



## Letter from the Director



*An overview of 2005 and looking toward 2006*

I would like to thank you all for your ongoing support in 2005, and look forward to working with you all again in 2006.

### 2005 Overview

2005 has been a challenging year in many ways, one of which was the regulation of IVF culture media by the Therapeutic Goods Administration, which at this point in time remains in their hands.

We saw towards the end of this year the release of the egg cryopreservation media by SAGE Assisted Reproduction Products which some of you are already using.

Gytech has also entered into an exclusive arrangement with Mid Atlantic Diagnostics who manufacturer "The Stripper".

"The Stripper" is safer than other products on the market as it is Gamma Radiated.

Mid Atlantic also have a range of IVF workstations and hoods that Gytech will make available in 2006. We'll keep you posted through our quarterly newsletter as to when they will be available.

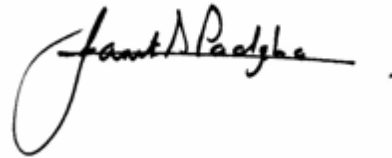
Rocket Medical continue to be innovative in the IVF field with the release of the Bulb Tip Transfer Catheter along with the Duo IUI Catheter.

Brady Australia has added another printer to it's product range, this one is called the LabXpert. This printer is ideal for use laboratories.

### Looking Toward 2006

2006 will see the release of a number of new products for use in Andrology and IVF laboratories, one of which is featured inside this newsletter, the PICSI Dish from Mid Atlantic Diagnostics. This product facilitates you to choose the "best" sperm for ICSI procedures. The second is also a Mid Atlantic product, HBA slides, sperm hyaluronan binding assay slides, which featured in last quarters newsletter.

Once again thank you for your support over the year, and from everyone at Gytech we would like to wish you all a safe and enjoyable Christmas and 2006.



Janet Padgham  
Director



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**HAPPY NEW YEAR**

## Feature Article

# Hyaluronic acid binding by human sperm indicates cellular maturity, viability, and unreacted acrosomal status

Gabor Huzsar MD, Ciler Celik Ozenci PhD, Sevil Cayli MS, Zoltan Zavaczki MD, Eleonora Hansch MD, Lynne Vigue MS. *Sperm Physiology Laboratory, Dept of Obs & Gyn. Yale University School of Medicine, New Haven, USA*

**Objective:** To test, both in semen and washed-sperm fractions, whether hyaluronic acid (HA) binding is restricted to sperm that have completed cellular maturation.

**Design:** Comparisons of sperm in semen and in HA-bound sperm fractions.

**Setting:** University-based diagnostic and research andrology laboratory.

**Patient(s):** Semen samples originated in men being tested for infertility.

**Intervention(s):** The attributes of sperm maturity were tested by immunocytochemistry with creatine kinase and HspA2 antisera (highlights cytoplasmic retention in diminished-maturity sperm), aniline blue chromatin staining (detects persistent histones), pisum sativum lectin staining (reveals acrosomal integrity), and the FertiLight viability kit (highlights viable and nonviable sperm).

**Results:** All markers of sperm maturity and immaturity supported the hypothesis that HA-bound sperm are mature. Nonbinding sperm exhibited cytoplasmic and nuclear properties of diminished maturity. The acrosomal status of HA-bound sperm was either unreacted or slightly capacitated, but not acrosome reacted. Only viable sperm exhibited HA binding.

**Conclusion(s):** Sperm that are able to bind to HA are mature and have completed the spermiogenetic processes of sperm plasma membrane remodelling, cytoplasmic extrusion,

and nuclear histone-protamine replacement. Hyaluronic acid – bound sperm show unreacted acrosomes.

These studies provide further insights into the relationship between spermiogenesis and sperm function. (*Fert Steril* 2003;79(Suppl 3): 1616-24. 2003 by American Society for Reproductive Medicine)

In summary, we report that sperm binding to immobilized HA allows identification and separation of sperm that are able to form an attachment.

Using objective biochemical and morphometrical parameters, we explored the maturity characteristics of sperm that are bound or fail to bind to HA. Bound sperm show no cytoplasmic retention and contain mature-type chromatin.

Further, we have demonstrated that sperm with HA-binding ability are viable and that the acrosomal status is either intact or slightly capacitated. All these data support the concept that sperm binding to HA via the plasma membrane HA receptors represents unequivocal evidence of completed spermiogenetic maturation.

*See the next page for the new Mid Atlantic product PICS1 Dish for Sperm Selection which will be available at the end of Quarter 1.*

*If you would like a full copy of this paper, please contact Tara Edwards on 03 9822 5911 or at [tedwards@gytech.com.au](mailto:tedwards@gytech.com.au)*

## Coming Soon



### PICSI Dish for Sperm Selection

*Objective*



*Qualitative*



*Repeatable*

Using the technology of the Hyaluronan Binding Assay (HBA™), the PICSI Sperm Selection Dish helps you select motile sperm for ICSI. The PICSI dish consists of 3 microdots of hyaluronan along the centre of the dish, approximately 2cm from the locating line (see figure 1). By placing sperm near the microdots, motile sperm bind to the hyaluronan, which facilitates collection of motile sperm

- *BASED ON HYALURONAN BINDING*
- *BOUND SPERM = BEST SPERM*
- *DR GABOR HUSZAR'S PIONEERING WORK*

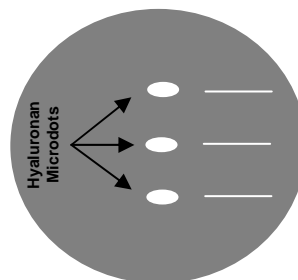


Figure 1



## STRIPPER TIPS

*All sizes available*

75, 100, 125, 135, 150, 175, 200, 275, 600



## Dec / Jan Trading

The office will be closing at the end of business on Thursday 22 December 2005

We will re-open on Tuesday 3 January 2006

If you have any queries during this time please leave a message on our answering system and your call will be returned

**WE HAVE A NEW AND IMPROVED WEBSITE**

**WWW.GYTECH.COM.AU**

It has the entire Gytech product range as well as back issues of our informative Quarterly Newsletters

*Hope you enjoy it!*

**Need more information?  
Call Gytech on 03 9822 5911 or  
visit our website [www.gytech.com.au](http://www.gytech.com.au)**



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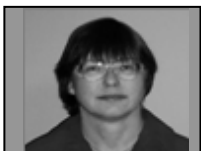
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