IMERCE 08-12-1998 RF mark Office Patent and ||QPgcket 692000300 nt Ref. 145 8-6.98 100791955 To the Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof Name of conveying party(ies): Name and address of receiving party(ies): Rich B. Meyer, Jr. and Howard B. Gamper, Jr. ■ Individual(s) ☐ Association Name: Epoch Pharmaceuticals, Inc. ☐ General Partnership ☐ Limited Partnership Internal Address: ☐ Corporation-State □ Other Street Address: 1725 220th Street SE #104 City: Bothell, State: Washington ZIP: 98021 Additional name(s) of conveying party(ies) attached? □ Yes ■No 3. Nature of conveyance: Additional name(s) & address(es) attached?

Yes
No ■ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Na ne ☐ Other: Execution Date: July 9, 1998 and July 15, 1998 4. Application number(s) or patent number(s): 09/074,626 If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No.(s) Patent No.(s) Additional numbers attached?

Yes

No Name and address of party to whom correspondence concerning Total number of applications and patents involved: 1 document should be mailed: Total fee (37 C.F.R. § 3.41): \$40.00 Sean M. Brennan Morrison & Foerster LLP Enclosed 755 Page Mill Road Authorized to be charged to deposit account, referencing Palo Alto, California 94304-1018 Attorney Docket 344692000300 8. Deposit account number: 03-1952 The Commissioner is hereby authorized to charge any fees under 37 C.F.R. § 1.21 that may be required by this paper, or to credit any overpayment to Deposit Account No. 03-1952. DO NOT USE THIS SPACE Statement and signature. To the best of my knowledge and belief, the foregoin; information is true and correct and any attached copy is a true copy of the original document. Name: Sean M. Brennan Registration No: 39,917 Date Total number of pages : omprising cover sheet, attachments and document: 2 Mail documents to be recorded with required cover sheet information to: U.S. Patent and Trademark Office

Office of Public Records Box Assignments Crystal Gateway 4, Room 335 Washington, D.C. 20231 JUATKINS

Attorney Docket No.: 344692000300

Client Ref. 145

ASSIGNMENT JOINT

THIS ASSIGNMENT, by Rich B. Meye, Jr. and Howard B. Gamper, Jr., (hereinafter referred to as the assignors), residing at 5533 61st Avenue N.E., Bothell, WA 98011 and 904 Locust Street, Philadelphia, PA 19107, respectively, witnesseth:

WHEREAS, said assignors have invented certain new and useful improvements in METHODS AND COMPOSITIONS TO FACILITATE D-LOOP FORMATION BY OLIGONUCLEOTIDES, set forth in an application for Letters Patent of the United States, having an oath or declaration executed on even date herewith; bearing Serial No. 09/074,626 and filed on May 7, 1998 and

WHEREAS, Epoch Pharmaceuticals, Inc., a corporation duly organized under and pursuant to the laws of Delaware and having its principal place of business at 1725 220tl. Street SE #104. Bothell, Washington 98021 (hereinafter referred to as the assignee) is desirous of acquiring the entire right, title and interest in and to said inventions and said application for Letters Patent of the United States, and in and to any Letters Patent or Patents. United States or foreign, to be obtained therefor and thereon:

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient considerations, the receipt of which is hereby acknowledged, said assignors have sold, assigned, transferred and set over, and by these presents does sell, assign, transfer and set over, unto said assignee, its successors, legal representatives and assigns, [as co-owners in undivided one-half interest respectively] the entire right, title and interest in and to the above-mentioned inventions, application for Letters Patent, and any and all Letters Patent or Patents in the United States of America and all foreign countries which may be granted therefor and thereon, and in and to any and all divisions, continuations and continuations-in-part of said application, or reissues or extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by said assignee, for its own use and the use of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the assignors, had this sale and assignment not been made.

AND for the same consideration, said as: ignors hereby covenant and agree to and with said assignee its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, said assignors are the sole and lawful owners of the entire right, title and interest in and to said it ventions and the application for Letters Patent above-mentioned, and that the same are unencumbered and that said assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, said assignors hereby covenant and agree to and with said assignee, its successors, legal representatives and assigns, that said assignors will, whenever counsel of said assignee, or the counsel of its successors, legal representatives and assigns, shall advise that any proceeding in connection with said inventions, or said application for Letters Patent, or any proceeding in connection with Letters Patent for said inventions in any country, including interference proceedings, is lawful and desirable, or that any division, continuation or continuation-in-part of any application for Letters Patent or any reissue or extension of any Letters Patent, to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent for said inventions, without charge to said assignee, its successors, legal representatives and assigns, but at the cost and expense of said assignee, its successors, legal representatives and assigns.

AND said assignors hereby request the Commissioner of Patents to issue said Letters Patent of the United States to said assignee as the assignee of said inventions and the Letters Patent to be issued thereon for the sole use of said assignee, its successors. legal representatives and assigns.

RECORDED: 08/06/1998

NOTARIAL SEAL PHYLLIS M. SIMMS, Notary Public City of Philadelphia, Phila. County

Commission Expires March 13, 2000

pa-283156

PATENT

REEL: 9371 FRAME: 0989