

# Wistar Rats

NOMENCLATURE: Cri:WI



## Strain Origin

To Scientific Products Farm, Ltd. [predecessor of Charles River United Kingdom] in 1947 from Wistar Institute.  
To Charles River in 1975 from Charles River UK. This particular colony was selected because of a low incidence of hydronephrosis.

Coat Color: White (albino)

Produced: North America, Europe and Japan

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## NOMENCLATURE: Cri:WI

### Genetic Management of the Wistar Rat Colony

Charles River uses our International Genetic Standard (IGS) program to manage production of the Wistar Han rat. The IGS program is a management system that minimizes inbreeding and manages random genetic drift that would otherwise lead to colony divergence among colonies bred in different locations worldwide. The IGS program is validated by direct genetic analysis of animals from the foundation colony and the barrier rooms.

### Charles River Wistar Data

We understand that knowing certain baseline parameters for your research model colonies is vital to achieving valid and reproducible research results. To help ensure that we are providing the exact research models that you need, we conduct routine health surveillance on our animal colonies for an extensive list of infectious agents, in addition to maintaining clinical and toxicological data for those models.

### Clinical Chemistry

| Cri:WI* |      | CHOL<br>(mg/dl) | TRG<br>(mg/dl) | ALT<br>(U/l) | AST<br>(U) | ALK<br>(u/l) | TBIL<br>(mg/dl) |
|---------|------|-----------------|----------------|--------------|------------|--------------|-----------------|
| Male    | Mean | 108.02          | 230.98         | 58.41        | 142.54     | 239.66       | 0.31            |
|         | S.D. | 27.11           | 165.67         | 24.80        | 124.36     | 69.64        | 0.11            |
|         | n    | 122             | 122            | 121          | 121        | 121          | 121             |
| Female  | Mean | 101.68          | 151.93         | 57.00        | 214.69     | 150.91       | 0.54            |
|         | S.D. | 24.50           | 85.17          | 25.98        | 219.29     | 49.93        | 2.93            |
|         | n    | 121             | 121            | 121          | 121        | 121          | 121             |

| Cri:WI* |      | GLU<br>(mg/dl) | P<br>(mg/dl) | TP<br>(g/dl) | Ca<br>(mg/dl) | BUN<br>(mg/dl) | CRE<br>(mg/dl) |
|---------|------|----------------|--------------|--------------|---------------|----------------|----------------|
| Male    | Mean | 274.36         | 13.58        | 7.45         | 12.67         | 20.60          | 0.53           |
|         | S.D. | 85.16          | 2.15         | 0.77         | 1.06          | 5.67           | 0.10           |
|         | n    | 120            | 122          | 122          | 121           | 121            | 121            |
| Female  | Mean | 269.93         | 12.45        | 7.30         | 12.51         | 19.16          | 0.53           |
|         | S.D. | 87.10          | 1.82         | 0.68         | 0.99          | 6.91           | 0.24           |
|         | n    | 121            | 121          | 121          | 121           | 122            | 121            |

| Cri:WI* |      | ALB<br>(g/dl) | Na<br>(meq/l) | K <sup>+</sup><br>(meq/l) | Cl<br>(meq/l) |
|---------|------|---------------|---------------|---------------------------|---------------|
| Male    | Mean | 3.87          | 152.88        | 10.26                     | 109.09        |
|         | S.D. | 0.36          | 8.74          | 1.41                      | 8.71          |
|         | n    | 121           | 122           | 122                       | 122           |
| Female  | Mean | 3.90          | 150.05        | 9.42                      | 107.83        |
|         | S.D. | 0.38          | 14.48         | 1.68                      | 8.62          |
|         | n    | 121           | 120           | 119                       | 120           |

\*North American colonies only/non-fasted values

\*Potassium levels reflect acidosis caused by CO<sub>2</sub> euthanasia

Age: 56 - 70 days

Diet: Purina CRL (5L79) rodent chow

Temperature: 68 - 72°F

Humidity: 40 - 60%

Cage Density: 18.6 in<sup>2</sup>/rat

Euthanasia: CO<sub>2</sub>

Bleed Route: Cardiac puncture after euthanasia

Analyzing Equipment: Alfa Wassermann Ace Alera

Screening Period: January to December 2008

## Hematology

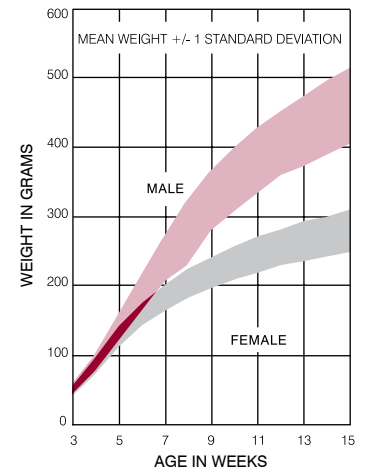
| Crl:WI* |      | WBC<br>(K/ $\mu$ l) | NEUT<br>(K/ $\mu$ l) | LYMPH<br>(K/ $\mu$ l) | MONO<br>(K/ $\mu$ l) | EOS<br>(K/ $\mu$ l) |
|---------|------|---------------------|----------------------|-----------------------|----------------------|---------------------|
| Male    | Mean | 9.45                | 3.88                 | 4.79                  | 0.65                 | 0.11                |
|         | S.D. | 3.01                | 1.44                 | 1.72                  | 0.31                 | 0.12                |
|         | n    | 122                 | 122                  | 122                   | 122                  | 122                 |
| Female  | Mean | 8.35                | 2.91                 | 4.67                  | 0.57                 | 0.16                |
|         | S.D. | 2.82                | 1.08                 | 1.66                  | 0.31                 | 0.20                |
|         | n    | 119                 | 119                  | 119                   | 119                  | 119                 |

| Crl:WI* |      | BASO<br>(K/ $\mu$ l) | NEUT<br>(%) | LYMPH<br>(%) | MONO<br>(%) | EOS<br>(%) |
|---------|------|----------------------|-------------|--------------|-------------|------------|
| Male    | Mean | 0.02                 | 40.80       | 51.05        | 6.86        | 1.09       |
|         | S.D. | 0.03                 | 8.12        | 8.03         | 2.30        | 1.14       |
|         | n    | 122                  | 122         | 122          | 122         | 122        |
| Female  | Mean | 0.04                 | 35.09       | 56.12        | 6.70        | 1.71       |
|         | S.D. | 0.07                 | 7.15        | 7.25         | 2.20        | 1.65       |
|         | n    | 119                  | 119         | 119          | 119         | 119        |

| Crl:WI* |      | BASO<br>(%) | RBC<br>(M/ $\mu$ l) | HGB<br>(g/dl) | HCT<br>(%) | MCV<br>(fl) |
|---------|------|-------------|---------------------|---------------|------------|-------------|
| Male    | Mean | 0.23        | 7.72                | 17.19         | 50.58      | 65.60       |
|         | S.D. | 0.30        | 1.19                | 2.76          | 7.92       | 4.64        |
|         | n    | 122         | 122                 | 122           | 122        | 122         |
| Female  | Mean | 0.38        | 7.58                | 16.51         | 49.02      | 64.76       |
|         | S.D. | 0.58        | 0.99                | 2.01          | 6.69       | 3.93        |
|         | n    | 119         | 119                 | 119           | 119        | 119         |

| Crl:WI* |      | MCH<br>(pg) | MCHC<br>(g/dl) | RDW<br>(%) | PLT<br>(K/ $\mu$ l) | MPV<br>(fL) |
|---------|------|-------------|----------------|------------|---------------------|-------------|
| Male    | Mean | 22.30       | 34.06          | 15.84      | 1815.40             | 7.52        |
|         | S.D. | 1.55        | 2.16           | 0.95       | 489.72              | 0.56        |
|         | n    | 122         | 122            | 122        | 122                 | 122         |
| Female  | Mean | 21.86       | 33.82          | 15.13      | 1710.82             | 7.39        |
|         | S.D. | 1.41        | 2.37           | 2.36       | 536.98              | 0.63        |
|         | n    | 119         | 119            | 119        | 119                 | 119         |

\*North American colonies only/non-fasted values



Age: 56 - 70 days

Diet: Purina CRL (5L79) rodent chow

Temperature: 68 - 72°F

Humidity: 40 - 60%

Cage Density: 18.6 in<sup>2</sup>/rat

Euthanasia: CO<sub>2</sub>

Bleed Route: Cardiac puncture after euthanasia

Analyzing Equipment: Drew Scientific HemaVet

Screening Period: January to December 2008

## Research Applications and References

The Wistar rat is a multipurpose model that can be used in such fields as toxicology (safety and efficacy testing), aging and oncology.

### General Purpose

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### Toxicology

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### Carcinogenesis

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