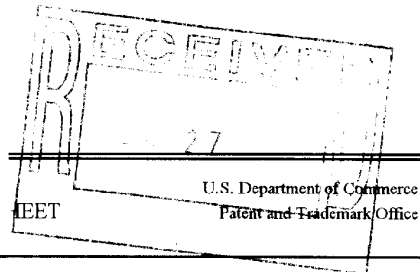


7-27-98

08-03-1998

Form PTO-1595
6-93

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To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

YANG, Shuwei
SOLUS, Joseph
CHATTERJEE, Deb K.

2. Name and address of receiving party(ies):

Name: Life Technologies, Inc.

Street Address: 9800 Medical Center Drive

City: Rockville State: Maryland Zip Code: 20850

Country: USA

Additional name(s) & address(es) attached? ☐ yes ☒ noAdditional name(s) of conveying party(ies) attached? ☐ yes ☒ no

3. Nature of Conveyance:

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other _____

Execution Date(s): May 13, 1998; July 23, 1998; and
May 13, 1998

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is

A. Patent Application No(s): 09/019,160

B. Patent No(s).

Additional numbers attached? ☐ yes ☒ no

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Sterne, Kessler, Goldstein & Fox P.L.L.C.

Internal Address:

Street Address: 1100 New York Ave., N.W.
Suite 600

City: Washington State: D.C. Zip Code: 20005-3934

6. Total number of applications and patents involved

1

7. Total fee (37 C.F.R. § 3.41).....\$ 40.00

☒ Enclosed☐ Authorized to be charged to Deposit Account

8. Deposit Account Number: 19-0036

07/29/1998 SMITH 00000100 09019160

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9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Brian J. Del Buono

Name of Person Signing

Registration No. P-42,473

Signature

Date

July 27, 1998

Total number of pages including cover sheet, attachments and document 2

OMB NO. 0651-0011 (exp. 4/94)

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents and Trademarks, Box Assignments
Washington, D.C. 20231

ASSIGNMENT

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned: Shuwei YANG, Joseph SOLUS and Deb K. CHATTERJEE, the undersigned heretly sell(s) and assign(s) to Life Technologies, Inc. (the Assignee) his/her entire right, title and interest

check applicable box(es) ☒ for the United States of America (as defined in 35 U.S.C. § 100),
☒ and throughout the world,

in the invention(s) known as Polymerases for Analyzing or Typing Polymorphic Nucleic Acid Fragments and Uses Thereof for which application(s) for patent in the United States of America has (have) been executed by the undersigned on July 23, 1998, July 23, 1998, May 13, 1998 (also known as United States Application No. 09/019,160, filed February 6, 1998), in any and all applications thereon, in any and all Letters Patent(s) therefor, and in any and all reissues, extensions, renewals, reexaminations of such applications or Letters Patent(s) and divisional and continuation applications thereof, to the full end of the term or terms for which such Letters Patent(s) issue, including the right to collect for all past, present and future damages, such entire right, title and interest to be held and enjoyed by the above-named Assignee to the same extent as they would have been held and enjoyed by the undersigned had this assignment and sale not been made.

The undersigned agree(s) to execute all papers necessary in connection with the application(s) and any continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference that may be declared concerning the application(s) or any continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

The undersigned hereby represents that the undersigned has full right to convey the entire interest herein assigned, and that the undersigned has not executed, and will not execute, any agreement in conflict therewith.

The undersigned hereby grant(s) Robert Greene Sterne, Esquire, Registration No. 28,912; Edward J. Kessler, Esquire, Registration No. 25,688; Jorge A. Goldstein, Esquire, Registration No. 29,021; Samuel L. Fox, Esquire, Registration No. 30,353; David K. S. Cornwell, Esquire, Registration No. 31,944; Robert W. Esmond, Esquire, Registration No. 32,893; Tracy-Gene G. Durkin, Esquire, Registration No. 32,831; Michele A. Cimbala, Esquire, Registration No. 33,851; Michael B. Ray, Esquire, Registration No. 33,997; Robert E. Sokohl, Esquire, Registration No. 36,013; Eric K. Steffe, Esquire, Registration No. 36,688; and Michael Q. Lee, Esquire, Registration No. 35,239, of STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C., 1100 New York Avenue, N.W., Suite 600, Washington, D.C. 20005-3934, power to insert in this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, executed by the undersigned on the date(s) opposite their name(s).

Date: 5/13/98 Signature of Inventor: Shuwei YANG
Date: 23 July 98 Signature of Inventor: Joseph SOLUS
Date: 5/13/98 Signature of Inventor: Deb K. CHATTERJEE
Date: _____ Signature of Inventor: _____

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b style="font-size: 1.2em;">FEE TRANSMITTAL Patent fees are subject to annual revision on October 1. These are the fees effective October 1, 1997. Small Entity payments must be supported by a small entity statement, otherwise large entity fees must be paid. See Forms PTO/SB/09-12. See 37 C.F.R. §§ 1.27 and 1.28.		<b style="font-size: 1.2em;">Complete if Known	
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(\$) 40.00			

METHOD OF PAYMENT (check one)	FEE CALCULATION (continued)																																																																																																																																																																		
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unavoidable</td><td></td></tr> <tr><td>141</td><td>1,320</td><td>241</td><td>660</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>142</td><td>1,320</td><td>242</td><td>660</td><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>143</td><td>450</td><td>243</td><td>225</td><td>Design issue fee</td><td></td></tr> <tr><td>144</td><td>670</td><td>244</td><td>335</td><td>Plant issue fee</td><td></td></tr> <tr><td>122</td><td>130</td><td>122</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>123</td><td>50</td><td>123</td><td>50</td><td>Petitions related to provisional applications</td><td></td></tr> <tr><td>126</td><td>240</td><td>126</td><td>240</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>581</td><td>40</td><td>581</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td>40.00</td></tr> <tr><td>146</td><td>790</td><td>246</td><td>395</td><td>Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr> <tr><td>149</td><td>790</td><td>249</td><td>395</td><td>For each additional invention to be examined (37 CFR 1.129(b))</td><td></td></tr> </tbody> </table>	Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid	105	130	205	65	Surcharge - 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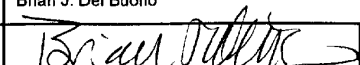
SUBMITTED BY				Complete (if applicable)	
Typed or Printed Name	Brian J. Del Buono			Reg. Number	P-42,473
Signature				Deposit Acct. User ID	
Date	JULY 27, 1998				

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

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FEE TRANSMITTAL		Complete if Known		
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		Filing Date	February 6, 1998	
		First Named Inventor	SOLUS	
		Examiner Name	(To be assigned)	
		Group / Art Unit	1643	
TOTAL AMOUNT OF PAYMENT	(\$)	40.00	Attorney Docket Number	0942.4250002/RWE/BJD

METHOD OF PAYMENT (check one)		FEE CALCULATION (continued)																																																																																																																																																																																																
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ADDITIONAL FEES</p> <p style="text-align: center; font-size: 2em; opacity: 0.5;">DUPLICATE</p> <table border="1"><thead><tr><th>Large Fee Code</th><th>Entity Fee (\$)</th><th>Small Fee Code</th><th>Entity Fee (\$)</th><th>Fee Description</th><th>Fee Paid</th></tr></thead><tbody><tr><td>105</td><td>130</td><td>205</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr><tr><td>127</td><td>50</td><td>227</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr><tr><td>139</td><td>130</td><td>139</td><td>130</td><td>Non-English specification</td><td></td></tr><tr><td>147</td><td>2,520</td><td>147</td><td>2,520</td><td>For filing a request for reexamination</td><td></td></tr><tr><td>112</td><td>920*</td><td>112</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr><tr><td>113</td><td>1,840*</td><td>113</td><td>1,840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr><tr><td>115</td><td>110</td><td>215</td><td>55</td><td>Extension for reply within first month</td><td></td></tr><tr><td>116</td><td>400</td><td>216</td><td>200</td><td>Extension for reply within second month</td><td></td></tr><tr><td>117</td><td>950</td><td>217</td><td>475</td><td>Extension for reply within third month</td><td></td></tr><tr><td>118</td><td>1,510</td><td>218</td><td>755</td><td>Extension for reply within fourth month</td><td></td></tr><tr><td>128</td><td>2,060</td><td>228</td><td>1,030</td><td>Extension for reply within fifth month</td><td></td></tr><tr><td>119</td><td>310</td><td>219</td><td>155</td><td>Notice of Appeal</td><td></td></tr><tr><td>120</td><td>310</td><td>220</td><td>155</td><td>Filing a brief in support of an appeal</td><td></td></tr><tr><td>121</td><td>270</td><td>221</td><td>135</td><td>Request for oral hearing</td><td></td></tr><tr><td>138</td><td>1,510</td><td>138</td><td>1,510</td><td>Petition to institute a public use proceeding</td><td></td></tr><tr><td>140</td><td>110</td><td>240</td><td>55</td><td>Petition to revive - unavoidable</td><td></td></tr><tr><td>141</td><td>1,320</td><td>241</td><td>660</td><td>Petition to revive - unintentional</td><td></td></tr><tr><td>142</td><td>1,320</td><td>242</td><td>660</td><td>Utility issue fee (or reissue)</td><td></td></tr><tr><td>143</td><td>450</td><td>243</td><td>225</td><td>Design issue fee</td><td></td></tr><tr><td>144</td><td>670</td><td>244</td><td>335</td><td>Plant issue fee</td><td></td></tr><tr><td>122</td><td>130</td><td>122</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr><tr><td>123</td><td>50</td><td>123</td><td>50</td><td>Petitions related to provisional applications</td><td></td></tr><tr><td>126</td><td>240</td><td>126</td><td>240</td><td>Submission of Information Disclosure Stmt</td><td></td></tr><tr><td>581</td><td>40</td><td>581</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td>40.00</td></tr><tr><td>146</td><td>790</td><td>246</td><td>395</td><td>Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr><tr><td>149</td><td>790</td><td>249</td><td>395</td><td>For each additional invention to be examined (37 CFR 1.129(b))</td><td></td></tr><tr><td colspan="6">Other fee (specify) :</td></tr><tr><td colspan="6">Other fee (specify) :</td></tr><tr><td colspan="6">*Reduced by Basic Filing Fee Paid</td></tr><tr><td colspan="6">SUBTOTAL (3) (\$)</td><td>40.00</td></tr></tbody></table>		Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid	105	130	205	65	Surcharge - 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<p>2. <input checked="" type="checkbox"/> Payment Enclosed: <input checked="" type="checkbox"/> Check No. _____</p> <p><input type="checkbox"/> Money Order <input checked="" type="checkbox"/> Other*</p> <p>*Charge any deficiencies or credit any overpayments in the fees or fee calculations of Parts 1, 2 and 3 below to Deposit Account No. 19-0036.</p>																																																																																																																																																																																																		
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SUBMITTED BY		Complete (if applicable)	
Typed or Printed Name	Brian J. Del Buono	Reg. Number	P-42,473
Signature		Date	JULY 27, 1998
		Deposit Acct. User ID	

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.**



STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

ATTORNEYS AT LAW

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**REGISTERED PATENT AGENTS

WRITER'S DIRECT NUMBER:

(202) 789-5525

INTERNET ADDRESS:

briand@skgf.com

July 27, 1998

The Honorable Commissioner
of Patents and Trademarks
Washington, D.C. 20231

Box Assignment

Re: U.S. Utility Patent Application
Appl. No. 09/019,160; Filed: February 6, 1998
For: **Polymerases for Analyzing or Typing Polymorphic Nucleic Acid
Fragments and Uses Thereof**
Inventors: SOLUS *et al.*
Our Ref: 0942.4250002/RWE/BJD

Sir:

Applicants submit the following documents for appropriate action by the U.S. Patent and Trademark Office:

1. Fee Transmittal Form (PTO/SB/17) (*in duplicate*);
2. Recordation Form Cover Sheet (Form PTO-1595);
3. Assignment to Life Technologies, Inc., official recordation and return of which is respectfully requested;
4. Our check no. 22405 for \$40.00 to cover recordation fee (37 C.F.R. § 1.21); and
5. One (1) return postcard.

PATENT
REEL: 9347 FRAME: 0150

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

The Honorable Commissioner
of Patents and Trademarks
July 27, 1998
Page 2

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

If extensions of time under 37 C.F.R. § 1.136 other than those otherwise provided for herewith are required to prevent abandonment of the present patent application, then such extensions of time are hereby petitioned, and any fees therefor are hereby authorized to be charged to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Brian J. Del Buono", with a large, sweeping flourish at the end.

Brian J. Del Buono
Agent for Applicants
Registration No. P-42,473

BJD:aaw

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