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Pages Enter the total number of pages of the attached conveyance document including any attachments. **#14**

Application Number(s) or Patent Number(s)

Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)			Patent Number(s)		
09/166,434	09/517,438	60/176,843	4,813,997	5,143,833	5,439,873
09/563,669	60/077,586	60/182,649	4,976,767	5,143,834	5,521,075
60/122,506	09/552,917	09/182,140	5,034,105	5,168,055	5,604,177

If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Month Day Year

Patent Cooperation Treaty (PCT)

Enter a PCT application number only if a U.S. Application Number has not been assigned.

PCT	PCT	PCT
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Number of properties

Enter the total number of properties involved **#21**

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Thomas Q. Henry *Thomas Henry* *April 9, 2001*
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 I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office" addressee" service under 37CFR § 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.
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**RECORDATION FORM COVER SHEET
CONTINUATION
PATENTS ONLY**

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Mark if additional names of conveying parties attached

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Month Day Year

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Name (line 2)

Execution Date
Month Day Year

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Name (line 2)

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If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (*Designation must be a separate document from Assignment.*)

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Application Number(s) or Patent Number(s)

Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

5,840,656

6,083,877

6,124,241

PATENT

REEL: 011712 FRAME: 0673

AUXEIN ASSIGNMENT AGREEMENT

This Auxein Assignment Agreement ("Agreement") is made as of February 7, 2001 between Auxein Corporation, a Michigan corporation ("Auxein") and Emerald BioAgriculture Corp., a Delaware corporation ("Emerald").

Recitals

A. Auxein is the owner of certain United States and foreign patents and patent applications (the "Auxein Patents") and certain United States and foreign trademarks and trademark applications (including any common law rights associated with the trademarks) (the "Auxein Trademarks") (A list of the Auxein Patents and Auxein Trademarks is attached hereto as Schedule 1).

B. Auxein is desirous of transferring to Emerald of all such right, title and interest to the Auxein Patents and any provisional, non-provisional, continuation, divisional, reissue, reexamination, foreign, PCT or other patent application based on the Auxein Patents ("Formal Applications") (collectively "Patent Rights").

C. Auxein is desirous of transferring to Emerald all of such rights, title and interest to the Auxein Trademarks.

D. Emerald is desirous of obtaining all right, title and interest to the Auxein Patents, any Formal Applications and the Auxein Trademarks from Auxein.

NOW THEREFORE, in consideration of the mutual covenants of the parties, each to the other, and of good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

ARTICLE 1

1.1 PATENT ASSIGNMENT

(a) Auxein hereby does sell, assign and transfer to Emerald, its successors, assigns and legal representatives, the full and exclusive right to the Auxein Patents and to all Formal Applications, in the United States and all foreign countries, together with the right of priority under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States adheres, and hereby authorizes and requests the Commissioner of Patents to issue said Letters Patent to Emerald on any of such applications, for the sole use and benefit of Emerald, its successors, assigns and legal representatives.

(b) Emerald shall be responsible for preparing and recording all required assignment documents, as well as the prosecution and maintenance of the Auxein Patents and all Formal Applications, including all expenses, on or after the date of this Agreement.

(c) Emerald shall have all rights to enforce the Patent Rights and collect any damages or settle any matters.

ARTICLE 2

2.1 TRADEMARK ASSIGNMENT

(a) Auxcin hereby does sell, assign and transfer to Emerald, its successors, assigns and legal representatives, the full and exclusive right to Auxcin's full and exclusive worldwide right, title, and interest in and to the Auxcin Trademarks, including the goodwill of the business symbolized by the Auxcin Trademarks, and the applications and registrations therefore, and the right to sue for and collect damages for infringements and past infringements thereof.

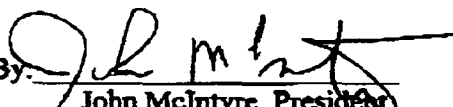
ARTICLE 3

3.1 RECORDATION

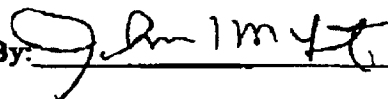
(a) Auxcin hereby authorizes and requests the United States Commissioner of Patents and Trademarks to record the Assignment for the sole benefit of Emerald, its successors, assigns, and legal representatives.

IN WITNESS OF THIS AUXCIN ASSIGNMENT AGREEMENT, the parties have signed below.

AUXCIN CORPORATION,
a Michigan corporation

By: 
John McIntyre, President

EMERALD BIOAGRICULTURE CORP.
a Delaware corporation

By: 
Its: John McIntyre

AUXEIN PATENT PORTFOLIO

ISSUED PATENTS

Patent No. Inventor(s) Date Issued/Paid: Title/Summary: Rights: Original Assignee:

U.S. 4,813,997 Kinnersley, A.M., Taylor, C. S., Yopp, J. H., Whittem, G. H. March 21, 1989 Method for Regulating Plant Growth
Summary: A process for increasing the rate of plant growth. Worldwide License CPC

Europe: 0,355,117 August 12, 1992
 Japan: 63501621 October 6, 1989

Re. 35,320 (Reissue of 4,813,997) Kinnersley, A.M., Taylor, C. S., Yopp, J. H., Whittem, G. H. August 27, 1996 Method for Regulating Plant Growth
Summary: A process for increasing the rate of plant growth. Worldwide License CPC

U.S. 4,976,767 Kinnersley, A.M., Henderson, W. E. December 11, 1990 Plant Food and Method for Its Use
Summary: A plant food with superior growth promoting properties that comprises a mixture of stepparat and other sources of nitrogen, phosphorus and potassium. Worldwide License CPC

U.S. 5,034,105 Benglund, K. A., Blankovian, P., Ghassem, D. A. July 23, 1991 Carboxylic Acid Purification and Crystallization Process
Summary: A process for preparing a carboxylic acid of high purity comprises preparing an under saturated solution of a salt of the carboxylic acid. Exclusive Rights! MBI

Europe: 0410728 February 9, 1994 Exclusive Rights!

Canada: 2,032,037 Filed: July 26, 1990 Exclusive Rights!

Japan: 20103590 Filed: July 27, 1990 Exclusive Rights!

Patent No.	Inventor(s)	Date Issued/Filed:	Title/Summary:	Rights:	Original Assignee:
Australia: 90308162.8		Filed: July 26, 1990		Exclusive Rights'	
U.S. 5,143,833	Datta, R.	September 1, 1992	Process for the Production of Succinic Acid by Anaerobic Fermentation <i>Summary:</i> A method of producing succinic acid comprises growing a succinate producing microorganism in medium containing sodium ions as assimilable carbohydrate.	Exclusive Rights'	MTBI
Europe: ¹ 249,773					
Canadian: 539,333					
Japan: 62-144217					
U.S. 5,143,834	Glasner, D. A., Datta, R.	September 1, 1992	Process for the Production and Purification of Succinic Acid <i>Summary:</i> A process for producing and purifying succinic acid comprises growing a succinate salt-producing microorganism on an inexpensive substrate containing carbohydrate.	Exclusive Rights'	MTBI
Europe: ¹ 0-389-103		Filed: February 20, 1990		Exclusive Rights'	
Australia: 626381		February 9, 1990		Exclusive Rights'	
New Zealand: 231315		November 8, 1989		Exclusive Rights'	
Canada: 1334583		February 28, 1995		Exclusive Rights'	
Japan: 345107/89		Filed: September 28, 1989		Exclusive Rights'	

Patent No.	Inventor(s)	Date Issued/Filed:	Title/Summary:	Rights:	Original Assignee:
U.S. 5,166,055	Datta, R., Glassner, D. A., Jain, M. K., Vick Roy, J. R.	December 1, 1992	Fermentation and Purification Process for Succinic Acid <i>Summary:</i> A process for economically producing highly purified succinic acid comprises growing a succinate-producing microorganism on a low cost carbohydrate substrate.	Exclusive Rights	MSB
Europe: 0-405-707		Filed: February 20, 1990			
Australia: 626634		February 9, 1990			
New Zealand: 231413		Issued: November 13, 1989			
Canada: 1,272,255		December 18, 1989			
Japan: 301809/89		Filed: November 20, 1989			
U.S. 5,439,873	Kinnersley, A.M.	August 8, 1995	Method for Stimulating Plant Growth Using GABA <i>Summary:</i> A process for increasing plant growth and productivity comprising treating the roots, stems and/or foliage of the plant with GABA.	Own	PGDC
AUX-003 (7224-5)		[Expires: 2-23-2014] Maintenance fees due 2-8-99, 2-8-2003, 2-8-2007			
Serial No. 06/200,218 filed 2-23-94					
Australia 681950 (7224-13)	Kinnersley	1-15-98 [Expires 2-21-2015] Annulies due annually on 2-21	Same as Above	Own	Auxein
Canada 2,183,887	Kinnersley	2-21-95	Same as Above	Own	Auxein
Europe ⁴ 95911852.2 (7224-11)	Kinnersley	2-21-95	Same as Above	Own	Auxein

Patent No.	Inventor(s)	Date Issued/Filed:	Title/Summary:	Right:	Original Assignee:
Japan 522425/95 (7224-14)	Kimberley	2-21-95	Same as Above	Own	Auxein
PCT 95/02189 (7224-10)	Kimberley	Closed. Nationalized	Same as Above	Own	Auxein
08/511,498 AUX-003-CON-2 (7224-4)	Kimberley, A. M.	August 4, 1995	Same as above. [Continuation of 08/500,391 filed 7-10-95, issued 2-18-97 as 5,604,177; which is a continuation of 08/200,218 filed 2-23-94, issued as 5,439,873 on 8-8-95]	Own	Auxein
Status: 07-01-99. Authorized TQH to let this application expire. Claims are covered in patent already issued.					
AUX-003-AU (7224-13) Australia: 681950	Kimberley, A. M.	Issued: January 15, 1998 Expires: February 21, 2015	Same as above.	Own	Auxein
Status: Authorized TQH to pay foreign patent annuities.					
AUX-003-CA (7224-12) Canadian: 2,183,887	Kimberley, A. M., Coleman, R. D., Tolbert, N. E.	Filed: February 21, 1995	Same as above.	All Rights	Auxein
AUX-003:JP (7224-14) Japanese: 504797/98		Published: May 5, 1998 Request for Examination due by February 21, 2002	Same as above.	All Rights	Auxein

Patent No.	Inventor(s)	Date Issued/Pat:	Title/Summary:	Rights:	Original Assignee:
U.S. 5,521,075	Quettler, M. V., John, M. K.	May 28, 1996	Method for Making Succinic Acid, Anerobiosiphilium succiniciproducens Variants for Use in Process and Methods for Obtaining Variants Summary: A method for making succinic acid employs a fluorescent resistant variant of Anerobiosiphilium succiniciproducens.	Exclusive Rights!	MIBI
U.S. 5,664,177	Kimberley, A.M., Coleman, R. D. and N. E. Tolbert	February 18, 1997	Method for Stimulating Plant Growth Using GABA Summary: A process for increasing plant growth and productivity comprising treating the roots, stems and/or foliage of the plant with γ -aminobutyric acid.	Own	Auxein
08/500,391 Filed 7-10-95 Continuation of 5,439,873 AUX-003-CON-1 (7224-6)	Kimberley, A.M., Coleman, R. D. and N. E. Tolbert	Expires: 2-23-2014 Maintenance fees due 8-17-2000, 8-17-2004, 8-17-2007			
PCT/US	Kimberley, A.M., Coleman, R. D. and N. E. Tolbert	US95/02189	Same as above		
EPO:	Kimberley, A.M., Coleman, R. D. and N. E. Tolbert	9391185202	Same as above		
Japan	Kimberley, A.M., Coleman, R. D. and N. E. Tolbert	522425/95	Same as above		
Canada	Kimberley, A.M., Coleman, R. D. and N. E. Tolbert	2,183,887	Same as above		
Australia	Kimberley, A.M., Coleman, R. D. and N. E. Tolbert	681930	Same as above		

Status: Authorized TOH to pay maintenance fee due 8-18-2000.

Auxein Patent Portfolio Status as of October 19, 2000

Patent No.	Inventor(s)	Date Issued/Filed:	Title/Summary:	Rights:	Original Assignee:
U.S. 5,948,656	Kimmerley, A.M., Coleman, R. D., Kimmerley, C.-Y. and McIntyre, J. L.	November 24, 1998	Method for Increasing Fertilizer Efficiency Summary: A process for increasing plant growth and productivity comprising treating the roots, stems and/or foliage of the plant with gamma-aminobutyric acid.	Own	Auxein
Serial No. 08/744,593					
Continuation of U.S. 5,439,873 (AUX-3-CON2-CIP) (7224-7)					
AUX-003-CON2-CIP-CA (7224-25)	Kimmerley, A.M., Coleman, R. D., Kimmerley, C.-Y. and McIntyre, J. L.	November 4, 1997	Same as above	Own	Auxein
Canadian Patent Application Serial No. 2,270,817					
AUX-003-CON2-CIP-NZ (7224-30)	Kimmerley, A.M., Coleman, R. D., Kimmerley, C.-Y. and McIntyre, J. L.	November 4, 1997	Same as above	Own	Auxein
New Zealand Patent Application No. 335642					
AUX-003-CON2-CIP-IL (7224-27)	Kimmerley, A.M., Coleman, R. D., Kimmerley, C.-Y. and Irwell Patent Application No. 129,741	May 3, 1999	Same as above	Own	Auxein
Japanese Patent Application No. 521802/98					
AUX-3-CON2-CIP-JP (7224-28)	Kimmerley, A.M., Coleman, R. D., Kimmerley, C.-Y. and McIntyre, J. L.	November 4, 1997	Same as above	Own	Auxein
AUX-3-CON2-CIP-MX (7224-29)	Kimmerley, A.M., Coleman, R. D., Kimmerley, C.-Y. and McIntyre, J. L.	May 4, 1999	Same as above	Own	Auxein
Mexican Patent Application No. 994148					

Patent No.	Inventor(s)	Date Issued/Filed:	Title/Summary:	Rights:	Original Assignee:
AUX-3-CONZ- CIP-BP (7224-26) European Patent Application No. 97947405.3	Kimberley, A. M., Coleman, R. D., Kimberley, C.-Y., and McLynne, J. L.	November 4, 1997 Austria, Belgium, Switzerland, Germany, Denmark, Spain, Finland, France, Great Britain, Greece, Ireland, Italy, Luxembourg, Morocco, The Netherlands, Portugal and Sweden	Same as above	Own	Auxelin
PCT/US AUX-3-CONZ- CIP:PCT (7224-16)	Kimberley, A.M., Coleman, R. D., Kimberley, C.-Y., and McLynne, J. L.	US97/20314 Demand for Examination filed 6-17-98; Written Opinion received 10-15-98 Publication No. 0936861 European Patent Bulletin August 25, 1999	Same as above	Own	Auxelin
AUX-0903- CONZ-CIP-AU (7224-24) Australian Patent Application No. 52494/98	Kimberley, A.M., Coleman, R. D., Kimberley, C.-Y., and McLynne, J. L.	Demand for Examination must be filed by December 23, 1999.	Same as above	Own	Auxelin
U.S. 6,003,977 Serial No. 09/265,172 AUX-007 (7224- 21)	Kimberley, A. M. and David, S.	March 9, 1999 Issued: July 4, 2000	Methods for Regulating Plant Growth <i>Synonym:</i> The present invention relates generally to the field of plant growth regulators and methods of their use. More specifically, the invention relates to methods of retarding plant growth that include treating a plant with compositions including either 2-aminobutyric acid, 3-aminobutyric acid or a mixture thereof.	Own	Auxelin
PCT Patent Application No. 99/065202	Kimberley, A. M. and Daniels, S.	September 10, 1999	Methods for Regulating Plant Growth	Own	Auxelin

Patent No. Inventor(s) Date Issued/Filed Title/Summary: Right: Original Assignee:

Shown: Received the Official Filing Receipt. Patent now being examined.
 Status: National stage filings in selected countries deadline September 10, 2000.

U.S. 6,324,241 Kimmerley, A. M. Filed: October 29, 1998 Method for Increasing Plant
 Serial No. 09/182,140 Allowed: April 20, 2000 Productivity Using Glaberric Acid
 AUX-005 Issued: September 26, 2000 and Glycolic Acid
 (7224-18) Summary: The present invention
 relates generally to a process for
 increasing plant productivity.
 Specifically, the method relates to
 increasing plant productivity by
 treating roots, seeds, stems and/or
 foliage of plants with compositions
 containing phytanic acid and either
 polyglycolic acid or glycolic acid.

International PCT
 Appl. No. 99/25313 Filed October 28, 1999
 Pub. No. WO 00/25582 Published May 11, 2000
 (7224-32)

PATENT APPLICATIONS PENDING

Serial No. Kimmerley, A. M., Bauer, B. Filed: October 5, 1998 Method to Mitigate Plant Stresses
 09/166,404 A., Crabtree, K. A., Summary: The present invention
 AUX-003 Kimmerley, C.-Y., Melnyre, relates generally to methods for
 (7224-17) J. L., and Daniels, S. E mitigating plant stresses.
 CIP of 08/744,593 (IDR Title: Method of Metabolically
 which is CIP of 08/511,498 which Priming Plants Against Stresses
 is C of 5,604,177
 which is C of 5,439,873

PCT Patent Kimmerley, A. M., Bauer, B. Filed: October 5, 1999 Same as above Own Auxein
 Application No. A., Crabtree, K. A.,
 99/23101 Kimmerley, C.-Y., Melnyre,
 AUX-005 J. L., and Daniels, S. E
 (7224-33)

Patent No. Inventor(s) Date Issued/Filed Title/Summary Rights: Original Assignee:

Status: 03-01-99. Received the Official Filing Receipt. Patent now being examined.
 Status: 07-26-99. Authorized TOH to file in all PCT countries. 11-24-99 Power of Attorney returned for all inventors.
 Status: 10-12-99. Received a substantive Office Action; examiner rejected claims 1-55.
 Status: 03-15-00. Authorized TOH to file a Demand for Examination on PCT application.

Serial No. Kimmerley Filed: May 2, 2000 Method for Increasing Plant
 09/563,669 AUX-006-CIP (7224-39) Productivity Using Glutamic Acid Own Aurstein
 (7224-39) CIP of 09/182,140 allowed 04-20-2000 and Glycolic Acid

Status: 03-01-99. Received the Official Filing Receipt. Patent now being examined.
 Status: 07-26-99. Authorized TOH to file in all PCT countries.
 Status: 05-08-00. Received the Notice of Allowability. Patent issue fee due by July 20, 2000. Authorized TOH to pay fee.
 Status: 06-06-00. Deadline April 29, 2001 to nationalize this case into individual countries.

Provisional Patent Kimmerley, A. M. and Filed: March 2, 1999 Ligand-Gated Ion Channels in Plants
 Application Serial Turano, F. J. Summary:
 No. 60/122,506 AUX-008 (7224-22) USDA-ARS Doctel No. 0049,99

New Patent Kimmerley, A. M. and Filed: March 2, 2000 Plant Ligand-Gated Ion Channels
 Application Serial Turano, F. J. Summary:
 No. 09/517,438 based on U.S. Provisional Application 60/122,506 AUX-008 (7224-35)

PCT Application Kimmerley, A. M., and Published on Plant Ligand-Gated Ion Channels
 No. Turano, F. J. September 2, 2000
 PCT/US90/05407 AUX-008-PCT (7224-38)

Patent No.	Inventor(s)	Date Issued/Filed	Title/Summary	Rights	Original Assignee
Status: Received the Official Filing Receipt. Patent now being examined.					
Serial No. 60/071,586 AUX-007-PROV (7224-19)	Kinnearley, A. M.	Filed: March 10, 1998 Must file full application by March 10, 1999	Method to Retard Plant Growth (Provisional Patent Application only)	Own	Austria
Status: Full patent submitted March 9, 1999. See 09/265,172.					
Serial No. 09/552,917 AUX-909 (7224-34)	Kinnearley, A. M.	Filed: April 20, 2000	Methods of Treating Plants with Glycolic Acid Summary: The present invention relates generally to methods for treating plants that increase the resistance or tolerance of a plant to the effects of plant stress and/or stimulate plant growth	Own	Austria
Status: 03-02-00. Confirmation the application was filed. Office filing receipt should be forthcoming.					
Status: 09-26-00. Assignment recorded on June 12, 2000.					
Provisional Patent Application No. 69/176,943 AUX-010-PROV- 1 (7224-36)	Kinnearley, A. M. and Carlson, Peter S.	Filed: January 19, 2000	Methods for Stimulating Plant Growth Using Taurine Summary:		
Status: 03-09-00. Confirmation the application was filed. Office filing receipt should be forthcoming.					
Provisional Patent Application No. 60/182,649 AUX-010-PROV- 2 (7224-37)	Kinnearley, A. M. and Carlson, Peter S.	Filed: February 15, 2000	Methods of Treating Plants with Taurine Summary: The present invention relates to methods of treating plants with taurine. In one aspect of the invention, plants may be treated with an effective amount of taurine. It has been discovered that taurine stimulates plant growth and may provide other beneficial results.	Own	Austria

Auxein Patent Portfolio Status as of October 19, 2000