



Balazs Czibók  
czibok@pte.hu  
University of Pécs

SZÉCHENYI 

EFOP-3.6.1-16-2016-00004  
COMPREHENSIVE DEVELOPMENT  
FOR IMPLEMENTING SMART  
SPECIALIZATION STRATEGIES  
AT THE UNIVERSITY OF PÉCS

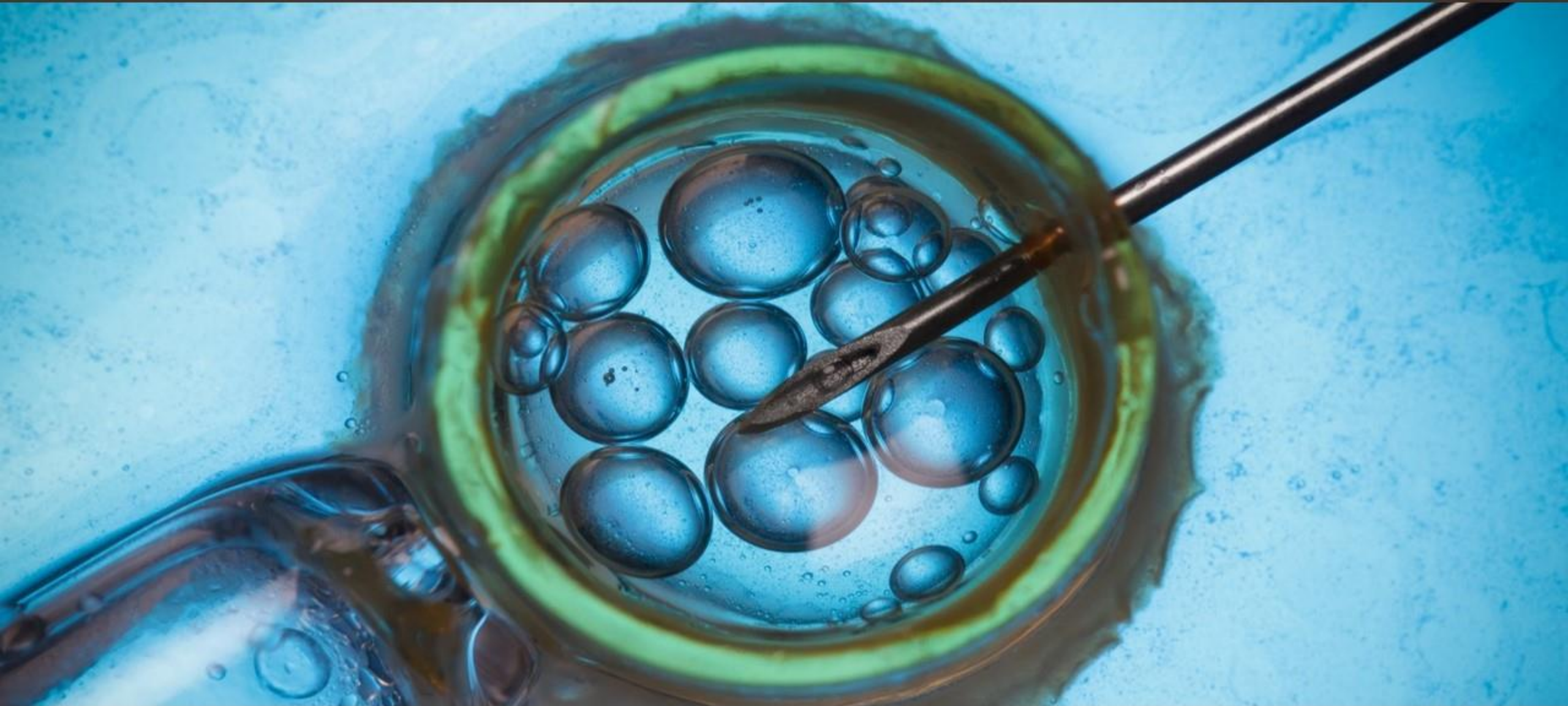
# INCREASING THE EFFICIENCY OF THE IN VITRO FERTILIZATION



- THE NUMBER OF INFERTILE COUPLES ARE INCREASING

- THE SUCCESS RATE OF IVF IS STILL ONLY 32%

- CURRENTLY EMBRYOS ARE ASSESSED USING MORPHOLOGICAL MARKERS, BUT IT IS COMMON THAT EVEN THE BEST LOOKING EMBRYOS FAIL TO RESULT IN SUCCESSFUL PREGNANCY



TO INCREASE THE CHANCE OF PREGNANCY USUALLY TWO OR MORE EMBRYOS ARE TRANSFERRED

AIM: TO TRANSFER ONE EMBRYO TO AVOID THE RISK OF MULTIPLE PREGNANCIES

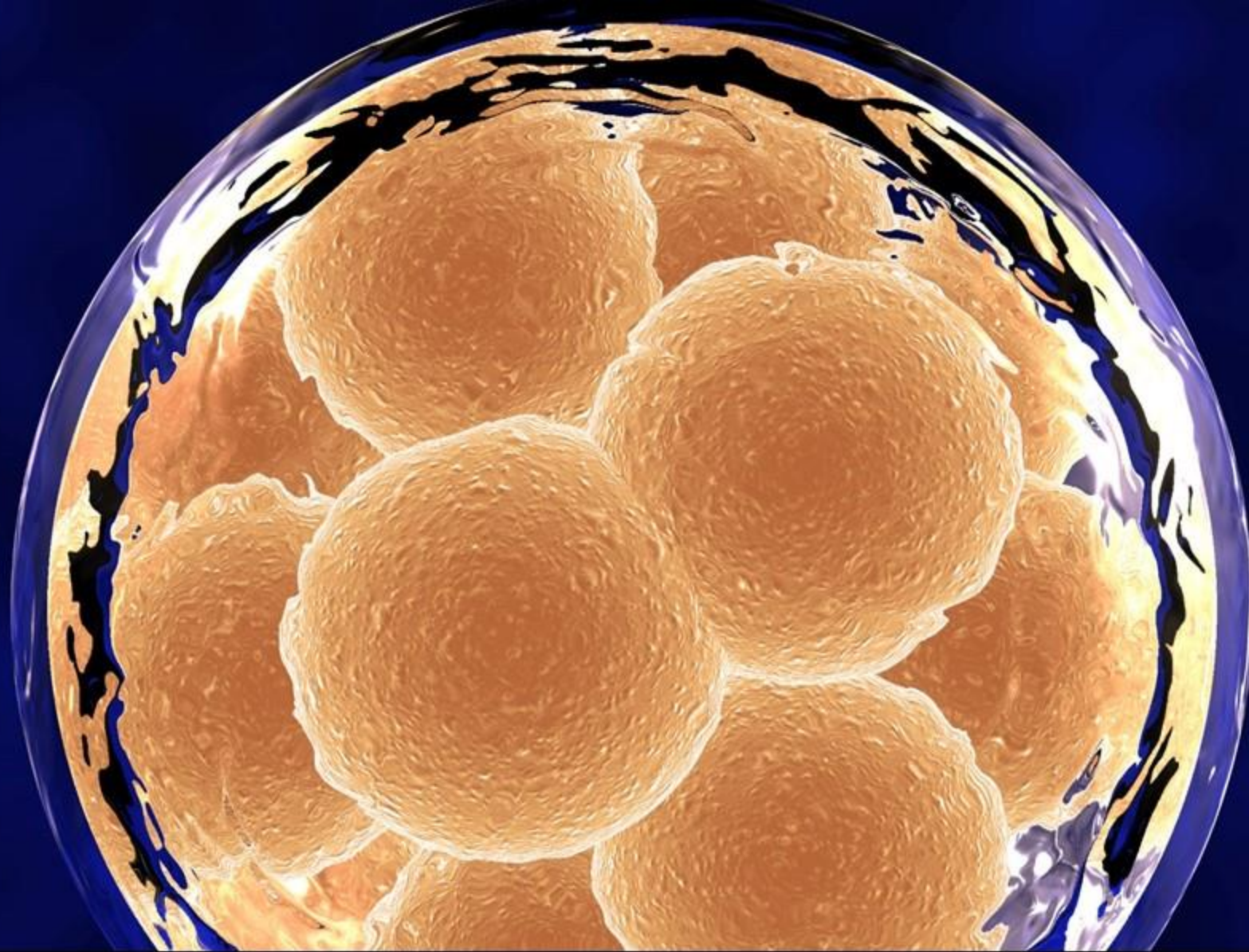


A NON-INVASIVE POC METHOD HAS BEEN DEVELOPED USING PROTEIN MARKERS OF THE CULTURE MEDIUM

THERE IS A TIGHT CORRELATION BETWEEN THE LEVEL OF HAPTOGLOBIN-ALFA AND THE VIABILITY OF THE EMBRYO (THE NEGATIVE PREDICTIVE VALUE OF THE TEST IS 100%)



WE ALSO DEVELOP A NEW METHOD TO IDENTIFY THE MOST COMPETENT EMBRYO  
BY DETECTING THE NUMBER OF DNA CONTAINING EXTRACELLULAR VESICLES  
IN THE CULTURE MEDIUM



WE ARE LOOKING FOR COOPERATING PARTNERS TO PERFORM VALIDATING CLINICAL STUDIES  
AND TO DEVELOP A QUICK TEST FOR DETECTING THE DNA CONTAINING EXTRACELLULAR  
VESICULAS.



THANK YOU FOR YOUR KIND  
ATTENTION!

Balázs Czibók  
czibok@pte.hu  
University of Pécs