# Abstract Details

**Session title:** Session 16: Breaking news in current practice
**Session type:** Invited session
**Presentation number:** O-062

## Abstract title:

Recommendations for good practice for the use of time-lapse technology

## Biography

Debbie Montjean is one of the current deputies of the SIG-E. She received her doctoral degree in 2011(University Paris VI) after she had graduated from a master's degree in physiology and physiopathology with a specialization in reproductive and developmental biology (University Paris VII). Her PhD research project dealt with genetic and epigenetic anomalies associated with male infertility. Dr Debbie Montjean currently works as a clinical and research embryologist in the service of medicine and reproductive biology of the Hospital Saint-Joseph in Marseille, France.

D. Montjean[1], S. Apter[2], T. Ebner[3], T. Freour[4], Y. Guns[5], B. Kovacic[6], N. Le Clef[7], M. Marques[8], M. Meseguer[9], I. Sfontouris[10], R. Sturmey[11], G. Coticchio[12].
[1]Hopital Saint-Joseph, Service de médecine et biologie de la reproduction, Marseille, France.
[2]Livio, Livio, Stockholm, Sweden.
[3]Kepler Universitätsklinikum, Department of Gynecology- Obstetrics- and Gynecological Endocrinology, Linz, Austria.
[4]CHU de Nantes, Medecine de la Reproduction, Nantes, France.
[5]UZ Brussel, Center for Reproductive Medicine, Brussels, Belgium.
[6]Univerzitetni klinicni center Maribor-, Department of Reproductive Medicine and Gynecologic Endocrinology-, Maribor, Slovenia.
[7]European Society of Human Reproduction and Embryology, Guidelines, Grimbergen, Belgium.
[8]CEMEARE, cemeare, Lisbon, Portugal.
[9]Instituto Valenciano de Infertilidad, IVF Laboratory, Valencia, Spain.
[10]Eugonia, Assisted Reproduction Unit, Athens, Greece.
[11]Hull York Medical School- University of Hull, Centre for Atherothrombosis and Metabolic Disease-, Hull, United Kingdom.
[12]9.baby Family and Fertility Center, 9.baby Family and Fertility Center, Bologna, Italy.

**Abstract text**

Traditional embryo morphology assessment is performed at static time points and implies interruption of embryo culture conditions. In a TLT incubator, images of embryo development are recorded at regular time intervals, which facilitates embryo monitoring. Indeed, it allows embryologists to assess embryo development thoroughly in a dynamic fashion without removing them from the incubator and thus maintaining constant culture conditions. Although TLT has been widely implemented since its release in 2010, there was no recommendation on how to introduce this technology in an IVF laboratory and no review of other aspects of its use. To address this need, a working group was constituted. It included 11 members of different nationalities with internationally recognized experience in clinical embryology and basic science embryology. The stakeholders of this project have reviewed the literature and collected published surveys and manufacturer information up to January 2019. Once a consensus was found on the content of the recommendation manuscript, a draft was released on ESHRE website for review by ESHRE members. The paper was published in HRopen (https://academic.oup.com/hropen/article/2020/2/hoaa008/5809428) and the recommendations are available on ESHRE website (https://www.eshre.eu/Guidelines-and-Legal/Guidelines/TLT). The working group listed 11 recommendations on what to do before introducing TLT in an IVF laboratory. These

statements include an assessment of the pros and cons of acquiring a TLT system, selection of relevant morphokinetic parameters, selection of an appropriate TLT system with technical and customer support, development of an internal checklist and education of staff. This paper also addresses more general aspects of TLT introduction in IVF laboratory such as the potential benefit of TLT especially regarding embryo quality assessment and the identification of parameters with biological/clinical outcomes. This document discusses in what extent TLT helps in embryo selection/deselection for transfer and how it allowed the development of algorithms thanks to the analysis of data generated during the past decade. A description of the current state of TLT is provided and the question whether to share TLT data with patients is tackled. Besides, the paper presents the non-clinical/biological interests and benefits of having TLT in IVF laboratory, which emcompass training/teaching, quality control and the management of staff time and work-flow. Overall these recommendations are mostly based on clinical and technical expertise. The paper provides technical advice, but leaves any decision on whether or not to use TLT to the individual centres.

**Keywords:**
time-lapse technology
guideline
embryology
embryo selection
morphokinetics