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The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search The Hague		Date of completion of the search 6 July 2009	Examiner Hornig, Horst
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

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EPO FORM 1503 03.82 (P04C04)

DOCUMENTS CONSIDERED TO BE RELEVANT			
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The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search The Hague		Date of completion of the search 6 July 2009	Examiner Hornig, Horst
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
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EPO FORM 1503 03.82 (P04C04)

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

- Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):
- No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:
- The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-2,5-20

A method of juxtaposing sequence tags (GVTs) where two constituent members of a tag pair (GVT-pair) are unique positional markers of a defined separation distance in a target nucleic acid molecule, the method comprising: ligating a DNA adaptor having one or more restriction endonuclease recognition sites to both ends of a fragmented target DNA insert; digesting the adaptor using a restriction endonuclease at the recognition site to cleave the target DNA insert at a defined distance from each end of the target DNA insert to create two sequence tags (GVTs) comprising terminal sequences of the target DNA insert that are attached to the plasmid vector; and recircularizing the plasmid vectors with the attached GVTs to obtain a circular plasmid including a GVT pair having two juxtaposed GVTs; a method of juxtaposing sequence tags (GVTs) where the two constituent members of a tag pair are unique positional markers flanking two adjacent and cleavable restriction endonuclease sites, for one or more given restriction endonucleases, along the length of a population of target nucleic acid molecules, the method comprising: ligating the digested target DNA inserts into a vector at a location flanked by a pair of sites for a type IIS, type IIG, or type III restriction endonuclease; cleaving the insert DNA at a defined distance from each end of the target DNA inserts, thereby creating two sequence tags (GVTs), comprising terminal sequences of the target DNA inserts that are attached to the vector backbones; and recircularizing the vector backbones with the attached GVTs to form a circular plasmid each bearing a GVT-pair comprising two juxtaposed GVTs.

2. claim: 3

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

A method to create a DNA oligomer through the controlled and ordered ligation of short DNA monomers possessing palindromic, rotationally equivalent cohesive ends to yield an oligomeric product bound at both ends by an initiation adaptor, comprising the steps of: forming an oligomer of DNA monomers initiated from an initiation adaptor wherein one adaptor terminus has a nonpalindromic cohesive end that cannot self-ligate, but can adhere to a vector, while the other adaptor terminus has a cohesive end that is unphosphorylated to prevent adaptor dimer formation and is complementary to the cohesive ends of the DNA monomer for ligation to monomer to initiate oligomer formation; and terminating oligomer growth upon ligation of either a free initiation adaptor to the oligomer formed by adding the DNA monomers or by ligation of another oligomer initiated by the initiation adaptor; wherein the oligomer so formed has an average length regulated by a molar ratio of DNA monomer to initiation adaptor measured when commencing formation of the oligomer.

3. claims: 4,21-28

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

A method for making a circular modular vector capable of producing linked sequence tags, propagating one or more independent DNA inserts, and of priming at least four sequencing reactions, comprising: providing two modular vector segments or modules of which the first module comprises a drug selectable marker and the second module comprises a replicon for plasmid replication and a terminal portion of each module having a type IIS endonuclease cleavage site that produces unique nonpalindromic cohesive end for the excision and targeted replacement of vector modules to create new vector functionalities; joining one end of the first and second modules in a DNA cassette comprising a recognition site which upon digestion with the endonuclease creates a pair of nonpalindromic cohesive ends on the vector for ligation to a DNA insert; and connecting the other end of the first and second modules to yield a circular molecule in a second DNA cassette comprising a second cloning site comprising another pair of restriction endonuclease recognition sites, which upon digestion with the endonuclease creates a pair of nonpalindromic cohesive ends on the vector that is distinct from those of the first cloning site, for ligation to a second and distinct recipient insert, and the cloning site is flanked on both sides by different DNA sequencing primer binding sites to prime Sanger dideoxy sequencing reactions into the recipient DNA insert; wherein the vector is free of recognition sites for Mme I, CstM I, NmeA III, EcoP15 I, Pst II, BamH I, Pst I, BspT I, or Kas I and the vector insert cloning sites comprise Eco31 I and Esp3 I recognition sites.

**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 07 70 1933

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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