

## Fertility NEWS

### Sperm tail-tracking technique could improve male fertility testing

**“Should we be using new tool of Flagellar Analysis and Sperm Tracking ( FAST)?”**

**INTRODUCTION:** Can flagellar analyses be scaled up to provide automated tracking of motile sperm and does knowledge of the flagellar waveform provide new insight not provided by routine head tracking? The clinical gold standard for sperm motility analysis comprises a manual analysis by a trained professional, with existing automated sperm diagnostics [computer-aided sperm analysis (CASA)] relying on tracking the sperm head and extrapolating measures. It is not currently possible with either of these approaches to track the sperm flagellar waveform for large numbers of cells in order to unlock the potential wealth of information enclosed within.

**SUMMARY:** Using the software tool [Flagellar Analysis and Sperm Tracking (FAST)] Gallagher et al<sup>1</sup> analysed 176 experimental microscopy videos and have tracked the head and flagellum of 205 progressive cells in diluted semen (DSM), 119 progressive cells in a high-viscosity medium (HVM) and 42 stuck cells in a low-viscosity medium. The software tool in this manuscript has been developed to enable high-throughput, repeatable, accurate and verifiable analysis of the sperm flagellar beat. Unscreened donors were recruited after giving informed consent. They described fully automated tracking and analysis of flagellar movement for large cell numbers. The analysis is demonstrated on freely motile cells in low- and high-viscosity fluids and validated on published data of tethered cells undergoing pharmacological hyperactivation. Direct analysis of the flagellar beat reveals that the CASA measure ‘beat cross frequency’ does not measure beat frequency; attempting to fit a straight line between the two measures gives R<sup>2</sup> values of 0.042 and 0.00054 for cells in DSM and HVM, respectively. A new measurement, track centroid speed, is validated as an accurate differentiator of progressive motility. Coupled with fluid mechanics codes, waveform data enable extraction of experimentally intractable quantities such as energy dissipation, disturbance of the surrounding medium and viscous stresses. They provide a powerful and accessible research tool, enabling connection of the mechanical activity of the sperm to its motility and effect on its environment. The FAST software package has only been tested for use with negative phase contrast microscopy. Other imaging modalities, with bright cells on a dark background, have not been tested but may work. FAST is not designed to analyse raw semen; it is specifically for precise analysis of flagellar kinematics, as that is the promising area for computer use. Flagellar capture will always require that cells are at a dilution where their paths do not frequently cross.

**CONCLUSION:** High-throughput flagellar waveform tracking and analysis enable measurement of experimentally intractable quantities such as energy dissipation, disturbance of the surrounding medium and viscous stresses, which are not possible by tracking the sperm head alone. Combining tracked flagella with mathematical modelling has the potential to reveal new mechanistic insight. By providing the capability as a free-to-use software package, ability to accurately quantify the flagellar waveform in large populations of motile cells will enable an abundant array of diagnostic, toxicological and therapeutic possibilities, as well as creating new opportunities for assessing and treating male subfertility.

#### REFERENCES:

1. M T Gallagher, G Cupples, E H Ooi, J C Kirkman-Brown, D J Smith, Rapid sperm capture: high-throughput flagellar waveform analysis, *Human Reproduction*, Volume 34, Issue 7, July 2019, Pages 1173–1185, <https://doi.org/10.1093/humrep/dez056>



**Dr Gouri Devi**  
President



**Dr Pankaj Talwar**  
Secretary General



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**BHARAT SERUMS  
& VACCINES LIMITED**



Organised by



Theme: Beyond Tomorrow

**15th** Annual Congress of  
**Indian Fertility Society**  
**FERTIVISION**  
**2019** 6-8 December  
The Leela Ambience Hotel, Gurugram  
New Delhi | India

**First Announcement**



[www.fertivision2019.com](http://www.fertivision2019.com)



# Invitation

Dear Friends, Welcome to *FERTIVISION 2019*

On behalf of the Indian Fertility Society (IFS), we are extremely pleased to announce and cordially invite you to the much awaited academic event – the **15<sup>th</sup> National Annual Conference - Fertilvision 2019**, to be held on **6<sup>th</sup>, 7<sup>th</sup> & 8<sup>th</sup> December 2019** at Hotel **The Leela Ambience, Gurugram, New Delhi / NCR, India**.

This conference is aimed to provide the most comprehensive academic platform in the field of Infertility and Assisted Reproductive Technology (ART) befitting the theme of the meeting “Beyond Tomorrow”

Renowned and leading expert faculty from around the world would gather and deliver talks in our cutting edge scientific program which will not only enrich your current knowledge and clear all doubts faced in day-to-day clinical practice, but will also enlighten you about the latest innovations and ongoing research.

A large number of renowned international faculties have already confirmed their participations till date. The pre-congress workshops on 6<sup>th</sup> December are specially designed for informal in-depth training with hands on sessions on simulators and live, where ever feasible. There will be 4 simultaneous running streams on 7<sup>th</sup> & 8<sup>th</sup> December covering a wide variety of topics, enabling you to choose the deliberations specific to your area of interest and clinical practice. We are having a dedicated hall for the esteemed embryologist friends.

The best oral and poster presenters under various categories and the quiz winners will be honored with special awards and prizes. Do join us in large numbers and update your knowledge with most updated current standards in clinical practice, as well as get inspired to innovate further to overcome remaining enigmatic issues!

The three days of scientific program will encompass didactic lectures, keynote presentations, panel discussions and orations. There will be 9 Pre-conference workshops based on Ovulation Induction, Ultrasound, Andrology, Embryology, Hands on Embryo Transfer, Ovum Pickup and PGS and more. These workshops will be in addition to the special state of the art workshops by the faculty from IFFS and ESHRE. We expect delegates across India, Sri Lanka, Bangladesh, Nepal, Middle - East Countries and African Nations and the arrangements are being made to accommodate more than 2500 delegates.

The exhibition area will be one of the highlights of the conference. Exhibiting provides tremendous benefits to both participating industry and the society. Tea, coffee and lunch will be served confluent with the trade area to allow optimal interaction between the trade companies and delegates during beverage and lunch breaks.

We invite you to participate in the Fertilvision 2019 and exchange your expertise with more than 2500 specialists in the field of Assisted Reproduction.

We look forward to your active participation and suggestions for successful conduct of the conference.

**With Our Best Regards**



**Dr. M Gouri Devi**  
Organizing Chairperson  
FERTIVISION 2019



**Dr. Pankaj Talwar**  
Organizing Secretary  
FERTIVISION 2019

**and All Executive Committee of Current IFS team**

# Scientific Highlights

1

Fertivision 2019 Would be One of the Most Comprehensive Coverage on "Best Practices, Innovations and Progress in the Field of Infertility and ART" Being Conducted in India.

2

We Promise You Cutting Edge Academic Deliberations Delivered by Leading Renowned Expert Faculty from Around the world befitting the Theme of the Meeting "Beyond tomorrow"

3

In the Conference There Would Be 4 Simultaneous Halls Running with Legendary Faculty in Lead Interacting With You, Covering a Wide Variety of Topics, and Enabling You to Tailor the Program Especially to Your Area of Interest and Clinical Practice. We are Having a Dedicated Hall for the Esteemed Embryologist Friends.

4

Along With the Main Conference We are Having 9 Pre -Congress Workshops on 6th Dec 2019 Pertaining to the Burning Issue in ART.

5

We Welcome You and Offer You This Opportunity to Showcase Your Research Work on a Prestigious National Platform and Enhance Your CV.

6

Scientific Quiz for sharp talented young minds with primary rounds conducted by various IFS Chapters across the country and abroad

7

Several Prizes and Awards for Best Paper, Poster and Quiz winners

8

Enjoy the Evenings With Exciting Social and Cultural Program

9

Sightseeing Tours in and Around Delhi Organized Professionally by Leading Event Management Teams.

10

A Great Opportunity for All of Us to Amalgamate the Most Updated Current Standards in Our Clinical Practice and Look Beyond Tomorrow

Limited Seats

## Choose from 10 Pre Conference Workshops | 6 December

- 1) *IFFS Workshop on Do's and Don'ts in Ovarian Stimulation*
- 2) *Reproductive Surgery*
- 3) *Ultrasonography Imaging In Infertility*
- 4) *Andrology & Semenology*
- 5) *Ovum Pickup and Embryo Transfer (With Simulators)*
- 6) *Cryobiology*

- 7) *Total Quality Management*

*Pre Lunch Workshop (0900 - 1300 Hrs)*

- 8 A) *Holistic Medicine and Patient Counselling*

*Post Lunch Workshop (1400 - 1700 Hrs )*

- 8 B) *Publish or Perish*

- 9) *PGT and Genomics*

Early Bird Reg. Ends 1st September

## Registration Details

Category	Early Bird Fees Till 1st September 2019		Regular Fees Till 15th October 2019		Onspot	
IFS Member	INR 10500		INR 12500		INR 14500	
Non IFS Member	INR 12500		INR 14500		INR 16500	
Conference Registration plus Life Time IFS Membership	Embryologist	INR 14500	Embryologist	INR 16500	Embryologist	INR 18500
	Gynaecologist	INR 15500	Gynaecologist	INR 17500	Gynaecologist	INR 19500
PG Students (No Dinner)	INR 6000		INR 7000		INR 8000	
Accompanying Person	INR 10500		INR 11500		INR 12500	
Foreign Delegates	\$ 350		\$ 400		\$ 500	

Inclusive of 18% GST

Register at [www.fertivision2019.com](http://www.fertivision2019.com)



# Venue:

**The Leela Ambience Hotel, Gurugram  
New Delhi | India**



**The Leela Ambience Hotel & Residences** is located on the fringe of the Gurgaon Central Business District, fifteen minutes from Delhi's International Airport and thirty minutes from Central Delhi.

In addition to 322 contemporary and world class five star deluxe rooms and suites, The Leela Ambience Gurgaon also features 90 residencies (with one, two and three bedroom) fully serviced luxury Residences.

Multi Award winning restaurants include; Multi-cuisine all day dining– Spectra, Italian – Zanotta, cucina Italiana, North Indian – Diya and whisky bar- Rubicon. The "Royal Club" is located on the 6th floor of the Hotel. The Royal Club features are 24 hour butler service, with evening cocktails and a Boardroom.

The 27,000 square feet, beautifully finished convention facilities, meeting and boardrooms were recently awarded the prestigious 5-Star deluxe "Best Luxury Hotel and Conference Centre – India".

This venue has been chosen with a lot of care and thought keeping in mind the comfort and also enjoyment of the delegates when visiting Delhi.

## Conference Secretariat

### **Indian Fertility Society**

302, 3rd Floor, Kailash Building,  
26, Kasturba Gandhi Marg  
C.P, New Delhi - 110001  
+91-9667742015, +91-9899308083  
+91-11-40018184



## Conference Manager

### **Conferences International**

Mr. Sumeet Ghai  
B-220/2, 2nd Floor,  
Opposite Kali Masjid, Savitri Nagar  
New Delhi – 110017  
Mobile: +91 9560493999

**fertivision2019@gmail.com**

# FERTIVISION

## 2019

6-8 December The Leela Ambience Hotel  
Gurugram, New Delhi, NCR | India

Organised by



## Registration Form

Title Prof/ Dr/ Mr/ Ms \_\_\_\_\_

Gender : Male ☐ Female ☐

First Name \_\_\_\_\_ Last Name \_\_\_\_\_

Institution \_\_\_\_\_ IFS Member No. \_\_\_\_\_

Correspondence Address \_\_\_\_\_

City \_\_\_\_\_ Pin Code \_\_\_\_\_ State \_\_\_\_\_

Mobile No. \_\_\_\_\_ Email \_\_\_\_\_

(All the above fields are mandatory)

Limited  
Seats

Choose from 9 Pre Conference Workshops | 6 December

Choose Any 1 Workshop

- |    |                          |   |
|----|--------------------------|---|
| 1) | <input type="checkbox"/> | IFFS Workshop on Do's and Don'ts in Ovarian Stimulation |
| 2) | <input type="checkbox"/> | Reproductive Surgery                                    |
| 3) | <input type="checkbox"/> | Ultrasonography Imaging In Infertility                  |
| 4) | <input type="checkbox"/> | Andrology & Semenology                                  |
| 5) | <input type="checkbox"/> | Ovum Pickup and Embryo Transfer (With Simulators)       |
| 6) | <input type="checkbox"/> | Cryobiology   |

- |                                       |                          |   |
|---------------------------------------|--------------------------|---|
| 7)                                    | <input type="checkbox"/> | Total Quality Management                  |
| Pre Lunch Workshop (0900 - 1300 Hrs)  |                          |   |
| 8 A)                                  | <input type="checkbox"/> | Holistic Medicine and Patient Counselling |
| Post Lunch Workshop (1400 - 1700 Hrs) |                          |   |
| 8 B)                                  | <input type="checkbox"/> | Publish or Perish                         |
| 9)                                    | <input type="checkbox"/> | PGT and Genomics                          |

## Registration Fees

Inclusive of 18% GST

Please tick the appropriate checkbox

Category	Early Bird Fees Till 1st September 2019		Regular Fees Till 15th October		Onspot	
IFS Member	INR 10500	<input type="checkbox"/>	INR 12500	<input type="checkbox"/>	INR 14500	<input type="checkbox"/>
Non IFS Member	INR 12500	<input type="checkbox"/>	INR 14500	<input type="checkbox"/>	INR 16500	<input type="checkbox"/>
Conference Registration plus Life Time IFS Membership	Embryologist	INR 14500 <input type="checkbox"/>	Embryologist	INR 16500 <input type="checkbox"/>	Embryologist	INR 18500 <input type="checkbox"/>
	Gynaecologist	INR 15500 <input type="checkbox"/>	Gynaecologist	INR 17500 <input type="checkbox"/>	Gynaecologist	INR 19500 <input type="checkbox"/>
PG Students (No Dinner)	INR 6000	<input type="checkbox"/>	INR 7000	<input type="checkbox"/>	INR 8000	<input type="checkbox"/>
Accompanying Person	INR 10500	<input type="checkbox"/>	INR 11500	<input type="checkbox"/>	INR 12500	<input type="checkbox"/>
Foreign Delegates	\$ 350	<input type="checkbox"/>	\$ 400	<input type="checkbox"/>	\$ 500	<input type="checkbox"/>

Inclusive of 18% GST

### Conference Registration Fees Includes

- 18 Hrs of World Class Academic Program with Access to Best & Brightest International & National Faculty
- 3 Lunches and 6 Tea / Coffee Served During the Conference on 6, 7 & 8 December
- Banquet Dinner on 7 December
- Conference Kit (Including Bag, Badge, Notepad, Certificate & Pen)
- 1 Pre Conference Workshop
- Accompanying Person is Entitled for Food Coupons Only

### Cancellation Policy

- Cancellation till 31st October, 2019 – 50% Refund.
- Cancellation from 1st November, 2019 – No Refund.
- All refunds will be made after the congress.

Cheque / Draft No. \_\_\_\_\_ Total Amount \_\_\_\_\_

Note: Kindly email us bank deposit slip / UTR number once you made the payment for our record.  
Payment confirmation will take 7-10 working days post deposit of cheque, DD or RTGS

3. To Register online log on to [www.fertivision2019.com](http://www.fertivision2019.com)

### Mode of Payment

1. Bank Draft/Cheque - To be made in favor of  
"INDIAN FERTILITY SOCIETY"

2. Bank Transfer Details

IFS Account Name : Indian Fertility Society

Account Number: 50562010067180

IFSC Code : ORBC0100179

Bank Name: Oriental Bank of Commerce

Branch: Connaught place, New Delhi- 110001

### Congress Manager's

Mr. Vikas Sharma  
Conferences International  
B-220/2, 2nd Floor,  
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Please send Registration Form along with cheque / draft at the following address

[www.fertivision2019.com](http://www.fertivision2019.com)