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CERTIFICATE OF MAIL Express Mail Label No.: EL354731681 I hereby certify that this paper or fee is being deposited with the United States Pc 37 C.F.R. § 1.10 on the date indicated above and is addressed to: AssistanComm Marlon McKe 1. Name of conveying party: Zeneca Limited	2. Name and address of receiving party: Name: Quadrant Holdings Cambridge Limited
 ☐ Individual(s) ☐ Association ☐ General Partnership ☐ Limited Partnership ☑ Corporation ☐ Other Additional name(s) of conveying party(ies) attached? ☐Yes ☑No 3. Nature of conveyance: ☑ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name ☐ Other: Execution Date: August 4, 1999 	Street Address: 1 Mere Way, Ruddington City: Nottingham, Country: United Kingdom ZIP: NG11 6JS Additional name(s) & address(es) attached?
 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the e A. Patent Application No.(s) Additional numbers attached? □ Yes ⊠ No 	execution date of the application is: B. Patent No.(s) US 5,728,574
 5. Name and address of party to whom correspondence concerning document should be mailed: Susan K. Lehnhardt Morrison & Foerster LLP 1290 Avenue of the Americas New York, New York 10104-0012 	 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, referenc Attorney Docket 263742003000 8. Deposit account number: <u>03-1952</u>
	E THIS SPACE
U.S. Patent and 3/1999 DHGUYEN 00000118 031952 5728574 C:581 40.00 CH Discussion C:581 40.00 CH Crystal Gatew	n required cover sheet information to: Trademark Office ablic Records signments yay 4, Room 335 n, D.C. 20231

PATENT REEL: 010288 FRAME: 0553

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.

Name: Susan K. Lehnhardt Registration No: 33,943

Justin Schulande 100899 Date Signature

Total number of pages comprising cover sheet, attachments and document: 15

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DATED 4 August 1999

ZENECA LIMITED

and

QUADRANT HOLDINGS CAMBRIDGE LIMITED

PATENT ASSIGNMENT

Shoosmiths Regents Gate Crown Street Reading Berkshire RG1 2PQ [RMS]

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PATENT REEL: 010288 FRAME: 0555

PATENT ASSIGNMENT AND COPYRIGHT LICENCE

THIS ASSIGNMENT AND LICENCE (this "Assignment") is made the 492 day of August 1999

BETWEEN:

- (1) **ZENECA LIMITED** (registered in England and Wales with number 2710846) whose registered office is at 15 Stanhope Gate, London, W1Y 6LN (the "Assignor"); and
- QUADRANT HOLDINGS CAMBRIDGE LIMITED (registered in England and Wales with number 2369749) whose place of business is 1 Mere Way, Ruddington, Nottingham, NG11 6GS (the "Assignee").

WHEREAS:

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- (1) The Assignor is the sole legal and beneficial owner of the patent applications short particulars of which are set out in Schedule 1 hereto (the "Applications") for any inventions disclosed and/or claimed in the Applications (the "Inventions"). For the avoidance of doubt "Applications" shall also include any patent applications derived from the PCT patent application listed in Schedule 1 hereto including the European patent application listed in Schedule 2 hereto.
- (2) The Assignor is the sole legal and beneficial owner of all the patents that have been granted pursuant to the Applications short particulars of which are set out in Schedule 3 hereto (the "Patents").
- (3) The technical reports (short particulars of which are set out in Schedule 4 to this Assignment)
 (the "Technical Reports") were prepared by or on behalf of the Assignor and contain
 information which relates to the Inventions.
- For the consideration stated in Clause 1 below, the Assignor has agreed to assign all its rights in the Applications and the Patents to the Assignee on the terms herein set out and has agreed to grant to the Assignor a licence in relation to the Technical Reports.

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PATENT ¹ REEL: 010288 FRAME: 0556

NOW IT IS HEREBY AGREED as follows:

1 ASSIGNMENT

In consideration of the sum of £35,000 (thirty five thousand pounds sterling) now paid by the Assignee to the Assignor (receipt of which the Assignor hereby acknowledges), the Assignor hereby assigns to the Assignee, its successors and assigns, with full title guarantee and free from encumbrances all its right, title and interest in and to the Applications and the Patents including all rights, privileges and advantages attaching thereto (including, but not limited to, the right to bring proceedings by virtue of section 61 or 69 of the Patents Act 1977 for a previous infringement or to bring proceedings under section 58 of the Patents Act 1977 for a previous act, or any like provisions in any other jurisdictions) to the intent that the Assignee shall:-

- 1.1 be absolutely entitled to the Applications (including any continuations, continuations in part, divisionals or any other applications derived from the Applications), the Patents and any patents to be granted on the Applications for the full term of any such patents; and
- 1.2 have the right to apply for, prosecute and obtain patents or like protection throughout the world claiming priority from the Applications, to the intent that the grant of any patents or like protection derived therefrom shall be in the name of and vest in the Assignee.

2 ASSIGNOR'S WARRANTIES

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The Assignor warrants the following:

- 2.1 The Assignor is the sole legal and beneficial owner of the Patents and the Applications free from encumbrances and other third party rights.
- 2.2 So far as the Assignor is aware, the Applications are the only patent applications filed with regard to the Inventions.
- 2.3 So far as the Assignor is aware, all renewal fees and steps relating to the maintenance and protection of any Patents which may have been granted to the Assignor pursuant to any of the Applications have been paid or taken.
- 2.4 The Assignor has not granted any licences in relation to the Inventions, the Applications or the Patents.
- 2.5 So far as the Assignor is aware, no patents, apart from the Patents, have been granted pursuant to the Applications.
- 2.6 The details set out in Schedules 1, 2, 3 and 4 to this Assignment are accurate.

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PATENT REEL: 010288 FRAME: 0557

- 2.7 All the rights that any Third Parties may have had over the Inventions have been fully and validly assigned to Zeneca. For the purposes of this warranty "Third Parties" shall include any parties that have worked for or on behalf of Zeneca in developing the Inventions (whether as employees, contractors or otherwise).
- 2.8 The Assignor has not disclosed the Technical Reports to any third parties with the exception of the Assignee.

3 FURTHER ASSURANCE

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- 3.1 The Assignor further covenants that for two years from the date of this Agreement. and thereafter only at its sole discretion, it shall execute such documents and provide such information and Non-technical Assistance as the Assignee may reasonably request from time to time to confirm to the Assignee the aforesaid rights, the Assignee bearing the Assignor's reasonable disbursements and outgoings in connection therewith which for these purposes shall exclude costs relating to such assistance where provided by the Assignor's employees, including Zeneca's in-house patent attorneys and in-house solicitors (the "Assignor's Internal Costs").
- 3.2 For the purposes of Sub-clause 3.1, "Non-technical Assistance" shall include, but shall not be limited to, the provision of technical advice but shall exclude the carrying out of additional laboratory research.
- 3.3 The Assignor shall procure that the inventor of the Inventions shall execute any such documents and provide any such information and assistance as the Assignee may reasonably request as aforesaid.
- 3.4 The Assignee shall reimburse any reasonable expenses that the Assignor shall incur for the purposes of the fulfilment of the Assignor's obligations under Sub-clauses 3.3 and 3.6 but such expenses shall exclude the Assignor's Internal Costs.
- 3.5 The Assignor shall not knowingly do anything that may prejudice the successful prosecution of the Applications or which may cause any patent granted pursuant to the Applications to be encumbered. The Assignor shall not use information or know-how in possession of the Assignor at the date hereof in order to challenge the validity of any patent granted pursuant to the Applications.

3.6 At the Assignor's discretion, not to be unreasonably exercised, the Assignor shall provide the Assignee with copies of any documents in possession of the Assignor which the Assignee may reasonably require in order to defend the Patents or successfully prosecute the Applications to grant. Within 4 months from the date hereof, the Assignor shall deliver to the Assignee copies of the relevant extracts of the laboratory books that relate to the Inventions (the "Extracts").

4 MAINTENANCE AND PROSECUTION

- 4.1 The Assignor shall deliver to the Assignee the Assignor's files relating to the prosecution and maintenance (as applicable) of each of the Applications and the Patents no later than 1 month after the date hereof.
- 4.2 The Assignor shall undertake all matters relating to the prosecution and maintenance of the Applications and of the Patents until the original files described in Sub-clause
 4.1 have been delivered to the Assignee. The Assignor shall not reply to any Patent Office action without first consulting the Assignee and obtaining its instructions in relation thereto.
- 4.3 The Assignee shall pay to the Assignor the amount of all official fees, external patent attorney's fees, disbursements and outgoings reasonably incurred by the Assignor after the date of this Assignment for the purposes of fulfilling the Assignor's obligations under Sub-clauses 4.1 and 4.2 but, for the avoidance of doubt, this obligation shall exclude the reimbursement of the Assignor's Internal Costs.

5. AWARD TO EMPLOYEE INVENTOR

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For the avoidance of doubt, the Assignor undertakes to pay any award to any of the Assignor's employee or ex-employee inventors that may be payable under the UK Patents Act 1977, section 40(1) in respect to the Patents or any patent deriving from the Applications.

6. LICENCE - TECHNICAL REPORTS

- 6.1 In relation to the Confidentiality Agreement signed between the Assignor and the Assignee on 29 April 1999 (the "Confidentiality Agreement") the parties agree the following:
 - 6.1.1 the Confidential Materials as referred to by clause 3.6 of such agreement shall not include either:
 - (i) the Patents or the Applications; or
 - (ii) the Technical Reports.
 - 6.1.2 The Extracts may be disclosed by the Assignee to third parties to the extent only that this is required for the purposes of the prosecution of the Applications or the defence of any patents granted pursuant to the Applications.
- 6.2 To the extent of the rights it holds on the Technical Reports, the Assignor hereby grants to the Assignee an irrevocable, perpetual, royalty-free, non-exclusive licence to:
 - (i) copy, adapt, and issue to third parties copies of the Technical Reports or their adaptation (as relevant);
 - (ii) use any and all the information contained in the Technical Reports for any purposes whatsoever including but not limited to the manufacture, marketing, sale or licensing of any process or product or any other commercial purpose anywhere in the world.
- 6.3 Subject to having obtained the Assignor's prior written consent not to be unreasonably withheld, the Assignee shall be entitled to assign to any third party the rights granted to the Assignee pursuant to Sub-clause 6.2.
- 6.4 The Assignee acknowledges and agrees that it has been informed by the Assignor that the Technical Reports were prepared by ex-employees/trainees of the Assignor, and that these employees/trainees and/or the academic institutions where they were then studying may have rights in the Technical Reports.

7. ENTIRE AGREEMENT

This Assignment represents the entire agreement between the parties in relation to its subject matter, and supersedes any previous agreement, written or oral, between the parties on that subject matter. Accordingly, all other terms, conditions, representations, warranties and statements which would otherwise be implied (by law or otherwise) shall not form part of this Assignment.

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8. CERTIFICATE OF VALUE

The parties to this Agreement hereby certify that the transactions effected by this Assignment are not part of a larger transaction or series of transactions in respect of which the amount or value, or aggregate amount or value of the consideration exceeds £60,000.

9. GOVERNING LAW

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This Assignment shall be governed by and construed in accordance with English law and the parties hereby submit to the non-exclusive jurisdiction of the English Courts in relation to all matters arising out of this Assignment.

10. OTHER

References to Clauses, Sub-clauses and Schedules shall refer to clauses, sub-clauses and schedules to this Assignment.

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IN WITNESS whereof this Assignment was executed by the duly authorised representatives of the parties the day and year first above written.

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PATENT REEL: 010288 FRAME: 0562

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The Applications

PATENT APPLICATION NUMBER	APPLICANT	FILING DATE	COUNTRIES	PUBLICATION NUMBER NOTES	NOTES
GB9314886.4	Zeneca Limited	£661/L/61	Great Britain	Not applicable as this application was never published	Abandoned
PCT/GB94/01556	Zeneca Limited	19/7/1994	Various designated countries, as specified in the application itself.	WO 95/03395	Priority date: 19/7/1993

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European Patent Application

PATENT APPLICATION NUMBER	APPLICANT	FILING DATE	COUNTRIES	PUBLICATION NUMBER NOTES	NOTES
EP 94921046.2	Zeneca Limited	19/7/1994	Austria, Belgium, Switzerland and Liechtenstein, Germany, Denmark, Spain, France, - Greece, Ireland, Italy, Luxembourg, Monaco, The Netherlands, Portugal, Sweden, United Kingdom	EP-A I-0,663,947	Derived from the PCT Application referred to in Schedule 1 above. Priority date: 19/7/1993

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The Patents

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PATENT APPLICATION NUMBER	REGISTERED PROPRIETOR	GRANT DATE	COUNTRY	PATENT NUMBER	NOTES
US08/397,270	Zeneca Limited	17/3/1998	USA	US-A-5728574	Granted
AU9471920	Zeneca Limited	2/7/1998	Australia	AU-B2-688755	Granted

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The Technical Reports

Those technical reports attached to a letter dated 25 March 1999 from Alan J Whittle of Zeneca to Colin Dalton of Quadrant, and described in such letter by Mr Whittle as "internal reports relating to the work covered in the above patent (ie patent PCT/GB 94/01556)". Such reports are the following:

(i) Draft (undated and unfinished) report written by Mike Legg, the Zeneca scientist who led the project.

(ii) Report dated April 1993 and titled "The Physiological Effects of Osmotically Stressing
 Pseudomonas fluorescens and the Subsequent Effects of Drying Osmotically Stressed P.fluorescens"
 submitted by Caroline Unwin, Department of Biochemistry, Royal Holloway College, University of London.

(iii) Report dated July 1992-September 1993 and titled "A Report on the Industrial Training
 Period at Zeneca Agrochemicals Jealott's Hill Research Station – Effect of Preconditioning on the
 Drying Survival of Pseudomonas fluorescens" by David Mainwaring – Applied Plant Science.

(iv) Report dated August 1994 and titled "Trehalose accumulation in Pseudomonas fluorescens" submitted by Dina Neves – Zeneca – Bioscience.

[JONATHAN SILIMA BECREMARY 2 ENELA AGROCHEMICALS

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for and on behalf of Zeneca Limited

EXECUTED BY

[RAJAN UPPAL] and DIRECTOR [ZOE CODD] Loe Coold COMPANY SECRETARY

for and on behalf of Quadrant Holdings Cambridge Limited



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