

VOL 7 (August) 2013

Not for sale

**Catalysts**

# Connect

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**Opportunities in Enzymes through Modern Biotechnology**

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**A Medi Claim Policy - Myth**

**HPLC - High Performance Liquid Chromatography**

**The 5 Must - Have Qualities Of The Modern Employee**

**Research Seminar at The Madras Sugars**





THE SUGAR TECHNOLOGIST'S  
ASSOCIATION OF INDIA

**72<sup>nd</sup> ANNUAL  
CONVENTION  
& SUGAR  
EXPO - 2012**

on 26<sup>th</sup> - 28<sup>th</sup> September

at

Indira Gandhi Pratishthan,  
Lucknow.



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**A Quality Certified & Leading  
Biotechnology Company**



The Catalysts Group, an integrated biotechnology organization delivers natural products & innovative biotech solutions encompassing enzymes, bio-products & additives for a wide range of industrial applications.

We are engaged in manufacturing and marketing of enzyme for the Industries - Grain Processing, Molasses Fermentation, Sugar Processing, Brewing, Carbohydrate & Malt Processing.

We have a highly qualified & experienced team looking after the needs of our current client base across industries who continue to create new & sustainable bio-based solutions.

We provide high degree of customer process oriented services in an efficient & professional manner.

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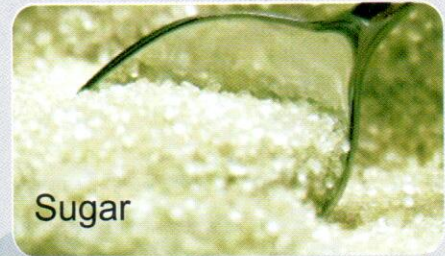
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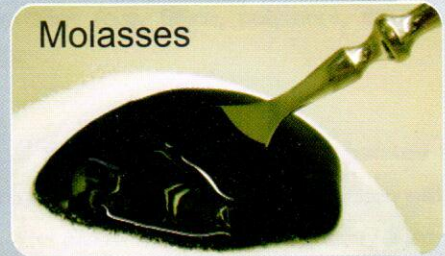
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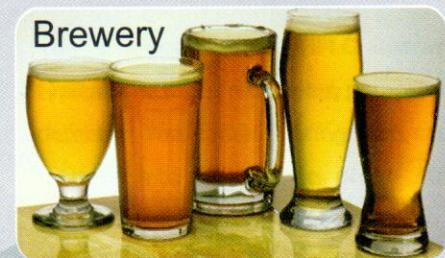
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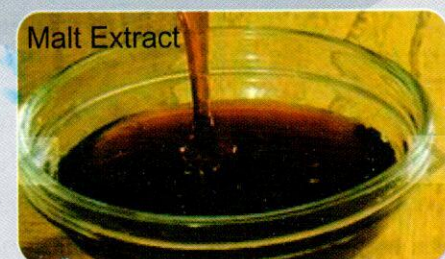
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## MESSAGE FROM THE DIRECTORS

**Dear Readers,**

**Greetings to all !**

I am pleased to introduce you to the first monthly edition of our magazine "Catalysts Connect". I am sure you will find it informative and refreshing.

The overwhelming response and recognition from our clients, vendors & employees encouraged us to initiate the quarterly magazine into monthly. Your constant views, feedback, articles etc not only showed your interest level but also shares the information with a variety of peoples.

The Catalysts Group - An Acronym for Enzyme Solutions is based on strong core values namely: Service, relationship, and teamwork. We believe in working together, not just amongst ourselves, but also with our customers to foster a long-term relationship while delivering quality services & Products that meet their expectations. We not only want to satisfy our customers but to earn their confidence and trust.

In the next few coming months we are expecting to achieve our expected targets and increase growth plan due to best quality and reliability of our product & services in the fields of Sugar & Grain Processing, Molasses Fermentation, Brewing, Carbohydrate & Malt Processing.

On behalf of The Catalysts Group, I would like to convey my best wishes to the Molasses & Sugar industry as the season is going to start & again wanted to thank all our customers for their trust and support.

With due regards

**Munish Madaan**  
Managing Director

**Dear All,**

First of all I would like to wish you a Happy Independence Day. May our country progress in every sphere so that the whole world is proud of us.

Wanted to extend my thanks to all the clients, vendors, employees etc. for appreciating our magazine - Catalysts Connect. we have received lots of positive feedback and your eagerly awaiting for the next volume inspires us to start it on monthly basis.

From the month of August you all will receive Catalysts Connect every month. Addition in articles, informative features will keep you turning pages.

We would appreciate if you share your own experiences in the form of short summary or articles with us to have a healthy, information sharing platform through the monthly magazine. You can also place your advertisement in our monthly magazine - FREE OF COST, for this you can contact our corporate communication department or our sales team.

The Catalysts Group is always customer oriented organization, right from the beginning to a decade. Our prime focus is to give the complete satisfaction to the clients by providing customized products & services to fulfil their needs by solving & giving solutions to their problems, queries. We do believe in long term relationships with every client, vendor or employee as they are our real wealth of time.

We look forward to nurturing and establishing new relationships to meet our goals.

**With Warm Regards,**

**Aditya Malhotra**  
Director



## Maize prices set to rally up on higher demand from growing poultry sector

Maize prices are expected to rally up in coming days due to short supply and good demand from the poultry sector, reports a study by the Tamil Nadu Agricultural University (TNAU).

India produced around 22.5 million tonne (MT) of maize from an area of 8.67 million hectares in 2012-13, and is one of the largest exporters of the commodity in Asia. Maize is cultivated twice in India during the summer and winter season, with a major contribution coming from the summer season crop.

Major factors affecting the maize market would be seasonal production, higher demand from the growing poultry sector and exports, says the study. According to the TNAU study, supplies from the winter sown or rabi crop is lower at 5.5 MT. "Only in Bihar the rabi production is 20% higher than the previous year's production, whereas in other states it was less than the previous year," TNAU sources said. The Indian poultry industry, which is seen to be growing rapidly, consumes



INDIA'S MAIZE EXPORT HAVE MORE THAN DOUBLED IN THE PAST FEW YEARS, FROM 1.9 LAKH TONNE IN FY 10 TO 4.8 LAKH TONNE IN FY 12

increasing volumes of maize, wheat and soyameal as feed. The poultry industry is estimated at \$3.6 billion and is seen growing at a CAGR of 10%, with production of meat estimated around 3 MT.

The study points out that exports could be limited in the coming days due to record production in the US. India's maize exports

have more than doubled in the past few years from 1.9 lakh tonne in 2009-10 to 4.8 lakh tonne in 2011-12. The estimated maize export in 2013 is around 3 MT-3.5 MT. Maize exports in the current season are expected to be

lower by about a third over last year's record high of 4.8 MT on a lower crop and rising domestic demand. The Export Market Intelligence Cell functioning in TNAU analysed the seventeen years' prices that prevailed in Udumalpet market and has forecast that maize prices will cross R15,00 per quintal after May, and farmers are recommended to store maize and sell in June- July to get higher prices.

Source: Yahoo News

## Enzyme linked to heart disease could help treat asthma

An enzyme, which is known for its role in heart disease, could be a promising target to treat asthma, a new study suggests.

Researchers from the University of Iowa have found that the enzyme, called CaMKII, is linked to the harmful effects of oxidation in the respiratory tract, triggering asthmatic symptoms. The finding could lead to the development of a drug that would target the CaMKII enzyme, the researchers said.

Asthma affects billions of people worldwide, and current treatments don't work well, Mark Anderson, professor and chair in internal medicine at the UI and a co-corresponding author on the paper, said.

"It's a kind of an epidemic without a clear, therapeutic option," Anderson said. "The take-home message is that inhibiting CaMKII appears to be an effective anti-oxidant strategy for treating allergic asthma," he said.

The study is published in the journal Science Translational Medicine. (ANI) Anderson said.

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## Opportunities in Enzymes through Modern Biotechnology

### MICROORGANISMS – PROTEIN FACTORIES

During the twentieth century human kind has harnessed microorganisms to produce useful biochemicals including antibiotics, vitamins, amino acids, flavors and colors, as well as specific proteins. Some of these proteins have important medical uses such as insulin, human growth hormone, and blood factors like erythropoietin. Microorganisms have also been domesticated to produce another class of important proteins called enzymes.

Until recently, availability of enzymes, also known as nature's catalysts, have been limited to the quantities that could be produced in the host organism in which they were naturally derived. But today, modern biotechnology techniques developed since 1973, are allowing the development of safe and efficient microbial hosts in which large quantities of many commercially useful enzymes can be produced.

In fact, manufacturers have developed a series of proven, safe, microbial hosts for use in the production of several enzymes. Further, enzymes that have not been readily available in adequate quantity can now be produced using this technology. This in turn has opened up important applications beneficial to humankind. Additionally, modern techniques are leading to the development of tailored enzymes with optimized functional properties specific for their intended use. An example of this is the modification in specific proteases so that they work more efficiently in the alkaline environment of detergent formulations. As a result, less of the modified protease is needed to deliver equivalent cleaning power, while using fewer resources during the



**Manav Prakash Sharma**  
(Sr. Executive - QA/QC)

manufacturing process.

### WHAT IS MODERN BIOTECHNOLOGY?

The microbial cell, i.e., a bacterium, yeast, or mold, is the key instrument in many enzyme production processes. To optimize the microbial strains for production of the desired enzyme, the strain's genetic properties are often modified either through natural evolution or through classical breeding and selection techniques; these classical techniques have been used for

decades to improve microbial production strains.

Since 1973, more precise methods of genetic modification have been developed. The methods, sometimes termed genetic engineering, are based on processes occurring in nature - the transfer of genes between different cells. When used by scientists to transfer genetic material between cells from the same or different species, microorganisms such

as yeasts, molds, and bacteria with new or improved properties for industrial applications can be developed.

In nature, genetic modification of has been occurring since life began. Such genetic changes are generally random, with a natural selection process favoring the change(s) best adapted for survival. Using this process, animal, plant, and microbial breeders have likewise selected individuals within a species with desired characteristics for further propagation. Since such changes are generally random and frequently affect more than one trait, isolation and breeding for a single trait is often not possible. Using the tools of modern biotechnology, modifications can now be made more precisely, and with much



less chance of developing unwanted secondary changes that could potentially have undesired effects.

In nature, and in our production systems, microbes do not express only single enzymes. Rather, each microbial cell has the genetic machinery to produce many different enzymes. Frequently, only one of these enzyme activities is needed for a specific application and the "side activities" are removed or substantially reduced during the recovery process. Often, these side activities are unwanted, and may even be detrimental to the final use.

For example, in the past enzyme preparations used for bread making contained side activities that could negatively affect the dough if the enzyme preparation was not used precisely. By using the techniques of modern biotechnology, it is relatively easy to remove such unwanted side activities. Additionally, scientists are now able to discover and/or evolve enzymes that will catalyze chiral pure compounds for applications including pharmaceutical manufacturing, both greatly reducing unwanted byproduct production as well as making the target product potentially safer and more effective



for the intended use, and to determine whether it is an irritant and how likely it is to cause allergies when inhaled.

Guidelines for safety assessments of food and food ingredients developed through biotechnology have been prepared by several internationally recognized scientists and expert groups (Organization for Economic Cooperation and Development, Health Canada Food and Agriculture Organization / World Health Organization, International Life Sciences Institute - Europe, Novel Food Task Force), and specific recommendations for microbially derived food ingredients (IFBC, 1990) and enzyme preparations (Pariza and Foster,

Pariza and Johnson, EU SCF, US FDA) have also been published.

Using tools of modern biotechnology, the enzyme industry is continuing to dramatically improve a wide range of production processes with both primary and

secondary benefits.

Reduced consumption of energy, water, and raw material, while generating less waste and fewer environmental pollutants are among the target benefits of this technology.

Additionally, many unavoidable waste materials can be effectively modified, either for recycling as a useful raw material, or as a valuable secondary product. Since the 1980s, new enzymes have been developed through modern biotechnology for widespread use in many products. Two examples involve laundry detergents and paper production. The use of these new enzymes in detergents enables consumers to remove difficult stains at lower wash temperatures without the use of harsh chemical additives, thus reducing the burden on wastewater systems. Enzymes are simple proteins and thus are fully biodegradable and environmentally sound.

The use of new, more robust enzymes in paper processing can significantly reduce the need for chlorine and chlorine dioxide

## WHY IS MODERN BIOTECHNOLOGY IMPORTANT?

By using the tools of modern biotechnology, the enzyme industry has developed safe host organism systems for the production of many enzymes that could not otherwise be produced. These safe host systems have been used since the early 1980's for the production of different enzymes in contained manufacturing facilities.

The host organisms and their enzyme products have been tested to demonstrate that they are safe for their intended use; this includes, but isn't restricted to, testing of the organism to demonstrate that it is not pathogenic and does not produce toxins, and testing of the product to demonstrate that it is safe



bleach, which ultimately feeds into wastewater streams as chlorinated organic compounds. Without the use of the modern tools of biotechnology, not enough of these enzymes, as well as enzymes in other. Industrial applications, can be produced to meet industry demand. Further, these modern tools give us the opportunity to produce enzymes that can replace other processes and/or chemicals that are less environmentally sound and thereby continue to move towards sustainability.

### WHAT DOES THE FUTURE HOLD?

There are many enzymes existing in nature with significant potential value to society. However, these enzymes have not been commercially developed because they exist in organisms that cannot easily be used for production or where other components of the organism are unacceptable for the intended use.

Isolating and then transferring the genes that code for these enzymes into an organism that can easily be grown and has been demonstrated to be a safe host can eliminate the unacceptable characteristics. The result will be valuable new enzymes, demonstrated to be safe, that are commercially available at affordable prices.

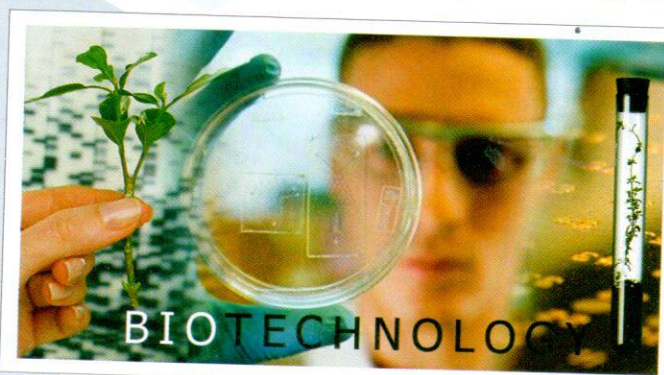
For example, with the modern tools of biotechnology, enzymes from nature can be accessed which are sufficiently robust to be useful at extremes of pH and temperature, and thus hold great promise for replacing certain chemical Processes with much cleaner protein-catalyzed processes. Just as exciting, these new enzymes can make the dream of converting waste biomass to useful energy an economic reality.

Overall, the use of modern biotechnology for enzyme production can have a major impact on improving the cost and quality of products we need and want while at the same time working towards sustainability. The vision is to make our

Currently land filled waste into productive raw materials, to utilize microbes that can sustain production for long periods Because they can reproduce themselves, and to reduce the need for fossil fuels and the waste/pollution they can create. Enzymes will continue to play a very important role in facilitating more environmentally sound production an making production systems more sustainable.

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### Q. Why are GM microorganisms used to produce enzymes?

Ans. Modern biotechnology has proven to be a safe and valuable tool when applied to microorganisms, including microorganisms used to produce enzymes. Modern biotechnology is indispensable in improving enzyme products and assuring adequate supplies of high quality enzyme preparations at reasonable cost.



Modern biotechnology has improved enzyme production and enzyme quality in several ways:

- 1) Increased efficiency of enzyme production resulting in higher yields;
- 2) Increased enzyme purity through reduction or elimination of side activities;
- 3) Enhancing the function of specific enzyme proteins, e.g., by increasing the temperature range over which an enzyme is active. The results are better products, produced more efficiently, often at lower cost and with less environmental impact.

**Q. Why do we need this technology?**

**Ans.** The world's population continues to grow. As it does, it becomes more concentrated in urban areas, and increasingly dependent upon modern conveniences. All this contributes to increase demand for food, energy, and all other limited natural resources.

At the same time this growth adds significant stress on the environment. Modern biotechnology is one tool that can help meet the challenge this growth poses.

Thus far modern biotechnology has contributed to:

- (1) Increased food production efficiency,
- (2) Reduced pesticide use,
- (3) Increased energy efficiency, reduced raw material consumption and water demand in manufacturing processes,
- (4) Reduced industrial waste and
- (5) Aided in pollution remediation.

Enzymes produced using modern biotechnology contribute to this effort by assuring the availability of safe, pure enzymes

that replace harsh chemical processes (reducing energy consumption and environmental burden).

**Q. Are enzyme products produced by biotechnology safe for human consumption?**

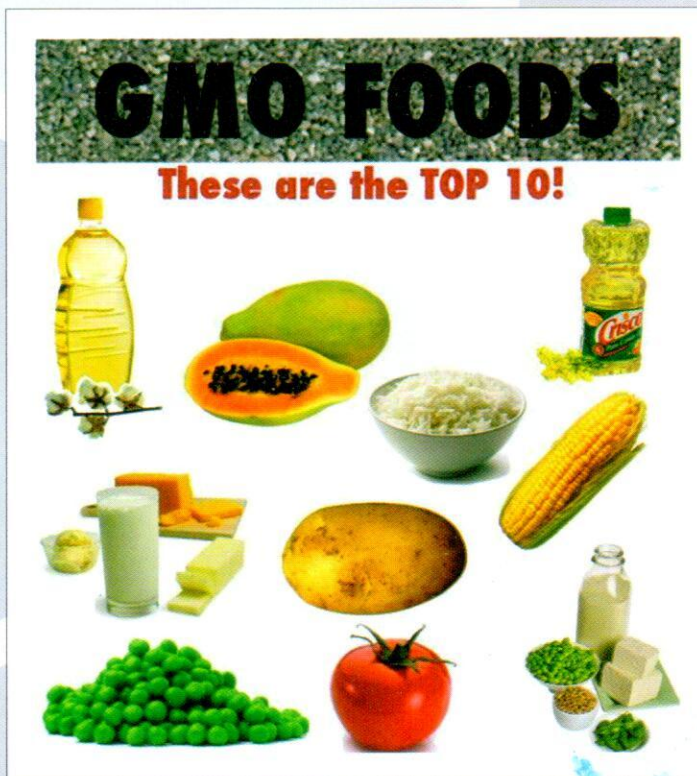
**Ans.** It is important that consumers feel confident about the food they buy. Modern biotechnology is therefore subject to strict controls. These are designed to ensure that new genetically modified products are safe to eat and that they pose no new risks to the environment.

Food enzymes produced by modern biotechnology or traditional techniques undergo rigorous safety evaluation, and must meet strict safety standards. Modern biotechnology allows highly controlled modification of an organism's genetic makeup to target specific characteristics based on the function of the specific genes characteristics based on the function of the specific genes involved.

Enzymes used by the food industry come from living organisms but are not themselves living. These enzymes are protein molecules, not unlike the thousands of

enzymes found in the human body.

Food grade enzymes are extracted from safe, well characterized microorganisms. Food grade enzymes are produced and formulated with food grade raw materials using current Good Manufacturing Practices (GMP) defined by the US Food and Drug Administration.





## Use of Microbes in Energy Conversion

**M**icroorganisms are used to generate a number of fuels, including ethanol, hydrogen, methane, and butanol, which can be burned to produce energy among which ethanol production is the most mature technology. Microbial energy conversion has several advantages over petroleum and natural gas-based energy.

Primary among these benefits is the fact that the processes involved in microbial energy transformations are more environmentally friendly than fossil fuel technologies. For example, microbial energy modes do not involve the use or production of hazardous materials. Biomass conversion is a "carbon-neutral" process, meaning potentially it neither increases nor decreases the total amount of carbon dioxide (an important greenhouse gas) in the atmosphere.

Microorganisms are also capable of selecting their substrate from among a complex mixture of chemicals, an ability that minimizes the need to purify or refine the raw materials to separate substrates from non-substrates.

Microorganisms can benefit the cultivation of biomass for energy conversion in a variety of ways;

They can help to manage plant pests and diseases, provide nutrients to plants and maintain balances of carbon, nitrogen, phosphorus, and sulphur in the soil. The bacilli target triangle. Current agricultural usage of *Bacillus*-based products as microbial pesticides, fungicides, and stimulators of plant growth. Although some *Bacillus* species also display bactericidal and nematicidal abilities. Bacillus lipopeptides, key molecules for biological control of plant diseases.

Fertilizer production and application constitutes 29% of all

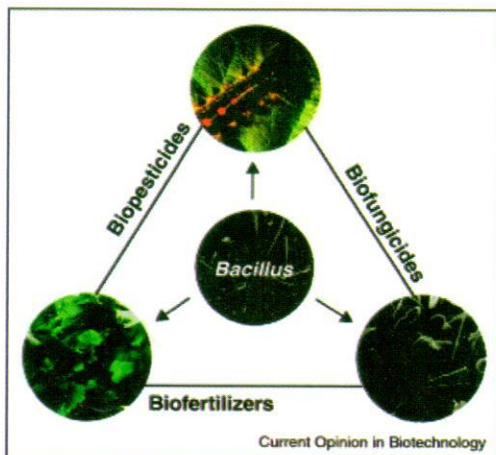


**Asha Makhija**  
(Sr. Executive - R & D)

agricultural energy use, hence, fertilizing bioenergy crops could potentially be energetically costly. Plant species that associate with nitrogen-fixing bacteria have lower fertilizer needs, so employing them as bioenergy crops could cut down on the energy expended on their growth. Microbes associated with plant roots are also capable of stimulating uptake of essential nutrients that are in low abundance in soils.

Use of Microbes to Minimize The Environmental Impact of Currently Used Sources. The residue from ethanol fermentation, which might otherwise go to waste, could be used as a substrate for many different microbial processes, including methane production or by converting the waste products of production into more useful or manageable commodities.

Lignin is a major component of waste from the production of biofuels, and new genes and microorganisms that can make use of this material to generate fuels and other useful products are needed.



Algae play a remarkable role in the treatment of municipal waste water at small and medium scale. The algal biomass produced from the treatment can be harvested and then could be converted through various methods to bio-fuels for example anaerobic digestion to biogas.



## HPLC: HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

**N**ow a days every biotechnology company is focusing over the customer solution & satisfaction. To achieve accurate results in different industries like sugar, molasses, ethanol, grain, brewery & antibiotics etc. HPLC (High Performance Liquid Chromatography) is a useful equipment & act as a boon for biotechnology industry to serve their customers efficiently with effective results.

Catalysts group is a leading biotechnology company equipped with HPLC in their instrument lab. Our results are much more accurate with it. HPLC is totally technical equipment & no common person is familiar with its application & process. So below mentioned summary is helpful to know about complete scenario of HPLC.

### WHAT IS HPLC & WHAT IS THE FUNCTION OF IT.

High performance liquid chromatography (formerly referred to as high-pressure liquid chromatography), HPLC, is a chromatographic technique used to separate the components in a mixture, to identify and quantify each component. HPLC is considered an instrumental technique of analytical chemistry (as opposed to a gravimetric).

In general, the method involves a liquid sample being passed over a solid adsorbent material packed into a column using a flow of liquid solvent. Each analyte in the sample interacts slightly differently with the adsorbent material, thus retarding the flow of the analytes. If the interaction is weak, the analytes flow off the column in a short amount of time, and if the interaction is strong, then the elution time is long.

HPLC relies on pumps to pass a pressurized liquid and a sample



**Meenakshi Sharma**  
(Trainee - R & D)

mixture through a column filled with adsorbent, leading to the separation of the sample components. The active component of the column, the adsorbent, is typically a granular material made of solid particles (e.g. Silica, polymers, etc.), 2–50 micrometers in size.

The components of the sample mixture are separated from each other due to their different degrees of interaction with the sorbent particles. The pressurized liquid is typically a mixture



of solvents (e.g. water, acetonitrile and/or methanol) and is referred to as a "mobile phase". Its composition and temperature plays a major role in the separation process by influencing the interactions taking place between sample components and sorbent.

The schematic of an HPLC instrument typically includes a sampler, pumps, and a detector. The sampler brings the sample mixture into the mobile phase stream which carries it into the column. The pumps deliver the desired flow and composition of the mobile phase through

the column. The detector generates a signal proportional to the amount of sample component emerging from the column, hence allowing for quantitative analysis of the sample components. A digital microprocessor and user software control the HPLC instrument and provide data analysis.

### HISTORY OF CHROMATOGRAPHY

**Brief History and Definition** Liquid chromatography was defined in the early 1900s by the work of the Russian botanist, Mikhail S. Tswett. His pioneering studies focused on separating compounds [leaf pigments], extracted from plants using a



solvent, and in a column packed with particles.

Tswett filled an open glass column with particles. Two specific materials that he found useful were powdered chalk [calcium carbonate] and alumina. He poured his sample [solvent extract of homogenized plant leaves] into the column and allowed it to pass into the particle bed.

This was followed by pure solvent. As the sample passed down through the column by gravity, different colored bands could be seen separating because some components were moving faster than others. He related these separated, different-colored Bands to the different compounds that were originally contained in the sample.

He had created an analytical separation of these compounds based on the differing strength of each compound's chemical attraction to the particles. The compounds that were more strongly attracted to the particles slowed down, while other compounds more strongly attracted to the solvent moved faster.

**This process can be described as follows:**

The compounds contained in the sample distribute, or partition differently between the moving solvent, called the mobile phase, and the particles, called the stationary phase. This causes each compound to move at a different speed, thus creating a separation of the compounds.

Tswett coined the name chromatography [from the Greek words chroma, meaning color, and graph, meaning writing—literally, color writing] to describe his colorful experiment. [Curiously, the Russian name Tswett means color.] Today, liquid chromatography, in its various forms, has become one of the most powerful tools in analytical chemistry.

#### **ADVANTAGE OF HPLC OVER OTHER ANALYTICAL**

#### **TECHNIQUES**

- Simplicity & high specificity
- Efficient & highly selective
- High sensitivity & speed
- Small quantity of sample is required
- Non destructive of sample
- Provide accurate, precise & reproducible results

#### **APPLICATIONS OF HPLC**

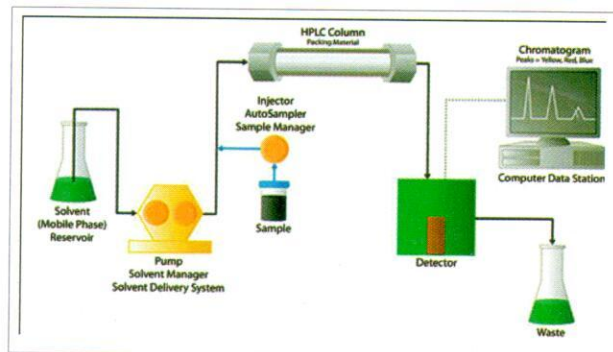
This technique is used for chemistry and biochemistry research analyzing complex mixtures, purifying chemical compounds, developing processes for synthesizing chemical compounds, isolating natural products, or predicting physical properties.

It is also used in quality control to ensure the purity of raw materials, to control and improve process yields, to quantify assays of final products, or to evaluate product stability and monitor degradation.

**Pharmaceuticals:-** Antibiotics, Sedatives, Steroids & Analgesics

**Biochemical:-** Amino Acids, Protein, Carbohydrates & Lipids

**Food products:-** Artificial Sweeteners, Antioxidants, Additives Other than these industries HPLC can be used in forensic chemistry, industrial chemicals, pollutant, clinical medicines.





### Research Seminar at THE MADRAS SUGARS LIMITED

The research seminar was held on 29th July at The Madras Sugars Limited (Bannari Amman Sugars) by the Deputy General Manager - Mr. Gautam Kapoor, Manger - Mr. C. Mohana Krishnan & Mr. K. Anna Durai of CMS Engg Product - our south region distributor .

The Madras Sugars is a new addition into the Bannari Group, situated at Thirukkovillur - Villupuram District, Tamil Nadu. It is a new Integrated Sugar Complex comprising of 3600 TCD Sugar and 25MW Co-generation Plants. The Unit has crushed 10.43 Lakhs Tonnes of Cane during the Financial Year 2012-13.

The emphasis of the seminar was to introduce our Brand, customized products/verticals, customer oriented service facilities etc. to the Vice President - Mr. A. R. Palanisammy, technical staff & purchase department officials.

The seminar started with a welcome note addresseds by Mr. C. Mohana & briefing about THE CATALYSTS GROUP. He also



**Gautam Kapoor**  
(DGM - Business Development)

discussed its functions, history, Research & Development Labs , Manufacturing units, National & International certifications & client list etc to have a complete overview about the brand. The podium was shared by Mr. Gautam also, who explained the sugar process, the application of enzymes in sugar industries & its benefits etc to guests. Product based queries & questions were raised by the technical staff & V.P. of The Madras Sugars but our applications trial reports not only satisfied all their curiosity & doubts successfully but also generated positive interest in our products & services.

Mr. A. P. Palanisammy invited us to do a performance based trial at their factory to study their cane juice & do a research on dextran & starch level with an estimated cost savings.

Overall it was a good beginning for our brand in the new season at south India sugar industries.

### The 5 Basic Fundamentals of SALES



**Ashwini agarwal**  
(DGM - Business Development)

There are some sound things that are very simple, that will make a difference in your sales results.

**1. It's Always about the Customer** - It is important to remember that whatever we are selling the only thing that matters is the customer. However good may be your product or service, don't forget about what the customer's needs are. Be enthusiastic about what you do, but remember it's about providing solution to customer's problem.

**2. Solve a Problem** - What people want is a solution to their problem, not the 'thing' you are selling. For example people buy a drill not because they want a drill , but because they want the hole the drill will make.

**3. Where is Your Customer** - Go where they are already hanging out. Prospecting is one of the most underrated tasks in

sales. Make it easier for yourself and go where your customer already is. Hang out in their circles, both offline and online. This is where knowing how the different social media platforms work and who they attract can be hugely valuable to you.

**4. Assume Nothing** - Making assumptions prevents you asking sometimes, some obvious questions. Don't make any assumptions, however well you know your market, and you will get more sales.

**5. Ask for the Business** - The biggest single issue why you won't get the business, you don't ask for it. At the end of the presentation or meeting, just ask. Depending on the type of sale and who you are talking to it may vary, but some examples could be..."When would you like to confirm the order?"....."Would you like to take option A or option B?"Who shall I make the order out to? This is also called CLOSING.





## A Medi Claim Policy - Myth



**Sanjay Poddar**

(Manager - Accounts & Finance)

Interactions with colleagues, like any other interaction, have their ups and downs, some are very interesting, some are a learning experience, some are hair-raising, and then there are those that really open your eyes. Open your eyes to the deeply ingrained Health Insurance myths: Deep myths that became truth for many, with regards to features, terms and of course most of them regarding Claims! Here's an attempt to break these myths, and open your eyes.

In case you know of other myths, or have any feedback for us, please do use the comment section.

We would love to interact with you.

### **Myth # 1: 24 hours Hospitalization is necessary for making a Claim.**

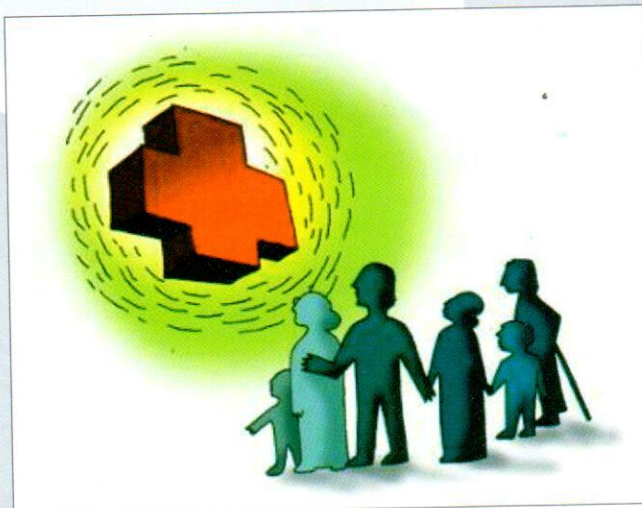
This health insurance myth always reminds me of an incident. A little over a year ago, we were having our weekly meetings, when a doctor friend who owns a hospital in Mumbai frantically called us.

A woman was making a ruckus in this friend's hospital, insisting doctors continue hospitalization of her son and discharge only after 24 hours, as she "advisor" had informed her that they would get the claim only if the hospitalization is over 24 hours. This incident brought to light the magnitude and the level of fallacies customers have about Health Insurance.

Advisors, Representatives, Telemarketers, and even hospitals and customers have frazzled their throats out of the 24 hour clause, while explaining or even using the product. Though, the policy does mention this as one of the clauses, the 24 number in the real world of claims holds lesser importance. The clause, in spirit, required the hospitalization to be "necessary" more than it to exceed "24 hours". This was purely from the general understanding that most hospitalizations less than 24 hours are treated under "Out-patient" (treatment at the Doctor's

Dispensary) not covered under a Standard Medclaim.

Hospitalizations (like Cataract), though required 2-3 days earlier, which are now possible due to advancement in medical science in less than 24 hours are covered, while, hospitalization by an insured for more than 24 hours for getting his routine diagnostic tests done, while no active treatments are being carried out, would not be payable under Medclaim.



**Conclusion:** The thumb rule of a whether a claim is payable is not 24 hrs hospitalization but whether the hospitalization was medically "necessary" or not?

### **Myth #2: You must compare Pre-existing waiting period, always.**

This is a clause that most people looking for a Medclaim are confused about. I speak to

many customers whose requirement with medclaim is that they do not want a waiting period for pre-existing ailments. This, in spite of their entire family being completely fit, without any ailment, whatsoever. Somehow, the clause again being so popular has brought in its own confusions for customers. In reality, the 4 year Pre-existing exclusion on ailments is applicable to ailments existing at the time of applying for the policy, and not any other ailments. If you do not have any ailments or conditions, you have no pre-existing waiting period.

**Conclusion:** When applying for a Medclaim, if you are completely healthy, the Pre-existing exclusion clause is not applicable to you

### **Myth #3: Cashless is an on-call Emergency Service.**



Ever since it was introduced as a value addition to Medclaim, Cashless has remained a buzz word. To a level, that for a lot of people, Cashless became a prefix, or, even synonymous to Medclaim. The reason for the cashless concept getting popular was obvious; it was a great value add, which helped customers tide away the burden of large payments on their bank account, documentation and of course, the stress of waiting for the claim cheque.

Yes, Cashless can do all this, but expecting it to work when there are emergency funds required for Hospitalization is asking for too much. You should understand the Cashless mechanism as a concept to know why it cannot be depended on at the time of emergencies. Cashless is an arrangement between the Health Insurance Company/TPA and the Hospital where, the Hospital agrees, under contract, to grant credit facility to the Insurance Company/TPA against authorized claims. Such an arrangement is only for authorized Claims, and not for all claims.

TPAs/Insurance Companies, hence, need to assess every claim received, against the policy terms and conditions, to authorize payment. Such an authorization could require additional information as well as documents and hence can take anywhere for 4 hours to 2 days of time. In their role, the TPA or the Claims Team at the Insurance Company would have to do its job of evaluation of the claim, irrespective of how urgent the medical admission or treatment is.

Cashless will help you save the burden of processing a reimbursement claim, but it cannot provide you the convenience of on-call emergency funds. Moreover, one should also note, unlike the hospital cashier, Insurance Desks in hospitals (which coordinate for cashless claims) have fixed work-hours from 10.00 AM to 7.00 PM. Cashless process and approvals after 07.00 PM are processed by the Hospital the next day. Hence, though the TPA provides 24/7 service, the cashless process may not move, once the Hospital stops working on it.

**Conclusion:** Expecting Cashless to work as an on-call

Emergency Service is foolish. You should plan your emergency medical fund, as well as ensure you have good unutilized credit card limits, always.

#### **Myth #4: You must compare no. of Day Care Procedures covered**

Most Insurance Companies (specially the Private ones) flaunt a large list of more than 100 Day Care Procedures being covered under their policy. In fact, it is a highlight of their product pitch. The truth is comparison of such numbers can be very misleading. One company could list every procedure, while another could list macro-level treatments, including the listed procedures of the former. For instance, a person who compares Apollo Munich's Easy Health Insurance which covers 140 Day Care procedures, with an Oriental Happy Family Floater which covers only 26 procedures would feel that Apollo has a wider cover on Day Care Procedures.



Believe me, but it could actually be the reverse. How? Oriental promises to cover Eye Surgery (a broader definition) in its daycare list, compared to say an Apollo which lists 15 specific eye treatments, which results in a larger number. Now, if the treatment being carried out is an eye surgery, which is day care but not a part of the 15 specific treatment, Apollo or many

other Private players may not pay, whereas, in the case of Oriental it would get paid in the broad definition of eye surgery. By providing a specific list of surgeries instead of a macro area of treatment, the coverage under Apollo may actually be more restrictive in the long run than an Oriental's wide area of treatment wise list.

**Conclusion:** A short list of procedures could be wider than a long one. Do not compare the no. of Day Care Procedures.

#### **Myth #5: You should check the list of Network Hospitals.**

Many customers, we have interacted with demand Hospital network lists. They select the medclaim product depending on whether their preferred hospitals are part of that Insurance Company's list. What they fail to realize is that a Hospital Network is ever changing. Insurance Companies regularly



### **Myth #6: Capping on Room Rent is bad:**

Public Sector (PSU) Mediciam products and their current terms and conditions are evolved from experiencing and analyzing millions of claims spread over more than 20-25 years. Hospital Rooms are classified into various categories like General, Shared, Private and Deluxe Rooms.

Earlier without the room rent limits, for the same treatment, a person with a sum insured of 1 Lakh paying a measly premium of say Rs. 2000, would have access to the same category of room, as a person who pays 5 times the premium, and takes a Rs. 5 Lakhs cover for himself. The 1% and 2% Room Rent Limits in Mediciam brought a clear sync between the kind of premium one pays and the eligibility of the room. With such cappings, an individual who pays a high premium gets a better room, than one who pays a smaller premium, for the same treatment, which is fair.

It's like any other product with categories, like Indian Railways, providing you better facilities/services, as you move from 2nd Class to 3rd AC to 2nd AC and so on. In my opinion, sooner or later, Insurance Companies would either have to hike premium for a lower sum insured or bring in a capping of some kind. For instance, the newest health insurance company – Max Bupa, has a restriction on the type of room according to the sum insured selected, instead of a "no capping on room rent" feature.

**Conclusion:** Cappings are good for Health Insurance as a community fund. Cappings could actually be helpful to customers in the long run.

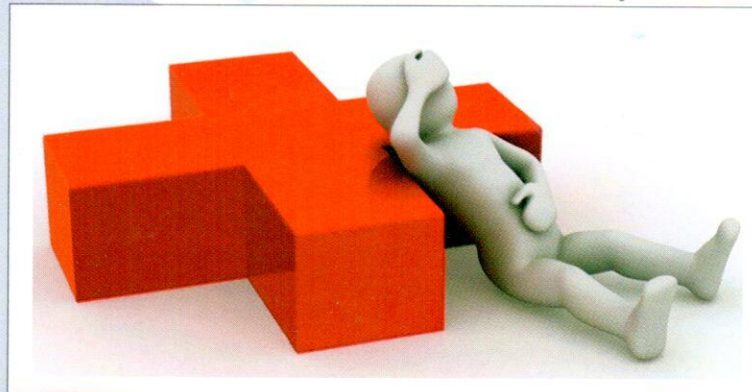
### **Myth #7: Health Insurance Plans sold by Life Insurers are the same:**

The highly advertised Health Plans from LIC are Defined Benefit Health Insurance Plans, sold as "hassle free" alternatives with guaranteed payments. These plans should not be considered as a substitute to Standard Health Insurance plans sold by General Insurance Companies. These plans provide fixed

benefits against no. of days of hospitalization and/or surgeries. These plan do not take care of healthcare inflation.

For instance, with 18-25% healthcare inflation, a fixed benefit for Angioplasty at say, Rs. 1,50,000/- would miserably fall short in 10 years. Defined Benefit Health insurance products are actually supplementary plans which provide a cover over allied costs of hospitalization including loss of earnings, if any, but such products surely cannot be a substitute to the good of traditional mediciam. Read more about the difference here.

**Conclusion:** Beware of what you buy. A Traditional Mediciam should be the first product you buy to cover the financial risk of healthcare expenses of the future. Defined Benefit Products are supplementary and not substitute to Traditional Health Insurance.



### **Myth #8: Health Insurance is a Tax Saving Tool:**

A large Healthcare expenditure can severely affect your financial planning for the future. The goal when you buy Health Insurance should be to financially insure your family against such large scale

healthcare expenditure. Buying a health insurance product blindly, for the 80D tax benefits, is a wide-spread fallacy, which has left a large no. of people underinsured or insured with products which are not suitable. The worst part is most of them are unaware of this.

**Conclusion:** Health Insurance at its core is not a Tax Saving Instrument. It could save you much more than your tax, if you invest wisely.

### **Myth #9: There will be no changes in the terms of the Mediciam I bought:**

Expect changes in your product, terms. Don't be surprised. The Health Insurance companies and other stakeholders in India are going through a mindset change. Losses in Health



Insurance are no longer acceptable by key stakeholders at Insurance Companies. A lot of streamlining and normalizing in premium, terms, benefits and procedures, which has already begun, is expected in the next 5 years. Group products would turn expensive, and restrictive.

Parents would be out of most Sponsored Employee Medclaim Covers. Large and small tweaks are expected in Retail/Individual products and processes, especially from new and private players who are still experimenting and understanding how to make a long term sustainable (read profitable) product for the Indian market.

For instance, last year, PSU Insurance companies tightened the procedure of intimation and submission of reimbursement claims. Customers who were not aware of such a change faced harsh action of denial of claims, and lost good money.

**Conclusion:** Ensure you are updated with changes in the terms and procedures of your Medclaim Product. Ensure you have recruited a good advisor who keeps you posted on such changes.

**Myth #10: I can destroy Medclaim Policies once they have expired.**

Don't know how many of you have observed at the time of renewals, but PSU companies and their divisions are infamous in the industry for changing their TPAs year over year. With TPAs being the custodian of claims, change in TPAs could result in scattered claims information amongst various TPAs across years of continuous renewals. Hence, when there is a claim, the TPA in all probability won't have information regarding how long you are continuously covered, an essential data point to approve claims, especially, those treatments which had a waiting period at entry into the policy.

TPAs for evaluation of continuity may demand policy copies of past 3 to 4 years. Hence, destroying policy copies records have cost many customers lot of stress in proving continuity of cover. Yes, we know that it is ridiculous for the Insurance Company or its representative to ask for their own record from the customers, but then this is how it is. A good health insurance

advisor knowingly would keep a repository of all policy copies, to ensure such queries do not create roadblocks in a smooth claim settlement.

**Conclusion:** In addition to the current one, keep copies of at least 3 previous year policy copies. Ensure your advisor also records them.

**Myth #11: My Friend, My Health Insurance Advisor**

No offence to agents, but in our interaction with Customers, we have noticed time and again, that most customers, who were found with a wrong health insurance product, bought these either from a friend, a friend's relative, or a relative, or a relative's friend. Most of these customers did not spend enough time in selecting an advisor, and relied on pure reference. Most of these agents selected were Life Insurance agents, who did not have a detailed understanding of medclaim products; neither were they providing any real expert assistance (beyond picking of forms, and providing the TPA's no.) at the time of claims.

The advisor selected should have the capability and the intention to provide unbiased advice, the advisor should forever own the product they sold you, and provide services across the Health Insurance service cycle, including Purchase Assistance, Records management, Claims Assistance and Renewals. A good advisor would be able to hand hold you through the dynamic transformation that the Health Insurance industry in India, is witnessing and will continue to witness for the next 2-3 years.

**Conclusion:** Select an advisor on the merits and the services he demonstrated, and just not merely on reference.



## Secret to become an Early Riser



**Sugandha Sharma**  
Jr. Manager (HR)

**A**t Last... My father told me the secret to become an early riser  
It was always a story of me with my favorite sleep.....

I always felt some kind of jealousy with some of my best childhood buddies..... Oops!! Don't take me wrong. It was because, I was the one who always used to make it late in gym despite settings three to five alarms(Yup.. its true) and get scolded by the instructor. "Why don't you make it on time?" he always used to ask.

Those were the days.....,Now i am a grown up, but just few months back the habit was still the same. My sleep was my first love, My first crush. I loved to sleep, like a polar bear in hibernation. But finally a day came in my life, when things changed, and i had to choose one, either the career or my first crush( Hmm....I am a disloyal boyfriend ) i left my beloved sleep.

The transformation was very tough both mentally and physically....work demanded me to wake up an hour early but body as always wanted those extra 5 minutes ( Those 5 minutes used to Magically turn into half an hour).

I used to set alarms at night with strong determination and usually ignored them in the morning with a lousy procrastinating attitude. One day my father saw me struggling with my sleep, as it was seven and i already had snoozed my alarm three times. That boring tip tic, tic tip, Beep Beep. He came to me and said " why don't you try the "Slow time method". I was intrigue,"what is slow time method" I asked. "you know, Human body is adjustable. But to the small changes not to the big and drastic ones". "So should i leave trying"this has hit me hard.

"Nup.. but try with Different approach "he said. He gave me some good and the most practical piece of info, which i am going to share with you.

**1st: Start with small changes:** Start setting up your alarm 5 to 10 minutes earlier than usually. your body will adjust to this within a few days as this is a small change, then again cut back another 5 to 10 min. Follow this schedule until and unless you don't achieve your goal.

**2nd: Set your favorite song as the alarm tone:** Alarm tone matters, as your mood will be uplifted if your favorite song is being played instead of beep beep. It will help you in reducing irritating feeling.

**3rd: Always keep your alarm 5 feet away:** It will force you to move your body or get up to shut it off. As it is easy to shut off or snooze the alarm when it is in our reach. And that not our goal(It works....).

**4th: Get yourself out of the bed:** This is one of the most difficult task, i never liked it(phew...). But my dad gave a easy solution, According to him, we just have to reach our purse(leave that far from your bed) and count money. First it will make our day( we always love money) and second by the time you count, you are already waked up. come on now go to bathroom.

**5th Don't be too strict to yourself:** Once in a blue moon its O.K, to stay sleeping(but only once in a while....Han..)

Enjoy the morning, there are very few people who get the chance to see "how beautiful the world is, in the morning", "how quite and peaceful it is" the breaking of dawn, chirping of birds.... Fresh air....just like direct connection to the mother nature.

Utilize your time....Don't you think waking up early for the sake of getting up is useless until you don't have something important, more important than sleep.



### The 5 Must - Have Qualities Of The Modern Employee



**Punya Singla**  
Jr. Manager (BD)

**\* Embrace change**

Employees have grown accustomed to doing things a certain way. They have used to the same technologies and the same processes for many years but that doesn't mean that those technologies and ways of doing things are the best for our companies or for ourselves.

Consider that in a few years millennial are going to become the majority workforce in the United States. These are people who grew up using social and collaborative tools to communicate, collaborate, and find people and information. This new workforce means new behaviors and new technologies; employees should be stepping forward together and embracing the change that is going to make their jobs and lives easier. As Winston Churchill said, "To improve is to change; to be perfect is to change often."

**\* Have a voice in your company**

For the first time in the history of business "leader" and "manager" are not mutually exclusive. Leaders no longer to have to be managers, they have to be people who are passionate, knowledgeable, and comfortable with sharing (which is another key quality mentioned below).

New collaborative technologies are empowering every single employee within an organization to share their passions, interests, ideas, and feedback. If you care about something you have the opportunity to become a leader and a known voice on that topic within your organization. However, this can't happen if you don't speak up. You can't become a leader if you are scared of sharing your voice and your opinions. This means using the new collaborative technologies that are available to you to get recognized within your company. Why be a employee when you can become a leader?

**\* Be autonomous**

Now that employees have the ability to work from anywhere at anytime, being self-directed is crucial. There is no longer a

manager watching your every move and reminding you to "get back to work." This is a privilege but it's also a responsibility. A great deal of trust is being placed on you to accomplish your tasks. As a modern employee you must be capable of executing on your deliverables whether you are in an office, cafe, or at home.

**\* Share and help others**

This was one of the key qualities for the modern manager but it's also a key quality for the modern employee. Traditionally employees wanted to keep ideas to themselves to get credit for their own contributions. This model is no longer effective. With the emergence of collaborative tools, ideas and feedback can easily be traced back to individuals within an organization.

Sharing not only benefits the team but it also benefits you as an employee. Your peers and managers will recognize your can-do attitude and ability to lend a helping hand. Sharing can take many forms; you can share your ideas, feedback, what you are working on, documents, or anything else that you choose to. By sharing, your team and neighboring departments will recognize your name. To be a modern employee you must become comfortable with sharing and helping others.

**\* Filter and focus**

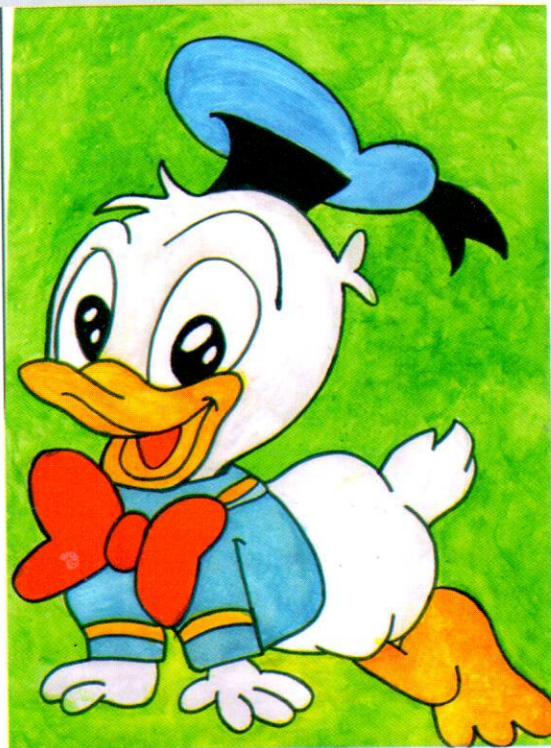
In today's work environment we are pulled in many directions. We are on meetings while we check email, simultaneously tweeting, editing a document, and IMing with a colleague. With the proliferation of content and tools that coworkers and friends can "ping" us on it's all too easy to lose focus. With emerging technology employees must remember to focus on what needs to get done. This means being able to put people and messages "over ice." Information bombards employees from every direction which means employees need to become adept at filtering out and focusing on what's crucial.



# ARTISTIC CORNER



**Akansha Sharma**  
Executive (R&D)



# HAPPY BIRTHDAY

Catalysts Group wishing you all the best today throughout the coming year!

Name	Designation	Date of Birth
C. Mohana Krishnan	Manager - BD	02 Aug
Manav P. Sharma	Sr. Executive - QA/QC	10 Aug
Gaurav Verma	Jr. Manager - logistics	15 Aug
Anil Kumar	Executive - Store	30 Aug
Abhishek Bhateja	Executive - Logistics	30 Aug

## WELCOME TO THE CATALYSTS GROUP

Name	Designation	Date of Joining
Ashish Kakar	Asst. Manager (BD)	12 Aug

## Farewell Wishes

To,  
Ms. Shalini (R & D)



You'll always be remembered  
with love and warmth

Wishing you  
All the Best  
for the future!



## ((( CATALYSTS NEWS )))

### ● Inauguration of new Research & Development Laboratories.

We are happy to announce that we have inaugurated new Research & Development Laboratory at corporate office - Sahibabad.

The new laboratory is in the area of 3000 sq. ft. and comprises of Biochemistry Lab, Application Lab, Instrumentation Lab, Microbiology Lab & Fermentation lab.

### ● The Catalysts Group - Employee of the Month - August

It gives us immense pleasure to announce & share the Employee of the Month for August was Mr. Ashish Kumar from Production department, Roorkee location.

Mr. Ashish Kumar has shown exemplary work in Cat Bio factory setup by taking extra responsibilities in civil, electric & plumber work.

He independently looked after all the production activity for Cat Bio factory - material short out, finished good bin card, sales return, rejected material etc.

We congratulate Ashish for his extra ordinary performance in the month of July & wishes more such achievements in the future.

### ● Independence Day Quiz

We organized an Independence Day Quiz on 14th August at our corporate office - Sahibabad to celebrate our 66th Independence Day.

This Independence Day Quiz was the panorama of India including the questions related to the Indian History & Culture, Mythology, Independence era, Sports/ Cinema & Current Affairs.

Mr. Dinesh Sharma & Mr. Sanjay Poddar were the winner of the Quiz, Our director - Mr. Aditya Malhotra distributed prizes to the winners.

## माँ मुझको जीवन दे दो



Nisha Saini

Wife of Pradeep Kr. Saini

मैं बेटी हूँ, न मुझको मारो,  
बेटों से कम नहीं, न मुझे मानो ।

तेरे आंचल में मुझको भी,  
चैन से सोना है माँ ।  
सुना है दुनिया वालों ने तुझे,  
भगवान से बड़ा माना है माँ  
मैं बेटी हूँ, न मुझको मारो ।

मैं शक्ति पहले भी थी,  
मैं शक्ति आज भी हूँ।  
कभी दुर्गा तो कभी महाशक्ति हूँ,  
पवित्रता की मूरत हूँ  
ममता की सूरत हूँ ।

दुनिया बदलो,  
अब सोच भी बदलो,  
भ्रूण हत्या अब बन्द करो  
माँ मुझको जीवन दे दो





**Laughter Therapy**

• English and Hindi always Contradict...

English: The sooner the better...  
Hindi: Jaldi ka kaam shaitaan ka hota hai...

English: Think of the devil, and the devil is here...  
Hindi: Badi lambi umar hai tumhari, abhi tumhe hi yaad kar rahe the...

English: Don't wait, fight for your rights...  
Hindi: Sabr ka fal meetha hota hai...

...and the most striking of all,

English: As wise as an owl...  
Hindi: Ullu ka Pattha...

• Santa walks into a bar and asks the bartender, "Was I in here last night?"

"You certainly were," replies the bartender.

"And did I spend a lot of money?" Santa asked.

"You spent over Rs. 10000," replies the bartender.

"Thank god for that," says Santa, "I thought I'd wasted it."



Amitabh Bachchan is angry over a fake video, which shows him endorse Narendra Modi as PM candidate.

**Guess the Picture ?????**

"She is an integral part of the Congress party"

Start guessing the picture. To win, email your entries - magazine@thecatalystsgroup.com

Vol 6 winner is **Sanjeev Singh (GAEL -QC), from Ambuja Group** and the correct answer - **Mahender Singh Dhoni & Yuvraj Singh.**



Congratulations !!! soon you'll receive your goody bag.

**Find the Fault**



Can you find the fault in the picture ?

send your views / entries at magazine@thecatalystsgroup.com to win a suprizе gift.

Vol 6 winner is **Punya Singla, Jr. Manager - BD** and the correct answer - **Polar bears cannot be found in beach areas.**

Congratulations !!! soon you'll receive your goody bag.

**Our True Friend**



In times of our need

Who is there indeed!

When we are down and hungry

Who uplifts, who feeds!

Walking barefoot on ground

Who is there all around!

Picking thorns, picking the weeds



Giving us love, taking care of our needs!

There are times in our life

When nothing seems right

Today looks so bleak

How can tomorrow be bright!

Suddenly from no-where

You see a shadow, a light

Who is there, can we see!

Above race, color or creed

Away from Religion, away from greed!

It's HIM "Our True Friend"

In times of our need!



**Abhishek Bhatеja**  
(Executive- Logistics)



**Celebrating  
the spirit of  
Independence Day !!**



**Catalysts**

*making things happen...*

ISO 9001:2008 & FSSC 22000 Certified

## **A Quality Certified & Leading Biotechnology Company**

The Catalysts Group, an integrated biotechnology organization delivers natural products & innovative biotech solutions encompassing enzymes, bio-products & additives for a wide range of industrial applications. We are engaged in manufacturing and marketing of enzyme for the Industries - Grain Processing, Molasses Fermentation, Sugar Processing, Brewing, Carbohydrate & Malt Processing.

We have a highly qualified & experienced team looking after the needs of our current client base across industries who continue to create new & sustainable bio-based solutions.

We provide high degree of customer process oriented services in an efficient & professional manner.

*Our Salient Features :*

- **Customized Solutions**
- **A decade of Excellence**
- **Trademark Products**
- **Certified Manufacturing Unit**  
(ISO 9001:2008 Certified, Food Safety System Certification 22000 certified,  
Halal Certified, Food Safety & Standards Authority of India Certified)
- **Well Equipped & State-of-art Labs**
- **Qualified Customer Support Team**

**Corporate Office:** 3/1/4, Site IV, Industrial Area, Sahibabad, Distt. Ghaziabad, Uttar Pradesh - 201010 (India).  
**Tel:** +91 120 2779888 / 2770036 / 2773442 **Email:** info@thecatalystsgroup.com **Website:** www.thecatalystsgroup.com