



## Certificate of Participation

This is to certify that ISAG Institutional Member

**Certagen GmbH**  
**Rheinbach, Germany**

has participated in the

**2024-2025 International Sheep (*Ovis aries*) STR Typing Comparison Test**

with the following result:

**Absolute genotyping accuracy rank: 1**

**Total number of participating labs: 41**

| Absolute genotyping Accuracy |        |
|------------------------------|--------|
| Rank                         | % Labs |
| 1: 100% – 98%                | 85.4   |
| 2: 97.9% – 95%               | 7.3    |
| 3: 94.9% – 90%               | 0      |
| 4: 89.9% – 80%               | 0      |
| 5: Below 80%                 | 7.3    |

### THE SCORING SYSTEM:

Based on the thirteen (13) ISAG recommended Sheep STR DNA Markers (AMEL, CSRD247, ETH152 (D5S2), INRA005, INRA006, INRA023, INRA063, INRA172, MAF065, MAF214, MCM042, MCM527, OarFCB20)

**Absolute genotyping accuracy (Aga):**  $(Nga - Gea) / Nga$  (as percentage)  
considers the total number of discrepancies, that is genotyping errors and "blanks" (no genotype reported)

*Nga*: total number of expected genotypes (reference samples not included)

*Gea*: total number of genotype errors, including blanks

President: Dr. Christopher Tuggle

Secretary: Dr. Sofia Mikko

ISAG is a scientific society that provides a forum for the exchange of information, methods and materials between members and for standardization of genotyping nomenclature. ISAG is not involved in the accreditation of service genotyping laboratories or institutions and ISAG does not regard participation in its Comparison Tests as indicating that a laboratory is internationally accredited. This certificate reflects the laboratory performance in the specific comparison test.