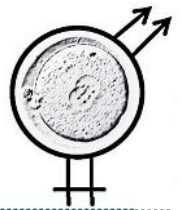


# Assisted Reproduction in Homosexual Couples: Options and Limitations

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## I. INTRODUCTION

Assisted Reproductive Technologies (ART) are an option to have children to couples with fertility alterations. Moreover, homosexual couples see in ART a way to being their children's genetic parents. Nevertheless, we have to accept that with the existing technologies, only one of the parents in the homosexual couple can be the genetic mother or father. This project's objectives are to explain those ART that can be applied to homosexual couples, explain the biological reason why two same sex people can not reproduce with the present techniques, describe the legislation regulating these ART, and contextualize with social concerns regarding homoparental families created through ART.

## II. METHODS

Research in the bibliography and synthesis of information to elaborate an informative project.

More information in:

<http://agusales.wix.com/homoparental>

### MALE COUPLES

#### Artificial insemination (AI)

##### Traditional surrogacy

- With the surrogate's oocyte
- AI with sperm from the couple

So...

Surrogate is disposed to donate her oocytes and no IVF is needed

#### In vitro fertilization (IVF)

##### Gestational surrogacy

- Oocyte donation
- IVF with sperm from the couple

So...

Surrogate is disposed to gestate but without genetic linkage  
If a few embryos are obtained from both parents' sperm and transferred, half genetic siblings could born.

## III. OPTIONS

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### ART

### FEMALE COUPLES

#### Artificial insemination (AI)

- Introduction of sperm into the woman's genital tract
- Using donor sperm

So...

Using in the second pregnancy the same sperm donor used in the first one, or inseminating both women at the same time with the same sperm donor, then in both situations children would be half genetic siblings.

#### In vitro fertilization (IVF)

- IVF with Donor sperm
- One partner oocytes
- Embryo transfer to the other partner

So....

Both women can be mothers:

- One genetic mother
- One gestational mother

ROPA  
(Reception of Oocytes from Partner)

Shared motherhood

## SOCIAL CONCERNS

### HOMOPARENTAL FAMILY

Studies have suggested:

- Children's psychosocial development is similar to children in heteroparental families regarding
  - Cognitive levels
  - Abilities
  - Social skills
  - Sexual identity
- Major impact of parents in the children development is from the **quality of parenting** and not from the parents' sexual orientation

- Positive parenting and good communication are more important for the psychological adjustment of children than the presence of gestational or genetic connection

### ARGUMENTS

#### FOR

- Procreation rights
- Reproductive freedom rights

#### AGAINST

- Episcopal Council: only way of reproduction is Matrimony
- Do not recognize homosexual marriage

## IV. LIMITATIONS

### BIOLOGY

Development inhibition caused by the lack of paternal genome

### Parthenogenesis phenomenon

#### Human parthenotes:

- Early development similar to fertilized oocytes and similar blastomere number
- **Unable to develop to term → Lack of paternal imprinting**

#### Imprinting phenomenon

Caused by Mechanism Controlled by

Expression of a set of genes only from one parental genome

- DNA methylation
- Histone modifications

- Allow selective gene expression and repression
- Determine specific differentiation properties of individual cells

No formation of extraembryonic and mesodermal tissues

### Spain

Gametes donation		Filiation to homosexual couples		Users	Surrogacy
Sperm	Oocyte	Maternity	Paternity	Women	
Conditions: <ul style="list-style-type: none"> <li>• Anonymous</li> <li>• Altruist</li> </ul> Spain is the main receptor of CBRC patients seeking for oocytes		<ul style="list-style-type: none"> <li>• Conceded at birth: <i>mater semper certa est</i></li> <li>• Then her partner adopts the children</li> </ul>	<ul style="list-style-type: none"> <li>• Conceded for genetic link</li> <li>• His partner adopts the children if the surrogate agrees</li> </ul>	Article 6: women can use ART regardless of her marital status and sexual orientation	Surrogacy contracts do not have any legal validity  Is allowed the inscription of children born in countries where surrogacy is allowed

Lej 14/2006, del 26 de Mayo, sobre Técnicas de Reproducción Humana Asistida

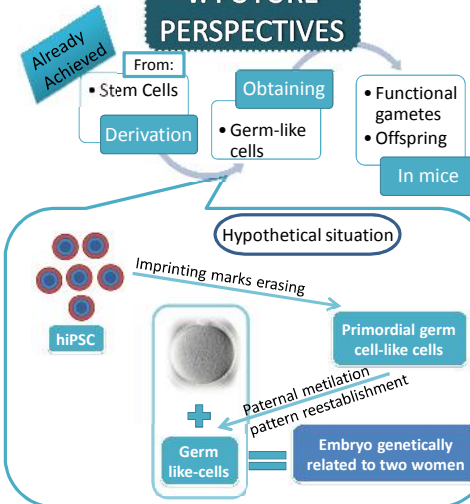
#### Cross Border Reproductive Care (CBRC):

moving of patients from the most restrictive countries to the less restrictive ones in order to receive reproductive care

Gametes donation		Users	Surrogacy	
Sperm	Oocyte	e.g.	Only altruistic surrogacy	Altruistic and commercial surrogacy
Mostly allowed	Mostly forbidden	<ul style="list-style-type: none"> <li>• France: to be a heterosexual couple is required</li> <li>• Sweden: be a couple is required (both homo and heterosexual)</li> </ul>	<ul style="list-style-type: none"> <li>• UK,</li> <li>• Surrogate receive only a reasonable payment derived from the agreement</li> <li>• Previous-to-surrogacy arrangement</li> <li>• Filiation is transferred from the surrogate to intended parents after birth</li> </ul>	USA, <ul style="list-style-type: none"> <li>• Several intermediation agencies between surrogates and intentional parents</li> <li>• Commercial payments to surrogates are allowed</li> </ul>

### International

## V. FUTURE PERSPECTIVES



## VI. CONCLUSIONS

- ART are applicable to homosexual couples regardless of each person's ethical concerns.
- International regulation about ART would needed in order to avoid uncomfortable situations to CBRC patients, as each country laws are different.
- With the existing techniques is not possible to obtain embryos genetically related to two same sex people. If technologies some day would permit it:
  - A laboratory work would be always needed
  - Male couples still would need surrogacy