

APICA

Joint Conference of Asia Pacific International Congress of Anatomists and 68th Korean Association of Anatomists

October 28-31, 2018 BEXCO, Busan, Korea

Hosted by Korean Association of Anatomists

Supported by The Korean Federation of Science and Technology Societies (KOFST) Korean Academy of Medical Sciences (KAMS) Hankok Medical Science Foundation **Busan Tourism Organization (BTO)** Korea Tourism Organization (KTO)

observed that there is a transition from the primary cilia to the kinocilia at the onset of hair cell differentiation. Although we did not observe an obvious difference in their microstructures, there was a clear change in their ability to respond to SHH signaling. We are currently investigating how such transition contributes to mediate diverse roles of SHH signaling essential for cochlear development. Taken together, our results demonstrate the complexity of ciliary mutants and the importance of the primary cilia in mediating multiple roles of SHH signaling during cochlear development.

Key Words: Primary Cilia, Shh Signaling, Cochlea, Auditory Hair Cell, Development, Hearing Loss

*Acknowledgement: This work is supported by the BK 21 PLUS Project for Medical Science, Yonsei University

P226

The Comparasion of Eucommia ulmoides And Cibotium barometz Ethanol Extract On Fetal Growth of Wistar Rat Fetus

Heddy Herdiman¹, Jeanny Ervie Ladi², Cherry Azaria². Christian Edwin³, Syani Lesmana³

Department of Anatomy Faculty of Medicine Maranatha Christian University, Bandung, Indonesia

³Department of Histology Faculty of Medicine Maranatha Christian University, Bandung, Indonesia

³Faculty of Medicine Maranatha Christian University, Bandung,

Eucommia ulmoides and Cibotium barometz are traditional Chinese medicine that is widely consumed all over the world, especially by pregnant women to strengthen the womb. Safety in consuming Eucommia ulmoides and Cibotium barometz needs to be investigated because most of the consumers are pregnant women who feared those herbs would affect fetal development. The purpose of the study is to find the effect of Eucommia ulmoides (EU) and Cibotium barometz (CB) ethanol extract on fetal growth. By experimental research, using male and female rats mated up until pregnant. Pregnant female rats were divided into 7 groups which were given the treatments



The Comparison Of Eucommia ulmoides and Cibotium barometz Ethanol Extract on Fetal Growth of Wistar Rat Fetus

KRISTEN MARANATHA

Heddy Herdiman¹, Jeanny Ervie Ladi², Chery Azaria², Christian Edwin³, Syani Lesmana³

- 1. Department of Anatomy, Faculty of Medicine, Maranatha Christian University, Bandung, Indonesia
- Department of Histology Faculty of Medicine, Maranatha Christian University, Bandung, Indonesia
 Faculty of Medicine, Maranatha Christian University, Bandung, Indonesia



INTRODUCTION

Malnutrition during pregnancy can cause inhibition of fetal growth and low birth weight babies (LBW). Intrauterine growth restriction can cause a small fetal size during pregnancy and even fetal death and abortion.1

Many traditional medicines, both patented drugs and herbal medicine, which is used to prevent abortion. An Tai Yao is a Chinese herbal medicine, which has been known and used since ancient. In Indonesia, the drug is already known and trusted by the public, especially by the Chinese. The use of these drugs, usually used empirically based on advice from parents or people nearby who believe the benefits of the drug.2An Tai Yao is a herbal remedy made from several plants, one of which is Cibotium barometz (Gou JI) dan Eucommia ulmoides. The aim of research is to determine the effect of the rhizome of Cibotium barometz (CB) and bark of Eucommia ulmoides (EU) ethanol extract on the growth of the fetus.

METHODS

This research was real laboratory experimental research design, using female rats that have been confirmed pregnant. Female rats were divided into 7 groups: the group treated by administering CB 500 mg/kgBW (CB1), CB 1000 mg/kgBW (CB2), CB 1500 mg/kgBW (CB3), EU 400 mg/kgBW (EU1), EU 800 mg/kg BW(EU2), and EU 1600 mg/kgBW (EU3), and control group were given CMC 1% on gestational age 11 days.3 The pregnant female rats were dissected and the uterus were opened during 20th days of pregnancy to take the samples of rat fetuses. Parameters measured in this research were weight (g), body length (mm), and length of femur bone calcification (mm), stained by Alizarin Red S, of fetal mice. Data were analyzed by using one-way ANOVA then followed by LSD test.

RESULTS

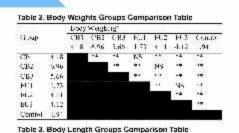


Table 1. ANOVA Results Table ANOVA **Body Weight** < 5.001 **Bady Length** < 5:000

Calcifications

< 0.001

| Grens | | dody Leneth (rom) | | | | | | |
|--------|------|-------------------|------|-----|-------|------|-------|-------|
| | | CH | Clie | CH3 | Legis | - Uz | 111.5 | Carry |
| | | 36.4 | 41.2 | -1. | 24.4 | 343 | 35.8 | 26.5 |
| CBI | 76.4 | | -1 | 1 | NS. | 11 | +1 | ++ |
| CB2 | 11.2 | | | 4. | 4- | 16 | NS. | |
| CB3 | 42.1 | | | | 1 | 18 | NS. | |
| L. | 24.9 | | | | | 911 | 10 | |
| F. " | 74.8 | | | | | | N5 | |
| E.3 | 35.3 | | | | | | | |
| Carrie | 34.5 | | | | | | | |

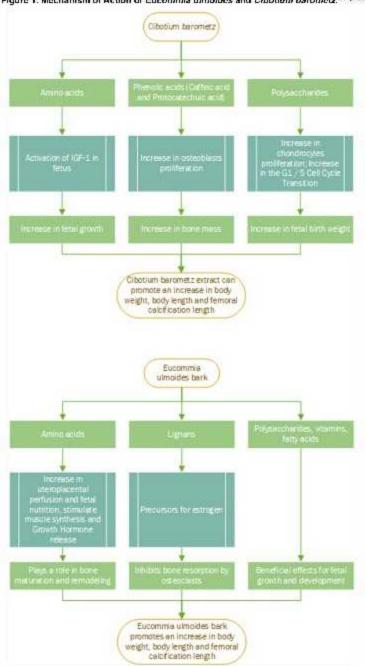
Table 4. Femoral Calcification Groups Comparison Table Length of that leader Calcidication (a FI 3 CB3 1.32 EIR





Picture 2. Calcification of Rat's Femur (Alazin Red)

DISCUSION



CONCLUSIONS

We concluded that Cibotium barometz and Eucommia ulmoides ethanol extract increases body weight, body length, and the calcification length of the femur of rat's fetus. The results also shows the rhizome of Cibotium barometz ethanol extracts are better than bark of Eucommia ulmoides ones in increasing body weight, body length, and femur calcification of the Wistar rat's fetuses.

REFERENCES

- 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910.
 3-1910 For Claberty C. Lin C. Y. C. Mor Y. Plan Claid State and David etatolysis controlled Wardiag characteristics for the Dynamic Linguistics (Co. 15 act).
 Special Parial Cost Not Visc Pap 2017; 15: 2227-2024.
- No. We camp; Creek Complete; U.S. Anti-coder, askedy of the once credit an introduct from the 2272-2 does 16,5821 in plus 200006.
 As C. Chao M.J. Sach, Coldin, Jan T.S. Ellectofride 17,465 and its authority process, the tite Funds and Perblety to or or many of collectuals. J Ellectorists of J. Schmidt. 17, 20000.
 Enternal D.S. Short AG, the sense SA, Reconsider, P. West established on the introduction for the introduction of the 18 and 19 and 19