

Modulating Effects on Vitellogenin Induction by Several Pharmaceuticals to *Oryzias latipes*

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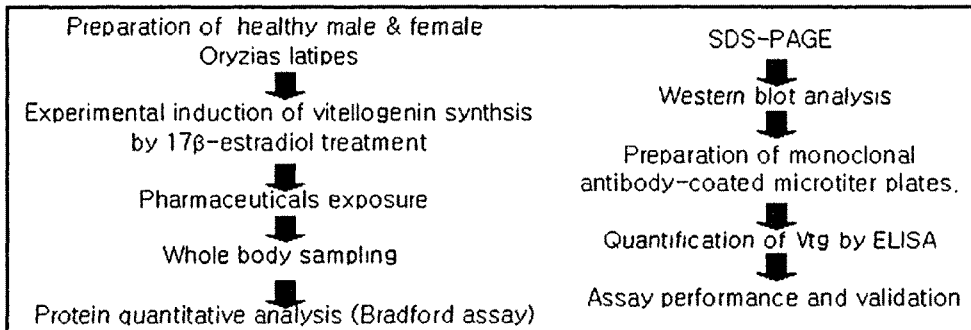
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Abstract

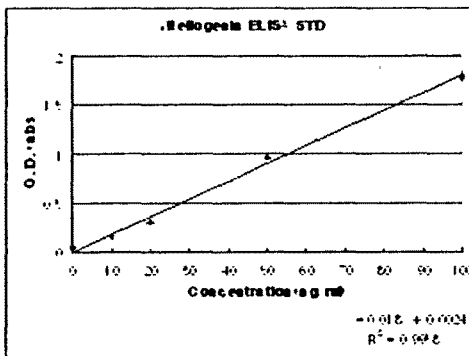
Endocrine disrupting effects of several pharmaceutical products were evaluated with fish. The test pharmaceuticals (caffeine, ketoconazole, acetaminophen and diltiazem) have been often detected in aquatic environment of Korea (from on going study of this research team). We analyzed vitellogenin induction by qualitative (Western blot) and quantitative (ELISA) assay. 17β -estradiol was used as a positive control. Some pharmaceuticals could give effects to male *Oryzias latipes*. They could induced vitellogenin under exposure of chemicals at male *Oryzias latipes*.

Materials and Method



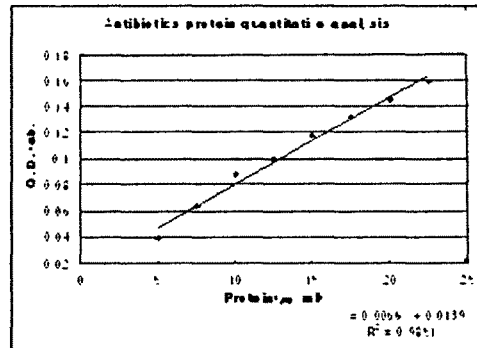
Results and Discussion

Vitellogenin standard curve



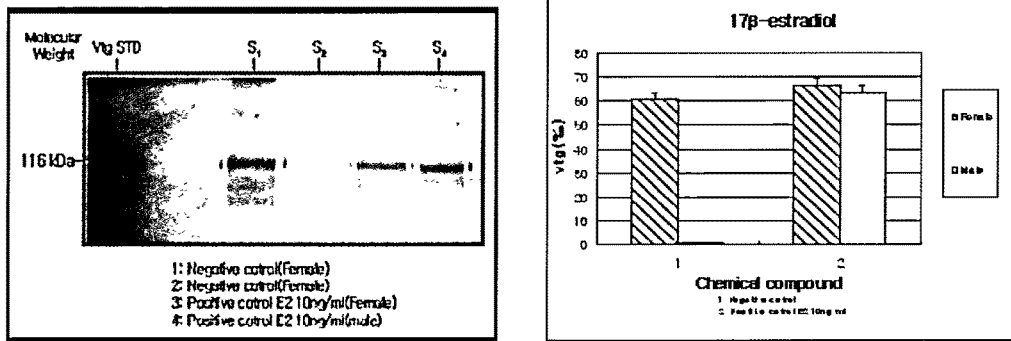
<Fig.1> Vitellogenine standard curve fitting

Protein quantification standard



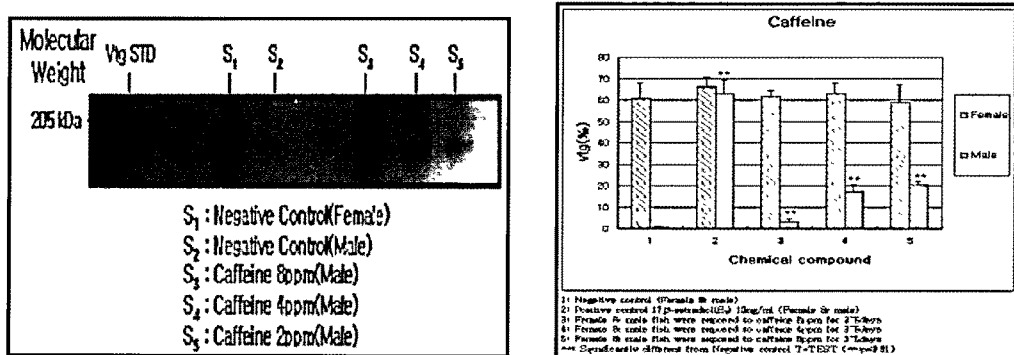
<Fig 2> Protein quantification standard curve fitting

Vitellogenin induction by 17β -estradiol in *Oryzias latipes*

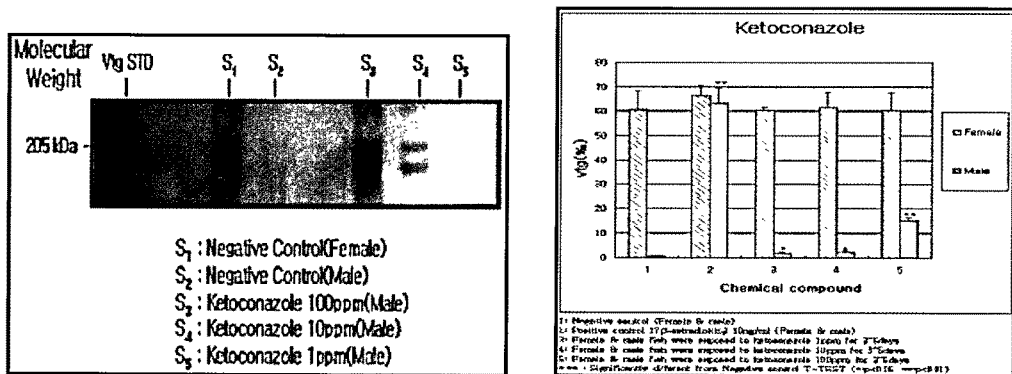


<Fig.3> Vitellogenine induction by 17β -estradiol in *Oryzias latipes*

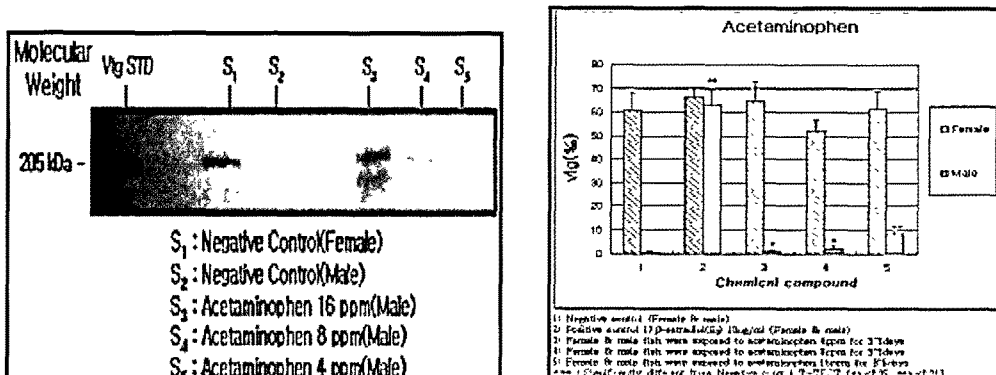
Vitellogenin induction by pharmaceutical



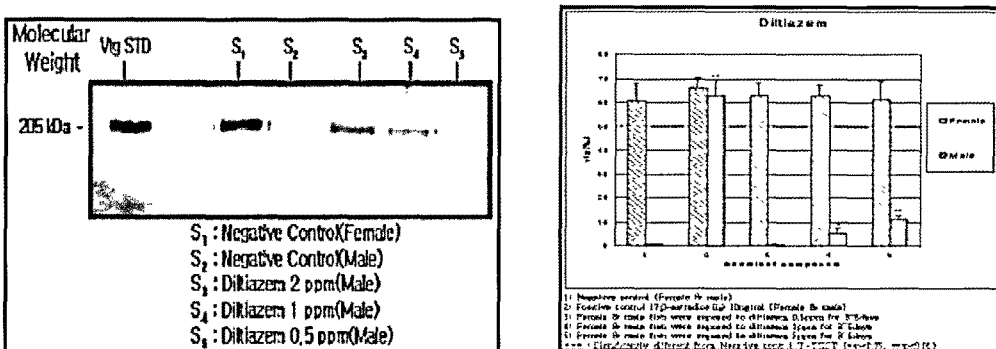
<Fig.4> Vitellogenine induction by caffeine exposure at *Oryzias latipes*



<Fig.5> Vitellogenin induction by ketoconazole exposure at *Oryzias latipes*



<Fig.6> Vitellogenin induction by acetaminophen exposure at Japanese medaka



<Fig.7> Vitellogenin induction by diltiazem exposure at Japanese medaka

Conclusion

The caffeine, ketoconazole, acetaminophen and diltiazem were induced vitellogenin at male *Oryzias latipes*.

References

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