

*Supplementary material*

## Characterization of the germplasm bank for the Spanish autochthonous bull breed “Asturiana de la Montaña”

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**Table S1.** Descriptive statistics from the fresh semen analysis (40 Asturiana de la Montaña bulls, 102 ejaculates).

| Variable                       | Min. | 1st Q. | Median | 3rd Q. | Max.  |
|--------------------------------|------|--------|--------|--------|-------|
| Total motility (%)             | 65.5 | 83.9   | 93.4   | 95.9   | 98.5  |
| Progressivity (%)              | 57.6 | 64.8   | 71.9   | 83.5   | 92.3  |
| VCL ( $\mu\text{m}/\text{s}$ ) | 95.7 | 109.9  | 116.4  | 128.0  | 156.2 |
| VAP ( $\mu\text{m}/\text{s}$ ) | 65.2 | 80.6   | 91.9   | 101.7  | 137   |
| VSL ( $\mu\text{m}/\text{s}$ ) | 50.2 | 65.4   | 75.4   | 79.8   | 118.9 |
| LIN (%)                        | 49.1 | 58.3   | 63.9   | 68.8   | 76.5  |
| STR (%)                        | 75.7 | 78.4   | 80.7   | 83.9   | 86.8  |
| WOB (%)                        | 64.9 | 71     | 80.7   | 83.7   | 88.1  |
| Abnormal forms (%)             | 3.0  | 8.6    | 8.8    | 8.9    | 13.0  |
| Cytoplasmic droplets (%)       | 0    | 4.0    | 5.8    | 7.4    | 18.0  |
| Damaged acrosomes (%)          | 1.0  | 3.0    | 3.7    | 4.2    | 8.0   |
| HOST (%)                       | 49.0 | 58.0   | 68.0   | 77.5   | 85.0  |
| Viability (%)                  | 55.0 | 63.0   | 66.0   | 70.2   | 80.0  |

Min: Minimum; 1st Q.: First quartile of the distribution; 3st Q.: Third quartile; Max.: Maximum.

**Table S2.** Descriptive statistics from the evaluation of the thawed semen (40 Asturiana de la Montaña bulls, 102 ejaculates).

| Variable                       | Min. | 1st Q. | Median | 3rd Q. | Max.  |
|--------------------------------|------|--------|--------|--------|-------|
| Total motility (%)             | 6.3  | 26.4   | 34.8   | 42.6   | 63.0  |
| Progressivity (%)              | 3.1  | 14.2   | 21.6   | 28.2   | 53.2  |
| VCL ( $\mu\text{m}/\text{s}$ ) | 42.5 | 68.0   | 90.7   | 127.0  | 192.6 |
| VAP ( $\mu\text{m}/\text{s}$ ) | 26.4 | 45.0   | 72.2   | 114.9  | 154.6 |
| VSL ( $\mu\text{m}/\text{s}$ ) | 20.8 | 40.3   | 57.6   | 72.8   | 121.2 |
| LIN (%)                        | 49.1 | 59.0   | 62.8   | 67.2   | 78.6  |
| STR (%)                        | 68.7 | 80.0   | 87.8   | 92.5   | 95.7  |
| WOB (%)                        | 58.0 | 66.1   | 80.8   | 89.4   | 93.4  |
| Abnormal forms (%)             | 9.0  | 17.4   | 17.6   | 17.7   | 33.0  |

| Variable                 | Min. | 1st Q. | Median | 3rd Q. | Max. |
|--------------------------|------|--------|--------|--------|------|
| Cytoplasmic droplets (%) | 1.0  | 3.4    | 3.5    | 3.6    | 7.0  |
| Damaged acrosomes (%)    | 9.8  | 15.3   | 18.5   | 23.4   | 50.9 |
| HOST (%)                 | 32.0 | 47.7   | 50.0   | 52.5   | 66.0 |
| Viability (%)            | 13.9 | 47.1   | 53.9   | 62.2   | 78.1 |

Min: Minimum; 1st Q.: First quartile of the distribution; 3st Q.: Third quartile; Max.: Maximum.