
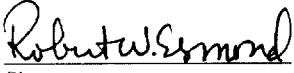


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| Form PTO-1595<br>(Rev. 03/01)   |  | F  |  | 12-11-2002  |  | U.S. Department of Commerce<br>Patent and Trademark Office |  |
| OMB No. 0651-0027 (exp. 5/31/2002)  |  |  |  |   |  |  |  |
| To the Honorable Commissioner of Patents and Trademark  |  |  |  | thereof.  |  |  |  |
| 1. Name of conveying party:<br><br>Frederick Khachik  |  | 102308102  |  | Name: University of Maryland, College Park  |  |  |  |
| Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no  |  |  |  | Internal Address:   |  |  |  |
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| Execution Date: March 28, 2002  |  |  |  | City: College Park State: Maryland Zip Code: 20742-9520   |  |  |  |
|   |  |  |  | Country: USA  |  |  |  |
|   |  |  |  | Additional name(s) & address(es) attached? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no  |  |  |  |
| 4. Application number(s) or patent number(s):   |  | 10/240172  |  |   |  |  |  |
| If this document is being filed together with a new application, the execution date of the application is 09/27/02.   |  |  |  |   |  |  |  |
| A. Patent Application No(s).<br><br>PCT/US00/18810  |  |  |  | B. Patent No(s).  |  |  |  |
| Additional numbers attached? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no  |  |  |  |   |  |  |  |
| 5. Name and address of party to whom correspondence concerning document should be mailed:<br><br>Name: <b>Sterne, Kessler, Goldstein &amp; Fox P.L.L.C.</b><br><br>Internal Address: c/o Robert W. Esmond<br><br>Street Address: 1100 New York Ave., N.W.<br>Suite 600<br><br>City: Washington State: D.C. Zip Code: 20005-3934 |  |  |  | 6. Total number of applications and patents involved: <u>1</u>  |  |  |  |
| 10/02/2002 LLA DGRA 00000068 10240172<br>05 FC:581  |  |  |  | 7. Total fee (37 C.F.R. § 3.41).....\$ <u>40.00</u><br><br><input checked="" type="checkbox"/> Enclosed<br><br><input type="checkbox"/> Authorized to be charged to Deposit Account |  |  |  |
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| 9. Statement and signature.<br><i>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.</i>  |  |  |  |   |  |  |  |
| Robert W. Esmond<br>Name of Person Signing<br>Registration No.  |  | <br>Signature |  | Sept. 30, 2002<br>Date  |  |  |  |
| Total number of pages including cover sheet, attachments and document <u>3</u>  |  |  |  |   |  |  |  |
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PATENT  
REEL: 013555 FRAME: 0103

## 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 inventor(s): Frederick Khachik, the undersigned inventor hereby sells and assigns to University of Maryland, College Park (the Assignee) his entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages:

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

(a) in the invention(s) known as Process of Making a (3R,3'R)-Zeaxanthin Precursor, for which an international application(s) for patent was filed in the United States Receiving Office under the Patent Cooperation Treaty (known as International Application No. PCT/US00/18810, filed July 11, 2000), in any and all applications thereon, in any and all Letters Patent(s) therefor, and

(b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and

(c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventor agrees 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 application(s) as the Assignee may deem necessary or expedient.

The undersigned inventor agrees to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

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

The undersigned inventor hereby grants Robert Greene Sterne, Esquire, Registration No. 28,912; Edward J. Kessler, Esquire, Registration No. 25,688; Jorge A. Goldstein, Esquire, Registration No. 29,021; 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; Michael Q. Lee, Esquire, Registration No. 35,239; Steven R. Ludwig, Esquire, Registration No. 36,203; John M. Covert, Esquire, Registration No. 38,759; Linda E. Alcorn, Esquire, Registration No. 39,588; Lawrence B. Bugaisky, Esquire, Registration No. 35,086; Donald J. Featherstone, Esquire, Registration No. 33,876; and Robert C. Millonig, Esquire, Registration No. 34,395, all 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 inventor on the date opposite his name.

Date: March 28, 02 Signature of Inventor: Frederick Khachik  
Frederick Khachik