

ABSTRACT

THE INFLUENCE OF THE WATER FRACTION OF THE GANDARUSA (*Justicia gendarussa* Burm.F.) TOWARDS THE GENE EXPRESSION OF HYALURONIDASE OF MICE (*Mus musculus* L.) TESTIS BY PCR ANALYSIS

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The development of man contraceptions is still limited (e.g. coitus interruptus, vasectomy and condom) and this common man contraceptions still have weaknesses. One of the ideal contraception conditions is safety which mean non mutagenic. The continous research will be required to prove the existence of the mutation. The early research from this verification process is the gene expression analysis with PCR. The PCR technique used to detect target of RNA through RT-PCR, so that the gene expression analyzed is at the process of transcription.

Gandarusa as an etnomedicin represent man contraception alternative, because it has been used long time ago by the society of Sentani (Papua). Gandarusa known to pursue the enzyme function of hyaluronidase at the head of spermatozoa acrosom which have a role to penetrate coats that cover up the ovum at fertilization.

The target of research is to know the gene expression of *hyaluronidase* of mice (*Mus musculus* L.) testis given with the water fraction of the gandarusa (*Justicia gendarussa* Burm. f.) with PCR analysis.

The total RNA is isolating from the normal mice testis (the negative control) and the treatment groups. The treatment groups are group I and II given with the water fraction of the gandarusa 15 mg/20 gr BW and 7,5 mg/20 gr BW, subsequently, and also the positive control group given with hesperidin 1 mg/20 gr BW counted once a day *per oral* during 1,5 times cycle of spermatogenesis (55 day).

The cDNA fragment which may confirm as the gene of *hyaluronidase* mice testis got through RT-PCR at the total RNA negative control group, sequenced, isolated and alignmented in the NCBI gene bank. Then will be electrophorated with the agarose gel electrophoresis with cDNA fragment of the treatment groups. The gene of *hyaluronidase* mice testis will not transcribed at the treatment I and positive control groups (there is no band with 710 bp length of nucleotide), but this gene will be transcribed at treatment II group (the band emerged).

Key word : man contraception, gandarusa, *hyaluronidase* gene, PCR analysis