antibiotics

# Supplementary Materials

# Determination of pharmacokinetic and pharmacokinetic-pharmacodynamic parameters of doxycycline against *Edwardsiella ictalurid* in yellow catfish (*Pelteobagrus fulvidraco*)

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Table S1, S2 and S3 showed the raw data of doxycycline concentrations in gill, kidney, liver, muscle+skin, and plasma of yellow catfish (*Pelteobagrus fulvidraco*) at different sampling times following a single oral dose of 10, 20, and 40 mg/kg, respectively.

Table S1. The concentrations of doxycycline in plasma and tissues of yellow catfish (*Pelteobagrus fulvidraco*) after a single oral dose at 10 mg/kg at 24 °C

| Time (h) | Concentration (mg/kg or mg/L) | | | | |
|---|---|---|---|---|---|
| | Gill | Kidney | Liver | Muscle+skin | Plasma |
| 0.08 | 0.52±0.17 | 0.29±0.19 | 0.63±0.13 | 0.08±0.02 | 0.05±0.02 |
| 0.17 | 0.56±0.06 | 0.41±0.18 | 0.50±0.06 | 0.05±0.01 | 0.18±0.12 |
| 0.5 | 0.66±0.19 | 0.53±0.29 | 0.59±0.04 | 0.13±0.08 | 0.11±0.05 |
| 1 | 0.57±0.07 | 1.03±0.31 | 1.08±0.53 | 0.14±0.07 | 0.18±0.04 |
| 2 | 0.56±0.02 | 0.64±0.11 | 0.95±0.18 | 0.16±0.04 | 0.28±0.04 |
| 4 | 0.48±0.06 | 0.59±0.16 | 0.68±0.06 | 0.18±0.06 | 0.32±0.08 |
| 6 | 0.52±0.01 | 0.83±0.41 | 0.44±0.21 | 0.18±0.06 | 0.44±0.22 |
| 8 | 0.57±0.07 | 0.77±0.14 | 0.54±0.06 | 0.17±0.04 | 0.32±0.02 |
| 12 | 0.46±0.07 | 0.62±0.12 | 0.60±0.31 | 0.18±0.01 | 0.31±0.06 |
| 16 | 0.42±0.04 | 0.56±0.14 | 0.56±0.21 | 0.16±0.02 | 0.35±0.10 |
| 24 | 0.52±0.05 | 0.58±0.29 | 0.66±0.37 | 0.18±0.03 | 0.33±0.14 |
| 48 | 0.54±0.22 | 0.84±0.19 | 0.58±0.18 | 0.17±0.01 | 0.30±0.05 |
| 72 | 0.42±0.06 | 0.41±0.19 | 0.51±0.06 | 0.14±0.02 | 0.28±0.01 |
| 96 | 0.30±0.06 | 0.40±0.27 | 0.47±0.33 | 0.12±0.04 | 0.19±0.09 |

Table S2. The concentrations of doxycycline in plasma and tissues of yellow catfish (*Pelteobagrus fulvidraco*) after a single oral dose at 20 mg/kg at 24 °C

| Time(h) | Concentration (mg/kg or mg/L) | | | | |
|---|---|---|---|---|---|
| | Gill | Kidney | Liver | Muscle+skin | Plasma |
| 0.08 | 18.19±12.66 | 10.54±7.75 | 2.01±0.90 | 0.08±0.03 | 0.47±0.10 |
| 0.17 | 81.82±20.88 | 8.21±3.38 | 5.20±1.38 | 0.21±0.12 | 0.71±0.59 |
| 0.5 | 120.74±20.31 | 11.64±0.96 | 8.78±2.45 | 0.50±0.13 | 0.94±0.37 |
| 1 | 56.37±19.98 | 7.61±4.46 | 10.02±3.12 | 0.57±0.21 | 2.12±0.26 |
| 2 | 94.89±39.66 | 5.87±0.69 | 23.52±5.55 | 0.88±0.73 | 2.44±0.49 |
| 4 | 45.78±21.71 | 5.67±1.88 | 24.15±15.43 | 2.30±0.83 | 4.67±2.97 |
| 6 | 24.53±14.54 | 9.82±6.62 | 16.32±1.01 | 1.08±0.47 | 1.99±0.61 |
| 8 | 17.20±5.67 | 4.34±3.05 | 10.16±2.07 | 1.46±0.58 | 2.81±1.10 |
| 12 | 15.11±3.83 | 1.96±1.47 | 19.96±11.21 | 0.93±0.57 | 3.78±1.40 |
| 16 | 9.53±4.24 | 2.16±0.78 | 15.49±6.36 | 1.03±0.27 | 2.41±0.14 |
| 24 | 2.87±1.96 | 1.84±0.42 | 34.81±10.22 | 1.39±0.84 | 3.35±1.96 |
| 48 | 2.56±1.52 | 3.32±2.61 | 23.62±9.87 | 0.86±0.55 | 1.55±0.14 |

| | | | | | |
|---|---|---|---|---|---|
| 72 | 0.73±0.34 | 2.18±0.68 | 5.10±3.20 | 0.52±0.46 | 1.32±0.40 |
| 96 | 1.73±0.15 | 1.08±0.33 | 3.14±1.79 | 0.67±0.28 | 1.03±0.12 |

Table S3. The doxycycline concentrations in plasma and tissues of yellow catfish (*Pelteobagrus fulvidraco*) after a single oral dose at 40 mg/kg at 24 °C

| Time(h) | Concentration (mg/kg or mg/L) | | | | |
|---|---|---|---|---|---|
| | Gill | Kidney | Liver | Muscle+skin | Plasma |
| 0.08 | 20.87±8.22 | 4.47±2.90 | 15.21±9.16 | 1.38±0.48 | 0.77±0.41 |
| 0.17 | 94.59±19.27 | 3.22±0.72 | 13.97±9.84 | 0.33±0.12 | 0.98±0.63 |
| 0.5 | 151.94±76.89 | 8.85±1.66 | 14.93±9.29 | 1.26±0.63 | 1.54±0.64 |
| 1 | 67.83±34.52 | 10.5±5.95 | 24.95±8.73 | 1.24±0.24 | 2.87±1.41 |
| 2 | 105.94±68.08 | 15.4±9.79 | 24.14±7.44 | 1.19±0.86 | 5.04±2.83 |
| 4 | 14.26±3.24 | 6.88±4.45 | 11.17±5.38 | 1.31±0.25 | 3.62±1.49 |
| 6 | 38.7±20.85 | 7.38±2.37 | 24.07±10.34 | 2.09±0.59 | 5.89±2.72 |
| 8 | 23.62±12.46 | 12.12±8.43 | 16.91±7.56 | 1.85±0.66 | 4.45±3.16 |
| 12 | 50.40±15.04 | 9.19±3.59 | 23.38±4.76 | 2.84±1.28 | 6.99±2.30 |
| 16 | 20.35±11.34 | 7.97±2.16 | 12.57±7.12 | 1.43±0.56 | 3.75±1.18 |
| 24 | 6.12±1.93 | 4.49±1.83 | 9.92±4.09 | 1.57±0.88 | 2.82±1.16 |
| 48 | 8.58±3.77 | 3.74±2.06 | 2.49±0.71 | 0.87±0.46 | 1.42±0.82 |
| 72 | 3.12±1.61 | 3.68±0.77 | 7.68±2.54 | 1.40±0.81 | 1.53±0.41 |
| 96 | 2.80±0.84 | 3.07±0.39 | 2.64±1.07 | 0.92±0.14 | 1.17±0.64 |