Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbp@gbpatent.com
ptob@gbpatent.com
Office Action Summary

Applicant(s)          Applicant(s)
Certified Paper Failure Office
Other: is/are: 4)
2b)^ Notice
Part.
Art
PTOL-326 Attachment(s)
3) Status
Disposition Period
2a)^ This action is FINAL.
2b)^ This action is non-final.
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.
Claim(s) 13-19 and 26-28 is/are pending in the application.
4) Claim(s) 13-19 and 26-28 is/are rejected.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 13-19 and 26-28 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.
The specification is objected to by the Examiner.
The drawing(s) filed on _____ is/are: a)^ accepted or b)^ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.
Claim(s) 13-19 and 26-28 is/are pending in the application.
4) Claim(s) 13-19 and 26-28 is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 13-19 and 26-28 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.
Priority under 35 U.S.C. § 119
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) All  b) Some  * c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. _____.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.
Attachment(s)
1) Notice of References Cited (PTO-892)
2) Notice of Draftperson’s Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO/SB/08)
4) Interview Summary (PTO-413)
   Paper No(s)/Mail Date ______.
5) Notice of Informal Patent Application
6) Other: ______.
DETAILED ACTION

Status of the application

1. The finality of previous office action has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

   A person shall be entitled to a patent unless –

   (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.


   Engman et al disclose a method for reduction of a substrate with thioredoxin reductase, comprising combining the thioredoxin reductase, the substrate, selenium compound and NADPH in vitro conditions to reduce the substrate, wherein the substrate is thioredoxin and selenium compound [see Table 1, page 4601] is a competitive inhibitor for the thioredoxin [see Results]. Engman et al also disclose selenium in the form of selenite (selenium compound) is a substrate for the reduction by mammalian thioredoxin reductase [page 4600, 2nd paragraph]. The listed selenium compounds by Engman et al, specifically the following compound
In view of the above disclosures, viz., selenium compounds are competitive inhibitors and selenite is a substrate for thioredoxin reductase, selenium compounds inherently possess the properties of thioredoxin, and therefore, the selenium compounds expected to act as a substrate for the thioredoxin reductase.

In the reduction process, the reduced thioredoxin is useful for the conversion of hydrogen peroxide to water, which means it reduces the peroxide in the cell, with the help of thioredoxin peroxidase. More the substrate more production of reduced thioredoxin, which in turn enhances the peroxidase activity. The claims 15 and 16 have two substrates, viz., thioredoxin and selenium compound, which produces more reduced thioredoxin, which anticipates the enhancement of the peroxidase activity. Hence the claims 15-16, 18-19 and 27-28 are anticipated.

Thioredoxins are electron donors. The Km for thioredoxin is less than the selenium compound for the enzyme. The claims 17 and 18 comprises both thioredoxin and selenium compound in the enzymatic reaction. The unreacted selenium compound
expected to oxidize the reduced thioredoxin. Hence the claims 17 and 26 are anticipated.

**Conclusion**

4. No Claim is allowed.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhakar Katakam whose telephone number is 571-272-9929. The examiner can normally be reached on M-F 8:30 AM - 5:00 PM.

   If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

   Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

   For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sudhakar Katakam/
Examiner, Art Unit 1621

/YVONNE L. EYLER/