6 Month Trial Sub-License for Gene Bridges' Red® /ET® Recombination

to Commercial Organisation for Non-Commercial, Research Purposes

Between

Gene Bridges GmbH, Im Neuenheimer Feld 584, 69120 Heidelberg, Germany

- "**GENE BRIDGES" -**

and

- "**LICENSEE"** -

the following is agreed upon:

PREAMBLE:

Whereas, the European Molecular Biology Enterprise Management Technology Transfer GmbH (hereinafter "**EMBLEM**"), a fully-owned subsidiary of the European Molecular Biology Laboratory (hereinafter "**EMBL**"), is the exclusive licensee of certain U.S. and foreign patents and patent applications owned by EMBL.

Whereas, GENE BRIDGES represents and warrants that EMBLEM granted GENE BRIDGES licenses under particular patents and patent applications with the right to grant sub-licenses.

Whereas LICENSEE desires to sublicense from GENE BRIDGES particular patent rights.

Now, in consideration of the promises and conditions contained herein, GENE BRIDGES and LICENSEE agree to the following:

ARTICLE 1

DEFINITIONS

1.1 **Affiliate** shall mean with respect to a party:

Any entity directly or indirectly controlled by, controlling, or under common control with such party, where “control” means having the majority of the voting rights thereof.

1.2 **Know-how** shall mean:

All information, know-how, experiences, or trade secrets pertaining to the use of the Licensed Technology which is necessary for LICENSEE to exercise the rights licensed hereunder, including but not limited to the specific information indicated in **Annex I**.

1.3 **Licensed Technology** shall mean:

Methods for generating Metabolic Engineering Products and Research Products using the Red®/ET® Recombination Method covered by the Patent Rights and all Know-how related thereto.

1.4 **Material** shall mean:

DNA constructs and bacterial strains as indicated in **Annex II(A)** provided by GENE BRIDGES, and non-patentable derivatives thereof with which the Red/ET Recombination Method can be enhanced, facilitated or performed. Material also includes the amplified DNA constructs or progeny of said cells or bacterial strains produced and propagated, respectively, by LICENSEE using the Material.

1.5 **Metabolic Engineering Product** shall mean:

a product, such as any industrial monomer, alcohol, oligopeptide, protein, vitamin, amino-acid etc, produced by the LICENSEE for commercial marketplaces, including for use in the pharma, fiber, fuel, feed, food, personal care materials, packaging and other industries generated by microorganisms which were modified using the Red®/ET® Recombination Method. A metabolic engineering product **does not include** polyketides and/or non-ribosomal peptide synthase pathways . For clarity, Microorganisms are not considered to be Metabolic Engineering Products.

1.6 **Patent Rights** shall mean:

The rights of GENE BRIDGES in patents and patent applications PCT-Application WO 99/29837 claiming priority of the European Patent Application No. 97 121 462.2 (December 5, 1997) and 98 118 756.0 (October 5, 1998) and the PCT-Application WO 01/04288 claiming priority of U.S. Application no. 09/350,830 (filed July 9, 1999), which has issued as US patent number 6,355,412. indicated in **Annex III.**

1.7 **Person** shall mean:

Any natural person, corporation, general partnership, limited partnership, joint venture, proprietorship, organization, university, academic or research institution, or other business or not-for-profit entity.

1.8 **Recombinant Service** shall mean:

A service provided by LICENSEE to any Third Party, in which LICENSEE is provided financial benefits or any other consideration including but not limited to an acquisition of shares or rights or an exchange of materials or information in exchange for the alteration, generation, cloning or sub-cloning of any Research Product.

1.9 **Red®/ET® Recombination Method** shall mean:

A recombination method for specific modification of bacterial chromosomes or *E. coli* compatible DNA target molecules, by *in vivo* homologous recombination with a targeting DNA molecule in prokaryotic cells. The position at which the target molecules are modified is determined by the design of the targeting molecule with which the target molecule recombines. The method also encompasses direct cloning and subcloning of target DNA sequences from various donor molecules. The method is described and claimed in further detail in the Patent Rights.

1.10 **Research Product** shall mean

a product, such as any nucleic acid generated and/or modified (through cloning, subcloning, deletion, insertion and/or mutation, of genes, gene fragments or any nucleic acid) using the Red®/ET® Recombinant Method and any DNA, RNA, nucleic acid fragment or vector that contains the same or is derived therefrom, whether purified or in a mixture (including libraries) or in a living, quiescent or dead Cell or Organism For clarity, Research Products include living cells such as modified *E.coli* strains.

1.11 **Third Party** shall mean:

A Person other than LICENSEE, GENE BRIDGES or an Affiliate.

1.12 **Transgenic** shall mean:

A DNA construct which is, or is intended to be, used to alter a mammalian cell so that said mammalian cell carries a genetic modification resulting from the insertion of the said DNA

construct that is not targeted to a predetermined, specific chromosomal location with or without the intent to alter the function or expression of the gene(s) at the site of the chromosomal insertion. Said DNA construct may be used to create a line of mammalian animals. For clarity, Transgenic includes the said DNA construct (the "**Transgenic Construct**"), the said altered mammalian cell and the said altered mammalian animal line. Transgenic does not include Class I or Class II Products.

1.13 **Trial License Term** shall mean:

A period of 6 (six) months, starting with LICENSEES´s receipt of Material.

1.14 **Viral Engineering Product** shall mean:

A DNA construct, which is used to clone, shuffle or modify DNA or pieces of DNA that are partially or completely leading, or are meant to lead to, the *in vivo* or *in vitro* production of a virus regardless of the replication competence or incompetence of said virus (the **"Viral Engineering Construct").** Virus includes all viruses whose life cycle is dependent upon either single-stranded or double-stranded DNA or RNA. Said DNA construct may be used to create a cell line or a virus, however, Viral Engineering Constructs which also fall under the definition of Class I, II or Transgenic Constructs are not considered Viral Engineering Constructs with respect to the license grant.

1.15 Commercial shall mean

An action or service for a Third Party in exchange for financial benefits or any other consideration including but not limited to an acquisition of shares or rights or an exchange of materials or information.

1.16 Recombinant service shall mean

A service provided by LICENSEE to its Affiliates or any Third Party, in which LICENSEE is provided financial benefits or any other consideration including but not limited to an acquisition of shares or rights or an exchange of materials or information in exchange for the alteration, generation, cloning or subcloning of any nucleic acid or an E. coli strain. For clarity, a Metabolic Engineering Product within the definitions given herein is not considered a Recombinant Service with respect to the license granted under Section 2.2.

1.17 Third party shall mean

A Person other than LICENSEE, GENE BRIDGES or any of their respective Affiliates.

1.18 **Year** shall mean:

The twelve-month calendar year starting on 1st January and ending on 31st December.

ARTICLE 2

SUBLICENSE GRANT AND TRANSFER OF MATERIAL

2.1 Non-exclusive Research License for Red/ET based Metabolic Engineering Products

Subject to the terms and conditions of this Agreement, GENE BRIDGES hereby grants LICENSEE the non-exclusive right to make and have made by its Affiliate an unlimited amount of metabolic engineering products for non-commercial purposes under the Licensed Technology in the research facilities of its own or of its Affiliate (but not the facilities of any other Third Party - "**The Sublicense Limit**") within the Trial License Term and to use metabolic engineering products generated there from for Research Purposes.

2.2 **Non-exclusive License for Research Products**

GENE BRIDGES hereby grants to LICENSEE and LICENSEE's Affiliates a worldwide, non-exclusive, sublicense under the Licensed Technology to make and use Research Products for non-commercial purposes. The license granted to LICENSEE and LICENSEE's Affiliates comprises the right to use but not to sell, transfer or distribute Research Products.

2.3 Research Purpose; No Allowance for Sublicense Grant

During the Trial License Term, LICENSEE shall in any case be entitled to use the Licensed Technology for non-commercial, internal Research Purposes. Any other use is considered to be outside the scope of the license granted under this Agreement. LICENSEE is in particular not entitled to any sublicense grant or to transfer or assign the licensed right(s).

Furthermore, LICENSEE is in particular not entitled to use the Red/ET Recombination Method in a Diagnostic Procedure, in a Recombinant Service, or in Transgenics or Viral Engineering. The Licensee is not allowed to make improvements to the technology licensed from Gene Bridges.

2.4 Field of Use Limitation

The parties acknowledge that they are, within this Article 2, defining the field of use of the Patent Rights to the fields defined in sections 2.1 and 2.2. The LICENSEE is aware that the use of the Licensed Technology by the LICENSEE for applications outside those listed in 2.1 and 2.2 can result in the immediate loss of all rights granted in this agreement.

2.5 Supply of Material

GENE BRIDGES will transfer one E.coli Gene Deletion Kit (product N0. K006) to LICENSEE within thirty (30) days after receipt of payment as outlined in Section 3.1 GENE BRIDGES shall provide for LICENSEE Know-how which is indicated in Annex I upon LICENSEE's request. LICENSEE is not entitled to amplify, propagate or multiply the provided Material unless it is required in order to use the Licensed Technology within the scope of the license granted herein. LICENSEE is not entitled to transfer, sell, distribute and/or exchange to any Third Party any Material. Additional materials from GENE BRIDGES can be purchased from GENE BRIDGES' distributor:, Biocat GmbH (www.biocat.de) during the trial license period.

ARTICLE 3

FINANCIAL CONSIDERATION

3.1 Consideration

The consideration for the rights granted and the Material provided is Euros 3,500- (plus VAT tax where applicable). This amount is (together with VAT) due within thirty (30) days of signing this Agreement. Payments shall be made to GENE BRIDGES upon receipt of an appropriate invoice form GENE BRIDGES. Any and all additional costs, including shipment of Materials and written documents shall be borne by LICENSEE.). Failure by LICENSEE to make timely payment within thirty (30) days of signing this Agreement will result in a surcharge fee of 4% of the amount overdue per calendar month.

3. 3 Taxes

All turnover taxes and indirect taxes shall be borne by LICENSEE.

ARTICLE 4

WARRANTIES AND INDEMNITIES

4.1 GENE BRIDGES does not assume liability for any damage occurring through the use by LICENSEE of the Licensed Technology or Material for any purpose, in particular arising out of the care, handling, disposal and breeding of the Material. GENE BRIDGES gives no warranty nor makes any representation, express or implied, with regards to the suitability of the Licensed Technology or Material for any applications or purposes of LICENSEE.

4.2 GENE BRIDGES warrants that to the best of its knowledge, it has been authorized to sub-license the Licensed Technology as provided for herein.

4.3 GENE BRIDGES represents and warrants as follows:

(a) this Agreement is and shall be a legal and valid obligation binding upon GENE BRIDGES, enforceable in accordance with its terms;

(b) the execution and delivery of this Agreement, does not and will not constitute a breach or violation of any other agreement or understanding, written or oral, to which it is a party; and

(c) the execution, delivery and performance of this Agreement have been duly authorized by all necessary corporate action on the part of GENE BRIDGES, and the person executing this Agreement on behalf of GENE BRIDGES has been duly authorized to do so by all requisite corporate action.

4.4 LICENSEE represents and warrants as follows:

(a) this Agreement is and shall be a legal and valid obligation binding upon LICENSEE, enforceable in accordance with its terms;

(b) the execution and delivery of this Agreement, and the use of the Licensed Technology, do not and will not constitute a breach or violation of any other agreement or understanding, written or oral, to which it is a party;

(c) the execution, delivery and performance of this Agreement have been duly authorized by all necessary corporate action on the part of LICENSEE, and the person executing this Agreement on behalf of LICENSEE has been duly authorized to do so by all requisite corporate action; and

(d) LICENSEE shall use the Licensed Technology in accordance with all applicable laws, rules and regulations.

4.5 GENE BRIDGES guarantees neither the patentability nor the validity of the Patent Rights, and shall not be liable accordingly.

4.6 The Material transferred by GENE BRIDGES is experimental in nature and is provided without warranty of merchantability or fitness for a particular purpose or any other warranty, express or implied. GENE BRIDGES makes no representation or warranty that the manufacture or use of the Material will not infringe any patent or proprietary right of others.

4.7 LICENSEE agrees to comply with all applicable laws, rules and regulations relating to the care, welfare, handling, breeding, storage, transfer and disposal of Material, including laws relating to shipment to and from GENE BRIDGES.

ARTICLE 5
CONFIDENTIALITY

5.1 Except as expressly contemplated by the license granted hereunder, LICENSEE shall not disclose or transfer, sell, distribute and/or exchange to any Third Party without prior consent of GENE BRIDGES any confidential or secret information or Know-how or trade secrets confided or made available by GENE BRIDGES (collectively "**Confidential Information**") in particular, (1) data or information of any kind, including Know-how, as well as (2) Material. Notwithstanding anything to the contrary herein, LICENSEE's obligations of confidentiality and non-use hereunder shall not apply to any information, Know-how or trade secrets that:

(a) is at the time of the disclosure by GENE BRIDGES in the possession of LICENSEE;

(b) is at the time of the disclosure by GENE BRIDGES available to the public;

(c) after the disclosure by GENE BRIDGES is published of becomes available to the public by the publication or otherwise, other than by an unauthorized act or omission by the LICEBSEE; or,

(d) LICENSEE rightfully receives without any confidential obligations from any third party having the lawful right to make such disclosure.

5.2 LICENSEE may disclose Confidential Information pursuant to an order of a competent court or administrative agency, provided that it has informed GENE BRIDGES of such order, and has used reasonable efforts to limit the scope of the disclosure and to obtain confidential treatment by the court or administrative agency of the Confidential Information disclosed pursuant to such order.

5.3 This obligation of confidentiality shall survive expiration and/or termination of this Agreement or any part of it for a period of five (5) years from the time of disclosure of such CONFIDENTIAL INFORMATION. The obligations of confidentiality apply to LICENSEE and its Affiliate.

5.4 LICENSEE will cause its employees or Affiliate that uses the Red®/ET® Recombination Method, the Material or that have knowledge of Know How to be under non-disclosure obligations with respect thereto.

ARTICLE 6

NO-CHALLENGE CLAUSE

LICENSEE agrees not to challenge the patentability or validity of the Patent Rights during the duration of this Agreement and not to support, directly or indirectly, third parties in challenging the patentability or validity of the Patent Rights.

ARTICLE 7

TERM AND TERMINATION

As defined in Section 1.16 (“Trial License Term”), the license granted to LICENSEE shall expire upon 6 months after receipt of Material. The rights granted will not be extended beyond the Trial License Term. Upon termination of the Trial License Term, LICENSEE will immediately cease to use the Licensed Technology and shall be obligated to return to GENE BRIDGES all Materials received from Gene Bridges.

ARTICLE 8

GENERAL CONDITIONS

8.1 Amendments and Modifications

Amendments and modifications to this Trial License Agreement including the amendment and modification of this provision may be made only in writing signed by both parties.

8.2 Governing Law; Jurisdiction

This Agreement shall be governed by and construed in accordance with the substantive laws of the Federal Republic of Germany, without reference to conflicts of law principles. The parties hereby unconditionally submit to the exclusive jurisdiction of the District Court Düsseldorf, Germany

8.3 Assignment

This Agreement may not be assigned by GENE BRIDGES or its successors in interest, assigns, trustees and other legal representatives without a prior written consent of the LICENSEE which shall not be unreasonably withheld.

8.4 Waiver

Any failure by a party to insist upon strict performance of any provision hereof, at anytime or for any period of time, shall not constitute a waiver of, or estoppel against asserting, the right to require such performance in the future. No waiver of any term or condition of this Agreement shall be effective unless set forth in a written instrument duly executed by or on behalf of the party waiving such term or condition.

8.5 Force Majeure

Neither party shall be liable or deemed to be in breach of this agreement by reason of any delay in performing, or failure to perform, any of its obligations if the delay or failure was due to any cause beyond that party’s control. Causes beyond a party’s reasonable control include, but are not limited to, an act of God, explosion, flood, tempest, fire or accident, war

or threat of war, sabotage, insurrection, civil disturbance or requisition, acts, restrictions, bye-laws, prohibitions, or measures of any kind on the part of any governmental, parliamentary or local authority, import or export regulations or embargoes, strikes, lock-outs or other industrial actions or trade disputes (whether involving employees of Gene Bridges, customer or a third party), difficulties in obtaining raw materials, materials from suppliers, labor, fuel parts or machinery, power failure, power surge or spike, telecommunications failure or breakdown of machinery.

8.6 Successors and Assigns

This Agreement shall be binding upon, and inure to the benefit of, the parties, successors and permitted assigns.

8.7 Annexes

All Annexes are part of this Agreement

LICENSEE

Name: _____ Signature: _____

Title: _____ Date: _____

GENE BRIDGES

Name: Gary Stevens Signature: _____

Title: Chief Executive Officer Date: _____

Annex I

Know How

1) Instruction and/or trouble-shooting guides and manuals

2) Training materials

3) Protocols

4) Any information, such as advice, strategy consultation, technical details, protocols, references and other know-how reduced to writing by GENE BRIDGES

Attachments:
Copies of the information indicated above

Annex II

Material

A) Plasmids and strains that allow the Red®/ET® Recombination and express the Red/ET proteins

Gene Bridges provides one Red/ET kit from its product range with different focuses, enabling LICENSEE to perform Red/ET Recombination technology.

It is agreed that any additional materials that can be used to perform, facilitate or enhance the Red/ET Recombination Method and are provided by a GENE BRIDGES distributor to the LICENSEE at any date after signing of this Agreement will also be entered in this provision.

B) Plasmids and strains that are useful in the application of the Red/ ET Recombination Method:

Plasmids and strains have been generated in the laboratory of Professor Francis Stewart, and are not the subject of the PATENT APPLICATIONS. They are not included in MATERIALS provided by a license agreement, but are available for purchase from Gene Bridges or its distributors. Please see product list at www.Genebridges.com

Annex III

Patent Rights

I. Patent Application PCT/EP98/07945, Novel DNA Cloning Method (ET) Priority date December 5, 1997;
II. U.S. Patent Application no. 09/350,830 filed July 9, 1999, Directed Cloning and Subcloning;
III. Related know how and reagents complementary to the patent and patent applications listed in Exhibit B; and
IV. US Patent nos. 6,355,412 and 6,509,156B by Stewart et.al. including the following related patents and applications:

US 6509156 FAMILY			
Country	**Title**	**Appln. No.**	**Filing Date**
Austria	Neue Methode Zur Klonierung Dns Unter Anwendung Des E. Coli Rece/Rect Rekombinationssystems	AT19980963541T	12/07/98
Australia	Novel DNA Cloning Method	AU19990018771	12/07/98
Australia	Novel DNA Cloning Method	AU19990018771D	12/07/98
Canada	Novel DNA Cloning Method	CA19982312474	12/07/98
Germany	DNA Cloning Method Relying On The E. Coli Rece/Rect Recombination System	DE19986015384	12/07/98
Germany	DNA Cloning Method Relying On The E. Coli Rece/Rect Recombination System	DE19986015384T	12/07/98
Denmark	DNA Cloning Method Relying On The E. Coli Rece/Rect Recombination System	DK19980963541T	12/07/98
Europe	Novel DNA Cloning Method Relying On The E. Coli Rece/Rect Recombination System	EP19980963541	12/07/98
Europe	Novel DNA Cloning Method Relying On The E.Coli RECE/RECT Recombination System	EP20020021915	12/07/98
Spain	DNA Cloning Method Relying On The E. Coli Rece/Rect Recombination System	ES19980963541T	12/07/98
Japan	DNA Cloning Method Relying On The E. Coli RecE/RecT Recombination System	JP20000524410T	12/07/98
Portugal	Novo Metodo De Clonagem De Adn Baseado No Sistema De Recombinacao Rece/Rect De E. Coli	PT19980963541T	12/07/98
United States	DNA Cloning Method Relying On The E. Coli Rece/Rect Recombination System	US20000555510	06/05/00
United States	Novel DNA Cloning Method	US20020231013	08/30/02
United States	Novel DNA cloning method	US20040842534	05/11/04

US 6509156 FAMILY			
Country	**Title**	**Appln. No.**	**Filing Date**
PCT	Novel DNA Cloning Method	WO1998EP07945	12/07/98

US 6355412 FAMILY			
Country	**Title**	**Appln No.**	**Filing Date**
Australia	Methods And Compositions For Directed Cloning And Subcloning Using Homologous Recombination	AU20000066911	07/10/00
Australia	Methods And Compositions For Directed Cloning And Subcloning Using Homologous Recombination	AU20000066911D	07/10/00
Brazil*	Methods And Compositions For Directed Cloning And Subcloning Using Homologous Recombination	BR20000012283	07/10/00
Canada	Methods And Compositions For Directed Cloning And Subcloning Using Homologous Recombination	CA20002377938	07/10/00
China	Method And Compositions For Directed Cloning And Subcloning Using Homologous Recombination	CN20000812739	07/10/00
Europe	Methods And Compositions For Directed Cloning And Subcloning Using Homologous Recombination	EP20000954461	07/10/00
Israel	No English Title Available	IL147385D	Unavailable
Japan	Methods And Compositions For Directed Cloning And Subcloning Using Homologous Recombination	JP20010509492T	07/10/00
Mexico	Methods And Compositions For Directed Cloning And Subcloning Using Homologous Recombination	MX2002PA00233	07/10/00
Poland	Methods And Compositions For Directed Cloning And Subcloning Using Homologous Recombination	PL20000353634	07/10/00
United States	Methods And Compositions For Directed Cloning And Subcloning Using Homologous Recombination	US19990350830	07/09/99
PCT	Methods And Compositions For Directed Cloning And Subcloning Using Homologous Recombination	WO2000EP06533	07/10/00
South Africa	Methods And Compositions For Directed Cloning And Subcloning Using Homologous Recombination	ZA20020000152	01/08/02