

Who will lead the ART laboratories into the future?

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Curriculum

- Describe the current state of affairs in the ART laboratories – Nordic countries
- Which areas of ART are likely to undergo development in the near future
- How do professions develop
- Who should lead ART laboratories to maximize patient security and benefit

- But first your opinion on some questions

What is an ART-unit?

Clinic with a supporting laboratory?

Laboratory with a supporting clinic?

Combination where both perspectives are valid?

EU Tissues and Cells Directive

Needle to catheter

Tissue Establishment

Regulatory framework focuses to a large extent on the laboratory – other systems in place for regulation of the clinical activities

Is this reflected in how the ART-units are managed?
Is this reflected in the inspection system in your country?

What is the most critical part of the ART-process?

Laboratory?

Clinic?

50/50?

Where is the highest rate of innovations and development in ART?

Laboratory?

Clinic?

50/50?

Where are the greatest prospects of future development in ART?

Laboratory?

Clinic?

50/50?

Which group is most knowledgeable
on laboratory structure and function?

Do we need a poll for this question?

Current state – Nordic countries

Today, ART has become an established form of treatment, especially in Western Europe, and is growing rapidly internationally

Large and growing portions of the population are conceived in ART laboratories

Embryologists working with in-vitro culture have a huge responsibility – and a huge impact on the population

Current state – Nordic countries

How do our patients and authorities see embryologists?

Do they see us?

How do authorities and the population envisage ART-laboratory management?

Current state – Nordic countries

There is a discrepancy between who is expected to:

- run the laboratories and secure optimal culture conditions

- select the best embryos

- take responsibility for years of cryostorage

- develop new and optimal methods

- uphold standards

- take care of documentation and traceability.....

– and who is seen by external stake holders as ultimately responsible

Current state – Nordic countries

Practical day-to-day work in the laboratory is usually the responsibility of the laboratory director

However, it is usually considered that the final responsibility lies with the doctor responsible for treatment of the patient

The first question is: Do we want any other order?

If so, why?

The second question is: If we want to change this, how do we go about doing it?

Current state – Nordic countries

Formal requirements on embryologists and laboratory directors

Each laboratory should assure competence of embryologists

ESHRE certification?

There are not enough ESHRE certified embryologists around at the moment

There are some very exciting new developments around the corner

Near-future developments

The futurists dilemma: “Any believable prediction will be wrong. Any correct prediction will be unbelievable.”

Arthur C. Clarke

I do not pretend to see into the future, but a few interesting developments are occurring right now and some near-future developments are almost ready for practical applications

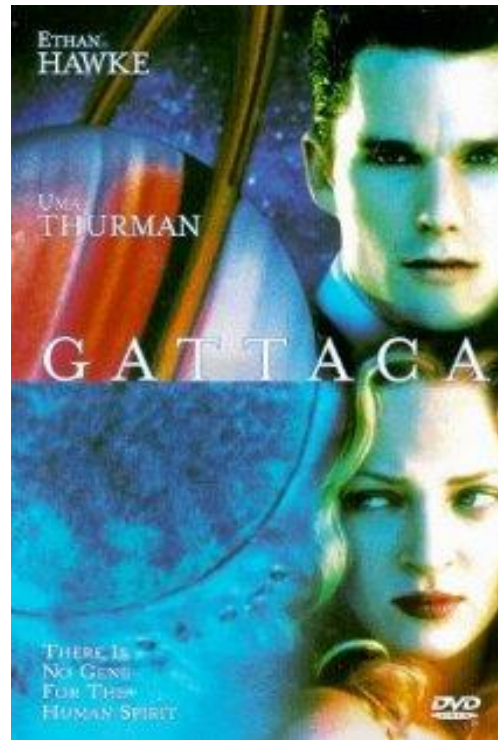
Near-future developments

1. Time-lapse monitoring of embryo development
 - Automation
 - Monitoring
 - Decision making

2. Genetic analysis of healthy individuals
 - PGS
 - Karyomapping and prevention of future disease
 - Genetics!!

Near-future developments

3. Assisted reproduction for fertile and healthy individuals
Oocyte vitrification for young women



Near-future developments

Level of knowledge development and technology is increasing

Not the kind they teach in medical school

Importance of compliance to regulatory demands is becoming an overriding issue

Management of the ART laboratory

Increasingly frequent and rapid integration of new, specialized techniques into daily use (Alikani et al., FS 2014)

ICSI/IMSI for challenging male factor cases

Laser assisted hatching

Embryo biopsy at cleavage or blastocyst stages

Increasing demands of witnessing & embryo tracking

Cytogenetic techniques

Vitrification

Time-lapse

More frequent interaction with patients and authorities

Management of the ART laboratory

It is important for embryologists to live up to responsibilities and expectations – and develop into a true profession

Development of professions

The System of Professions. An Essay on the division of Expert Labour. Andrew Abbott. *The University of Chicago Press. 1988.*

A road-map on how professions develop

Jurisdiction – Maintained by the power and prestige of their academic knowledge

Changes in technologies and organizations provide new professional tasks

Abstract knowledge is the foundation of an effective definition of a profession

Development of professions

Classical requirements for the development of a profession:

Master new technology and abstract knowledge

Form own societies

Express ethical criteria

Take over own education – form schools

Create own abstract knowledge

Define and defend jurisdiction

Development of professions

The biggest current obstacles for the development of the embryology profession:

Lack of own educational system

Too little focus on development of abstract knowledge in the field

Inadequately defined jurisdiction

Inadequate engagement in ethical debates and lack of own ethical criteria – as a profession

Lack of a public profile

Development of professions

What is the public image of a laboratory assistant?



Who should lead ART laboratories

Embryologists are most knowledgeable regarding the current processes/procedures

Embryologists usually play a key role in regulatory compliance

Embryologists have developed the laboratory techniques until now and are the only ones equipped to develop them further

It would be destructive for any other profession to assume the leadership role of ART laboratories

Pros and cons of a strong embryology profession

+	-
Job security	Responsibility and accountability
Independence from organizations	More work
Ability to implement best practice	Difficult to get in
Influence	Expensive
Patient benefit	Added study time
Allows us to be pro-active regarding future developments	Risky, if we don't know what we're doing in the lab

Conclusion

It is high time for embryologists to become pro-active and develop a strong embryology profession in the Nordic countries in much the same way as has already been done for example in the UK

Imperative for successful future developments in the field

The Nordic countries otherwise risk being left behind as an underdeveloped area in the field

Thank you for your attention!

