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**Pozyskiwanie oocytów *in vivo* - OPU  
(ovum pick-up) i ich ocena.**

**Produkcja zarodków *in vitro* (IVP).**

**Dojrzewanie (IVM) i zapłodnienie (IVF) oocytów *in vitro*.  
Hodowla zarodków (IVC)**

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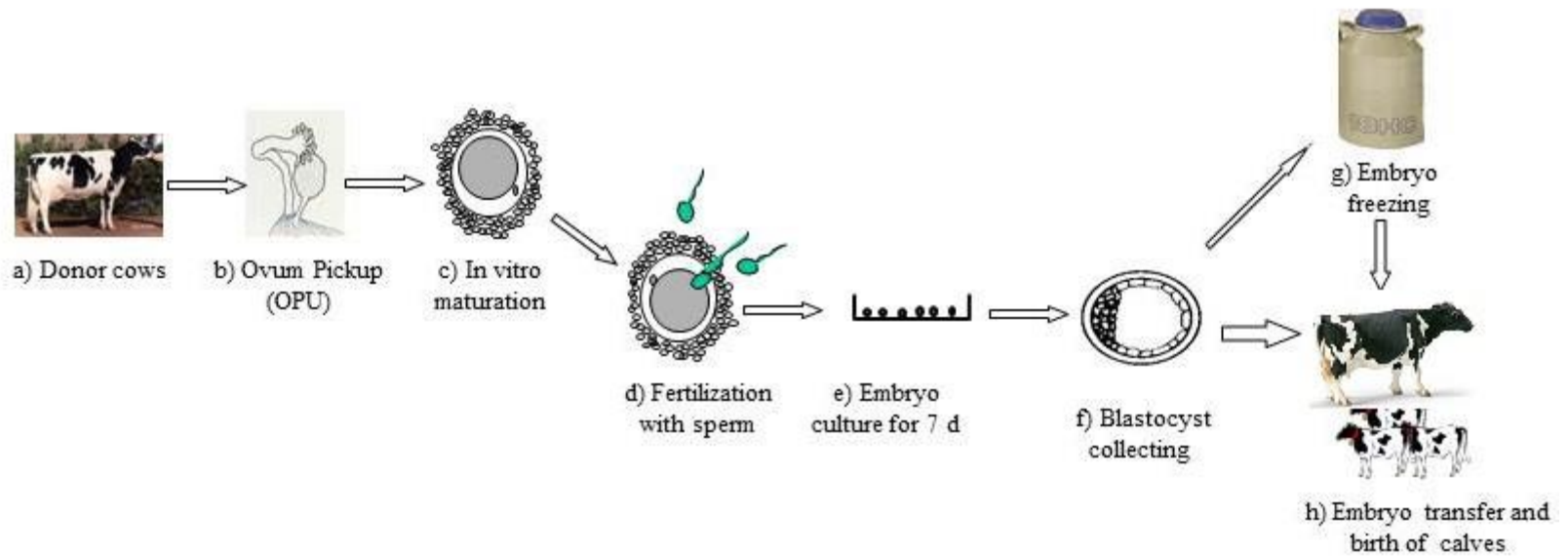
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# Pozyskiwanie oocytów *in vivo* - Ovum Pick Up (OPU)



# Procedura



# Wyposażenie



# Wyposażenie



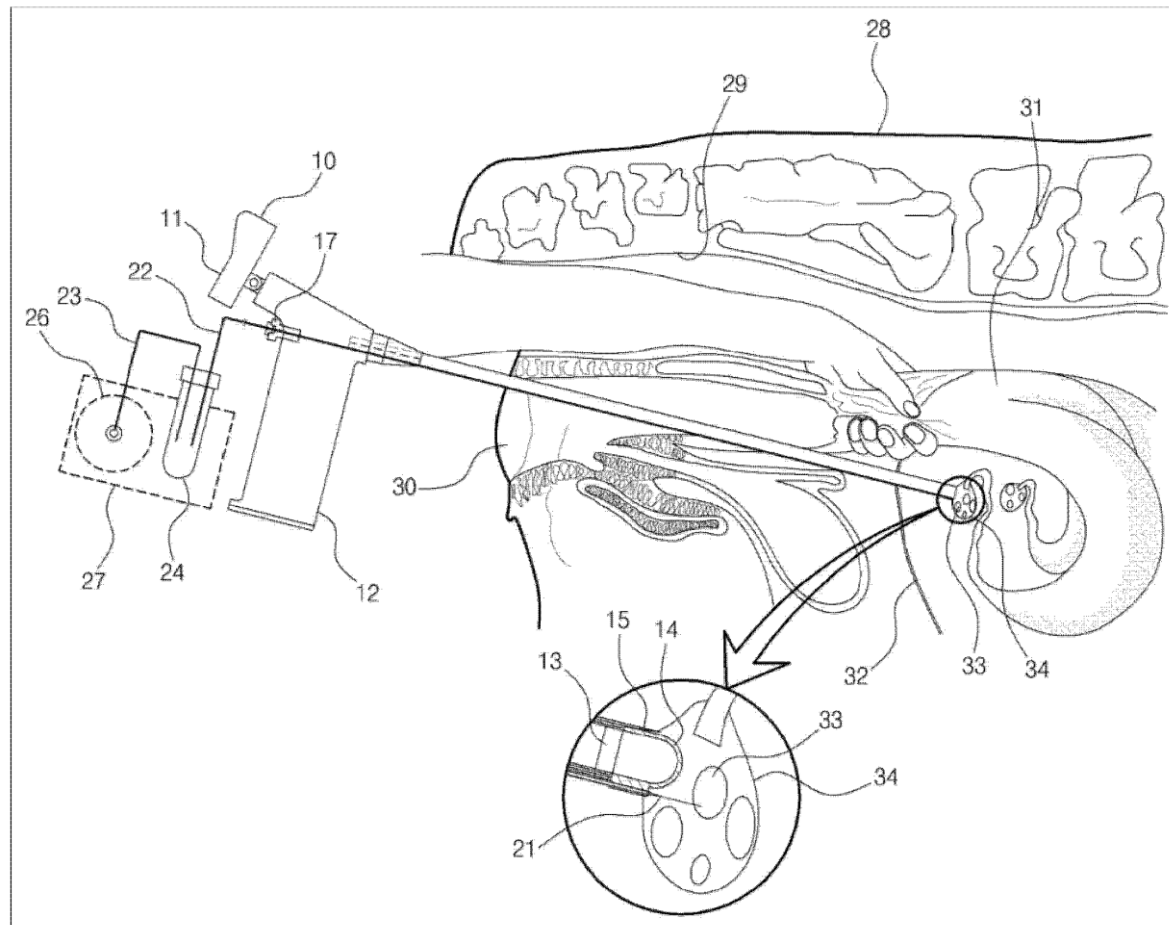
**Endo Cavity probe E610A**



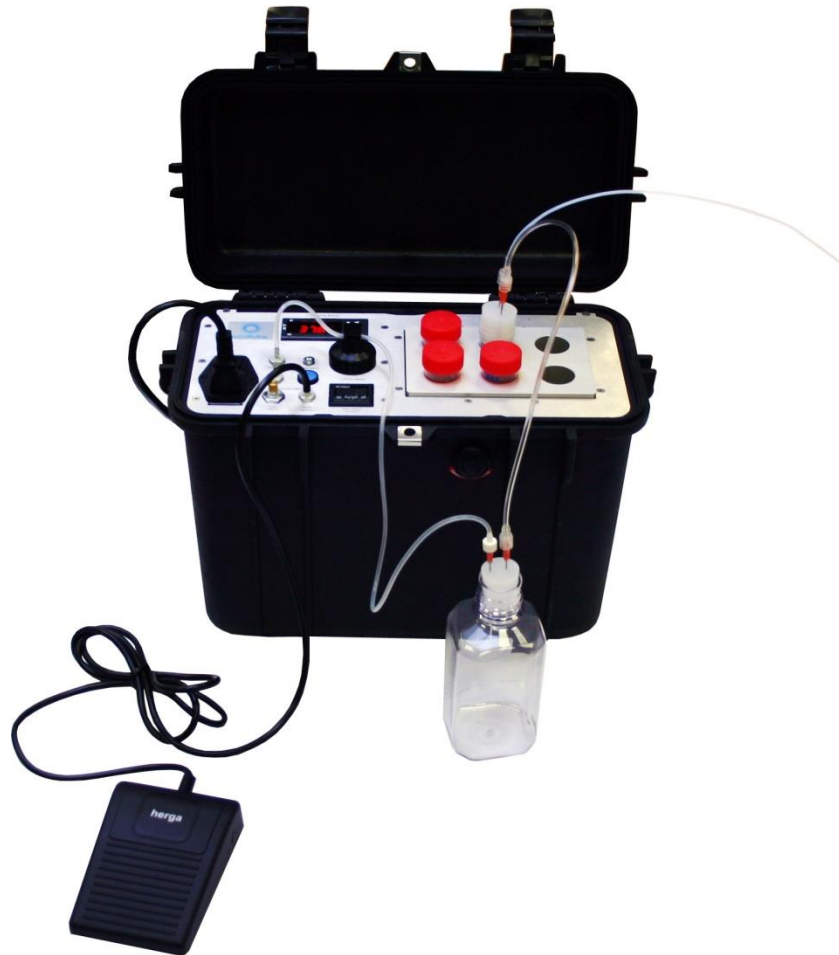
**« Ready to use set »  
OVUM PICK UP GUIDE & PROBE**



# Technika Ovum Pick Up

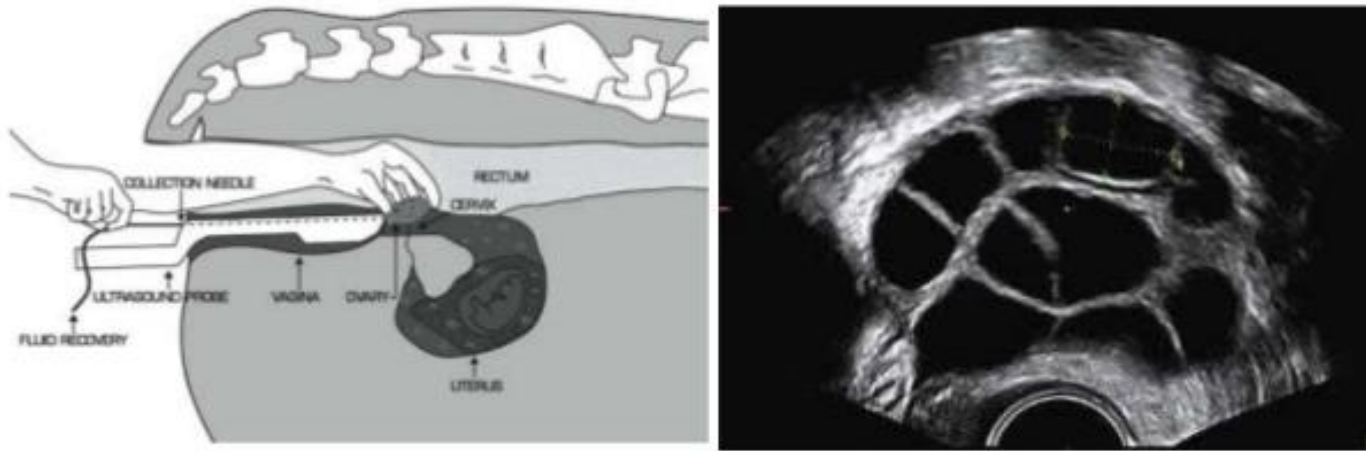


# Wyposażenie





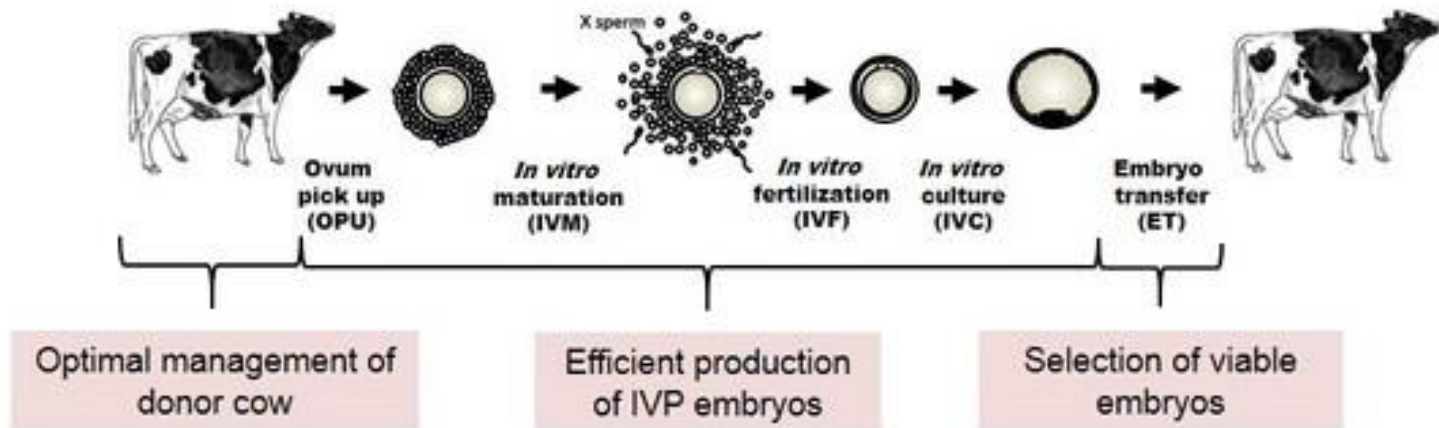
# Pozyskiwanie oocytów *in vivo* - Ovum Pick Up (OPU)



- *Ultrasound guided – non invasive*
- *Allows the used of hormonal stimulated or non stimulated donors*
- *Highly repeatable – Donors can be aspirated every two weeks*
- *Indicus breeds yield a high number of viable oocytes*

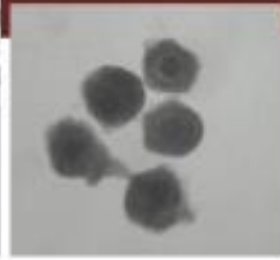
# Research

## Development of novel *in vitro* production (IVP) system in dairy cows



**To practical use IVP-ET in production of dairy cows**

# *In-vitro* production of bovine embryos of desired genetics



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Oocytes by Ovum pick up (OPU)

Frozen semen

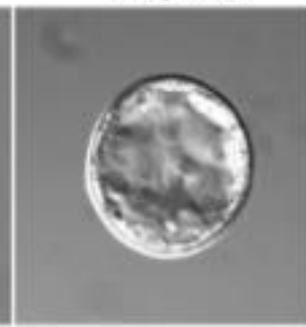
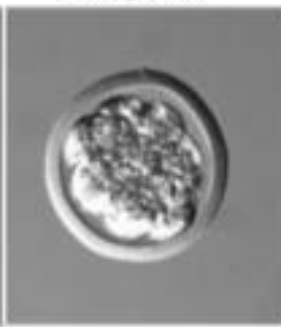
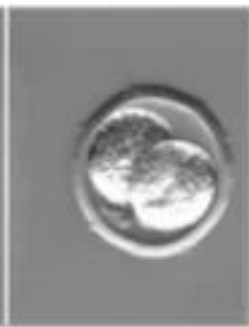


IVF

2-cell

Morula  
Day 3.5

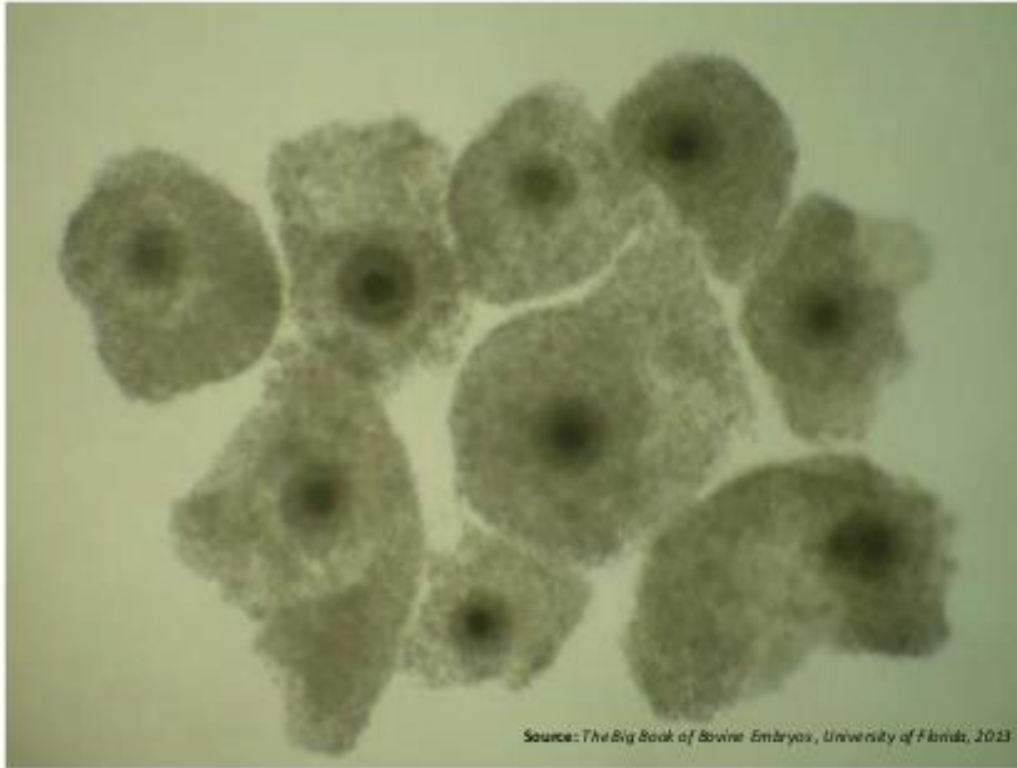
Blastocyst  
Day 7.5



Embryo  
Transfer (ET)

Cryopreservation

# Dojrzewanie oocytów *in vitro* - In Vitro Maturation (IVM)



Source: *The Big Book of Bovine Embryos*, University of Florida, 2013

*Cumulus Oocyte Complexes (COC's) after Ovum Pick Up (beginning of IVM)*

# Zapłodnienie oocytów *in vitro* - In Vitro Fertilization (IVF)

