

**Pengaruh Induksi Oodev terhadap Kematangan Gonad Ikan Uceng
Nemacheilus fasciatus (Valenciennes in Cuvier and Valenciennes, 1846)
Betina**

**Tsalitsa Nabila Ainurrahmah
19/438666/BI/10204**

Dosen Pembimbing: Dr. Slamet Widiyanto, S.Si., M.Sc.

INTISARI

Ikan uceng (*Nemacheilus fasciatus*) merupakan ikan air tawar yang mempunyai berbagai manfaat dan nilai ekonomi yang cukup tinggi. Pemenuhan kebutuhan ikan uceng yang sampai saat ini masih mengandalkan tangkapan dari alam berpotensi menyebabkan populasi ikan uceng menurun seiring waktu, sehingga diperlukan adanya upaya budidaya. Dalam upaya budidaya ikan uceng, salah satu kendala yang umum dihadapi yaitu ketersediaan benih yang terbatas karena tidak tersedianya induk matang gonad di luar musim pemijahan. Selain itu, kematangan gonad ikan uceng yang dipelihara di akuarium diketahui berlangsung lebih lambat dibandingkan di habitat aslinya. Salah satu solusi untuk mengatasi permasalahan tersebut yaitu dengan mempercepat kematangan gonad ikan uceng betina melalui rekayasa hormonal menggunakan hormon Oodev (*oocyte developer*).

Penelitian ini bertujuan untuk mempelajari pengaruh induksi Oodev dan dosis optimal Oodev untuk mempercepat kematangan gonad ikan uceng betina. Penelitian dilaksanakan pada bulan Januari 2023 – April 2023 di Laboratorium Fisiologi Hewan dan Laboratorium Struktur dan Perkembangan Hewan, Fakultas Biologi, Universitas Gadjah Mada. Metode penelitian yang digunakan adalah metode eksperimen. Rancangan penelitian yang digunakan yaitu Rancangan Acak Lengkap (RAL) dengan lima perlakuan, yaitu kontrol (tanpa induksi Oodev), P1 (0,25 ml/kg pakan), P2 (0,50 ml/kg pakan), P3 (0,75 ml/kg pakan), P4 (1,00 ml/kg pakan) dan 11 ulangan individu pada setiap perlakuan. Pada penelitian ini, induksi Oodev dilakukan dengan metode oral melalui pakan, dengan frekuensi pemberian sebanyak tiga kali sehari, selama 27 hari masa perlakuan hormon. Parameter pada penelitian ini meliputi tingkat kematangan gonad (TKG), indeks gonadosomatik (IGS), indeks hepatosomatik (IHS), diameter telur, pertumbuhan panjang mutlak, pertumbuhan bobot mutlak, dan kualitas air yang meliputi suhu, pH, dan DO. Hasil penelitian menunjukkan bahwa induksi Oodev secara oral mampu mempercepat kematangan gonad ikan uceng betina pada perlakuan selama 14 hari. Dosis optimal Oodev untuk mempercepat kematangan gonad ikan uceng betina, yaitu 1,00 ml/kg pakan, dengan didapatkannya ikan uceng betina yang telah mencapai TKG III, rerata nilai IHS 1,302%, rerata nilai IGS 2,401%, dan rerata diameter telur 92,234 µm.

Kata kunci: induksi, Oodev, ikan uceng, kematangan gonad, *Nemacheilus fasciatus*

**Effect of Oodev Induction on Gonad Maturity of Female Barred Loach Fish
Nemacheilus fasciatus (Valenciennes in Cuvier and Valenciennes, 1846)**

**Tsalitsa Nabila Ainurrahmah
19/438666/BI/10204**

Supervisor: Dr. Slamet Widiyanto, S. Si., M. Sc.

ABSTRACT

Barred loach (*Nemacheilus fasciatus*) is a freshwater fish that has various benefits and high economic value. The reliance on natural catches for the fulfillment of barred loach fish stocks has the potential to lead to a gradual decline in the population of barred loach fish in their natural habitats over time. Therefore, cultivation efforts are necessary to mitigate this issue and ensure the long-term sustainability of barred loach fish population. In the barred loach fish cultivation, one common obstacle is the limited availability of seeds due to the unavailability of mature gonad fish outside the spawning season. Furthermore, the gonad maturity of barred loach fish maintained in aquarium occurs at a slower rate compared to those in their natural habitat. One of the proposed solutions to overcome these problems is by accelerating the gonad maturity of female barred loach fish through hormonal engineering using Oodev (oocyte developer) hormone.

The purpose of this research is to study the effect of Oodev induction and the optimal dose of Oodev to accelerate the gonad maturity of female barred loach fish. The research was conducted from January 2023 to April 2023 at the Animal Physiology Laboratory and Animal Structure and Development Laboratory, Faculty of Biology, Gadjah Mada University. The research method used is the experimental method. The research design used was a completely randomized design (CRD) with five treatments, i.e., control (without Oodev induction), P1 (0.25 ml/kg feed), P2 (0.50 ml/ feed), P3 (0.75 ml/kg feed), P4 (1.00 ml/kg feed) and 11 individual replications for each treatment. In this study, Oodev induction was carried out by the oral method through feed, with a frequency of three times a day, for 27 days of the hormone treatment period. Parameters in this study include gonad maturity stage, gonadosomatic index (GSI), hepatosomatic index (HSI), egg diameter, absolute length growth, absolute weight growth, and water quality which includes temperature, pH, and DO. The results of this study indicated that Oodev oral induction was able to accelerate the gonad maturity of female barred loach fish after 14 days of treatment. The optimal dose of Oodev to accelerate the gonad maturity of female barred loach fish is 1.00 ml/kg feed, by obtaining female barred loach fish that had reached TKG III, the average HSI value is 1.302%, the average GSI value is 2.401%, and the average egg diameter is 92.234 μm .

Keywords: induction, Oodev, barred loach, gonad maturity, *Nemacheilus fasciatus*