



Reproductive Tourism: Reproductive Exile or an Insemination Vacation

Mitchel C. Schiewe, PhD

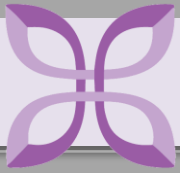
Newport Beach, CA

OVATION  FERTILITY™

THE NEXT GENERATION

California Cryobank





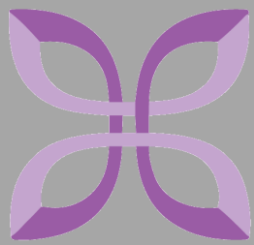
DISCLOSURE

- Research Director , Ovation Fertility;
- Technical Director to the California Cryobank.
- Scientific Advisory Board for Innovative Cryo Enterprises (I.C.E., NJ)
- No Conflicts of Interests



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ACKNOWLEDGEMENT

- CRB Organizing Committee
- Kavoussi Outstanding Teaching Award - ASRM
 - 2015 2nd Annual Recipient :

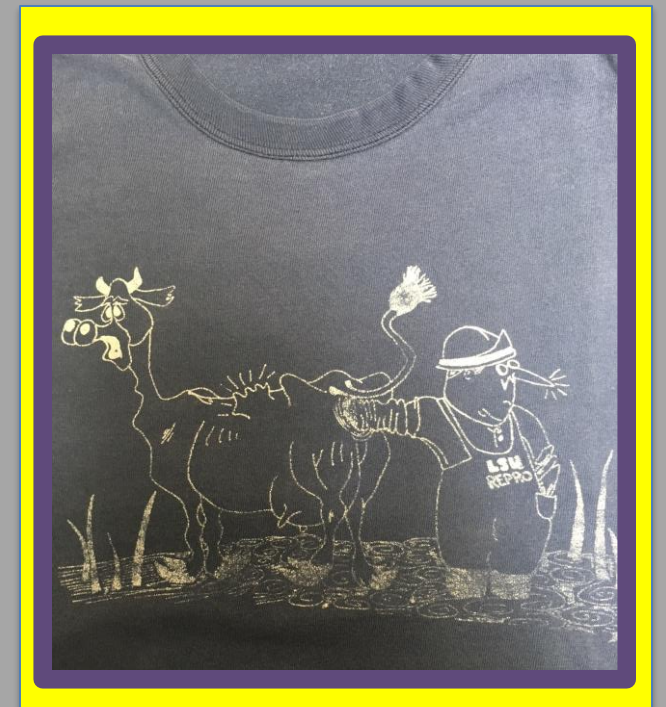
Robert A. Godke, PhD

LSU



Legacy
of the
“**REPRO
RANGERS**”

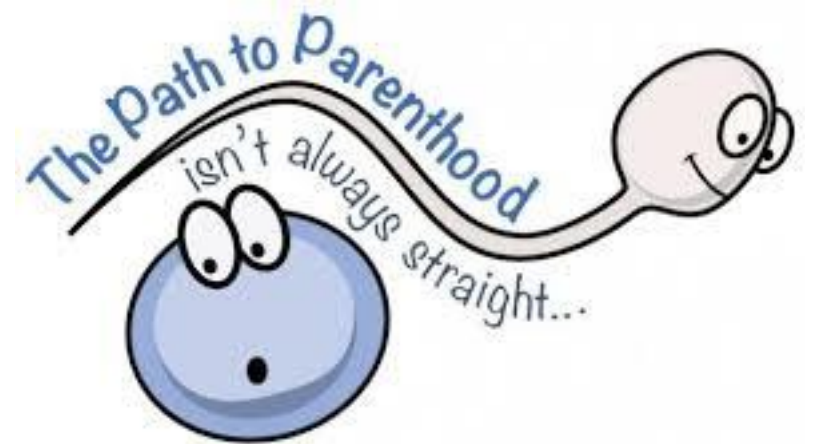
In Memorium





Fertility Tourism – Definition

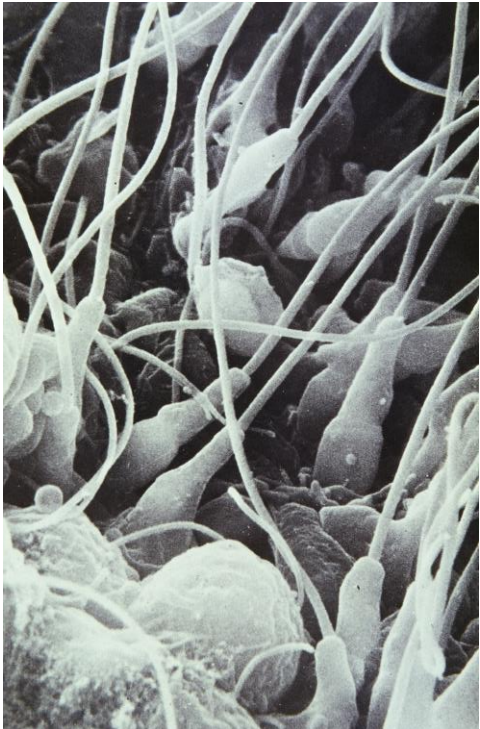
- The act of infertile individuals or partners travelling over national and international borders for the purpose of receiving ART advice and treatment.



Cross-border Reproductive Care (CBRC)



Fertility Diagnosis
Semen Analysis/Cryo
IUI
IVF / ART
Donor Gametes
Surrogacy





Fertility Dilemma

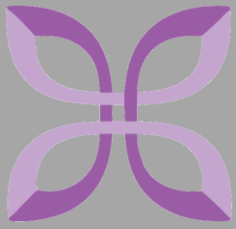
IVF Treatment ?

- DECISIONS
- STRESS / LIFESTYLE
- COSTs \$\$\$



Cross-border Reproductive Care

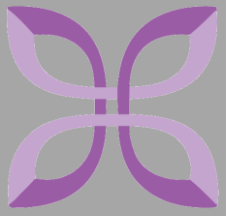




Factors influencing RT decisions:

Diagnosis / Semen Analysis

- Limited access to diagnostic testing
 - Diagnosis may not be covered or treated in country
 - Difficult male factor conditions may require TESE
 - Failure with treatment due to undiagnosed reason
-



Factors influencing RT decisions:



Insemination Vacation

- Affordability (\$\$\$)
- Preservation of privacy

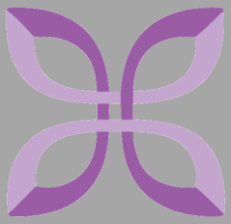


Greece IVF



Male Reproduction
Treatment & Spa



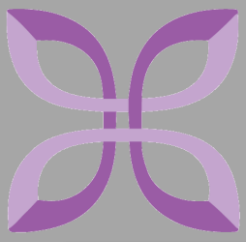


Factors influencing RT decisions:

Cross-Border Reproductive Care (IVF)

- ART demands outweigh availability of services
 - (wait listing/shortages)
- Availability of ART resources
 - (expertise, equipment, donor services)
- ART success rates
 - PGT (gender selection)





Factors influencing RT decisions:

Reproductive Exile

- Ethical and religious reasons
- Regulatory issues in country of origin
- Discrimination of Sexual Orientation
- Limited/Regulated 3rd Party Services





The Reproductive Travelers (RT)

The concept of a Cross-Border Reproductive Experience :

❖ Patients

- Safety (societal opinion, religion, IDS)
- Effective care (technology)
- Legal concerns (regulations)
- Affordable care (lower cost, efficiency of outcomes)

❖ Reproductive Professionals

- Advanced training
- Diversified services





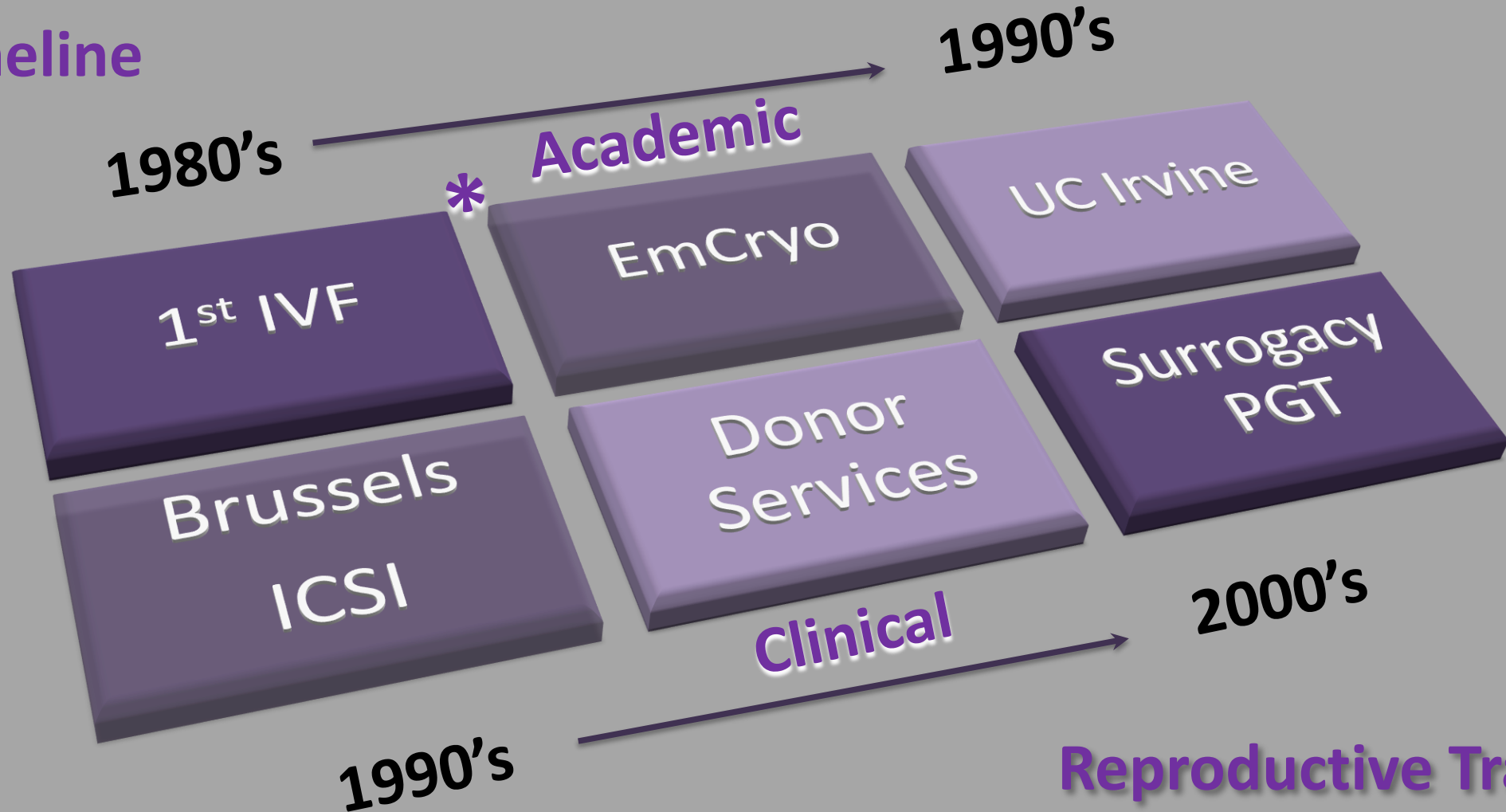
Historical Timeline

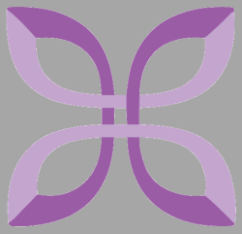
- 1980's - IVF Advances : IVF and Embryo Cryopreservation
 - UK, Australia, USA (Patients and Professionals)
- 1988-95 - UCI Global Enterprise
 - International Patients / Research Fellows
 - Global Satellite Clinics (\$\$\$ Driven Pitfalls)
- 1992-95 - ICSI Success - UZ Brussels
 - Workshops and CB-ICSI
- 1990's - Donor insemination in European countries
- 2000's - Governmental “embryo” restrictions / 3rd Party Use
 - Vatican Party “Italian” Law / German Laws
- 2000's - Surrogacy Boom worldwide / Low Cost IVF
- Since 2010 - PGT Boom Worldwide



CROSS BORDER FERTILITY

Timeline





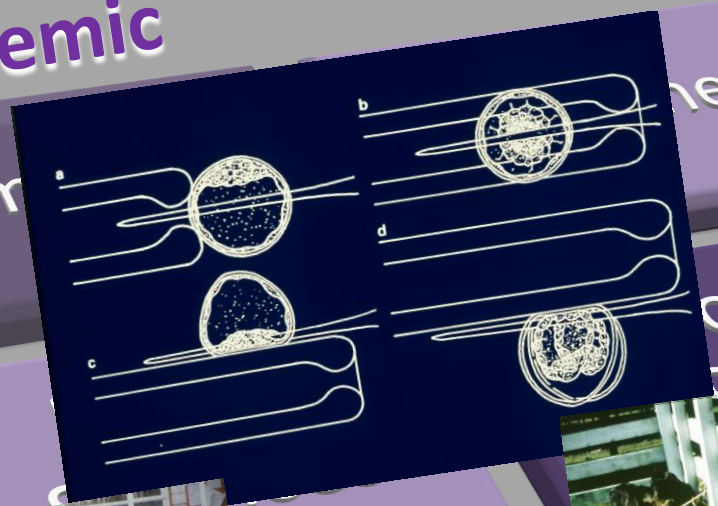
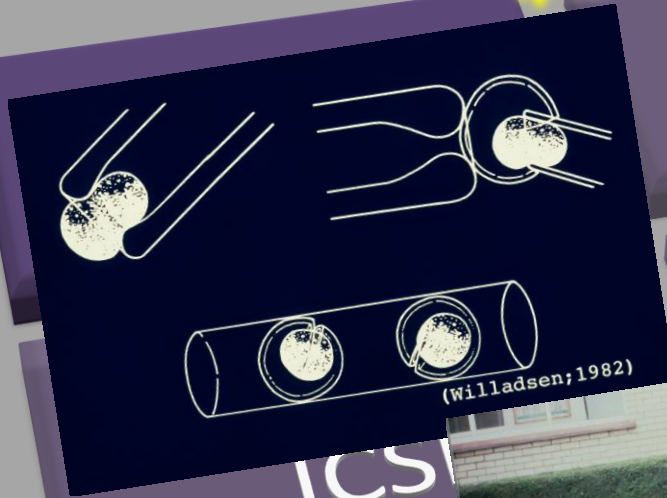
CROSS BORDER EDUCATION

Godke - Cambridge Sabbatical

1982



Academic



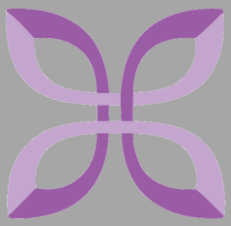
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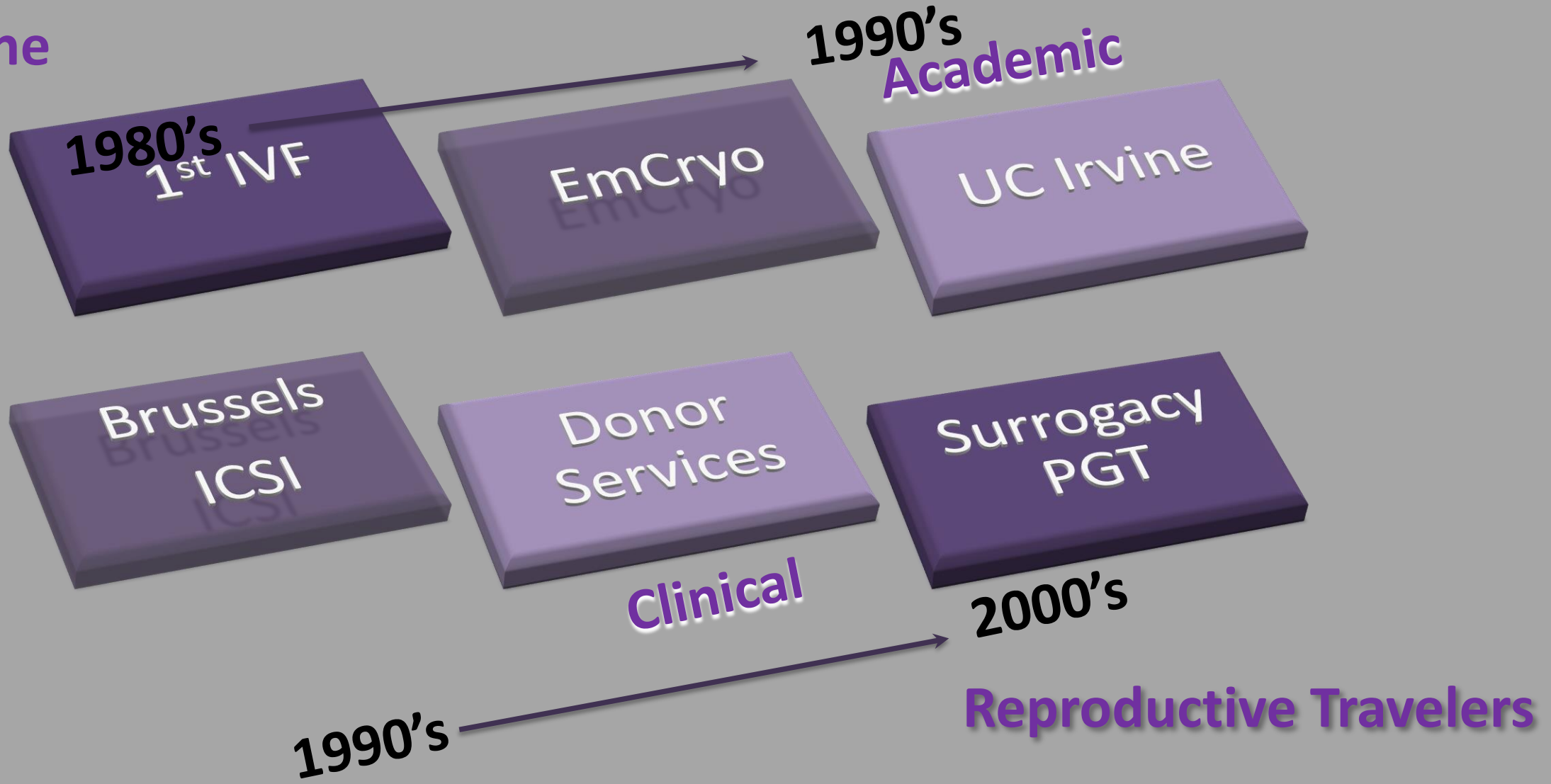


Reproductive Travelers



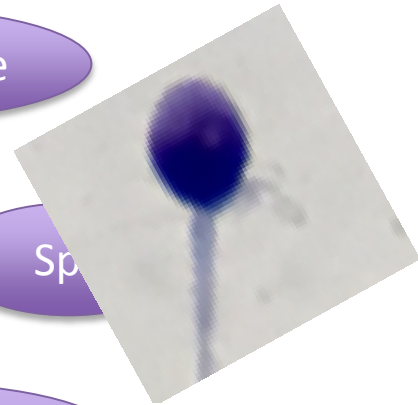
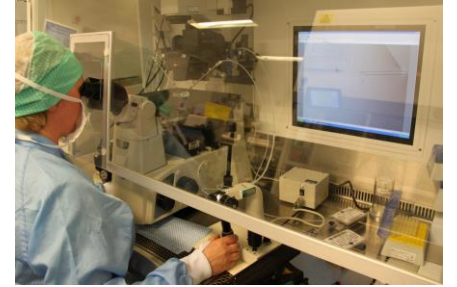
CROSS BORDER REPRODUCTION

Timeline

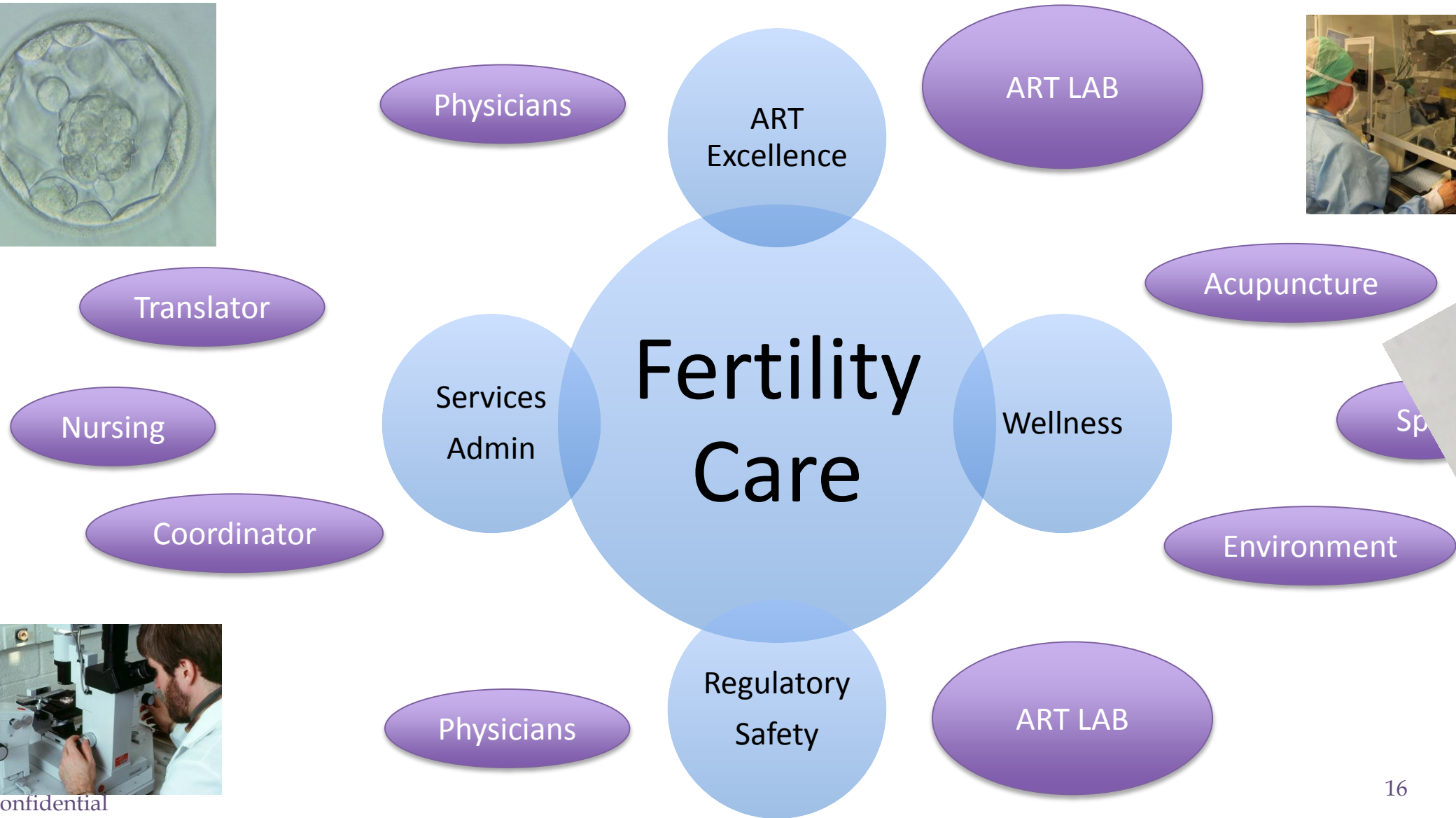




Key Components to Successful Operation



Confidential



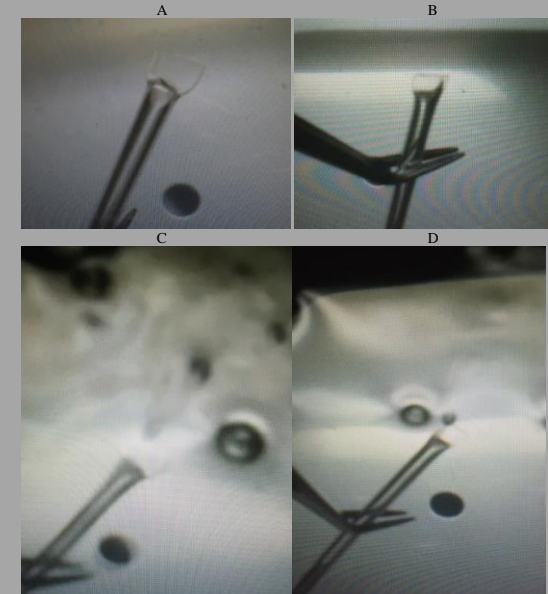


HEALTH & SAFETY?

- ❖ **Concerns regarding CBRC patients**
 - Safety (IDS) to patients and staff
 - Receiving Oocytes/Embryos from outside Lab
 - Responsible treatment / care
 - Multiple births : health & birth complications
 - Does affordable care come at a cost?

- ❖ **Need for international policies /laws : CBRC practices**
 - ❖ Standard of care
 - ❖ Quality control measures

Figure 1.





3rd Party Services



Surrogacy

- Big \$\$\$?

- Commercialism?

Typical RT Patient:

- Single Parent
- Same Sex Couples



- Gestational Carriers

EARN UP TO **\$10,000.00**

◀ ANSWER HER PRAYERS...

AND MAKE YOUR DREAMS COME TRUE!!!

Loving DONATION

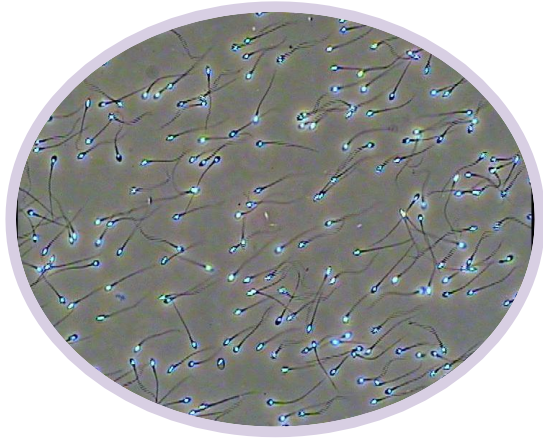
CLICK HERE TO LEARN MORE

AN EGG DONATION AGENCY

- Egg Donors



Patients Seeking International Fertility Treatment



IP Reasons for International ART

- Perceived low-cost
- Access to discount 3rd party services
- Vacation
- Specific treatment

Risks with International ART

- Ineligible or nonexistent screens eliminating future embryo transfers to be performed in the US
- Failures require continual trips to international clinic
- Storage and communication difficulties



Patients Coming to US for Treatment



IP Reasons for US ART

- Perceived high-success
- Access to various 3rd party services
- Specific ART treatments
- Child citizenship



Risks with International ART

- Shipping risks for countries to not allow embryos in/out
- Failures require continual trips to US
- Storage and communication difficulties
- Increased cost

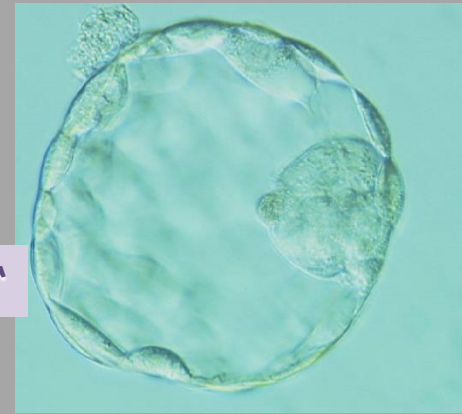


SCCRM / OVATION FERTILITY

CBRC APPEAL?



PGT/VFET



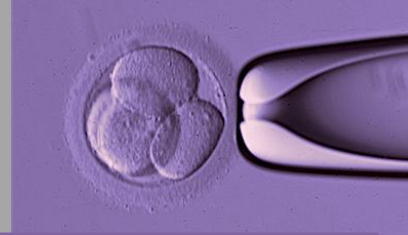
SHOPPING



Success Rates!



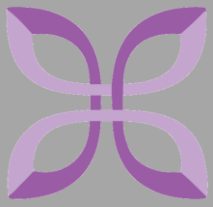
Laguna Beach, CA



Newport Beach, CA




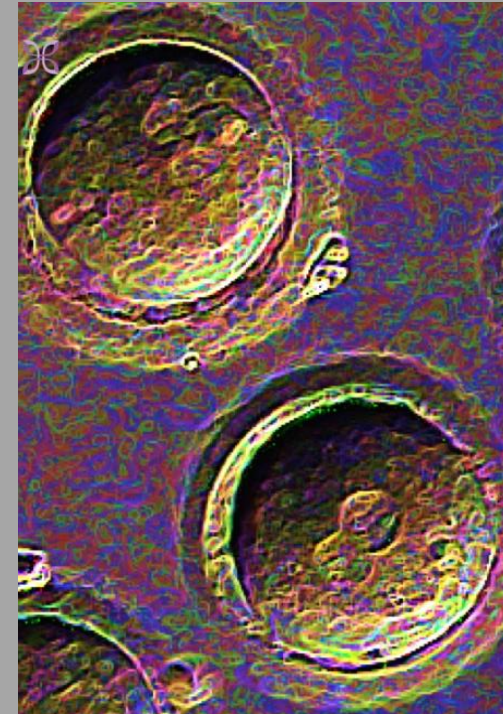
microSecure-VTF

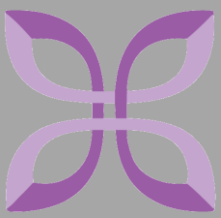


OVATION FERTILITY - NB

LABORATORY STORIES of Reproductive Travelers Experience #1


- **Italian Couple (2009)**
 - Donor egg cycle
 - Poor egg / embryo yield
 - 2 blastocysts D5 –fresh ET (not pregnant)
 - 1-LMor, 1-eBL (fair quality)
 - Cryopreserved ? (1st μ S-VTF *)
 - VFET- both embryos survived and transferred
 - Twin live birth in Italy  SUCCESS!
-

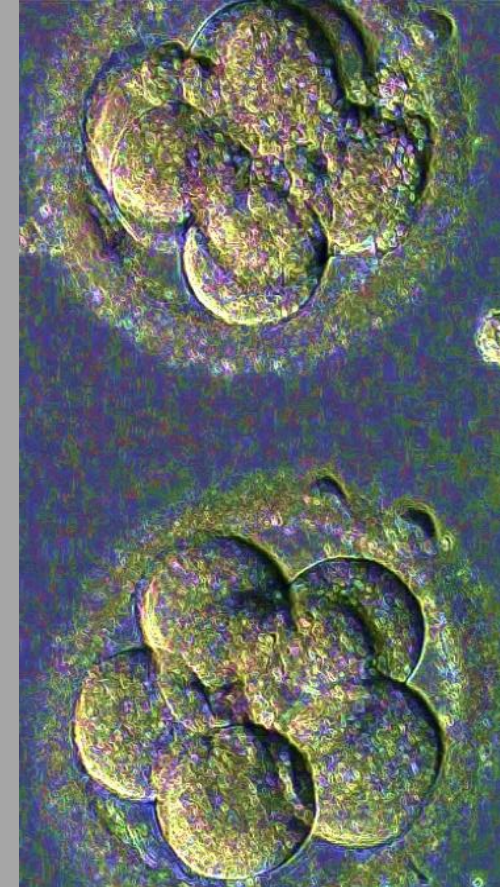




OVATION FERTILITY - NB

LABORATORY STORIES of Reproductive Travelers Experience #2

- **Female Patient 32yo : decreased ovarian reserve**
 - 4 eggs vitrified in Columbia
 - **Partner has history of azoospermia**
 - 3 countries, 5 clinics – No Sperm
 - Pre-TESE: Ejac ICSI-prep → 3 motile Sperm(CCB)
 - OFNB: repeated 4-8 sperm/ejac
 - 2 ICSI-PGT cycles : 4-5 eggs each
 - 1st cycle : single abnormal blastocyst
 - 2nd cycle : single euploid blastocyst
 - **VFET- 3rd trimester pregnancy**  **SUCCESS!**
-





OVATION FERTILITY - NB

VFET / PGT cycles : SCCRM/OFNB 2017

AGE	Transfers N	% Implantation
≤25 (DE)	24	71% *
26-30	11	82%
31-34	34	79%
35-37 yo	40	83%
38-40 yo	41	85%
41-42 yo	14	71%
43-44 yo	4	75%



μS-VTR BL recovery/survival rates: 100% / 99.5%

* Typical annual pattern due to repeat failure recipients



OF-NB: PGT/VTF OUTCOMES

Table 1. Euploid SET versus DET Pregnancy Outcomes for Patients of Advanced Maternal Age.

Age (years old)	SET			DET		
	Implantation	Clinical Preg	Live Birth	Implantation	Clinical Preg	Live Birth
38-40	79.1%	79.1%	75.8%	68.8%	87.5%	87.5%
	72/91	72/91	69/91	11/16	7/8	7/8
41-42	93.1%	93.1%	89.7%	88.9%	88.9%	88.9%
	27/29	27/29	26/29	16/18	8/9	8/9
43+	100%	100%	100%	0%	0%	0%
	2/2	2/2	2/2	0/2	0/1	0/1
Total	82.7%	82.7%	79.5%	75.0%	83.3%	83.3%
	101/122	101/122	97/122	27/36	15/18	15/18

(Gordon et al., 2018)



OF-NB : SEET BY DAY OF VFET

- ❖ 6.5% of the BL tested were Day 7, they had a 36% euploidy rate, in contrast to 53.5% & 40.4% on Days 5 & 6, respectively.

	Day 5	Day 6	Day 7
# VFET	145	92	16
# Implantations	115	63	9
% Implantation	79.3% ^a	68.5% ^{ab}	56.3% ^b
% Loss	2.6% ^a	1.6% ^a	22.2% ^b
% Live births	78.6% ^a	67.4% ^a	43.8% ^b

^{a,b} Row values with different superscripts are different (P<0.05) (Whitney et al., 2018)



CBRC CONSIDERATIONS

❖ Diagnosis

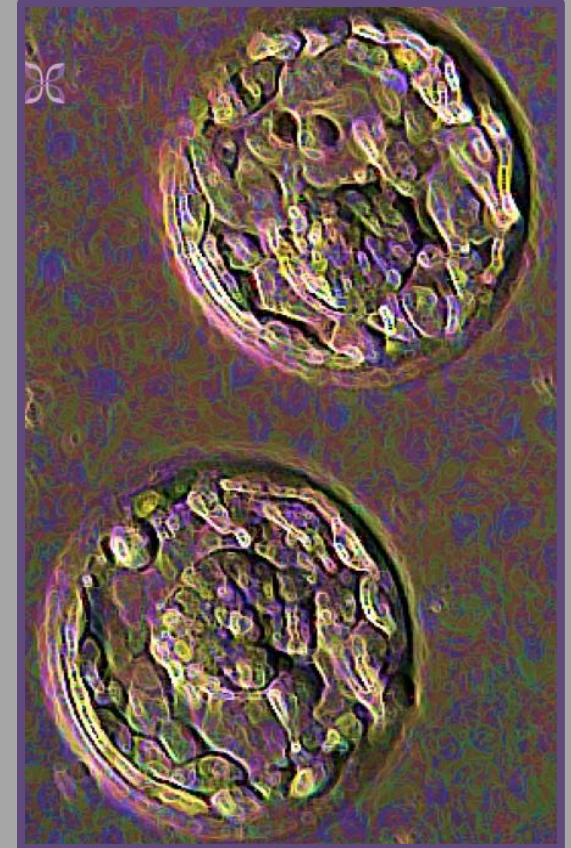
- ❖ Organize all travel to US to capitalize on the days for all treatments needed for any service

❖ IUI

- ❖ Advise international patient that IVF as a better alternative, especially when using donor sperm

❖ IVF

- ❖ Organize alternate protocols to minimize the time needed in the US
- ❖ Discuss failures and success to properly inform parents on future needs of OB treatment





OPTIONS FOR DONOR SERVICES

- ❖ Frozen Eggs
 - ❖ Eggs can be shipped, if country allows
- ❖ Ovation Fertility Donor Services
 - ❖ Ship sperm to the US
 - ❖ Embryos are generated from requested donor
 - ❖ Guaranteed euploid frozen blastocysts
 - ❖ Ship embryos back (easier and more guaranteed than oocytes)
 - ❖ Patient never needs to leave their country.





CAUTIONARY NOTES BY OFNB

- ❖ Commercialization of infertility trade practices
 - ❖ Facilitator-3rd Party agencies - \$\$\$
 - ❖ International mergers: Clinics & \$groups
 - ❖ Marketing & Ethics
- ❖ Screening of STD's per FDA (21 CFR Part1271)
 - ❖ How to deal with unexpected results ?
- ❖ Long-term storage
 - ❖ consents, billing, discards
 - ❖ notary services
- ❖ Communications
- ❖ Accepting outside Lab vitrified samples





**“Japanese RT’s take ‘sleeping buses’
to the Yukon Territory to enhance
fertility success”**

Amy Jones



The Future ?



NASA
Crossing Galactic Borders

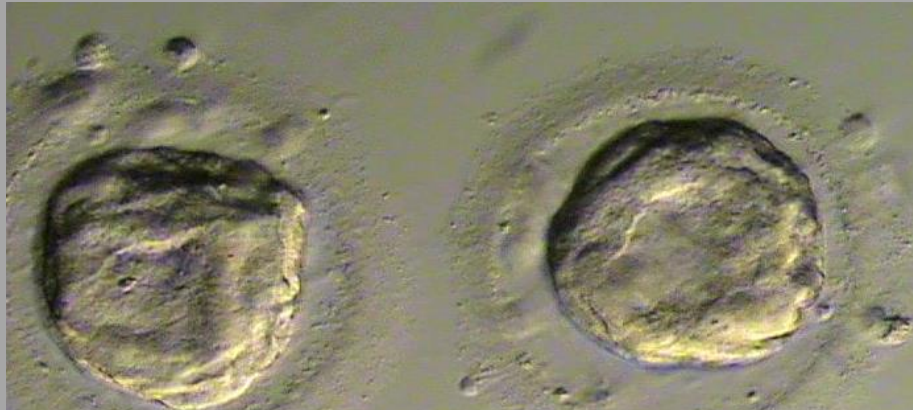
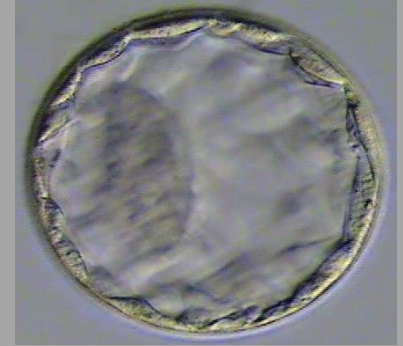


Where no human Sperm
has gone before !
UnivKansasMC-CCB expt:
SpaceX-MICRO-11

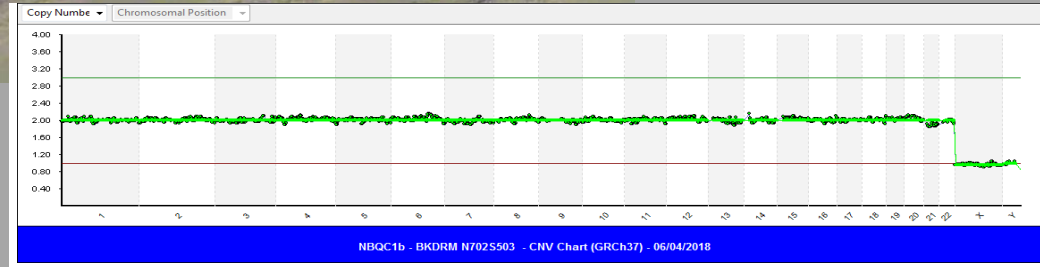
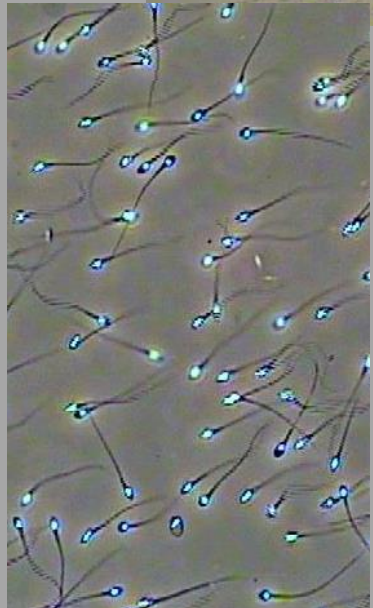
Genetic Modification: the next frontier in Reproductive Tourism ?



REPRO TRAVELER SUCCESS



ART WORLDWIDE



INSEMINATION" OR "SEET" VACATION