

# TISSUE REGENERATION AND INTERSTITIAL CYSTITIS

Regenerative medicine involves stem cells and growth factors. The successful clinical application depends on effective technologies to gain autologous preparations and modifying to the lesions caused by the disease or trauma.



**GIBS 2024 9th Annual Congress on IC/BPS**  
**24th & 25th August 2024**  
**@Pride Plaza Hotel, New Delhi**



**Become a GIBS Lifetime Member**  
**Some Benefits**

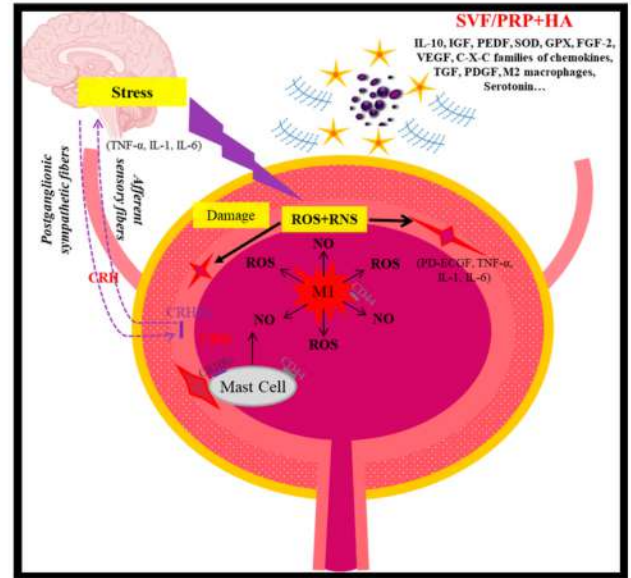
- Stay updated with latest in IC/BPS.
- Enjoy registration of GIBS annual event at discounted rates & Many More.



**Be the NEXT Author!**  
**Please send your contributions to [info@gibsociety.com](mailto:info@gibsociety.com)**



**GLOBAL INTERSTITIAL CYSTITIS  
BLADDER PAIN SOCIETY**



Mesenchymal stem cell and platelet derived growth factors are proved to be essential because of their versatile and easy sampling. These factors not only work on interstitial tissue but also on the epithelium. Successful application of regenerative medicine in the dermatology and recent application in urethroplasty enhances recent research on interstitial cystitis.

IC/BPS is defined as a chronic (> 6 weeks), poorly understood pelvic condition, characterized by suprapubic pain, discomfort, or pressure related to bladder filling; it is associated with increased frequency of urination in the absence of UTI or any other obvious pathology. (1) It fluctuates over time with waxing and waning course and no pathophysiological mechanism is clearly defined here. Therefore, treatment is primarily directed toward symptom palliative. Biopsy even cystoscopy is not mandatory to reach the diagnosis. The glycosaminoglycan (GAG) layer is damaged and it exposes the submucosal layers to urinary irritants

Dietary and lifestyle modification is the initial treatment. Sodium pentosan polysulfate is the only US-FDA approved drug(1). Amitriptyline in fact is a staple drug with different dose formulations and varied response rates. Therefore, there are clear lacunae as patients have to wait months for symptoms palliation.

Stem cell transplantation in the bladder do not fill up the damaged epithelium rather it secretes anti-inflammatory, anti-apoptotic factors and it is endogenous stem cells cover the damaged part(2). In 2022, Shin et al. reported the 12-month follow-up of three IC/BPS patients treated with MSCs derived from hESCs(3). VAS and their lesions were greatly improved, and one lesion in the first patient became unidentifiable under cystoscopy(3). Lander et al. investigated the effect of the combined intravenous and local injection of autologous stromal vascular fraction (SVF) into the pelvic floor in 91 women and 18 men with IC/BPS(4). Stromal vascular fraction contains an adipose pool of MSCs. 71.5% of patients reported that they felt better after SVF treatment(4). Patients also reported significant decreases in overall mean pain scores, significant decreases in mean Urgency/Frequency Patient Symptom Scale (PUF), and improved O'Leary-Sant symptom (OSS) and bother scores at 1 year(4).

Platelet-rich plasma (PRP) carries growth factors and cytokines that can stimulate the healing of soft tissue and joints. For its properties, PRP may offer an treatment option to improve the healing of bladder mucosa injuries and to reduce neuropathic pain. In their study, 40 patients (37 women and 3 men) with IC/BPS, who had previously failed to conventional treatments, received four injections of PRP at monthly intervals. They analyzed parameters of global response assessment (GRA) score as the primary endpoint at 3 months after the last injection of PRP and OSS score, visual analog scale (VAS) score, micturition frequency, nocturia, functional bladder capacity, posturination residual (PVR), and maximum flow rate as the secondary endpoints at baseline and at 3 months after the last injection.

They observed a significant decrease in GRA and symptom score post-treatment, as well as a significant decrease in OSS, VAS, urinary frequency, and nocturia. The same authors, in another recent clinical trial, showed a significant improvement in urothelial tight junction defects in patients with refractory nonulcer IC/BPS. MSCs and PRP has promising 5 yr long term follow up period.

## CONCLUSION

Regenerative approaches towards IC/BPS seems to be promising for future standardization protocols. But regenerative medicine in IC/BPS has no standardized procedures and lacks guidelines. It appears more complicated than pharmacological or surgical intervention and need multidisciplinary approaches.

## REFERENCE

1. Diagnosis and Treatment of Interstitial Cystitis/Bladder Pain Syndrome (2022) - American Urological Association [Internet]. [cited 2024 Jun 29]. Available from: [https://www.auanet.org/guidelines-and-quality/guidelines/diagnosis-and-treatment-interstitial-of-cystitis/bladder-pain-syndrome-\(2022\)](https://www.auanet.org/guidelines-and-quality/guidelines/diagnosis-and-treatment-interstitial-of-cystitis/bladder-pain-syndrome-(2022))
2. Wen C, Xie L, Hu C. Roles of mesenchymal stem cells and exosomes in interstitial cystitis/bladder pain syndrome. *J Cell Mol Med.* 2022 Feb;26(3):624–35.
3. Shin JH, Ryu CM, Yu HY, Park J, Kang AR, Shin JM, et al. Safety of Human Embryonic Stem Cell-derived Mesenchymal Stem Cells for Treating Interstitial Cystitis: A Phase I Study. *Stem Cells Transl Med.* 2022 Oct 1;11(10):1010–20.
4. Lander EB, Berman MH, See JR. Personal cell therapy for interstitial cystitis with autologous stromal vascular fraction stem cells. *Ther Adv Urol.* 2019 Jan 1;11:1756287219868590.
5. Intravesical injections of platelet-rich plasma is effective and safe in treatment of interstitial cystitis refractory to conventional treatment—A prospective clinical trial - Jhang - 2019 - Neurourology and Urodynamics - Wiley Online Library [Internet]. [cited 2024 Jun 30]. Available from: <https://onlinelibrary.wiley.com/doi/10.1002/nau.23898>

### The Author



#### Dr. Nirmalya Ghosh

CONSULTANT UROLOGIST,  
HOD OF UROLOGY,  
AIIMS KALYANI,  
KOLKATA, WEST BENGAL,  
INDIA

### FOR ANY ASSISTANCE CONTACT US

-  [info@gibsociety.com](mailto:info@gibsociety.com)
-  +91 8169746459
-  [www.gibsociety.com](http://www.gibsociety.com)



GLOBAL INTERSTITIAL CYSTITIS  
BLADDER PAIN SOCIETY

August  
24th & 25th, 2024

# GIBS 2024

9th Annual Congress on IC/BPS

---

CONTAINING THE  
BLADDER BLAZE

 **Pride Plaza Hotel,  
Aerocity, New Delhi, India**



SCAN FOR MORE  
INFORMATION





GLOBAL INTERSTITIAL CYSTITIS  
BLADDER PAIN SOCIETY

August  
24th & 25th, 2024

# GIBS 2024

9th Annual Congress on IC/BPS

CONTAINING THE BLADDER BLAZE

## INTERNATIONAL STALWARTS



**DR. BARY BERGHMANS**  
Pelvic Physiotherapist



**DR. SAJJAD RAHNAMA'I**  
Urologist



**DR. BHOJRAJ LUITEL**  
Urologist



**DR. SAKINEH HAJEBRAHIMI**  
Urologist



**DR. GEORGE KASYAN**  
Urologist



**DR. SANDOR LOVASZ**  
Urologist



**DR. GOPAL BADLANI**  
Urologist



**DR. SENDER HERSCHORN**  
Urologist



**DR. MANISH PRADHAN**  
Urologist



**DR. SITI NUR MASYITHAH MAAROF**  
Urologist



**DR. NG POH YIN**  
Urogynecologist



**DR. WARREN LO HWA LOON**  
Urologist



**DR. OLGA PLEKHANOVA**  
Urologist



**DR. WILLIAM ONG**  
Urologist



**DR. PAWAN RAJ CHALISE**  
Urologist



**DR. YADGAR SHWANI**  
Urologist



**DR. POONGKODI NAGAPPAN**  
Urologist





GLOBAL INTERSTITIAL CYSTITIS  
BLADDER PAIN SOCIETY

August  
24th & 25th, 2024

# GIBS 2024

9th Annual Congress on IC/BPS

CONTAINING THE BLADDER BLAZE

## SCIENTIFIC PROGRAM TOPICS

1

**How do we manage IC/BPS in our Country - Across the Globe ?**  
(Canada, Iran, Malaysia, Nepal, Russia, Iraq)

2

**Phenotyping in IC/BPS**

Evolution, Recent concepts, Treatments linked to Phenotypes

3

**AI in IC/BPS**

Diagnosis & HL, Phenotyping, Treatments

4

**IC/BPS as Pelvic Pain**

Gynecologists view, Laparoscopy, Pelvic Floor, Pudendal Neuralgia & MRN, Neuromuscular Disorder, NGS in Pelvic Pain

5

**Having Brain in Bladder**

Brain to Bladder - Neuroanatomy & Bladder to Brain - In the clinic

6

**Newer Modalities in treatment of IC/BPS,**

Oral Agents, Intravesical Agents, Botox, Stem Cell Therapy, Physical Therapy - SWT, PRP

7

**Hunner's Lesions (HL)**

Etiopathogenesis, Cystoscopic appearance, Treatments, Dietary Influences

8

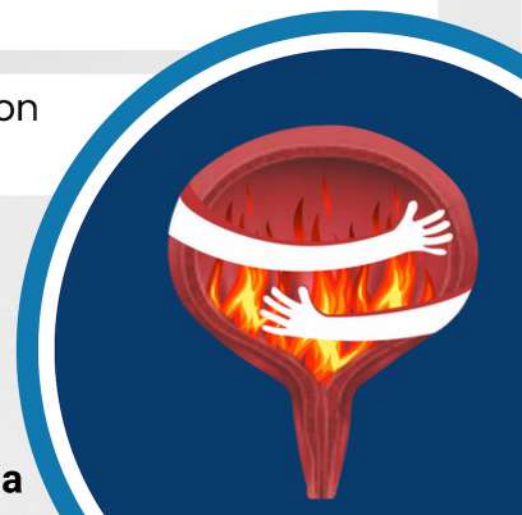
**More attractions** - Competitive papers session  
Case Based Panel Discussions, Quiz.

**'Ask the Experts'**

SCAN FOR MORE  
INFORMATION



Pride Plaza Hotel,  
Aerocity, New Delhi, India





GLOBAL INTERSTITIAL CYSTITIS  
BLADDER PAIN SOCIETY

August  
24th & 25th, 2024

# GIBS 2024

## 9th Annual Congress on IC/BPS

### CONTAINING THE BLADDER BLAZE

# REGISTRATION DETAILS

Scan To Register



Submit Your Abstract



Become a Lifetime Member



Categories	NATIONAL DELEGATES		
	Till 31st May	1st June – 15th Aug	16th August Onwards (Onspot)
<b>GIBS Lifetime Members</b>	<del>INR 5000</del>	INR 8000	INR 13000
<b>Non Members</b>	<del>INR 10000</del>	INR 15000	INR 20000
<b>PG/AHP*</b>	<del>INR 3500</del>	INR 6000	INR 10000

Categories	INTERNATIONAL DELEGATES		
	Till 31st May	1st June – 15th Aug	16th August Onwards (Onspot)
<b>GIBS Lifetime Members</b>	USD 75	USD 100	USD 150
<b>Non Members</b>	USD 150	USD 200	USD 250
<b>PG/AHP*</b>	USD 60	USD 80	USD 125

\*AHP - ALLIED HEALTH PROFESSIONALS

BOOK YOUR STAY WITH GIBS

PRIDE PLAZA HOTEL - 5\* HOTEL  
AEROCITY, NEW DELHI, INDIA

\*\*Exclusive Subsidized rates for GIBS Delegates



CONTACT FOR MORE DETAILS [info@gibsociety.com](mailto:info@gibsociety.com) +91-8779515840