

5th World Congress on Biotechnology

June 25-27, 2014 Valencia Conference Centre, Valencia, Spain

Study of some biological profiles as limiting factors of male fertility in the region of Batna (Algeria)

Bousnane Nour El Houda

University Hadj Lakhdar Batna, Algeria

Male infertility or the inability of a man to procreate is a major public health problem, where it is a leading cause of marital discord in several countries such as Algeria. The objective of this work is to study some biological profiles of infertile men from the city of Batna/Algeria and to identify the causes of infertility in a population of infertile males to improve its management and to establish a good therapeutic strategy through a study that lasted 10 months in the Department of Urology of the University Hospital of Batna and on a population of 140 infertile subjects. For every man, series of assessments was performed to determine the exact causes of infertility. It was found 102 cases of primary infertility against 38 cases of secondary infertility; the average age of men was 39.7 years, with a predominance of the age group (46-50 years). 34.29% of subjects had genital infections against 17.14% with varicocele. 132 men presented spermiological abnormalities; asthenospermia (AS) in 27.27% of the cases, astheno-teratospermia (OATS) 11.36% while Azoospermia showed 5.07%. Genital infections are the main causes of infertility (34.29%) of the cases. The results of spermocytogramme showed a predominance of head abnormalities (41.70%), while the flagellum abnormalities presented 33.83%. The dosage of the seminal plasma carnitine showed no pathological cases, which makes it difficult to know their association with infertility. By against some disturbances Fructose and Zinc have been reported.

Biography

Bousnane Nour El Houda is PhD 2nd year at the age of 24, from the University of Hadj Lakhda Batna, Algeria, department of natural and life sciences, and a laboratory engineer in Biochemistry in the department of medical sciences and a member of research laboratory of Biotechnology of Bioactive Molecules and Cellular Pathophysiology. He has participated in several congresses the latest has been in Tunisia (the 25th Congress of the ATSB of Biotechnology).

hodanorel20@hotmail.fr

Cloning and over-expression of gene g6pd of glucose 6-phosphate dehydrogenase in *Candida tropicalis* and its influence on xylitol biosynthesis

Cheng-Tao Wang^{1,2}, Sheng Yin¹, Chan Zhang², Baocai Xu^{1,2} and Xuenan Gao¹

¹Beijing Engineering and Technology Research Center of Food Additives, China

²Beijing Technology & Business University, China

The influence of gene g6pd over-expression on the xylitol biosynthesis in *C. tropicalis* was investigated in this paper. Glucose 6-phosphate dehydrogenase gene (g6pd) was cloned from *Candida tropicalis* AS2.1776 and inserted into a yeast expression vector pYES-pgk, generating a recombinant expression vector pYES-pgk-g6pd. The recombinant vector was then introduced into *C. tropicalis* AS2.1776 by the LiAc/ssDNA/PEG transformation method resulting in over-expression of the g6pd gene. The fermentation results showed that a maximum xylitol yield of 79.90 g/L was achieved in the recombinant strain SYG5 harboring pYES-pgk-g6pd after 62 h of fermentation. Compared to the wild type strain *C. tropicalis* AS2.1776, the yield and productive rate of xylitol in strain SYG5 was increased by 11.30% and 44.91%, respectively. These results in this study indicated that increasing the expression level of the gene g6pd significantly enhanced the xylitol production, which revealed the glucose 6-phosphate dehydrogenase played a key role in the biosynthesis pathway of xylitol in *C. tropicalis*.

Biography

Cheng-Tao Wang has completed his PhD from College of Food Science and Nutritional Engineering, China Agricultural University (CAU) in 2006. He is a deputy dean and a professor, School of Food and Chemical Engineering of Beijing Technology and Business University (BTBU). He has published more than 75 papers in reputed journals, and has been serving as an editorial board member of Science and Technology of Food Industry (STFI).

wct5566@163.com