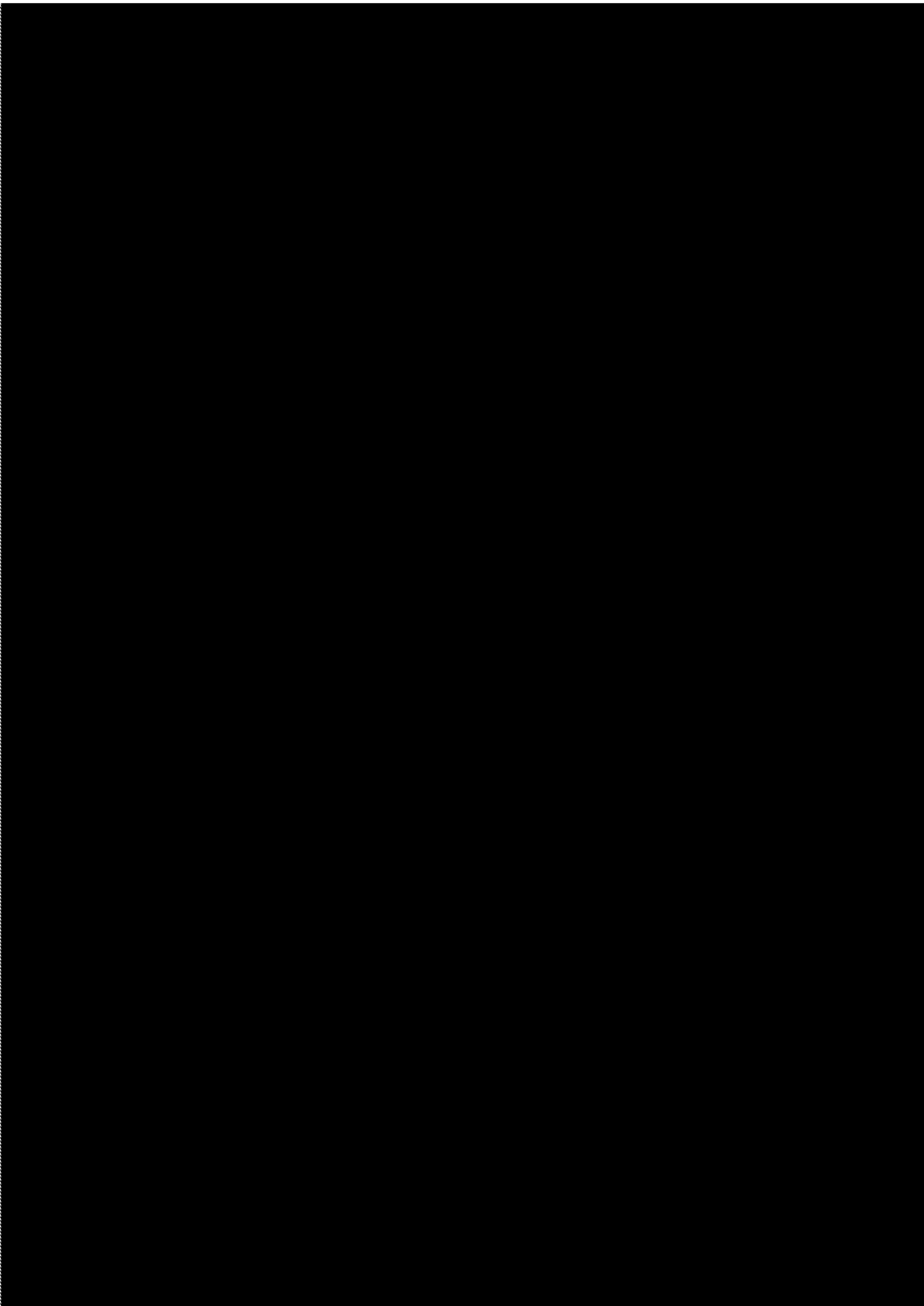


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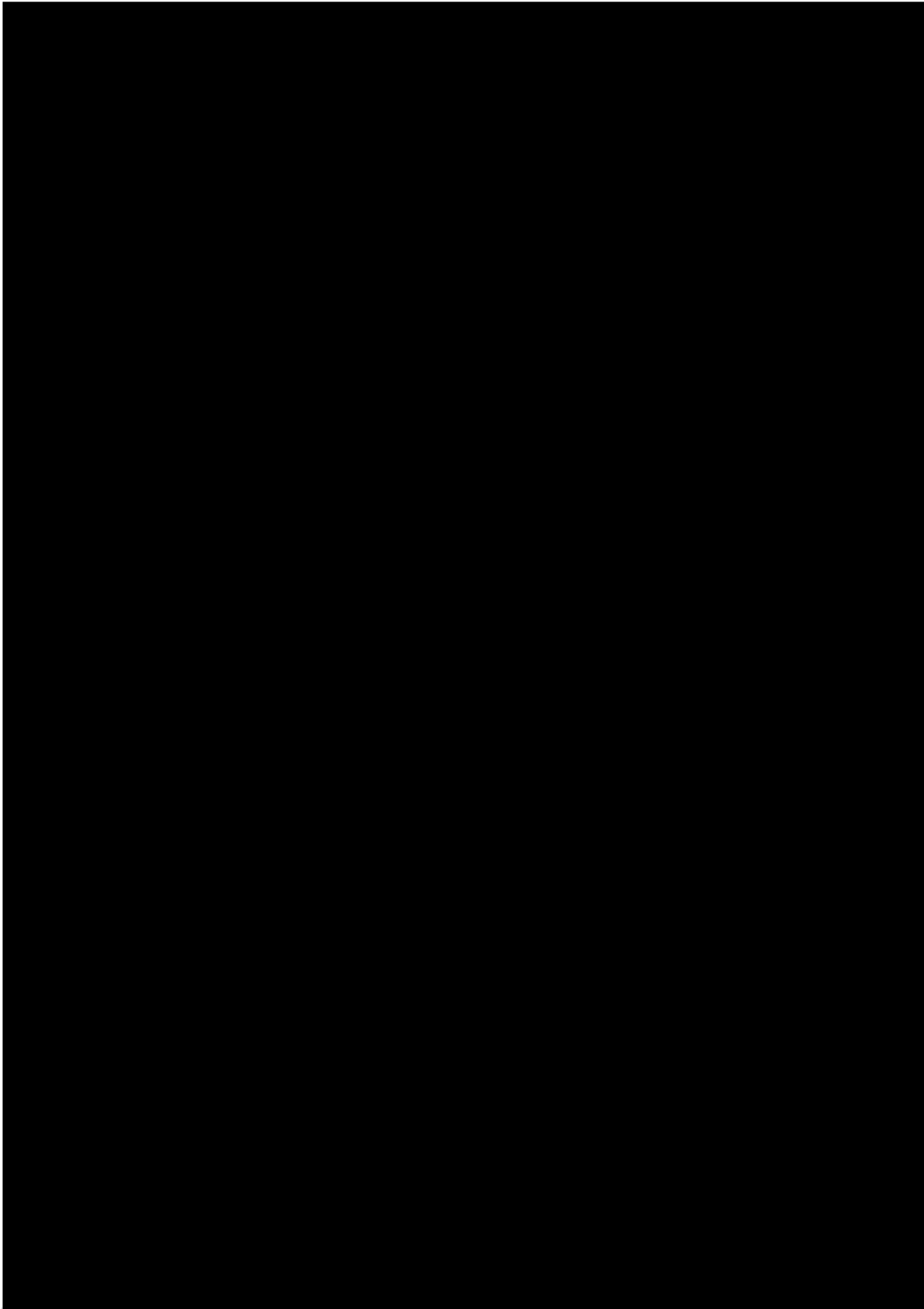
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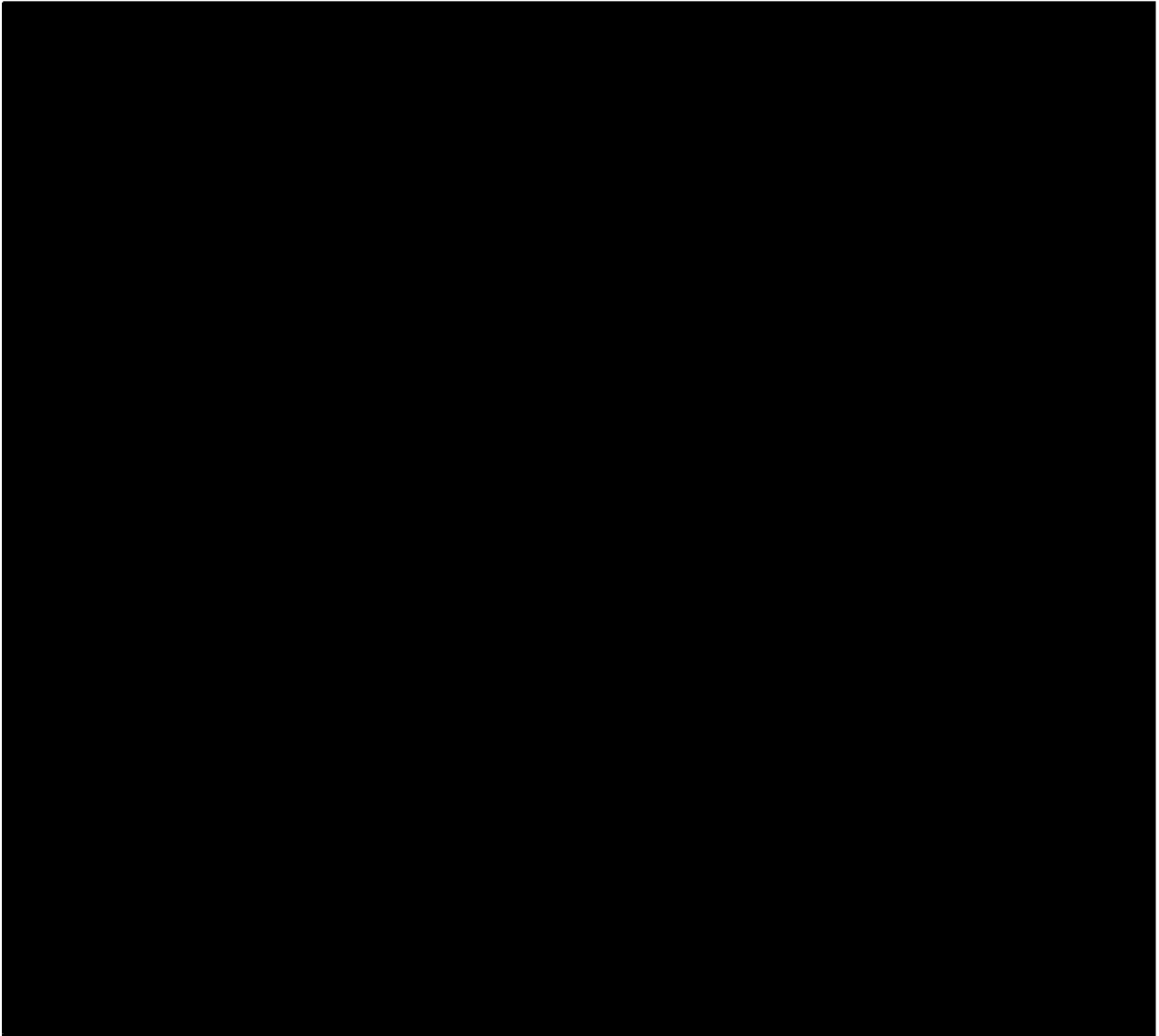


14 **Intellectual Property**

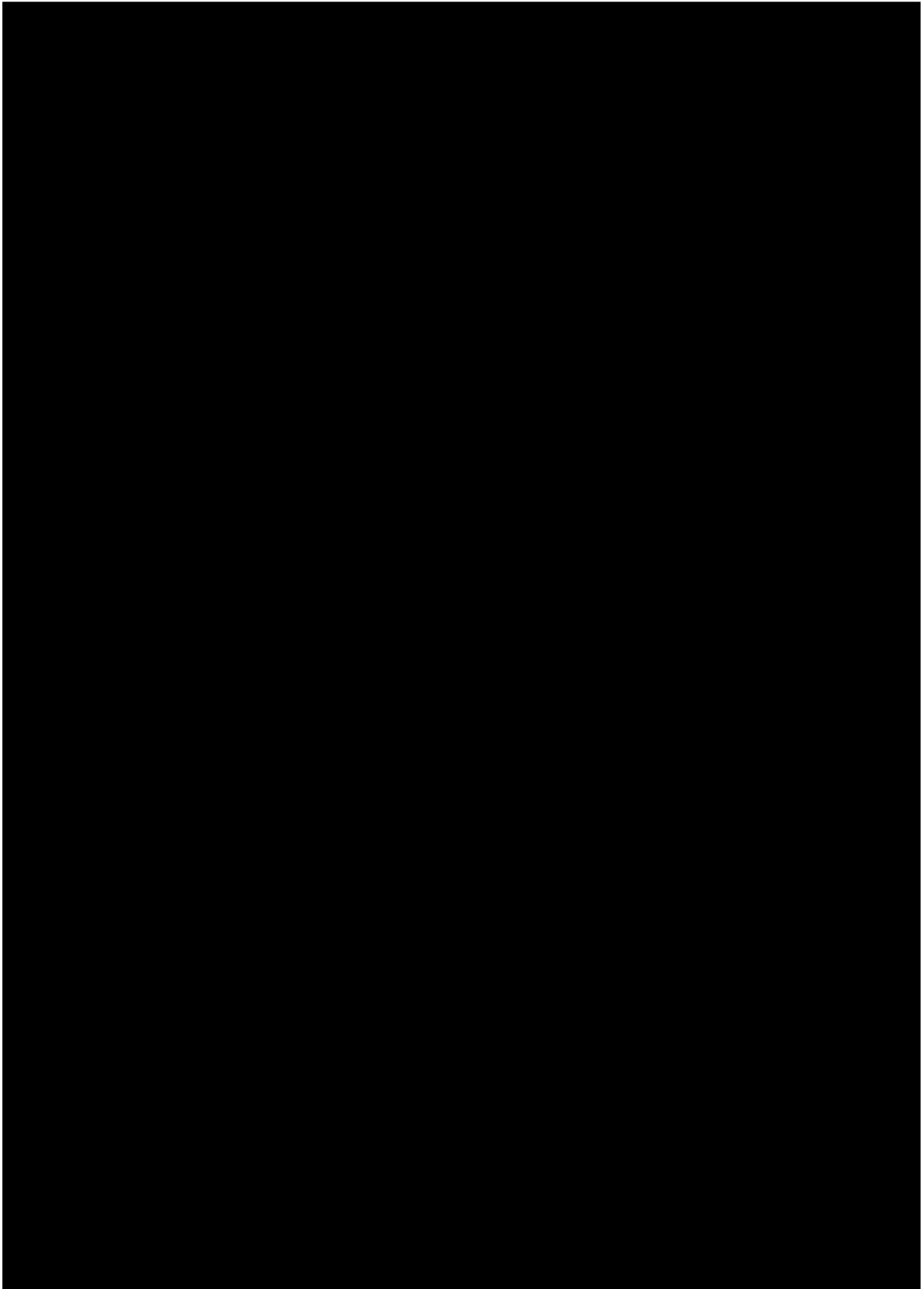
- 14.1 The Employee shall give the Company full written details of all Inventions and of all works embodying Intellectual Property Rights made wholly or partially by them at any time during the course of the Appointment which relate to, or are reasonably capable of being used in, the business of the Company or any Group Company. The Employee acknowledges that all Intellectual Property Rights subsisting (or which may in the future subsist) in all such Inventions and works shall automatically, on creation, vest in the Company absolutely. To the extent that they do not vest automatically, the Employee holds them on trust for the Company. The Employee agrees promptly to execute all

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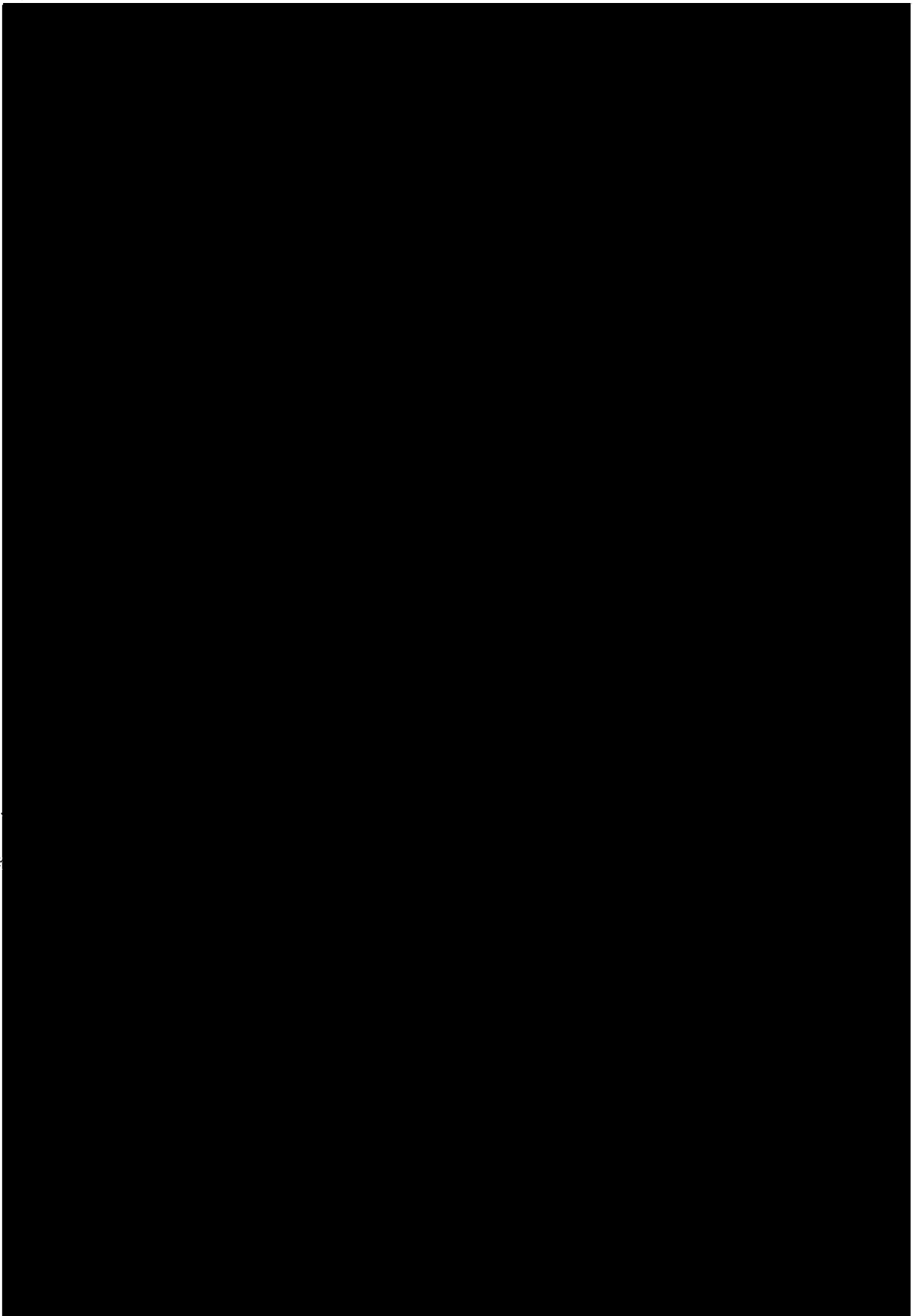
documents and do all acts as may, in the opinion of the Company, be necessary to give effect to this clause 14.1 at the Company's expense.

- 14.2 The Employee hereby irrevocably waives all moral rights under the Copyright, Designs and Patents Act 1988 (and all similar rights in other jurisdictions) which they have or will have in any existing or future works referred to in clause 14.1.
- 14.3 The Employee hereby irrevocably appoints the Company to be their attorney to execute and do any such instrument or thing and generally to use their name for the purpose of giving the Company or its nominee the benefit of this clause 14 and acknowledges in favour of a third party that a certificate in writing signed by any Director or the Secretary of the Company that any instrument or act falls within the authority conferred by this clause 14 shall be conclusive evidence that such is the case.
- 

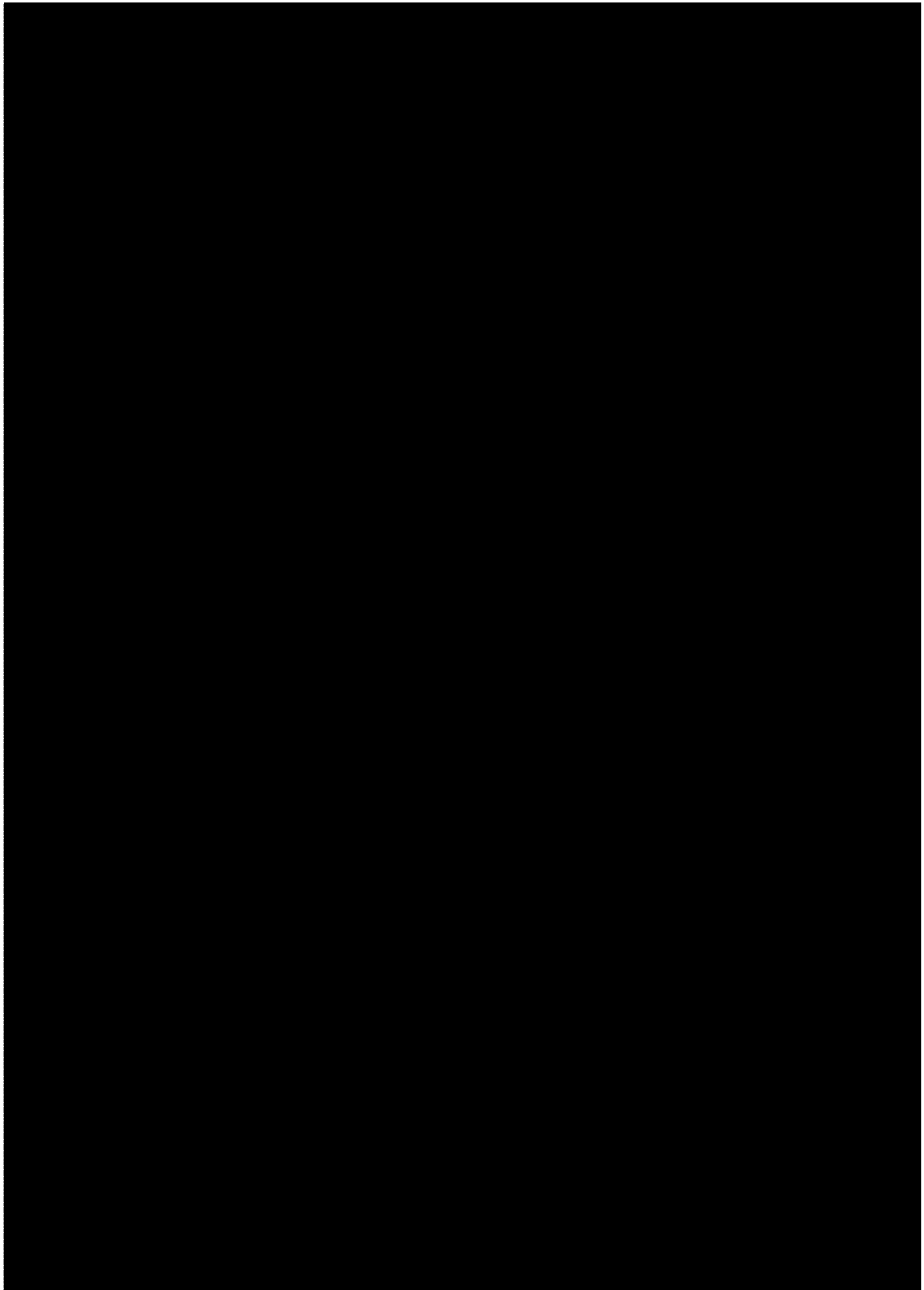
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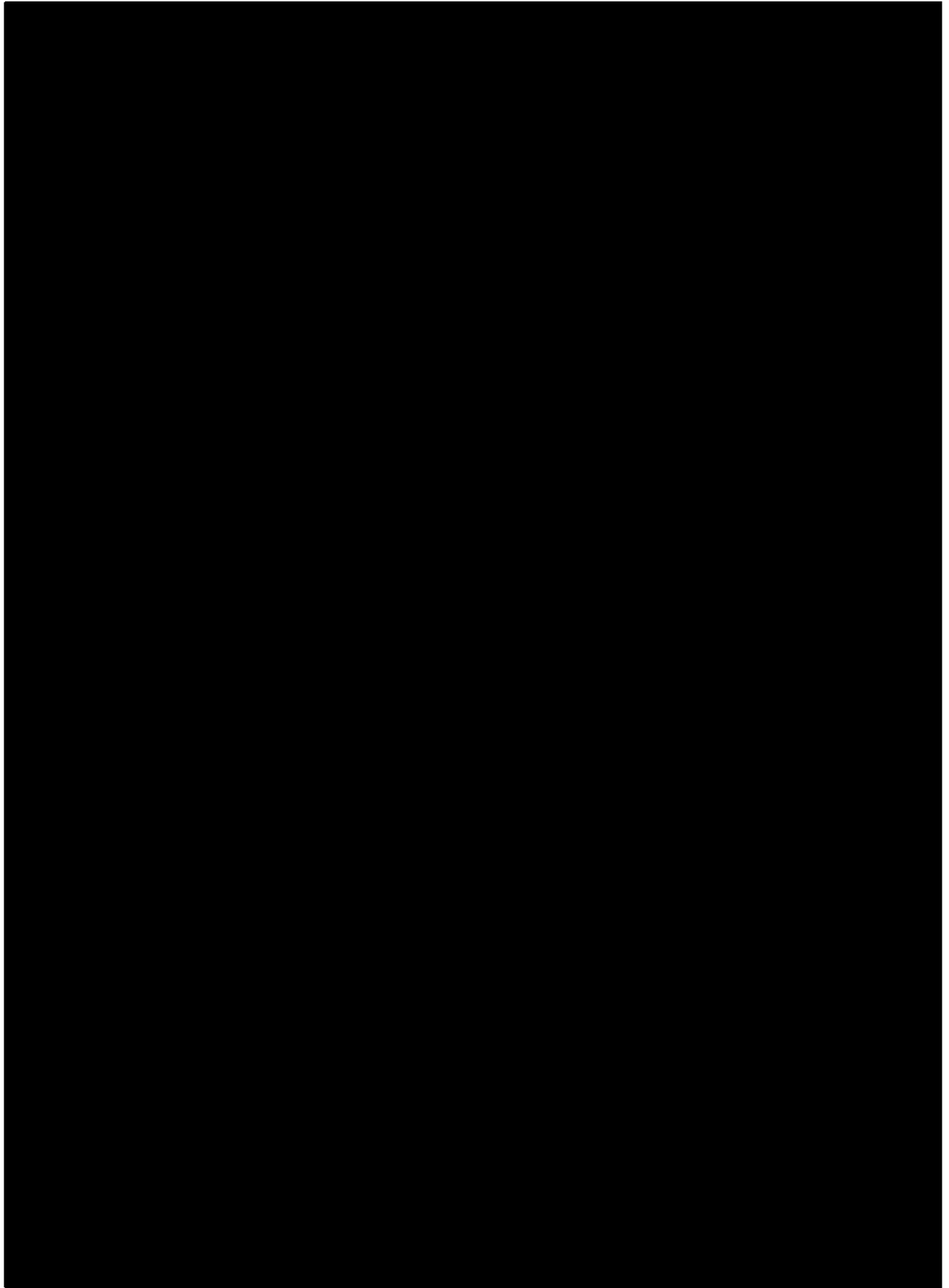
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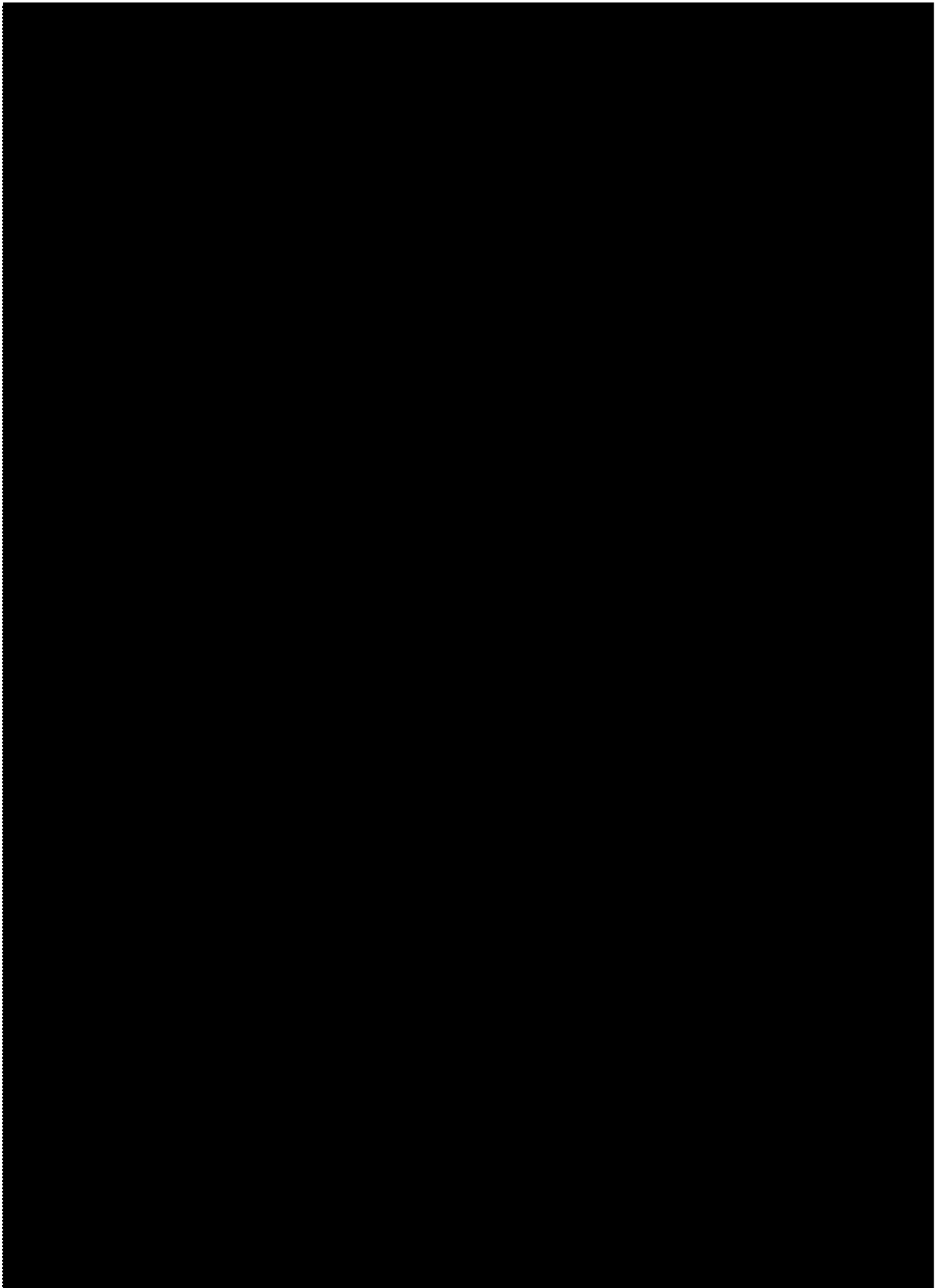
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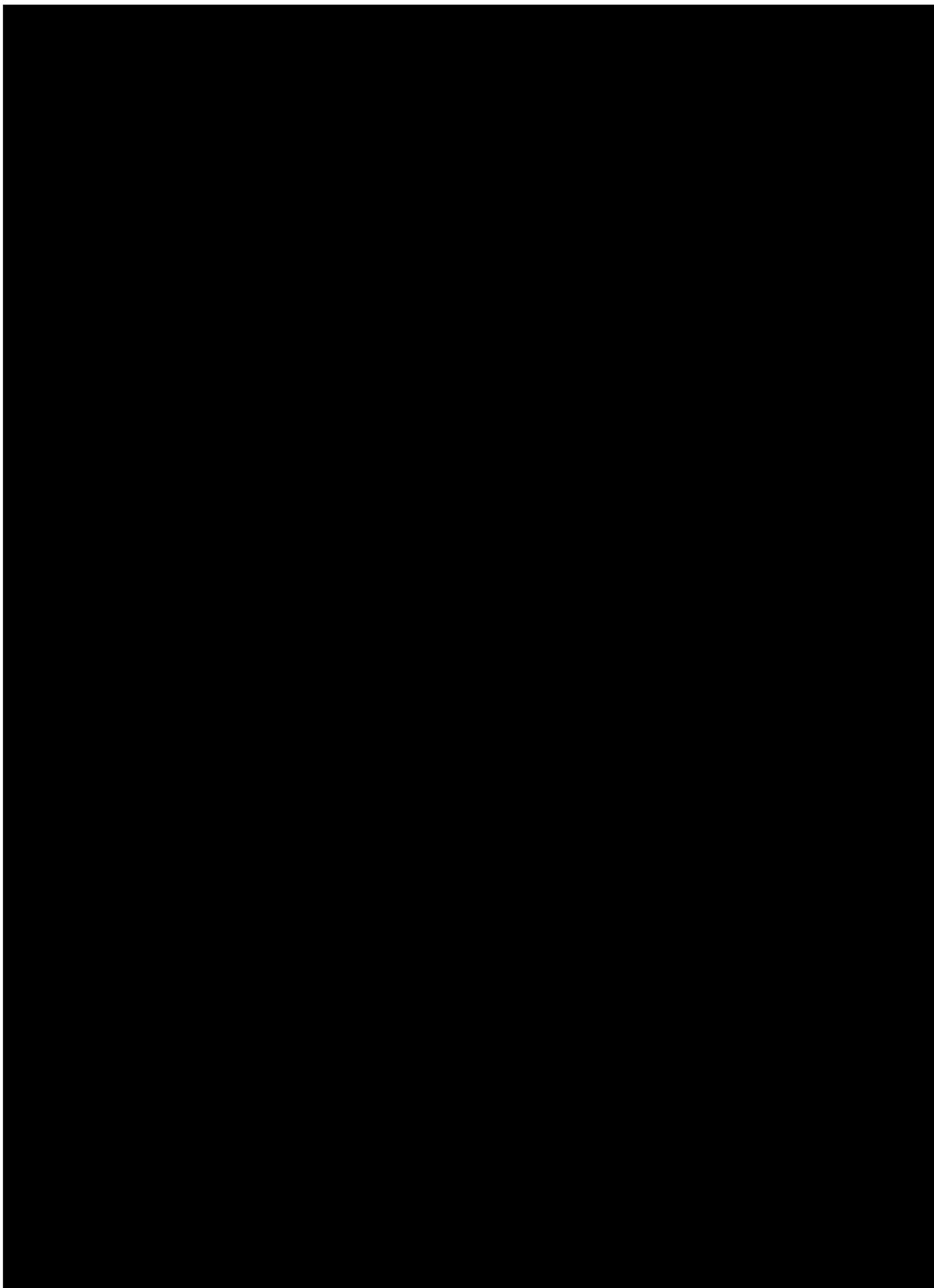
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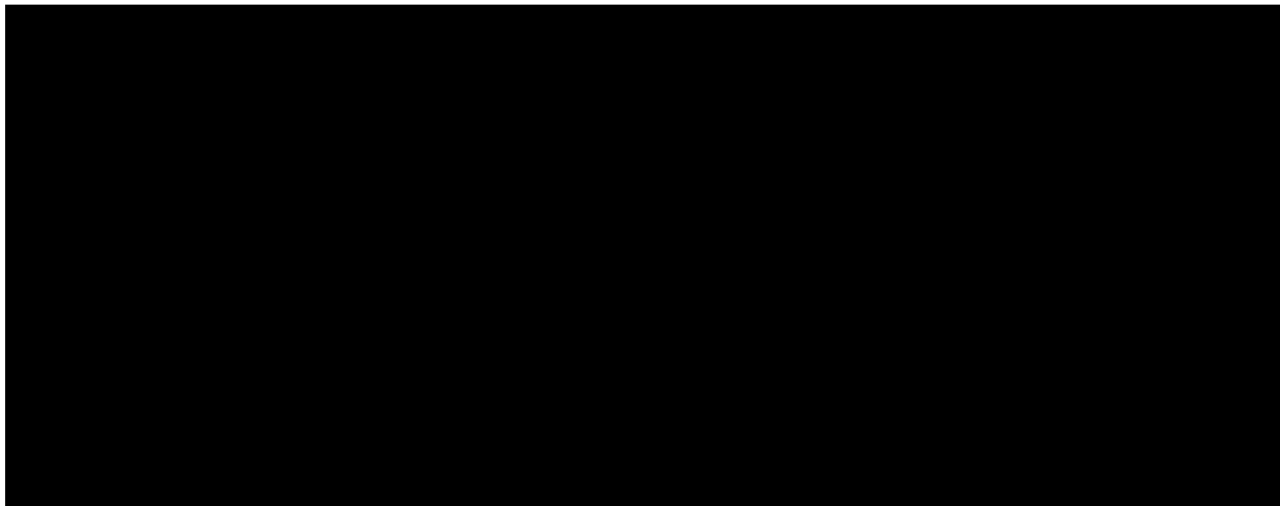
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This document has been executed as a deed and is delivered and takes effect on the date stated at the beginning of it.

Executed as a deed by 4D PHARMA
RESEARCH LIMITED by A. STEVENSON
a Director, in the presence of:

Director

[SIGNATURE OF WITNESS]

NAME GAIL ENCE ROSE

ADDRESS 60 FAIRFIELD AVENUE

KNABESSBOROUGH

HG5 8AT

OCCUPATION SOLICITOR

Signed as a deed by Parthena Fotiadou

in the presence of:

Lisa Watson

[SIGNATURE OF WITNESS]

NAME LISA WATSON

ADDRESS 4 LOIRSTON AVENUE

COVE BAY, ABERDEEN

AB12 3HE


OCCUPATION Office and HR Administrator

PATENT ASSIGNMENT				Docket Number 56708-738.301								
<p>The undersigned:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%; vertical-align: top; padding: 5px;"> <p>1. Imke Elisabeth MULDER c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p> </td> <td style="width: 25%; vertical-align: top; padding: 5px;"> <p>2. Parthena FOTIADOU c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p> </td> <td style="width: 25%; vertical-align: top; padding: 5px;"> <p>3. Amy Beth HOLT c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p> </td> <td style="width: 25%; vertical-align: top; padding: 5px;"> <p>4. Suaad AHMED c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p> </td> </tr> <tr> <td style="vertical-align: top; padding: 5px;"> <p>5. Anna ETTORE c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p> </td> <td style="vertical-align: top; padding: 5px;"> <p>6. Samantha YUILLE 27 Auchmill Terrace Bucksburn Aberdeen, UK AB21 9LF</p> </td> <td style="vertical-align: top; padding: 5px;"> <p>7. Ted DINAN Merton, French's Walk Cobb, IE</p> </td> <td style="vertical-align: top; padding: 5px;"> <p>8. John CRYAN Sunday's Well Cork, IE</p> </td> </tr> </table>					<p>1. Imke Elisabeth MULDER c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p>	<p>2. Parthena FOTIADOU c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p>	<p>3. Amy Beth HOLT c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p>	<p>4. Suaad AHMED c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p>	<p>5. Anna ETTORE c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p>	<p>6. Samantha YUILLE 27 Auchmill Terrace Bucksburn Aberdeen, UK AB21 9LF</p>	<p>7. Ted DINAN Merton, French's Walk Cobb, IE</p>	<p>8. John CRYAN Sunday's Well Cork, IE</p>
<p>1. Imke Elisabeth MULDER c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p>	<p>2. Parthena FOTIADOU c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p>	<p>3. Amy Beth HOLT c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p>	<p>4. Suaad AHMED c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p>									
<p>5. Anna ETTORE c/o 4D Pharma Research Limited Life Sciences Innovation Building Cornhill Road Aberdeen, UK AB25 2ZS</p>	<p>6. Samantha YUILLE 27 Auchmill Terrace Bucksburn Aberdeen, UK AB21 9LF</p>	<p>7. Ted DINAN Merton, French's Walk Cobb, IE</p>	<p>8. John CRYAN Sunday's Well Cork, IE</p>									
<p>(the "Inventor(s)"), desire to assign the entire right, title and interest in and to the Inventions and Assigned Patents (each, as defined below) to 4D Pharma Research Limited, a company formed under the laws of the Country of Great Britain, having a place of business at Life Sciences Innovation Building, Cornhill Road, Aberdeen, GB AB25 2ZS, (the "Assignee"), and Assignee desires to acquire such right, title and interest, all on the terms and conditions set forth in this Patent Assignment.</p> <p>NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Inventor(s) to have been received in full from said Assignee:</p> <p>1. Said Inventor(s) have invented certain new and useful inventions and improvements disclosed in the following patent(s) and patent application(s):</p> <p style="text-align: center;">COMPOSITIONS COMPRISING BACTERIAL STRAINS</p> <p>• for which application serial number <u>17/013,026</u> was filed on <u>September 4, 2020</u> in the United States Patent and Trademark Office</p> <p>(the "Listed Patent(s)"). As used herein: "Assigned Patents" means (a) the Listed Patent(s), (b) all Patents that share priority with or claim priority to or from the Listed Patent(s), including each and every Patent that is a divisional, substitution, continuation, continuation-in-part, non-provisional, or national phase application of any of the Listed Patent(s), (c) all Patents applied for on an invention disclosed within the Patents included in foregoing subclauses (a)-(b), (d) each and every Patent granting, issuing or reissuing from any of the foregoing under subclauses (a)-(c), (e) each and every reissue, reexamination, renewal or extension of any kind of any of the foregoing under subclauses (a)-(d), and (f) each and every Patent filed outside the United States and corresponding to any of the foregoing under subclauses (a)-(c). "Patents" means (i) patents, certifications of inventions, inventor's certificates and other forms of protection granted on any invention in the United States, foreign countries, or under any international convention, agreement, protocol, or treaty, including those filed under the Paris Convention for the Protection of Industrial Property, The Patent Cooperation Treaty or otherwise, and (ii) applications therefor (whether provisional, converted provisional, utility, design, plant, utility model, non-provisional or otherwise).</p> <p>2. Said Inventor(s) do hereby sell, assign, transfer and convey unto said Assignee the entire right, title and interest (a) in and to the Assigned Patents, including the right to claim priority to and from said Assigned Patents; (b) in and to the inventions disclosed in the Assigned Patents; and in and to all embodiments of the inventions, heretofore conceived, made or discovered, whether jointly or severally, by said Inventor(s) (the "Inventions") and (c) in and to all claims for past, present and future infringement of the Assigned Patents, including all rights to sue for and to receive and recover for Assignee's own use all past, present, and future lost profits, royalties, and damages of whatever nature recoverable from an infringement of the Assigned Patents.</p> <p>3. Said Inventor(s) hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest herein conveyed in the United States, foreign countries, or under any international convention, agreement, protocol, or treaty. Such cooperation by said Inventor(s) shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for filing, prosecuting or maintaining any of the Assigned Patents; (c) for filing, prosecuting or maintaining applications for reissue of any said Assigned Patents; (d) for interference or other priority proceedings involving said Assigned Patents or Inventions; and (e) for legal proceedings involving said Inventions or Assigned Patents, including without limitation reissues and reexaminations, IPRs, opposition and other post-grant proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions, provided, however, that reasonable expenses incurred by said Inventor(s) in providing such cooperation shall be paid for by said Assignee.</p> <p>4. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventor(s), their respective heirs, legal representatives and assigns.</p> <p>5. Said Inventor(s) hereby warrant, represent and covenant that said Inventor(s) have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.</p> <p>6. Said Inventor(s) hereby request that any Assigned Patents issuing or granting in the United States, foreign countries, or under any international convention, agreement, protocol, or treaty, be issued or granted in the name of the Assignee, or its successors and assigns, for the sole use of said Assignee, its successors, legal representatives and assigns.</p> <p>7. This instrument will be interpreted and construed in accordance with the laws of Great Britain, without regard to conflict of law principles. If any provision of this instrument is found to be illegal or unenforceable, the other provisions shall remain effective and enforceable to the greatest extent permitted by law. This instrument may be executed in counterparts, each of which is deemed an original, but all of which together constitute one and the same agreement.</p>												

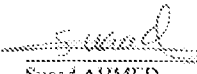
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PATENT ASSIGNMENT		Docket Number 56703-738.301
IN WITNESS WHEREOF, said Inventor(s) have executed and delivered this instrument to said Assignee as of the dates written below:		
Date: _____ Inke Elisabeth MULDER	Date: _____ Parthena FOTIADOU	
Date: _____ Amy Beth HOLT	Date: _____ Susad AHMED	
Date: _____ Anna ETORRE	Date: _____ Samantha YLILLE	
Date: _____ Ted DINAN	Date: 4 MARCH 2021 John CRYAN	
RECEIVED AND AGREED TO BY ASSIGNEE: 4D Pharma Research Limited		
Date: _____	Signature: _____ Name: _____ Title: _____	


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PATENT ASSIGNMENT		Docket Number 56708-728.301
IN WITNESS WHEREOF, said Inventor(s) have executed and delivered this instrument to said Assignee as of the dates written below:		
Date: _____ Imke Elisabeth MULDER	Date: _____ Parthena FOTIADOU	
Date: _____ Amy Beth HOLT	Date: _____ Suaad AHMED	
Date: _____ Anna ETTORE	Date: ^{15 Feb 2021} 15/2/21  Samantha YUILE	
Date: _____ Ted DINAN	Date: _____ John CRYAN	
RECEIVED AND AGREED TO BY ASSIGNEE: 4D Pharma Research Limited		
Date: _____	Signature: _____ Name: _____ Title: _____	

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PATENT ASSIGNMENT		Docket Number 56708-738.301	
IN WITNESS WHEREOF, said Inventor(s) have executed and delivered this instrument to said Assignee as of the dates written below:			
Date:	Imke Elisabeth MULDER	Date:	Parthena FOTIADOU
Date:	Amy Beth HOLF	Date: 18/02/2021	 Sanaad AHMED
Date:	Anna ETTORRE	Date:	Samantha YUILLE
Date:	Ted DINAN	Date:	John CRYAN
RECEIVED AND AGREED TO BY ASSIGNEE: 4D Pharma Research Limited			
Date:	Signature: Name: Title:		

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PATENT ASSIGNMENT		Docket Number 56708-738.301	
IN WITNESS WHEREOF, said Inventor(s) have executed and delivered this instrument to said Assignee as of the dates written below:			
Date: _____	<u>Imke Elisabeth MULDER</u>	Date: _____	<u>Parthena POTIADOU</u>
Date: _____	<u>Amy Beth HOLT</u>	Date: _____	<u>Suzad AHMED</u>
Date: _____	<u>Anna ETTORRE</u>	Date: _____	<u>Samantha YUILLE</u>
Date: <u>2/3/22</u>	 <u>Ted DINAN</u>	Date: _____	<u>John CRYAN</u>
RECEIVED AND AGREED TO BY ASSIGNEE: 4D Pharma Research Limited			
Date: _____	Signature: _____ Name: _____ Title: _____		

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PATENT ASSIGNMENT		Docket Number 56708-738.301	
IN WITNESS WHEREOF, said Inventor(s) have executed and delivered this instrument to said Assignee as of the dates written below:			
Date: _____	Inke Elisabeth MULDER	Date: _____	Parthena FOTIADOU
Date: _____	Amy Beth HOLT	Date: _____	Saad AHMED
Date: <u>13 Feb 21</u>	<u>Anne Ettorre</u> Anna ETTORRE	Date: _____	Samantha VUILLE
Date: _____	Ted DINAN	Date: _____	John CRYAN
RECEIVED AND AGREED TO BY ASSIGNEE: 4D Pharma Research Limited			
Date: _____	Signature: _____ Name: _____ Title: _____		

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PATENT ASSIGNMENT		Docket Number 56708-738,301	
IN WITNESS WHEREOF, said Inventor(s) have executed and delivered this instrument to said Assignee as of the dates written below:			
Date: <u>20th Feb</u> <u>2021</u>	<u>Imke Elisabeth MULDER</u>	Date: _____	<u>Parthena FOTIADOU</u>
Date: _____	<u>Amy Beth HOLT</u>	Date: _____	<u>Saad AHMED</u>
Date: _____	<u>Anna ETTORRE</u>	Date: _____	<u>Samantha YUILLE</u>
Date: _____	<u>Ted DINAN</u>	Date: _____	<u>John CRYAN</u>
RECEIVED AND AGREED TO BY ASSIGNEE: 4D Pharma Research Limited			
Date: _____	Signature: _____ Name: _____ Title: _____		

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PATENT ASSIGNMENT		Contract Number 18728-228-281	
IN WITNESS WHEREOF, said Inventor(s) have executed and delivered this instrument to said Assignee as of the date written below.			
Date	John STEADMAN	Date	Patricia FOTIAIDOU
Date 5/13/2021	John STEADMAN	Date	Patricia FOTIAIDOU
Date	Anna LITVIN	Date	Gregory YUJUE
Date	John STEADMAN	Date	John CRYAN
RECEIVED AND AGREED TO BY ASSIGNEE: AD Pharms Research Limited			
Date 10/25/2022	Signature: [Signature]	Name: MICHAEL STEVENSON	
	Title: DIRECTOR		