



DiponEd BioIntelligence

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DiponEd BioIntelligence



P4M Services

Predictive

Preventive

Participatory

Personalized

Goals are dreams with Deadlines

https://www.youtube.com/watch?v=o8Vav_4JkvU

- DiponEd works as a technology support partner, with a focus
 - on developing intelligent solutions-services
 - products to serve no-option medical conditions
 - unmet healthcare needs, through a personalised approach

DiponEd R&D

- Has developed more than 20 Products
- ❖ Diagnostics and prognostics bio-markers
- ❖ New cellular biologicals kits
- ❖ GFCs, mAbs
- ❖ Cellular therapies
- ❖ POC stem cell transplantation and processing
- ❖ 3D printing, 3D tissue engineering

Apart from this DiponEd's inhouse R&D team partners with various leading national institutions, biopharma companies, hospitals, clinical research organizations and universities across the world for technology development projects.

DiponEd current Personalized Medicine focus includes

- ❖ genetic predispositions
- ❖ mutation detection
- ❖ cancer integrated therapies
- ❖ pharmacogenomics based drug response tests
- ❖ antiageing
- ❖ stem cells transplantations in blood related disorders, biomaterials,
- ❖ ear auricular, 3D reconstructions, orthotics
- ❖ radiation and chemo protection and personalization
- ❖ skin and hair treatments
- ❖ infertility and other health care products

Consultancy Services

- ❖ We provide transplant quality and point of care (POC) stem cell and cell processing
- ❖ Cell isolation, expansion and characterization research services
- ❖ Flow cytometry based diagnostic and prognostic assays
- ❖ CDCSCO, US- FDA etc.,
- ❖ GLP GMP compliant Modular Cell Culture systems and Cleanrooms
- ❖ Contract research
Contract formulation/ constructs etc. for biologicals and biosimilars - IGF/ TGF/ GM CSF/ IL1/ IL2 etc
- ❖ BioInsurance/ Biobanking
- ❖ P4M services

P4M- clinical support services

- ❖ Personalised Immunotherapies/ vaccines --in Cancer, Allergy, Autoimmunity & Pain
- ❖ Adult Cellular transplantations--
Melanocytes/Keratinocytes/ Chondrocytes / Fibroblasts
- ❖ Bone Marrow Stem cell transplantations-- HSCT/ BMT and Haploidentical BMTs
- ❖ Cosmetic corrections-- with Adipose SVF and PRP / PRF/ PRFM/ PPP/ IRAP etc
- ❖ Nano-Biomolecules-- for Regeneration, Fatigue and Antiaging

6. Adult Stem Cells -- Autologous and Allogenic Transplantations in diseases/ disorders / trauma

7. Predictive /Prognostic systems--Genetic, Cellular and Molecular platforms for cancer etc.

8. Laser therapies IV and Dermal Lasers, and Cancer immunotherapies

9. Point of care US FDA approved devices BMAC, PRP, PRFM, PPP, Blood viscometer and vein detectors etc.

Commercial Products

- Dipogen- wound healing cream
- Dipogen 77- restores RT wounds
- Keratogrow-hair spray with GFs
- MT-ATP- energy refuelling for cells
- Derma glow- topical for skin with GFs
- DI cell matrix-scar healing with GFs
- Merisis PRP components
- Dtox 500- purifier
- STEMED capsules- stem cell enhancer
- PGD2hair-topical hair spray
- UMBRELLA- sunscreen
- UNICA- mosquito repellent

IVF-Stem Cell Partner

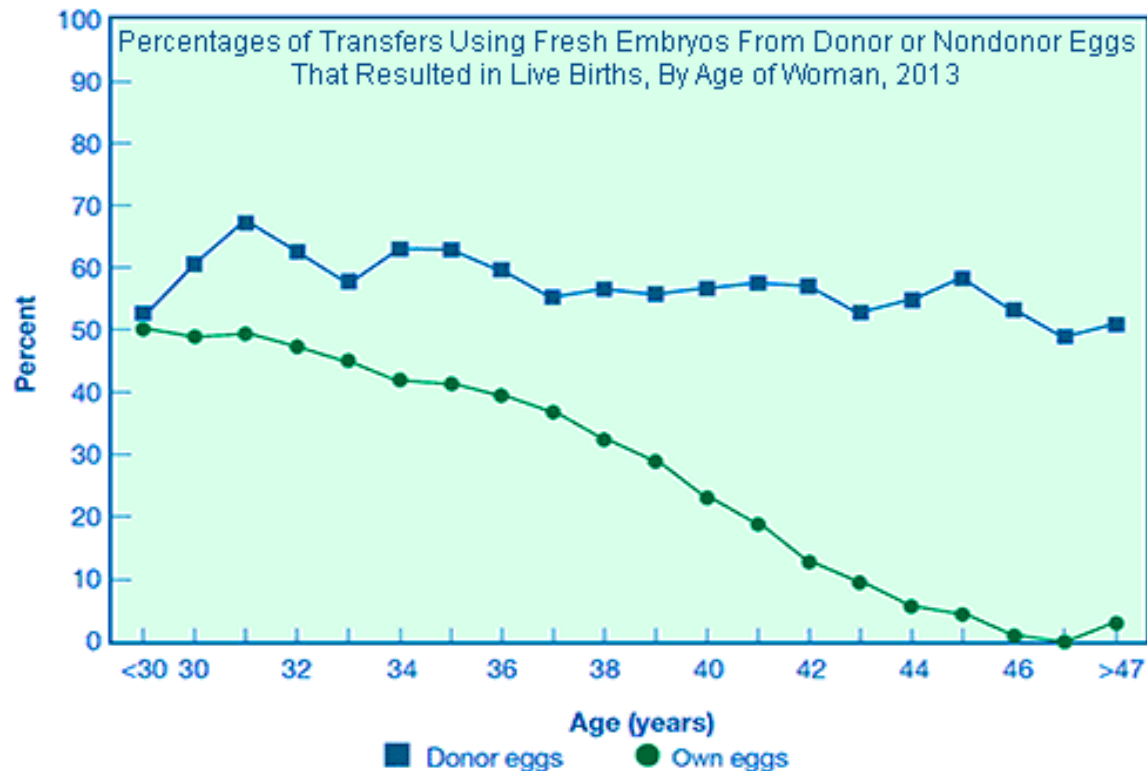
Our understanding of stem cells and tissue engineering will help dentists to revolutionize the IVF treatment.

IVF professionals have the opportunity to make their patients aware of these new sources of stem cells

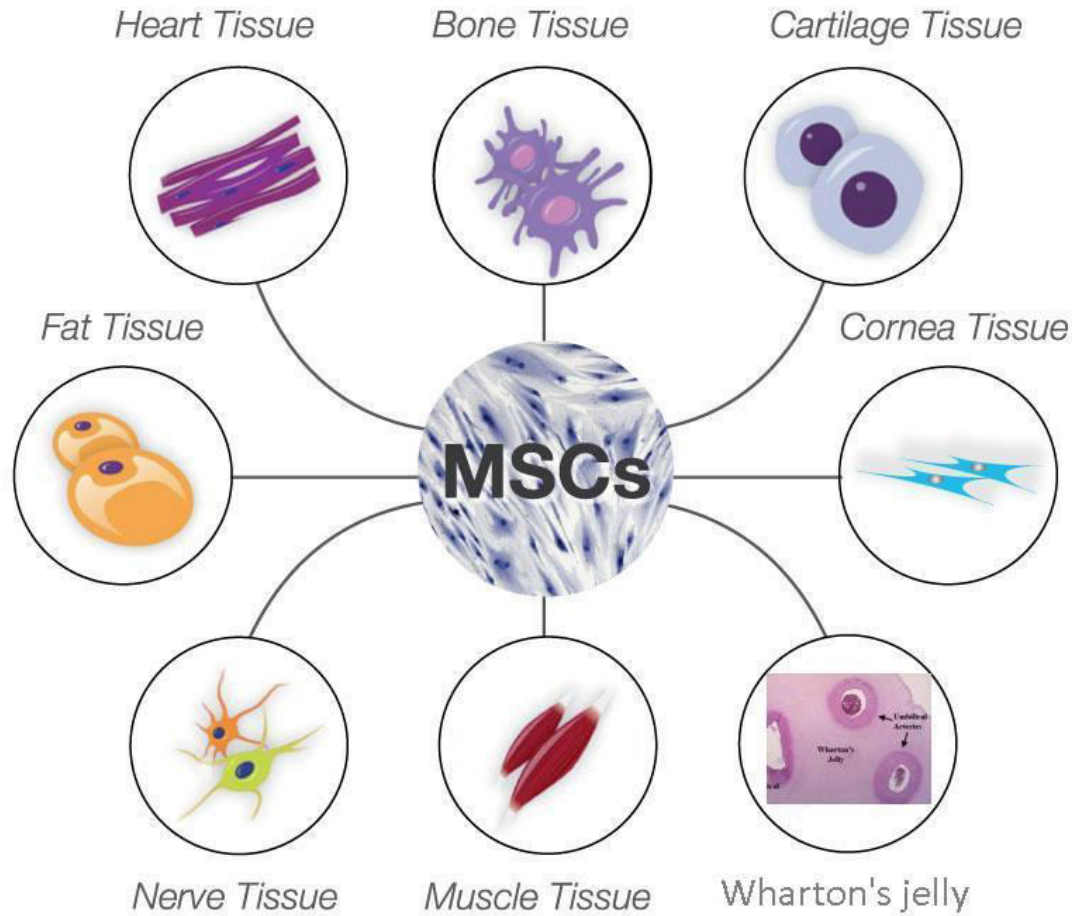
Recent findings and scientific research articles support the use of MSC autologously for IVF and other accessible tissue harvested from patients without immunorejection.

Applications of Stem cells in IVF

In vitro fertilization (IVF) is the process of fertilization in a laboratory (literally ‘fertilization in glass’). The current rate of success for in vitro fertilization is around 38% for women in their late 30s, and 18% for those in their early 40s.



Sources of MSCs



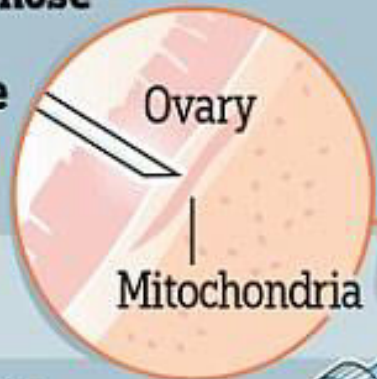
AUGMENT

- ❖ A procedure has recently been developed that boosts the vitality of older eggs and makes them act like young eggs again.
- ❖ It works by taking the mitochondria from egg precursor cells or stem cells found in a woman's own ovaries, also known as egg precursor cells, that haven't fully developed and putting those cells into older eggs.
- ❖ This laparoscopic procedure is a proprietary product called [Augment](#)

- ❖ On 2015, the first baby was born in Toronto, Canada after treatment with the AUGMENT method, a laparoscopic procedure that involves extracting the mitochondria from ovarian stem cells and injecting them into mature eggs.
- ❖ Since then, the AUGMENT procedure has been used in several other countries including the United Arab Emirates and Turkey. They plan to offer this fertility treatment soon in Japan and the UK.
- ❖ According to Dr. Michael Fakhri, clinical pregnancy rates in women that have previously had no success with IVF procedures increased from just 4% to 22% with AUGMENT.

HOW FERTILITY IS GIVEN A BOOST

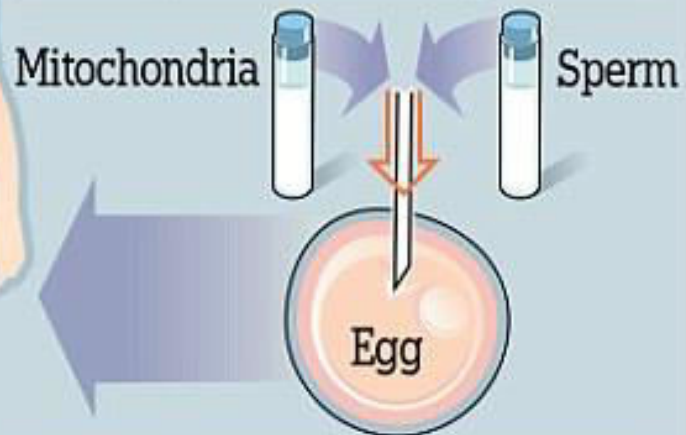
1 Sliver of tissue rich in healthy, immature eggs is taken from woman whose 'normal' eggs have gone flat with age



2 Immature eggs are raided for their high-energy mitochondria



3 Mitochondria injected into ageing eggs, with sperm, when patient is having IVF



4 Energy boost rejuvenates her eggs, lifting odds of pregnancy



Ovarian Tissue Sample

Isolation of egg precursor cells
(EggPCSM)
Identify, Purify, Quantify



Isolate Mitochondria



Designed to Improve
Bioenergetics for
Better Egg Quality



Inject Mitochondria
at Time of ICSI

Ovarian Rejuvenation

- ❖ Ovarian rejuvenation is a procedure that may create new eggs in the ovaries of women who are unable to conceive because of early menopause, advanced maternal age or low oocyte (egg) reserve, yet who wish to have their own biological child.
- ❖ Growth Factors are produced naturally by certain blood cells (platelets and white blood cells) when the body is injured, in order to naturally repair the body's tissues.
- ❖ Ovarian rejuvenation process is the injection of the Growth factors or PRP, etc.. into the ovaries.

Who are candidates for this procedure?

1. Menopausal or perimenopausal women under the age of 50 years.
2. Infertile women, over the age of 35 years, having low egg reserve and low AntiMullerian Hormone levels.
3. Women under the age of 35 years, who have low egg reserve and low AntiMullerian Hormone levels
4. Women with premature ovarian failure (POF)

(<http://www.infertilityny.com/ovarian-rejuvenation-nyc/>)

CORD BLOOD BANKING



Steps in cord blood banking

1



After birth the umbilical cord is clamped and cut

2



Cord blood is collected from umbilical cord vein by experts

3



Collected cord blood is safely packed in proprietary transfer kits and within 24 hours reach our labs

6



The end product is stored at -196 deg. C for 21 years

5



Cord blood is processed by patented technologies to yield maximum number of stem cells

4



The sample quality is evaluated and all the required tests are conducted for maximum safety

Gynaecology, Infertility and IVF related services

- ❖ Husband stem cells transplants before IVF cycles- in women in idiopathic implantation failure
- ❖ Cytokine profiling tests- HMGB1, TNFa etc. in uterine fluids in women with Endometriosis or intrauterine infections
- ❖ Genetic predisposition tests -- in PCODs, Metabolic disorders, hyperthyroidism, anemias, etc

- ❖ BM-Stem Cell transplants (MSCs) - for women with preterm births, pregnancy failure, Thrombocytopenias etc..
- ❖ Endometriosis - BM Stem cells treatment
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3136069/>
- ❖ Bio-Banking- for entire family-- blood, umbilical cord blood, adipose , Bone marrow, menstrual blood stem cells, breast milk stem cells etc.. with the worlds first US FDA, AABB etc., banking- options-- in Univ Arizona USA and with us in India. www.celebritylife.in

- ❖ Male infertility- Erectile dysfunctions and azoopermia
- ❖ HLA typing, fetal stem cells harvest, and tissue harvesting from aborted fetus for drug discovery and transplants R&D
- ❖ Organ transplant and autoimmunity conditions support by MSCs
- ❖ Mesenchymal stem cells Conditioned media- for improving oocyte maturation and embryonic development, preantral follicle growth etc.

(http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0100-879X2008001100006)

- ❖ R&D embryo cultures and embryonic stem cells for drug screening
- ❖ Education and training - diploma, PG Diploma regenerative medicine etc..
- ❖ Product development-- Growth factors from placenta and UCB and Amnionic membrane dressing material

Our Partnership with you

- ❖ Preparing Stem cells/MSC cells for
- ❖ Uses in IVF
- ❖ Augment
- ❖ Ovary Rejuvenation
- ❖ Uterine Upliftment
- ❖ Male infertility
- ❖ Increased ROS
- ❖ Gene therapy
- ❖ Cord Banking
- ❖ Stem cell therapy for further Purpose

