



## CORPORATE INFORMATION

BOARD OF DIRECTORS	Sri P Sudhakar	Managing Director
	Sri Dr. A Ramaiah	Director
	Sri BV Ramana Reddy	Director
	Sri Dr. K S R Siva Sai	Director
	Sri Dr. S S N Murthy	Director
	Smt. P B T Sundari	Director
	Smt. P Sailaja	Director
REGISTERED OFFICE	1/102, Sathyamangalam Village, Thumanapalli Post -635 105, Hosur Taluk, Krishnagiri Dist, Tamil Nadu, PIN – 635 105.	
CORPORATE OFFICE	130, Amarjyoti Layout, Off Intermediate Ring Road, Domalur, Bengaluru – 560 071, Karnataka.	
ADMINISTRATIVE OFFICE	202, SGC's Suresh Arcade, Opp. Nature Cure Hospital, Dharam Karam Road, Ameerpet, Hyderabad – 500 016.	
BANKERS	Oriental Bank of Commerce, Ameerpet Branch, Greenlands, Begumpet, My Home Jupally, Hyderabad – 500 016.	
	Oriental bank of Commerce, Hosur Branch, Hosur – 635 109, Tamil Nadu.	
	Punjab National Bank, Bank Street Branch, Hyderabad-500001	
	Allahabad Bank, Himayatnagar Branch, Hyderabad.	
AUDITORS	B Rama Rao & Co., Chartered Accountants, Flat No.7, Block No. 6, MIG 2 baghlingampalli, Hyderabad – 500 004.	
REGISTRARS AND SHARE TRANSFER AGENT	Aarthi Consultants Pvt. Ltd 1-2-285, Domalguda, Hyderabad - 500 029 <a href="http://www.aarthiconsultants.com">www.aarthiconsultants.com</a>	
LISTED AT	Bombay Stock Exchange National Stock Exchange Limited	
COMPLIANCE OFFICER	Sri. P Sudhakar 202, SGC's Suresh Arcade, Opp. Nature Cure Hospital, Dharam Karam Road, Ameerpet, Hyderabad – 500 016.	



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## NOTICE TO MEMBERS

Notice is hereby given that the Sixteenth ANNUAL GENERAL MEETING of POCHIRAJU INDUSTRIES LIMITED will be held at Company's registered office situated at 1/102, Satyamangalam Village, Hosur Taluk, Krishnagiri Dist, Tamil Nadu – 635 105, on September 29th, 2011 at 11:30 A. M. to transact the following businesses:

## ORDINARY BUSINESS:

1. Receive, consider and adopt the audited balance sheet as at 31<sup>st</sup> March, 2011 and Profit & Loss Account for the year ended on that date together with the Reports of the Board of Directors and Auditors thereon.
2. Appoint a director in place of P. Sudhakar, who retires by rotation and being eligible, offers himself for reappointment.
3. Appoint a director in place of B. V. Ramana Reddy, who retires by rotation and being eligible, offers herself for reappointment.
4. To appoint Auditors in the place of B.Rama Rao & Co, whose term is ending at this Annual General Meeting and due to professional pre occupations expressed their inability to continue as the auditors of the company, to hold office from the conclusion of this Annual General Meeting until the conclusion of the next Annual General Meeting of the Company and to fix their remuneration and to pass the following resolution as an ordinary resolution

“RESOLVED that M/s. M. M. REDDY & CO Chartered Accountants be and are hereby appointed as Auditors to hold office from the conclusion of this meeting until the conclusion of the next Annual General Meeting of the Company at remuneration to be decided by the Audit Committee of the Board in consultation with the Auditors.

Regd. Office :

1/202, Sathyamangalam Village Bagalur –  
Berigai Road, Thummanapalli Post,  
Hosur Taluk, Krisnagiri Dist. T.N. – 635 105.

Place: Hyderabad

Date: 22.08.2011

By order of the Board  
Pochiraju Industries Limited

Sd/-

P Sudhakar  
Managing Director



## Notes:

1. A member entitled to attend and vote at the meeting is entitled to appoint a proxy or proxies to attend and vote on a poll instead of himself / herself and the Proxy need not be a member of the Company.
2. Proxies, in order to be effective must be received by the Company not less than 48 hours before the commencement of the meeting.
3. The Register of Members and Share Transfer Books of the Company will be closed from 23rd September to 29<sup>th</sup> September, 2011 (Both days inclusive).
4. Members are requested to notify immediately any change in their address to the Share Transfer Agents and in case their shares are held in dematerialized form, this information should be passed on to their respective Depository Participants.
5. Members, who hold shares in de-materialized form, are requested to bring their Client ID and DP IDs for easier identification of attendance at the meeting.
6. Members are requested to kindly bring their copies of the Annual Report to the meeting. As a measure of economy, copies of Annual Report will not be distributed at the AGM.



## DIRECTORS' REPORT

Dear Shareholders,

Yours Directors have pleasure in placing before you the Sixteenth Annual Report on the working and progress of the Company along with audited accounts of the company for the financial year ended 31st March, 2011 and the report of the auditors thereon.

### FINANCIAL RESULTS

Key aspects of the company's financial performance for the year 2010-11 are tabulated below: (Rs. in lakhs)

Particulars	2010-11	2009-10
Gross Revenue	5543.94	4333.54
Total Expenditure	4304.72	3237.55
Profit before Depreciation and taxation	1380.19	1285.95
Depreciation	172.92	138.90
Profit/(Loss) before tax(PBT)	1207.27	1147.05
Less: Provision for Current tax	35.06	21.95
Profit/(Loss) after tax	1172.21	1125.10
Prior Period Items	-	-
Profit / (Loss) after Prior Period Items	1172.21	1125.10
Profit Brought Forward from previous year	4460.14	3335.04
Net Profit / (Loss) carried to Balance Sheet	5632.35	4460.14

### OPERATIONS

The Company has recorded a turnover of Rs.5543.94 lacs in the current year. The Company earned a Net profit of Rs.1172.21 lacs after depreciation and taxes. The amount of Net profit available for appropriation after adjustments for prior period items is Rs.

1172.21 lacs and the same is carried to balance sheet. The operations during the year ended on 31<sup>st</sup> March, 2011 were encouraging. In spite of global recession your company achieved decent results. The company has been continuously working on quality up gradation and cost reduction plans.

### PUBLIC DEPOSITS

Your Company has not accepted any deposits falling within the meaning of Sec-58A of the Companies Act, 1956 read with the Companies (Acceptance of Deposits) Rules, during the financial year under review.

### LISTING

The equity shares of your company are listed on The Bombay Stock Exchange Limited and National Stock Exchange Limited



## MANAGEMENT AND DISCUSSION ANALYSIS

The management discussion and analysis of the financial condition and results of operations of the company for the period under review as required under clause 49 of the listing agreement of the stock exchange, is given as a separate statement forming part of this Annual report.

## BUSINESS INNOVATION, EXPANSION AND DIVERSIFICATION

You company has completed the construction of all the Blocks of its Bio pharma Unit at Shameerpet, Hyderabad. Your management is happy to inform you that the units' R & D block, Administrational Block and Canteen Block along with the required necessary support services are fully operational. Plant and Machinery and equipment for the production blocks are being installed and the management is contemplating to complete the validation of the facility, plant and machinery by the end of this financial year.

The company's agriculture and f & v divisions are having regular operations with steady growth. Presently the company apart from growing its own flowers in the green houses also procuring many varieties of flowers from different farmers all over the country and also procurement for its f & v division is being done directly from farmers and also on contract farming basis. Taking into consideration the growth potential of this segment both in domestic and overseas and the relative location and costs advantages your company is contemplating to setup its production basis in African countries such as Kenya, Ethiopia, Ghana, Tanzania etc and also identified large areas of lands for acquisition during the coming financial year.

## BANKS AND FINANCIAL INSTITUTIONS

Presently our Bankers are Oriental Bank of Commerce for our Agriculture division and Punjab National Bank for our Biopharma Unit at Shameerpet. We have been dealing with OBC since 1998 and PNB since 2010. We have very good business relationship with our bankers and the bank has been supporting us throughout our business growth plans.

## CHANGES IN THE BOARD OF DIRECTORS

In accordance with the Companies Act, 1956 read with Articles of Association of the company the Directors, Sri. P.Sudhakar and Sri. B.V. Ramana Reddy retire by rotation and are eligible for reappointment.

Your Board recommends the re-appointment of the above Directors in the best interest of the company. Smt. P.B.T. Sundari director and mother of promoter director Sri. P.Sudhakar has passed away on 10<sup>th</sup> February, 2011 due to old age. Other than these there are no changes in the Board of Directors.

## DIRECTORS RESPONSIBILITY STATEMENT

Pursuant to the provisions of Sec.217 (2AA) of the Companies Act, 1956 the Board of Directors of your Company hereby certifies and confirms that:

- i. In the preparation of the Annual Accounts, the applicable accounting standards have



been followed along with proper explanation relating to material departures;

- ii. We have selected such accounting policies and applied them consistently and made judgment and estimates that are reasonable and prudent so as to give a true and fair view of the state of affairs of the Company at the end of the financial year and of the profit or loss account of the company for that period;
- iii. We have taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of the Companies Act, 1956 for safeguarding the Assets of the Company and for preventing and detecting fraud and other irregularities;
- iv. We have prepared the Annual accounts on a going concern basis.

#### PERSONNEL

As required under the provisions of Section 217(2A) of the Companies Act, 1956 read with Companies (Particulars of employees) Rules, 1975, as amended, the names and other particulars of employee(s) are set out in the annexure of this report.

#### AUDITORS

M/s. B Rama Rao & Co., Chartered Accountants, Hyderabad, retires at the conclusion of ensuing Annual General Meeting and expressed their inability to continue as auditors of the company due to their professional pre occupations and compulsions. The Board recommends for the appointment of M/S M. M. Reddy & Co Chartered Accountants, Hyderabad as auditors of the company.

#### CORPORATE GOVERNANCE

As a listed company, necessary measures have been taken to comply with the Listing Agreement of Stock Exchanges. A report on Corporate Governance, along with a certificate of compliance from the Auditors, forms part of this Report as an Annexure.

#### ACKNOWLEDGEMENTS

Your Directors take this opportunity to thank the customers, shareholders, suppliers, bankers, financial institutions and other business constituents for their consistent support to the Company. The Directors also wish to place on record their appreciation of the hard work, dedication and commitment of the employees. The enthusiasm and unstinting efforts of the employees has enabled the Company to achieve sustained growth in the operational performance during the year under review.

For and on behalf of the Board  
Pochiraju Industries Limited

Sd/-

P Sudhakar  
Managing Director

Place: Satyamangalam

Date: 22.08.2011



## Annexure – I

a) Information under section 217(1)(e) of the Companies (Disclosure of particulars in the report of Board of Directors) Rules, 1988 and forming part of Directors Report.

## FORM A

## A) Power and Fuel Consumption

	<u>Current Year</u>	<u>Previous Year</u>
1) Electricity		
a) Purchases Units	309230	274670
Total Amount (Rs)	1493585	1268976
Average Rate/Unit (Rs)	4.83	4.62
b) Own Generation		
Through Diesel Generators (Units)	164225	146619
Unit per liter of Diesel Oil (Nos)	8.13	8.26
Cost/Unit (Rs)	5.10	4.63
B) Consumption per unit of production Standards		
Electricity	0.25	0.28
C) Foreign Exchange Earnings and out go	(Rs in Lakhs)	(Rs in Lakhs)
i) Foreign Exchange earned (Rs.)	-	-
ii) Foreign Exchange used (Rs)		
1. Raw Materials	-	-
2. Machinery	-	-
iii) Foreign Travel (Rs)	12.75	7.56
Commission/Import duty/handling charges		
D) FORM - B		
Form for disclosure of particulars with respect to absorption		
1) Research and development	620.83	384.93
2) Technology absorption, adaptation and innovation		
3) Foreign Exchange earnings and outgo		
Earnings (Rs in lakhs)	-	-
Outgo (Rs in lakhs)	12.75	7.56



## ANNEXURE TO THE DIRECTORS' REPORT

- a) Information as per section 217(2A) of the companies Act, 1956 read with the Companies (Particulars of Employees) Rules, 1975, and forming part of the Directors' Report for the year March 31, 2011.

Employed for part of the year with an average salary  
above Rs.2 Lakh per month.                      NIL



## MANAGEMENT DISCUSSION AND ANALYSIS

## Management's Discussion and Analysis of Financial Condition and Results of Operation.

Your company is engaged in three core businesses viz. Agriculture, Pharmaceuticals and Bio Pharma.

## I. Segment / Product Wise developments and Performance:

The agriculture operations of the company carried on under its agri division AGROPIL consists of apart from growing flowers in company's green houses also involve procurement of flowers fruits and vegetables directly from farmers and contract farming. These operations have continuous growth and are having potential growth opportunities.

The Pharma division namely PHARMAPIL is operating in range of pharmaceutical Formulations on a National Level through aggressive, dynamic and committed field force by outsourcing its formulations from different manufacturers under loan license agreement. The company is presently rationalizing its product range to rebrand and reposition the same in the domestic and export markets. The management of the company is also restructuring its entire marketing team. As such the operations of this division is presently slowed down. The company's bulk drug unit proposed at Nadikudi which is located at the boarder of Nalgoda district and Guntur district. Due to the recent regional disturbances and also due to the necessity and lack of a common effluent treatment plant at Nadikudi Industrial Estate the management of the company considering the relocation of the unit and identifying suitable location either in A.P.or Karnataka.

The company's state of the art multi product Biopharma Unit coming up at Turkapally village, Shameerpet Mandal, near Hyderabad to manufacture bio similars, therapeutic proteins, and vaccines is nearing completion and the company is contemplating to complete the validation process of the facility by end of March, 2012.

**Products:**

The Biotech division is focusing on the development of polysaccharide-protein conjugated vaccines for Typhoid, Haemophilus Influenza-B and Pneumococcal diseases. Efforts are under way to outsource bench scale technologies for therapeutic proteins and Monoclonal antibodies Identification of Bulk API suppliers for biopharmaceutical manufacturing is under progress.

**Manpower:**

The company has recruited a senior Vice President to head the technical operations of the division. Full time Civil functional Engineers with more than 10 years in the relevant fields are employed for building biotech facilities.

An engineering head with more than 10 years of experience in Bio-Pharma manufacturing is



in charge of the various utility installations of the company.

#### Research and Development:

The company's state of art R&D facility is ready and is operational. The company has got DSIR approval and recognition for its R&D activities.

#### RESEARCH AND DEVELOPMENT (R&D) ACTIVITIES:

PIL's R&D centre is actively involved in process development work in the areas of Bio-similar, vaccines & Bulk API's. The centre is equipped with the latest scientific equipments to carry out basic research in the above fields.

At present, we have a R&D man power of 25 which is expected to increase to 100 within 3 years.

The various research programs conducted at the centre are listed below:

##### a. Bio-technology:

- Development of conjugated HiB Vaccine.
- Development of conjugated Typhoid Vaccine.
- Pneumococcal conjugate vaccine.
- Development of Rabies vaccine
- Development of Meningococcal vaccine
- Life cycle improvement of Therapeutic Proteins. b.

##### Bulk APIs:

- Process for Ethambutol through n-substituted dehydro AA
- Process development for Rosuvastatin.
- Process development for Quetapine.
- Process development for Atrovastatin
- Process development for Olanzapine.

## II. Industry Overview

### II.I. Agriculture

II.I.I OVERVIEW Agriculture is the dominant sector of Indian economy, which determines the growth and sustainability. About 65% of the population still relies on agriculture for employment and livelihood.

Indian agriculture however, has milestones. The green revolution transformed India from a food deficient stage to a surplus food market. In a span of 3 decades, India became a net exporter of food grains. Remarkable results were achieved in these fields of dairying and oil seeds through white and yellow revolutions. The sector could not however maintain its growth momentum in the post green revolution years, the strategic growth in agriculture



and the accelerated growth in industry reversed the structure of national GDP in Indian economy.

Despite these major structural transformations, the agriculture sector continues to accommodate the major share of the workforce. The sector is prone to output fluctuations even after establishing better input facilities and technology like irrigation, High yielding seeds, changes in cropping pattern etc.

India is yet to emerge as significant trade partner in the world agriculture market. India holds around 1% of the global trade-in agricultural commodities. With the ongoing trade negotiations under the WTO, Indian Agriculture needs to reorient its outlook and enhance competitiveness to sustain growth from a demand side.

With India being a major negotiator on world agriculture trade, it can be expected that Indian agriculture trade will expand in the years to come. This process started with the India signing the Agreement on Agriculture (AOA) during the Uruguay Round. Now that the fourth Ministerial of WTO at Doha has mandated further negotiations on agriculture trade to improve market access India can look forward to a bright trade prospects in agriculture with proper policy support.

The Indian Agriculture Industry is on the brink of a revolution that will modernize the entire food chain, as the total food production in India is likely to double in the next ten years.

As per recent studies the turnover of the total food market is approximately Rs.250000 crores (US \$ 69.4 billion) out of which value-added food products comprise Rs.80000 crores (US \$ 22.2billion). The Government of India has also approved proposals for joint ventures, foreign collaborations, industrial licenses and 100% export oriented units envisaging an investment of Rs.19100crores (US \$ 4.80 billion) out of which foreign investment is over Rs. 9100 crores (US \$ 18.2 Billion). The agricultural food industry also assumes significance owing to India's sizable agrarian economy, which accounts for over 35% of GDP and employs around 65 per cent of the population. Both in terms of foreign investment and number of joint-ventures / foreign collaborations, the consumer food segment has the top priority. The other attractive features of the Indian agro industry that have the capacity to lure foreigners with promising benefits are the deep-sea fishing aquaculture, milk and milk products, meat and poultry segments. Excellent export prospects, competitive pricing of agricultural products and standards that are internationally comparable has created trade opportunities in the agro industry. This further has enabled the Indian Agriculture Industry Portal to serve as a means by which every exporter and importer of India and abroad, can fulfill their requirements and avail the benefits of agro related buy sell trade leads and other business opportunities.



This Indian agro industry revolution brings along the opportunities of profitable investment and agriculture-industry- India company you the B2B platform with agro related trade leads, exporters & importers directory etc. that help you make your way to profit easy. Second largest producer of food and a country with a billion people from canned, dairy, processed, frozen food to fisheries, meat, poultry, food grains, alcoholic beverages & soft drinks, the Indian agro industry has dainty areas to choose for business.

### PROBLEMS

Low Productivity:-

The low productivity in India is result of the following reasons:

According to “India: Priorities for Agriculture and Rural Development” by World Bank, India’s large agricultural subsidies are hampering productivity-enhancing investment. Overregulation of agriculture has increased costs, price risks and uncertainty. Government interventions in labor, land, and credit markets are hurting the market. Infrastructure and services are inadequate.

- Illiteracy, general socio-economic backwardness, slow progress in implementing land reforms and inadequate or inefficient finance and marketing services for farm produce.
- The average size of land holdings is very small and is subject to fragmentation, due to land ceiling acts and in some cases, family disputes. Such small holdings are often over-manned, resulting in disguised unemployment and low productivity of labor.
- Adoption of modern agricultural practices and use of technology is inadequate, hampered by ignorance of such practices, high costs and impracticality in the case of small land holdings. World Bank says that the allocation of water is inefficient, unsustainable and inequitable.
- The irrigation infrastructure is deteriorating. Irrigation facilities are inadequate, as revealed by the fact that only 52.6% of the land was irrigated in 2003–04, which result in farmers still being dependent on rainfall, specifically the Monsoon season. A good monsoon results in a robust growth for the economy as a whole, while a poor monsoon leads to a sluggish growth. Farm credit is regulated by NABARD, which is the statutory apex agent for rural development in the subcontinent.

### PROSPECTS

- Presently a small percentage of farm produced processed in to value added products.
- India needs US \$28 billion of investment to raise food processing level by 8-10%.
- Rapid urbanization, increased literacy, changing life style, more and more women in workforce, rising per capita income leading torpid growth and new opportunities in food and beverages sector.
- Indians spend about 50% of household expenditure on food items.



## OPPORTUNITIES

- Excellent export prospects, competitive pricing of agricultural products and standards that are internationally comparable has created trade opportunities in the agro industry.
- An average Indian spends out about 50% of his/her household expenditure on food items. With a population of over 1 billion and a 350 million strong urban middle class and their changing food habits.
- The relatively low cost but skilled workforce can be effectively utilized to set up a large, low cost production base for domestic and export market.
- Foreign Direct Investment is not directly allowed in agriculture but there exist ample opportunities in related sectors.
- Biotechnology refers to the techniques that allow scientists to modify the DNA of crops to enhance their tolerance to pests and diseases, increase yields and improve quality and nutritional value.
- Indian agricultural trade underwent significant changes in the post liberalization era. This book "Indian Agricultural Trade in the 21st Century" examines these changes in terms of production trends, trade patterns as well as policy initiatives. The various articles in the book trace the Indian agricultural evolution in a general perspective, and also track specific commodities in their trade patterns, with special focus on the post-1991 period. The articles in the initial section on agriculture in general help identify those commodities, which hold high export prospects, and track their progress in international trade. Trade policy initiatives are also examined in the light of trade facilitation in the country. Trade in food crops is determined by the domestic requirements, in order to ensure domestic food self-sufficiency and security. Hence, trade policies strike a balance between domestic pricing, demand, and external trade prospects. Agricultural Export Zones and trade in agriculture in the light of Sanitary and Phytosanitary measures of the WTO are also examined. The section on Horticulture and dairy products reveals the dominant position of India in fresh fruit and dairy production, and the huge export potential that remains untapped. Impact of trade liberalization on dairy farming is examined, besides looking at floriculture as a viable

### II.I.II Outlook

India is one of the major food producers in the world. The food sector contributes to about 28% of India's GDP. India stands at 1st position in the world for production of cereals, milk, livestock, banana and Mango, 2nd in producing fruits and vegetables and ranks amongst top 5 in producing rice, wheat, groundnut, tea, coffee, tobacco, spices, sugar and oilseeds. India's share in global production of fruits is 10% and vegetables are 13.7%. The current consumption



of fruits and vegetables is approx Rs.2 lakh crores at current prices with an estimated growth rate of 11% per annum.

The growth rate is higher than cereals and milk and comparable to meet consumption.

#### STATUS OF HORTICULTURE

The current state of horticulture industry in India is not satisfactory. The average productivity of horticulture produce is about 7 tons/ha compared to 30 tons/ha in many western countries. India's share in global fruits and vegetables trade is less than 1%, whereas, only 2% of the horticulture produce in India is processed vis-à-vis more than 40% in other

developing countries like Brazil and Malaysia. India's share in global processed food trade is only 1.5%. The first and foremost reason for under developed horticulture industry is high proportion of wastage across the value chain.

Table No. 1:- % wastage in different crops

S.NO.	Crop	% wastage
1	Tomato	30
2	Potato	22
3	Onion	25
4	Cauliflower	49
5	Cabbage	22
6	Papaya	40
7	Litchis	28
8	Grapes	27
9	Apricot	28

This wastage happens in various stages and few of them are crop losses due to substandard farming techniques, post harvest losses, storage losses, transportation losses and weight loss. There is also a high proportion of wastage across the value chain, deterioration in quality of produce, large fluctuations in prices, low availability of produce during off-season and low spend on fresh fruits and vegetables as a proportion of total spend on food.

#### POOR STATE OF HORTICULTURE

The main reason for the poor state of horticulture appears to be the long and fragmented supply chain. The supply chain ranges from farmer to orchard farm owner to consolidator/ aggregator (commission agent1) to Trader/Transporter

(Commission agent 2) to wholesaler to small roadside vendor/Retailer/Super market/ Handcart vendor to finally consumer. In the entire supply chain, each constituent in the supply chain functions independently with little or no overlap with the next level and limited exchange of information, therefore, the constituents are constrained in performing their roles effectively. An integrated supply chain may enable the critical linkages between various



constituents. This may provide better information flow, material flow and money flow among various intermediaries.

#### STATUS OF FOOD PROCESSING INDUSTRY

The food processing industry in India is still in a sorry state. The rural population comprising 70% including small cities, consume less than 10% of the processed foods and vegetables, whereas 60% of the processed food is consumed in four major metropolitan cities and 30% in the state capitals and big cities. Another fact is that 40% of the processed food and vegetables produced in the country in terms of value are bought by institutional buyers like Hotels, Restaurants and Defense etc. The highest growth in domestic market has been in fruit drinks, tomato ketchup and Jams. There is another fact that India is the largest milk producer in the world, however, organized industry accounts for less than 15% of the milk produce in India. It is estimated that there may be a total production of 1100 million tons of food products mainly food grains, oilseeds, sugarcane and fruits/vegetables during 2011-12 and leaving marketable surplus of 870 million tons.

Table No. 2: Projections of Marketable surplus (Million tons)

Commodity	Production		Marketable surplus	
	2001-02	2011-12	2001-02	2011-12
Oilseeds	21	46	16	37
Sugarcane	297	433	276	402
Fruits & vegetables	133	300	166	265
Total	664	1100	518	870

Source: IARI

The demand for high value commodities particularly fruits; vegetables and milk would go up significantly during 2010 and 2020 in India. It is expected that the demand for fruits would go up from 56 million tons to 77 million tons (2010-2020), vegetables 113 to 150 million tons (2010-2020) and 104 to 143 million tons (2010- 2020) for milk, as projected by IARI.

The processed fruits and vegetables in India has been growing at about 9% per annum with the highest growth being witnessed by juices and ready to eat vegetables. Table No. 3: Status of processed F&V industry in India



(Rs. In crores)			
Category	Industry	size	Key players
Organized	Jams	90	HLL, Mapro, Marico, Malas
Unorganize		50	
	Pickles	150	Priya food, Praveen Desai brother
		1000	Cavin Kare GD Foods
	Sauce/Ketchup	100	HLL, Nestle, GD foods Heinz
	Pulp/Concentrates	400	Foods & Inns, BEC, clean foods, Jain
	Juices/Fruit based drinks	500	Pepsi, Dabur, Godrej, Mother Dairy
	Squashes	130	Kissan, Haldiram, Mapro
		250	
	Ready to eat vegetables	100	Tasty Bite, ITC, MTR
	Potato Chips	250	
		300	Pepsi, Haldiram, ITC
	Cooking pastes	30	Dabur, HLL

Source: Rabo Bank India report

#### STATUS OF WORLD PRODUCTION VIS-À-VIS CONSUMPTION OF F&V

The global production of fruits and vegetables is approx 1.7 billion tons and has grown at a CAGR of 3.4%. The China dominates the production of fruits and vegetables with 1/3rd of total global production. China, India, USA and Turkey are jointly responsible for 2/3rd of global vegetable production. The production of fruits and vegetables worldwide is hugely fragmented. Majority of food and vegetables is considered fresh. In low income markets, fruit consumption is mostly fresh, only 10% is consumed processed, whereas, in High income markets, 50% of fruit consumption is in the processed form.

Besides consumer demand, triggers for food and vegetables processing are from the foodservice industry. Fresh cut produce is a relatively new phenomenon and is a premium priced. Globally, fruits and vegetables are consumed close to the place of production. The global fruits and vegetables trade accounts for 5% of the global production and is

currently approx. between 80-85 mn tons. However, the trade in fruits and vegetables is growing rapidly than trade in any other agriculture commodity. The fruits accounts for 60% of the total F&V trade and Banana is the world's most traded

fruit. The banana, citrus, apples and pears account for 70% of global fruit trade. The vegetables



trade is more regional, because of limited shelf life, but China is a dominant player in vegetable trade due to cost advantages and proximity to key import markets. The major key traders in the world for food and vegetables are EU and Mexico (Exporter) whereas USA and Japan are major importer.

#### AGRI BUSINESS

Dealing in any agriculture output viz cereals, pulses, oilseeds, Horticulture, Floriculture, spices, plantation crops, livestock, poultry, marine products etc. is considered as Agri. business. Besides this, Beekeeping (Honey production),

Dairying & Milk products, oil extraction, flour, derivatives, spices/Tea/Coffee Meat/Seafood/ Poultry processing is also covered under Agri. business. Sinc. The Agri. business pertaining to fruits and vegetables has three kinds of business components:

- Procurement/sorting /grading-transport (sell of fresh produce)
- Development of cooling facilities in terms of warehousing/storage/transportation /IQF (Individual quick freezing)- Infrastructure support
- Processing of fruits and vegetables

#### II.III Opportunities and Threats: SWOT

##### Analysis

##### 2.1.1 Strengths

- The Indian agriculture is large, competitive and well developed, offering products at low prices. The sector experiences a constant demand, as Indians have a strong preference for fresh rather than processed foods and for local spices and ingredients (The World Bank, 1997).
- Provides employment for a large Indian population, living in rural territories.
- Recent advances in technology and government initiatives support the development of the sector. In pursuance of the government policy to strengthen and promote IT led governance, the department of agriculture and cooperation has been taking various measures to promote the use and application of technology with the aim of making agriculture “online” for the use of farmers, exporters, and traders, etc.

##### 2.1.2 Weakness

- One of the major weaknesses present for the agricultural sector in India is in the lack of government support. Unlike in East Asian countries, the shift of the labor force from agriculture to non-agriculture in India is peculiarly slow, largely attributable to rigid labor laws in both the agricultural and industrial sectors. Glassman (1989) also highlights the need for pressing on with reforms in agriculture, in particular, trade liberalization and export promotion strategies. Becker and et al. (1992) also claim that though India spends on agriculture nearly twice as much



as some East Asian economies, this level of spending on agriculture does not translate into a significantly higher sectoral performance.

- Inadequate road linkages also remain a major constraint for the development of well-functioning agricultural markets. A continuing fragmentation of land-holdings, poor maintenance of existing irrigation systems and declining soil fertility in some areas are other factors.
- Another weakness is based on seasonality and the fact that agricultural sector output heavily depends on the annual monsoon, as less than one-third of cropland is irrigated. The main food grain crops, for example, and some cash crops (oilseeds, cotton, jute and sugar) depend on the south-west monsoon (This brings 80% of India's rain, usually within a three-month period from June to mid-September. The 2002 south-west monsoon was disastrous, causing the autumn grain harvest to fall by 18% year on year. In 2004 the sector stagnated in comparison to the previous year when the best monsoon rains in a decade generated growth of around 10% in the agricultural sector. Excessive rainfall in 2005 caused severe flooding in Maharashtra (The Economist Intelligence Unit Report, 2005).

### 2.1.3 Opportunities

- A growing population, rapid economic development, and political and social demands exceed the mandate and capabilities of any corporation in an emerging economy (Bhagwati, 1998), and India is no exception to this. A growing population has made industrial development one of the Indian government's highest policy priorities; it is an important element of economic development as it assists in raising national income at a more rapid pace. It is also a precondition for continued agricultural development.
- Palmer-Jones and Sen (2003) state that the government continues to play a major role in assisting farmers through agricultural credits, subsidies, price support schemes and extension services. Although there is no food security concerns at present, better agricultural productivity will hold the key to stable growth in food production, given the limits of the resource base. There is an opportunity for the economic growth to benefit more people only if the country raises agricultural productivity, improves its system of general education to help the millions who must leave farming, and encourages labor intensive manufacturing industries.

### 2.1.4 Threats

- About one-fifth of the country, 69m ha, is covered by forests and woodland, and one-half of this area is reserved for the production of timber and other forestry products (Varshney, 1998). However, there are increasing concerns from environmentalists and local government over the rapid depletion of forest areas, ecological factors, and scarcity of natural resources.



- As income rises, India is becoming an increasingly important market for processed foods, especially in the cities and among young people. Aware of quality and international brands, consumers are less likely to support national products, and are more vulnerable to pay premium prices for foreign products of better quality. This represents a potential substitution to the local products, impacting the production levels of agriculture sector.
- Food support prices for wheat and rice have given farmers little incentive to diversify and have filled government storage facilities to overflowing, while keeping the market price of food grains artificially high. Current agricultural policy, which supports cereal production, is exceedingly expensive and will be unable to deal with the likely scenario of a shift in consumption from cereal food towards non-cereal food. A lack of market infrastructure also hampers the movement of crops, leading to sudden shortages. India has considerable potential as an exporter of rice, cotton, many types of fruit and even flowers, but this has so far not been tapped (Yoho and Siang, 2006).

The introduction of high-yield crop varieties and new fertilizing and irrigation techniques over recent decades – the so-called Green Revolution – dramatically increased productivity in some regions. India has been self-sufficient in food since the mid-1970s, maintaining buffer stocks adequate to meet demand despite failed harvests and seasonal fluctuations.

## II.II Pharma

### II.II.I OVERVIEW

The pharmaceutical industry's main markets are under serious pressure. North America, Europe and Japan jointly account for 82% of audited and unaudited drug sales; total sales reached US\$773 billion in 2008, according to IMS Health. Annual growth

in the European Union (EU) has slowed to 5.8%, and sales are increasing at an even more sluggish rate in Japan

(2.1%) and North America (1.4%). Impending policy changes, promoting the use of generics in these key markets are expected to further dent the top-and bottom-line of global pharma majors. The industry is bracing itself for some fundamental changes in the market place and is looking at newer ways to drive growth. Further, higher R&D costs, a relatively dry pipeline for new drugs, increasing pressure from payers and providers for reduced healthcare costs and a host of other factors are putting pressure on the global pharmaceutical companies. Pharma companies are looking for new ways to boost drug discovery potential, reduce time to market and squeeze costs along the whole value chain. How can industry leaders best face these challenges? Analysis by PricewaterhouseCoopers (PwC) shows that several regions offer considerable



promise, either as places with untapped demand for effective drugs or as suitable areas for conducting research

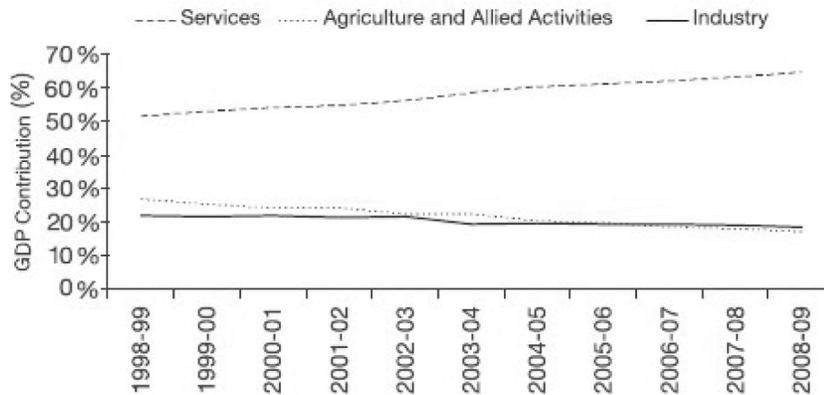
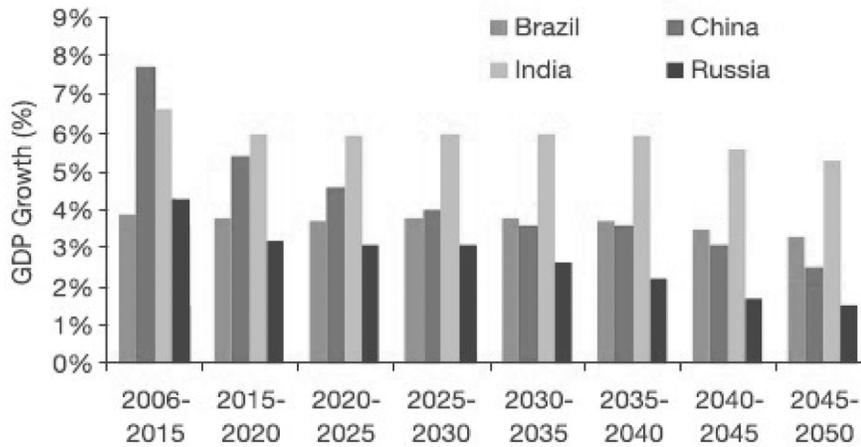
and development (R&D) and/or clinical trials. In this paper we shall examine the opportunities available in India. India's population is growing rapidly, as is its economy – creating a large middleclass with the resources to afford Western medicines. Further, India's epidemiological profile is changing, so demand is likely to increase for drugs for cardio-vascular problems, disorders of the central nervous system and other chronic diseases. Together these factors mean that India represents a promising potential market for global pharmaceutical manufacturers. More than that, India has a growing pharmaceutical industry of its own. It is likely to become a competitor of global pharma in some key areas, and a potential partner in others. India has considerable manufacturing expertise; Indian companies are among the world leaders in the production of generics and vaccines. As both of these areas become more important, Indian producers are likely to take a large role on the world stage – and potentially partner with global pharma companies to market their wares outside of India. Indian companies have also started entering into the realm of R&D; some of the leading local producers have now started conducting original research. India has the world's second biggest pool of English speakers and a strong system of higher education, so it should be well-positioned to serve as a source for research talent. A new patent regime provides better protection of intellectual property rights, although some issues remain. Clinical trials can also be conducted here much more cost-effectively than in many developed nations, and some local companies are beginning to develop the required expertise. All of these factors add up to a strong case for partnering with Indian companies around R&D, including clinical testing. Further, healthcare has become one of the key priorities of the Indian Government and it has launched new policies and programmes to boost local access and affordability to quality healthcare. Global players in the pharma industry cannot afford to ignore India. The country, many predict, will be the most populous in the world by 2050. India will make its mark as a growing market, potential competitor or partner in manufacturing and R&D, and as a location for clinical trials.

#### Global pharma looks to India: Prospects for growth 3

The Indian economy is worth about US\$1,243 billion and rapidly getting bigger. Real GDP growth reached 9% in the year to March 2008. The rate of increase has since slowed down due to the global financial crisis; in the year to March 2009, growth eased to 6.7%. Even so, most forecasters believe that India will continue to show robust growth over the long-term; survey of professional forecasters performed for the Reserve Bank of India (RBI) anticipates growth improving to 6% in the year ending March 2010 and expects robust growth of 7.8% p.a for the next ten years. Previous forecasts such as those of Goldman Sachs suggest that India will be the only emerging economy to maintain such an outstanding pace over the longer term, i.e. to 2050. Two factors underlie this favourable outlook: India's demographic



profile and a robust services sector. India's population is currently just over 1.1 billion and projected to rise to 1.6 billion by 2050 – a 45.5% increase that will see it outstrip China as the world's most populous state. India has also utilized its strengths in IT to become a major offshore business services provider, in marked contrast with most of Asia, which has relied on manufacturing for its recent growth. As a result, services now account for 64.5% of India's GDP. While a strong services sector heralds well for continued economic prosperity, it also suggests why India looks to be important for research and development as well as drug manufacture; the country's experience delivering on outsourcing opportunities in other knowledge-critical areas such as IT should serve it well in its bid to offer such services in pharma, biotech and related area.





## II.II.II. Outlook

An expanding pharmaceuticals market India's pharmaceuticals industry looks set for a solid long-term growth. It already ranks fourteenth in the global league table, with sales of almost US\$19 billion in March 2009. However, PwC estimates that it will rise to approximately US\$50 billion by 2020 – a 163% in the space of eleven years. Indeed, in our report, Pharma

2020: The vision, we anticipate that India will be one of the industry's top 10 markets by 2020. This growth will be driven by the expanding economy and increasing per capita GDP. In 2008, India's middle class constituted 13% of the population, according to the National Council of Applied Economic Research. While this remains a fairly small proportion of the total population, it represents a substantial increase from a mere 3% in 1995. If the economy continues to grow faster than those of the developed world and the literacy rate keeps rising, around a third of the population (34%) is expected to join the middle class in the near future. While these consumers still earn substantially less than their US or European counterparts, they are rapidly acquiring the buying power necessary to afford modern healthcare, particularly if purchasing power parity is considered. One source estimates that at least 60 million Indians – a market as big as the UK – can already afford to buy Western medicines. Aggressive pricing strategies will be necessary, however, to make in-roads into India's price-sensitive market. India's federal Government currently mandates price controls on essential drugs, however, these are under review. Price controls are carried out on certain drugs by virtue of the Drugs Price Control Order (DPCO), supervised by the National Pharmaceutical Pricing

Authority (NPPA). The 347 price-controlled drugs included in 1979 were reduced to 143 in 1987. At present, 74 bulk drugs are covered under the DPCO. The Government's draft pharmaceutical policy in 2006 sought to expand the scope of essential drugs and evoked a sharp reaction from the industry. They argued that it would adversely affect R&D activities in India, as companies would stay away from investing in new drugs. To date, no further action on the proposed policy changes have been taken and it currently looks unlikely that the DPCO will be expanded. The Indian Government's Department of Pharmaceuticals has also initiated operations for a peoples' medicines shop, called 'Jan Aushadhi,' in various locations. These shops sell generic medicines at much cheaper rates than the price of corresponding branded medicines.

Some multinational pharma companies are already taking measures to reach a larger patient population by reducing drug prices and increasing affordability. One example: Merck & Co. has launched differential pricing through Januvia, its anti diabetic drug, which is priced at approximately US\$1 per dose in India – a fifth of its price in the US. Indian companies like Biocon have also followed a similar pricing strategy. Biocon has launched its monoclonal



antibody BIOMAb EGFR at one-fourth of its price in the global markets.<sup>20</sup> It's also likely that India will require different types of drugs in the future. Like almost every other emerging economy, India is experiencing epidemiological changes. Thanks to greater affluence and better hygiene,

The bottom line:

2008 saw M&A in the pharma sector in India more than double against the previous year, despite the challenges posed by the Global pharma looks to India: Prospects for growth for example Pfizer has entered into alliances with Aurobindo and Claris to market their drugs in offshore markets. Similarly, GlaxoSmithKline (GSK) has acquired exclusive rights for Dr. Reddy's Laboratories' (DRL) pipeline of over 100 generics for sale in emerging markets. In addition to partnering with global pharma, some Indian companies are also setting up their own marketing subsidiaries abroad. India's pharmaceutical exports totaled around US\$8 billion in 2009 and PwC estimates they will rise to approximately US\$20 billion by 2020. Over the past several years companies such as DRL, Cipla and Lupin have grown internationally in their own right as well. Other Indian pharma companies like Glenmark Pharma, Orchid and Aurobindo also have wholly owned subsidiaries in different parts of the globe. DRL has grown from a small firm into an international business with annual sales of more than US\$1.4 billion, about 84% of them outside India. The company's acquisition of Germany's Betapharm positioned it as one of the largest generics companies in the world; it is currently one of the largest suppliers of drugs to the US. It is also one of the largest active pharmaceutical ingredient

(API) manufacturers globally. Cipla is another company with revenues of over US\$1.1 billion, 56% of which come from outside India. It is one of the largest manufacturers of antiretroviral drugs in the World. In 2007, an Avesta-Cipla joint venture acquired Siegfried Biologics, a Switzerland based company, to manufacture US FDA and European Medicines Agency (EMA) compliant biopharmaceuticals for the global markets. Meanwhile, Lupin is the biggest producer of Lisinopril, an API used in the treatment of hypertension. Lupin's acquisition of Multicare Pharmaceuticals of Philippines has propelled it into position as a top generics player in the Philippines. The deal represented Lupin's sixth acquisition since 2008. was second among industry sectors in terms of deal value at US\$5.57 billion, marginally below the Telecommunication sector which had total transactions worth US\$5.78 billion in 2008. In the same year, India's largest pharma company, Ranbaxy Laboratories, was acquired by Japan's Daiichi Sankyo. This was a landmark deal in the Indian pharma history, where Ranbaxy's promoters relinquished their entire stake to the acquirers. The transaction paved the way for other promoters to consider whether they are better served growing their businesses independently or by realigning with other partners who may be able to help them to take their businesses to the next level of growth. In 2008, the world went through a credit



crunch, followed by a prolonged global economic downturn in the last quarter of 2008 and throughout 2009, both of which have also had a negative impact on the Indian pharma industry. The impact of the downturn, coupled with volatility in the Rupee, depleted the financial position of several Indian pharma companies, especially those which had substantial foreign borrowings on their balance sheets. Sustaining acquisition heavy structures became increasingly difficult Consolidation underway, despite challenges The Indian pharma industry as a whole is moving on a consolidation path. The year 2008 saw 57 mergers and acquisitions, a 128% increase over the previous year. Total investment in pharmaceutical, healthcare and biotechnology sectors

Some Indian companies which made significant acquisitions were now finding it difficult to integrate their foreign acquisitions with the Indian operations due to severe pricing pressures. Legislative reforms imposed in acquisitions' home markets also had an impact. Further, some companies booked losses on foreign currency convertible bonds (FCCBs), negatively impacting overall profitability. Nonetheless, investor confidence has remained fairly stable and deals continue despite challenges. The average deal size in 2008 was around US\$15.34 million, 20% higher than US\$12.82 million in 2007. The pharma sector had 57 deals, of which 17 deals were domestic. There were a total of 22 pharma private equity (PE) deals worth US\$337.41 million. Private equity players and investment funds played an active role in the deal market. Some of the investments were those of Citi Venture and Everest Capital of about US\$23.6 million in Nectar Lifesciences. Similarly, Kotak Private Equity Group, an arm of Kotak Mahindra Bank, invested about US\$10 million in Intas Biopharmaceuticals. Gujarat Biotech Venture Fund invested US\$12.7 million in Century Pharmaceuticals and SME Growth Fund invested US\$7 million in Centaur Group. Further, in 2009 another landmark deal was announced, with sanofi-aventis acquiring controlling stakes in the leading Indian vaccine manufacturer Shanta Biotech. Elsewhere we discuss some of the strategies that Indian companies employed to stay afloat during the crisis, including greater focus on leveraging their strengths in newer structures like Contract Research & Manufacturing Services (CRAMS), biotech & clinical trials, and increasing penetration in rural markets.

### Contract manufacturing

Contract manufacturing is a strong segment of the domestic market. Indian firms have several advantages over their Western rivals. The expertise gained in manufacturing generics through reverse-engineering has helped some companies streamline the process for getting manufacturing up and running. Costs are very competitive; indeed, they are only two-fifths of those involved in setting up and running a new manufacturing facility in the West. They can operate on significantly lower margins, given their low development and labour costs. Currently their key area of strength in



## Global pharma looks to India: Prospects for growth

Indian pharma companies have solid expertise in contract manufacturing and recent scrutiny around quality issues is driving significant improvement in manufacturing standards. Outsourcing is the manufacture of APIs. Some Indian pharma companies could probably benefit significantly by moving towards specialty APIs in the future. The Indian contract manufacturing segment was worth around US\$605 million in 2008 and is expected to reach around US\$916 million in 2010. The US FDA has already approved over 100 manufacturing sites – more than in any country except the US. Among six offices that the US FDA has overseas, two are located in India, in Delhi and Mumbai. All domestic producers are also obliged to comply with India's Good Manufacturing Practices, under Schedule M of the Drugs and Cosmetics Act, 1940. Indian manufacturers are currently facing some scrutiny around quality issues. In

2009, the US FDA took action against a few Indian companies after conducting a series of inspections and issuing warning letters against these drug makers. While such sanctions clearly pose significant challenges, some analysts see an opportunity as well. Indian companies are aggressively improving their manufacturing standards in response, and are therefore likely to be better positioned to take advantage of the upsurge in generics production expected as patents expire over the next five years. Some Indian manufacturers are also now incorporating Lean Manufacturing and Six Sigma principles to help them boost operational efficiency and further improve quality, while facilitating compliance.

## Clinical Trials

India's developing research skills are matched by its growing involvement in clinical testing. The country historically lacked the expertise to perform clinical trials because most companies only tested different processes for producing copycat versions of Western products and the rules were quite lenient. Several drug makers have also been caught behaving unethically or even illegally. The Supreme Court and Drug Controller General of India (DCGI) have criticized a process, although most Indian pharma companies dealing with international clients or exporting to foreign regulated markets look to attain such certification. The National Good Laboratory Practice Compliance Monitoring Authority was established under the Department of Science and Technology in April 2002. While this was undoubtedly a step in the right direction, there are still only about 33 GLP inspectors and about 12 GLP certified labs in the country. In addition, the ruling on whether a trial design violates ethical principles is left to individual local ethics committees. There is no central register of Ethical Committee decisions. Better infrastructure for regulation, ethics review and monitoring is required. The Clinical Establishments (Registration and Regulation) Bill, 2007, which is yet to be approved, proposes compulsory registration of all clinical trial establishments subject to compliance with prescribed standards. The bill also calls for setting up a National Council entrusted with forming the standards required. This type of more rigorous regulatory



oversight, together with increasing interest from foreign firms, should help to boost the Indian clinical trials market. Expectations are already high; some observers expect the market could reach US\$2 billion annually by 2012, up from just US\$300 million in 2008. The strong anticipated growth reflects some of the attractions India holds for this market. According to a study by Rabo India Finance, a subsidiary of the Netherlands based Rabo Bank, the huge patient population offers vast genetic diversity, making the country “an ideal site for clinical trials.” Further, many people are “treatment-naïve” and relatively easy to access. The United Nations reports that around 30% of the population lives in urban areas; and over 67 million people live in India’s six biggest cities alone. The ratio of doctors to patients – at 60 per 100,000 people – is also : Urban Indi

It has been commissioned by the WHO to develop vaccines against the latest strain of H1N1. An estimated two out of every three immunized children in the world have received a vaccine manufactured by the Serum Institute. As the risk of global pandemics grows, so do potential markets for new vaccines. OTC market holds significant potential Globally, over-the-counter (OTC) drug sales have been increasing in recent years. This trend is driven in part by aggressive efforts of global pharma companies to leverage the brand equity that major products have attained during the patent period. Other major winners in the OTC category include products where patients continue to buy particular remedies following an initial doctor’s prescription. OTC drugs may have even stronger potential in India. An increasing number of Indians are already dipping into their own pockets to buy OTC drugs. The OTC market was worth about US\$1.8 billion in 2009 and is expected to grow at 18% a year to reach about US\$3 billion in 2012. The Government is now considering plans to expand the list of drugs which can be sold outside pharmacies, since many common household remedies are more difficult to obtain in India than in other developing countries. An expansion of the list would substantially increase the potential market opportunity in this segment. Although the term ‘OTC’ has no legal recognition, all the drugs that are not included in the list of ‘prescription only drugs’ are considered as non-prescription drugs (or OTC drugs). OTC proprietary drugs are also regulated by the Drugs and Cosmetics Act and the Drugs and Cosmetics Rules. However, as they do not require a drug license they can be sold by non-chemists, so sales channels are more extensive. As discussed, much of India’s population relies on self-medication, and the purchasing power of the middle class is growing. These trends should drive growth in cough and cold formulations, gastrointestinal, analgesics, and dermatologicals. Only a few OTC active ingredients, e.g. acetylsalicylic acid and ephedrine and its salts, fall under the current DPCO price control. Counterfeits of popular OTC drugs are however a major issue. Indian consumers are also placing more emphasis on prevention and wellness, which should contribute to continued increases in sales of OTC vitamins and minerals. The market is already growing strongly. Profitable OTC drugs for some of India’s



largest pharma companies include artificial sweeteners, emergency contraceptive pills and nutritional supplements. The popularity of Ayurvedic therapies should also contribute to the sales of related OTC formulations. Some of the leading OTC brands in India are registered as 'Ayurvedic Medicines' because of their plant-based natural active ingredients. There are no price controls on 'Ayurvedic Medicines'. Some global pharma companies are already launching OTC products in India or buying OTC products. Novartis India launched Calcium Sandoz as an OTC supplement in 2000 and has now come out with Otrivin nasal drops in a spray form. Pfizer has launched Listerine, Benadryl, Caladryl and Benylin in India, OTC sales are on the increase, offering opportunities to achieve high volumes and enhance pharma brands in India. Global pharma looks to India: Prospects for growth

#### Medical devices

Medical devices represent a significant potential market, however the sector currently lacks the regulatory and R&D support necessary to achieve its full potential and faces stiff competition from Europe and China. Many pharmaceutical companies such as Bayer Healthcare, Johnson and Johnson Medical India (JJMI), Roche, and Piramal Healthcare are also looking to medical devices as a path to growth. The Indian medical devices and supplies market is at a nascent stage and was estimated at US\$2.75 billion in 2008. This is about 1.25% of the global medical devices and supplies market of around US\$220 billion in 2008. By 2012, India's medical devices market is expected to nearly double to around US\$5 billion. Improving health infrastructure such as an increasing number of hospitals, clinics and clinical laboratories and telemedicine services are expected to drive demand. The production of low value medical supplies and disposables is dominated by domestic manufacturers, whereas the high end medical equipment is generally imported. The sector consists of the large medical-dental- surgical equipment segment which is about 50-60%, implantable devices which are around 20-30%, and simple plastic disposables which are around 20%. The sector became regulated in 2005 under the Drugs and Cosmetics Act. The Ministry of Health and Family Welfare declared 10 products to be classified and listed as drugs under the Act. The list was expanded in March 2009 to include 19 more products. Under the Act, import registration requires product approval from another country's regulatory organization such as the US FDA or the EU medical devices directive. The manufacture of any new type of a medical device is not covered under the Act and requires approval from an expert committee put together for the purpose. In contrast to other biotech - related areas such as stem cell research and bioinformatics, the medical devices sector lacks the necessary regulatory and R&D support. Institutional support is also required for testing and validating facilities, as well as human resource development. In the future the industry is expected to face stricter regulation and competition from Europe as well as China.



Global Pharma's evolving business models and options in India Background The global pharmaceutical industry is changing. In a report by PwC Pharma 2020: Challenging business models, we describe how the pharmaceutical business model is witnessing a paradigm shift from a fully integrated company structure towards a future where companies use a wide range of outsourcing, partnership initiatives and other contractual and relationship arrangements to create networks of collaboration and discovery. Eli Lilly, for example, is currently transforming itself from a traditional fully integrated pharmaceutical company into a fully integrated pharmaceutical network, in order to leverage on a wider range of resources beyond its physical boundaries. It aims to get better access to innovation, reduce its costs, manage its risks effectively and improve productivity. This evolution in pharma business models has enormous repercussions for the Indian pharmaceutical sector, and related sectors like biotechnology. Indian companies now have an unprecedented opportunity to partner with global players across a wide range of activities, from contract manufacturing and licensing arrangements, to franchising and joint venture opportunities. The range of option spans a wide spectrum of levels of ownership and control, from straight forward outsourcing of manufacturing to licensing arrangements to more involved joint ventures and partially or wholly-owned subsidiaries. The amount of investment risk varies accordingly. Big Pharma is already well aware of India's importance. Many of them have been sourcing products from Indian manufacturers for some years, but have now started setting up their

## II.III. Biotech and Life Sciences

### II.III.I OVERVIEW

Biotechnology is neither a scientific discipline nor an industry, but a rapidly developing and still diffusing field of activity that cannot be adequately described by a short definition. In a report prepared for the OECD, Bull et al propose the following "working definition" of biotechnology: "Biotechnology is the application of scientific and engineering principles to the processing of materials by biological agents to provide goods and services." This definition attempts to avoid both too narrow or too wide a view, seeing biotechnology neither as essentially genetic manipulation nor as all activities involving living materials. Thus, "scientific and engineering principles" are taken to cover a variety of disciplines, but in particular microbiology, biochemistry, genetics, and biochemical and chemical engineering; "biological agents" refer to a wide range of biological catalysts but particularly to micro-organisms, enzymes, and animal and plant cells; "materials" are taken in a broad sense to include both organic and inorganic compounds; and the essential link of scientific activity with industry is considered in the "application... to provide goods and services," covering a variety of products such as pharmaceuticals, biochemical, and foodstuffs, as well as services such as water purification and waste management.



Essentially, biotechnology harnesses the catalytic power of biological systems, whether by direct use of enzymes or through the use of the intricate biochemistry of whole cells and micro-organisms. Defined in this way, biotechnology encompasses everything from the technology of bread-making to that involved in the production of human insulin from a bacterium induced to take up a non-bacterial gene and produce the protein coded by that gene. Its history goes back centuries in such activities as fermentation and brewing of alcohol or bread- and cheese-making. New scientific and technological advances in genetic engineering and other ways of transforming biological organisms in the 1970s revolutionized commercial possibilities, giving rise to a large number of applications with the development of new products and new techniques. The recent technological developments in genetic engineering, enzyme technology, and fermentation technology are often called “the second biotechnological revolution” (or the “new biotechnology”), the first being generally recognized as Pasteur’s revolutionary treatment and prevention of human and animal infectious diseases through immunization in the late 1880s.

New biotechnology is typically a science-led technology, in the sense that most of the inventions and process and product innovations have emerged from breakthroughs in scientific and technological research undertaken in universities, research institutes, and industrial R&D departments. It denotes a broad and heterogeneous field of applied sciences and related strategic research, encompassing several distinct technologies utilized in a wide range of industries: agriculture, pharmaceuticals, chemicals, and even weaponry are all potential beneficiaries of the advances being made.

Industries are increasingly using biotechnology to produce industrial substitutes for natural agriculture products manufactured in large quantities (and mainly exported by developing countries). Many new substances are competing with each other as viable substitutes for a particular product (foodstuffs, flavors, additives, fragrances), a trend very similar to the one encountered in new materials. The demand for new foodstuffs and pharmaceutical products (e.g. vaccines) is becoming increasingly diversified, and biotechnology is providing industry with the opportunity to abandon commodity chemicals and move into more lucrative specialty and agricultural chemicals. Older biotechnological techniques (e.g. fermentation) are themselves benefiting from additional inputs from genetic engineering and new enzymatic processes.

Bio-industry is reorganizing itself to respond to these trends: conscious of the economic stakes involved in the enormous potential markets for the new biotechnological products, many chemical, pharmaceutical, petrochemical, and industrial food corporations are creating their own research laboratories in plant biology and physiology and are investing in small venture-capital companies engaged in advanced research as well as in larger companies with



R&D experience. As new products depend heavily on new and more productive processes and call for rigorous quality standards and safety tests, bio-industry is typically science- and capital-intensive and requires highly qualified staff and skilled labour.

A number of biotechnology developments are having profound technical impacts on processes and products. As with new materials, these technical changes are inducing important structural changes in the economy :

- New commercial biotechnological devices and methods of diagnosis and prevention, based on monoclonal antibodies, biosensors, and gene probes, are revolutionizing the fields of health, agriculture, and environment, permitting the extension of hitherto limited physical and chemical measurements to the potential control and regulation of complex systems in the human body, in animals, plants, the environment, and in industrial processes.
- The specificity and diversification of biotechnological products are increasing, as commodity chemicals tend to be replaced by specialty and agricultural chemicals, closer to user demands. Monoclonal antibodies can be used as ultra specific drug vectors against specific tissue antigens, opening the way to the introduction of medicines specific to individual patients (personalized therapy). Several distinct new biotechnology products tend to compete with each other as substitutes for the same traditional product: for instance, more than eight new sweeteners compete to replace sugar.
- Biotechnology contributes to a reduction in the intensity of the use of energy and materials: the production of chemicals through enhanced fermentation or enzymatic processes, industrial purification by monoclonal antibodies, and the replacement of sugar by new compounds with dramatically superior sweetening power may be mentioned as examples of this trend. New immunodiagnostic tests based on monoclonal antibodies and gene probes, besides being rapid, specific, and easy to use, are sensitive to smaller quantities of test material and imply a dramatic reduction in the quantities of blood, urine, cells, etc., needed. Biotechnological processes and products present the ability to use renewable energy resources and to recover reusable or marketable by-products in the processing industry, thus increasing the productivity of all energy and materials inputs through “maximum recycling” and “minimum effluents.”
- The methodologies employed in the development of new products and processes in biotechnology rely on rigorous scientific knowledge in numerous fields, thus increasing rationality and diminishing empiricism in research and industrial production through a goal-directed and systematic understanding of the processes involved. This is for instance apparent in the radical change in the methods of pharmacological research, which has shifted from the screening of a large number of molecules to the targeting of a suitable molecule to act upon the mechanism of a specific disease. This change in the paradigm of



pharmacology, made possible by new biotechnological research instruments and products, has simplified and rationalized the process of innovation and profoundly affected the pharmaceutical industry: from being a drug supplier, it is becoming an “industry of function,” i.e. a supplier of a wide range of therapeutic products, diagnostics, auxiliary materials, equipment, machines, biomedical systems, and technology. A similar evolution towards rationalization of the innovation process in industry can be expected in the agrochemical and food industries.

The bulk of biotechnology sales in terms of volume and value can be grouped in three main groups of products ]:

1. Very high value medical products used in small quantities, like vitamins ( $B_{12}$ ), antibiotics (cephalosporin), enzymes, novel biological products (interferon, tissue plasminogen activator - TPA), or monoclonal antibodies, vaccines, which are extremely expensive and whose production in commercially viable quantities has only become possible with recent genetic engineering technologies.
2. Low value products that have to be sold in enormous quantities, usually produced by fermentation processes, and that generally compete against similar commodities produced by more traditional means, like ethanol, methane, is glucose, and several effluent and waste treatment substances.
3. An intermediate group of organic chemicals, such as amino and organic acids (glutamic acid, lysine), fungal proteins used in novel foods, and bacterial cultures used as soil inoculants to protect plants from pests or to supply additional nitrogen to the roots, all of which also have to compete against other processes.

Some applications

Biotechnology inventions and innovations have already been applied in numerous industrial sectors.

**FOOD AND AGRICULTURAL PRODUCTION.** The potential of biotechnology for increasing agricultural productivity is high, in terms of both increasing the yields of cultivated plants and of obtaining foodstuffs with higher nutritional value. Many foodstuffs are produced by fermentation, and enzymes are now widely used as processing aids in food manufacturing. Acetone, citric acid, ethanol, and other chemicals are, or have been, produced industrially by fermentation. The digestion of wastes anaerobically is not only part of sewage treatment but also a way of generating methane gas as a source of energy. Biotechnology offers ways of improving even traditional fermentations like the production of silage, a fermented gas product used as cattle feed: microbial cultures are available that ensure that the correct sort of fermentation takes place. It is expected that by the year 2000, five-sixths of the annual increase in agricultural production in the world will be due to new biotechnology and other



yield increases, while only one sixth will result from the increase in the area of land used in production. In the next century, about 75 per cent of all major seeds may be developed by genetic engineering or tissue culture.

Many developing countries have established programmes to incorporate biotechnology into agricultural and agro-industrial activities. Some have already successfully applied biotechnology to their production of palm coconut oil, eliminating major disease traits and thereby increasing productivity by about 30 percent. A marked increase in production, using cloning techniques to enable the propagation of high-yielding varieties of oil-palms and cocos, would make it possible to improve the fat content of diets and thus cover the additional nutritional needs of growing populations. But the production of oil-palm and coca clones using tissue culture techniques, where the applications could benefit millions of small landholders in developing countries whose standard of living depends entirely on the productivity of their holdings and whose cultivation techniques would have to be adapted to the properties of the new clones, constitutes a break through that cannot be fully exploited before the end of the century.

Wood exports play an important role in the economy of many tropical developing countries. The in vitro micro propagation of forest tree species for their wood or paper pulp is therefore of great economic interest; this technique is for instance being studied for the large-scale production of clones of several eucalyptus species with better resistance to cold weather and greater wood yield. Similarly, the multiplication and exploitation of drought-resistant plant species of commercial interest could afford useful outlets for a number of developing countries located in arid or semi-arid zones. For instance the jojoba, cultivated today in all five continents, can tolerate temperatures up to 50 C and its roots can search for water at a depth of 30 metros. It offers the possibility of controlling desertification by fixing soils and of earning a good income from a valuable oil extracted from its seeds, thus bringing employment to the rural areas and the chance to export a multi-purpose product with a high potential demand on the world market. Jojoba oil can be used industrially as an excellent transmission fluid or lubricant for fast rotating machines under high pressures and high temperatures (replacing the strategic sperm whale oil and thus limiting the massacre of sperm whale and other cetacean populations), as a shampoo and a sun cream in the cosmetics industry, as a treatment for skin diseases and burns in the pharmaceutical industry, as a wax to replace other plant or animal waxes, and meal proteins could be extracted from it for use in animal feed

Tissue culture techniques have been applied to rice, maize, wheat, barley, cabbage, lettuce, tomatoes, peas, onions, potatoes, rapeseed, tobacco, sugar cane, and cotton for such purposes as gene transfer for disease resistance and salinity tolerance, selection of plants resistant to



pathogens, and recovery of immature embryos from defective seeds. Substantial research in biotechnology and genetic resources has led to the adoption of genetic selection and breeding techniques by several countries, as well as to the improvement and production of local varieties of crops with higher yields, greater pest resistance, and earlier maturation. Progress in fermentation technology for the production of feed components, single-cell protein and industrial chemicals, as well as recent developments in enzyme technology for the production of antibiotics are expected to have a large impact on industry and agriculture in several developing countries. Nitrogen-fixing biotechnology, which enables non-leguminous crop plants to fix atmospheric nitrogen should permit a two to fourfold increase in corn yields.

**LIVESTOCK HUSBANDRY AND ANIMAL HEALTH.** Genetic engineering is already being applied in animal husbandry. Bovine embryo transfer techniques can have great zootechnical and economic advantages. Besides helping to speed up the improvement process or the preservation of superior breeds showing special characteristics (for instance, better resistance to tropical bovine diseases), embryo transfer can increase the production of meat and milk, each inseminated cow being able to give birth to up to 20 calves per year. The development of DNA probes can permit the sexing of the bovine embryos to be transplanted, thus selecting male embryos for meat production and female embryos for milk production. In some developing countries this technique could help overcome chronic milk shortages.

Genetic engineering also provides the possibility of developing and producing large quantities of new vaccines against many cattle, swine, and poultry infectious diseases that plague developing countries, like aphthous fever, theileriasis, hog cholera, colibacillus and viral diarrhoea, pseudorabies, coccidiosis, fowl pest, etc. Traditional vaccines against the aphthous fever virus, which is endemic in large areas in developing countries, are prepared by inactivation or attenuation of virus strains obtained from material collected from the lesions themselves, and imply the manipulation of very large quantities of virulent virus; in addition, these vaccines are unstable and must be stored under refrigeration, which is not always easy in tropical countries. The production by DNA techniques of an effective, safe, and heat-stable vaccine against this disease will have a great economic impact in developing countries, which will be able to vaccinate their herds systematically and to increase the export of their livestock products to disease-free industrialized countries.

Fowl pest is the principal virus disease of poultry in the world, and it has devastating economic effects in several developing countries, where poultry meat and eggs form a major contribution to the human diet; most of the commonly used vaccines are relatively ineffective and must be administered on several occasions in high doses, a task rendered very difficult, particularly in countries where village poultry and small flocks predominate. A new, simple, and cheap vaccine is needed; research in genetic engineering may permit the production of massive



quantities of antigen to be used for the preparation of an improved vaccine, in terms of potency and geographical utility.

**PHARMACEUTICAL AND CHEMICAL PROCESSING.** Biotechnology has been efficiently used to produce new pharmaceutical products, such as interferon, growth hormone, lymphokines, and tissue plasminogen activators. Biosynthesis of growth hormones of the main livestock species by genetically engineered micro-organisms can markedly improve their productivity and would have significant effects in intensive livestock husbandry. Bovine growth hormone can increase milk production by 20 per cent at the same feed costs.

**MEDICAL TREATMENT.** The health care sector has attracted the most early interest for various reasons. Health care covers a large number of human activities, ranging from “formal” care provided by organized health services (clinics, hospitals, and other organizations for care, cure, or preventive medicine), “alternative” medical practitioners and self-medication or self-diagnosis products, to unpaid care of the sick and infirm. Biotechnology is particularly applicable to health care products in all these activities, including pharmaceuticals, vaccines, and diagnostic kits. It also provides ways of more rapidly screening potential pharmaceuticals, speeding up and lowering the high cost of pharmaceutical innovation.

Genetic engineering offers a way of producing on a larger scale biological molecules with therapeutic value that were formerly very scarce and therefore expensive, if available at all. Examples of these substances would include the first product of DNA organisms for human therapy, human insulin, as well as human growth hormone, the interferons, interleukin, and other bioactive proteins. Many higher plants possess active compounds that form the starting material for a large range of drugs. The 1986 market for plant-derived pharmaceuticals was estimated at US\$9 billion in the United States alone. Tropical developing countries, whose pharmacopoeia is very rich and which constitute the main exporters of plant medicinal raw materials, could start from naturally occurring compounds and resort to biotechnology to isolate them and produce novel pharmaceuticals, thus reducing current imports. In addition, the amount of active product required for pharmaceutical uses of these substances is usually low and the pay-off potentially huge in many instances; however, the regulations concerning the commercialization of medicines apply equally to plant medicinal products, and since most therapeutic substances require painstaking testing, development may often be a lengthy and expensive process.

By contrast, a large number of new methods of testing human fluids and infections have been developed, based on monoclonal antibody technology. The fastest growing diagnostics markets are in immunology and microbiology. Monoclonal antibodies used in diagnostic kits offer products that, because they are not ingested by or applied to people, could be brought



quickly to market and for which there is growing demand. Already, monoclonal antibody- based tests sold in pharmacies for confirming pregnancy are being established as a do-it- yourself market, and other over the-counter products are being introduced for monitoring fertility. Monoclonal antibody products are also becoming a vital part of the growth of new types of imaging techniques, and accurate, rapid, and cheap tests based on DNA probes and biosensors are promising future developments.

The cost of the techniques involved are falling sharply so that they are likely to become, with the improvement of current vaccines and the development of effective, safer, and cheaper new vaccines, the major instruments of public health policy in developing countries.

Recombinant DNA techniques can be used to produce large quantities of immunogenic proteins synthesized by genetically engineered microorganisms, which are the basis for effective new vaccines. A genetically engineered vaccine requires no inactivation procedure as conventional vaccines do, facilitating its administration and reducing cost; additional economies may arise from the replacement of expensive embryo culture systems by relatively simple conventional bacterial media, from savings on high-security plants usually required in the production of conventional infectious disease vaccines, from reduced transport and storage costs, and from reduced testing, since the vaccines do not contain the disease-producing pathogen. Recombinant DNA techniques are being developed for the production of vaccines against viral hepatitis B (highly endemic in regions of Africa, Asia, and South America), rabies (a serious health problem in developing countries and still a cause of high mortality in domestic livestock), herpes, cholera, leprosy, malaria (the most widespread human infectious disease), schistosomiasis (chronic throughout tropical countries), onchocerciasis, sleeping sickness, and Chagas' disease.

#### Advantages and disadvantages

One of the main advantages of these innovations in biotechnology has been the possibility of their economic use on a small scale, without large infrastructure requirements, and their application at different levels of complexity, investment, and effort. It is in fact possible to adapt sophisticated biotechnical technologies to low-cost operations without eliminating the chances of success. This characteristic may facilitate the use of biotechnology in developing countries, provided that the promises brought to them are accurately identified, as well as the positive or negative impacts on their economy, their way of life, and their social structure. For instance, the expected growth in the market for gene synthesizers, protein fractionation equipment, or gene-splicing enzymes requires the provision of adequate infrastructure in terms of these enabling technologies, as well as culture collections and information systems. These requirements present an increasing concern to developing countries wishing to establish



a sound base in biotechnology, which must therefore reconcile the spectacular progress of biotechnology with the lack of funding resources and qualified personnel needed by most sectors of bio-industry.

#### Importance of Biotechnology:

- In today's era, when people are exposed to so many physical disorders, biotechnology plays a vital role in developing medicines, vaccines, energy production, and conservation. To keep pace with the competitive world, India has launched a comprehensive programme in biotechnology to make use of the resources available. In India the Department of Biotechnology (DBT) was established in the year 1986 under the ministry of Science and Technology.
- It is imperative that India has to keep up with the increasing demand for food from the ever expanding population. Agricultural land is also shrinking. Genetic engineering of plants to increase their yield is the way to go in future.

Biotechnology can be used in a wide range of economic activity ranging from environment, animal husbandry, medicinal and aromatic plants, bio fuels, aquaculture and products like silk and leather

#### I.III.II Outlook

GIA announces the release of a comprehensive report on the Biotechnology Industry in India. The Indian Biotechnology Industry is forecast to garner revenues of \$11.6 billion by the year 2017. Rising investments from foreign companies, increasing R&D and infrastructure investments from private and public sectors, emerging market for contract research, increasing clinical capabilities in drug discovery, and rising opportunities to outsource manufacturing functions to the country are some of the key factors driving market growth. Growth is also expected to emanate from indigenous factors such as rich biodiversity, increasing size of population, rising incidence of lifestyle diseases, large pool of skilled scientists, substantial infrastructure facilities, and supportive governmental policies.

#### INDIAN BIOTECH INDUSTRY

The Indian biotechnology industry was adversely affected by the global economic downturn, and the resultant impact on the foreign exchange rate. There was a significant slowdown in the industry growth during the financial year 2008-09, with industry growth continuing to remain positive although at a decelerated pace. Major factor contributing to this slowdown is the heavy reliance of the Indian industry on exports. However, following a substantial



slowdown due to the global economic recession, the Indian biotech industry emerged strong in 2010. The industry is poised to witness another period of high growth, as drug developers worldwide are looking to India as a low-cost destination for outsourcing their discovery and production work.

Biotechnology is touted as the next big thing for India on the global front, following a remarkable debut in the area of information technology. The area represents a fast-growing, knowledge-based sector in India, which plays an important role in the rapidly growing economy of the country. Biotechnology in India is a highly technology-based industry, which presently accounts for a share of about 2.0% in the global biotech industry. The industry ranks among the leading 12 biotech industries globally, and is the third largest in Asia, next to Japan and South Korea. Despite its low share in the global market, the Indian biotech industry has a remarkable potential for growth in the ensuing years, given its skills, knowledge, cost-effectiveness, and infrastructure facilities. The Indian government, on its part, has been both proactive and supportive in driving innovation in the Indian biotechnology sector. Most of the support from the Indian government has been in the form of regulations, grants for fledging companies, and tax incentives among others.

Exports continue to account for the largest share in the revenues of the Indian biotech industry, reflecting the continued focus of Indian biotech companies on the international markets. While segments such as bio-pharma, bioinformatics and bio-services represented a substantial chunk of the export market, bio-industrial and bio-agriculture generated a major share of revenues serving the domestic market. Western India's domination in the Indian biotech industry continues, accounting for the largest share in the industry in terms of revenues. However, the southern region, with biotech hubs such as Bangalore and Hyderabad, represent the largest in the country when it comes to the number of companies. The number of companies in the Southern region reached 172 in 2010.

Bio-Pharmaceuticals represents the largest sector in the Indian biotechnology industry, as stated by the new market research report on Biotechnology In India. Bio-Services trails behind Bio-Pharmaceuticals. Growth in the market is primarily expected to emerge from Bio-Agriculture sector, which is forecast to emerge as the fastest growing sector in terms of revenues during the analysis period.

The Bio-Pharmaceutical sector in India, which primarily comprises therapeutic drugs, vaccines, animal biologicals, insulin, diagnostics and stations, continues to account for the largest share in total revenues of the biotech industry in the country. Within the biopharma sector, vaccines including animal and human vaccines, account for the largest share. Owing to awareness about the disease prevention, education, government participation and higher disposable income, the vaccines market is expected to continue driving growth in the



biopharma segment. The bio-agriculture sector in India rides on the success of Bt Cotton, which remains the only commercially approved crop in the country. As of 2008, there were 30 seed companies in the market producing 374 Bt cotton hybrids. Meanwhile, the bio-services sector continues to flourish, deriving a major chunk of its revenues from exports. Several companies have swarmed into clinical research and contract research services areas over the past five years. The trend is expected to continue further, due primarily to the strong potential this sector has to offer and remarkable growth experience in the recent years.

Over 350 companies operate in the biotechnology sector in India. Leading the suite include Biocon, Serum Institute of India, and Panacea Biotech. Major players profiled in the report include Biocon, Serum Institute of India, Panacea Biotech, Nuziveedu Seeds, Reliance Life Sciences, Quintiles, Rasi Seeds, Novo Nordisk, Shantha Biotechnics and Mahyco.

The research report titled “Biotechnology In India: A Market Report” announced by Global Industry Analysts Inc., provides a comprehensive review of the Indian Biotechnology Industry, current market trends, key growth drivers, overview of major sectors, recent product approvals, recent industry activity, and profiles of major/niche global as well as regional market participants. The report provides revenue estimates and projections for biotechnology industry in India for the years 2009 through 2017 by the following sectors – Bio- Pharmaceutical, Bio-Agriculture, Bio-Industrial, Bioinformatics, and Bio-Services.

It is clear from the revenue statistics that the trend of growth in this industry has continued and the industry has crossed ` 18,000 crore or \$4 billion in dollar terms, posting a 21 percent growth over previous year’s revenues of over ` 14,000 crore (approx \$3 billion).

#### Established Players & New Entrants

It is interesting to note the overall ranking in this sector. While the top players have maintained their positions with Biocon, Serum & Panacea leading the way, Transasia and Ankur Seeds have posted exponential growth figures to leapfrog to 10th & 11th position respectively. Continuing the trend of growth in the seed business, Krishidhan Seeds has also climbed to join the top 20 firms. Other biotech SMEs that have shown incredible growth over the last year are Anthem Biosciences, JK Agrigenetics, Metahelix, Bayer Cropscience, Ecron Acunova and Semler Research. Surprisingly though, many established players have seen a fall in revenues such as Shantha Biotech, Jubilant Life Sciences and Suven Life Sciences.

#### The Southern-Western Leadership

The southern region is slightly ahead of the western region in terms of total share of revenues,



however, the south comfortably leads in the number of firms (172 vs 137). Bangalore and Hyderabad are leading the way and the recent announcement of building a cluster and incubator in Bangalore will help maintain the leadership of this region. The north cluster follows at the third spot but hopefully new clusters, especially in the NCR, will help close the gap in the future. What is revealing is, that despite possessing huge bio-resources and many leading institutions, the eastern part of India is lagging in terms of proper biotech enterprises. The states of Bihar, West Bengal, Orissa, Assam and the North East need a focused strategy to seed biotech enterprises.

The survey shows that there are now 362 firms in India that are focused on some aspects of biotechnology. This is an important indicator. The vibrancy of a knowledge intensive and highly regulated industry such as biotech depends on the number of new start-up firms that are establishing and injecting fresh business ideas, solutions, and products built on innovation. What do we need to have in policy terms to say that India can treble the number of innovative biotech firms in the next five years to cross the one thousand mark? How do we make the biotech landscape investor friendly and ease the burden of establishing and operating start-ups? Indeed for the sector to grow even further several concomitant factors have to be addressed:

#### Streamlining Regulation:

Regulation that enables innovation is the key. ABLE facilitated, as “Knowledge Partner” a regulatory session at Bangalore INDIA BIO last month. What became clear from discussions there as well as from all other fora is, that Industry will like to have a scientific evidence-based, clear and non-ambiguous, streamlined and transparent regulatory mechanism where procedural delays are minimized and technical considerations are dealt with by expert committees that are not created on an ad-hoc basis.

For India to achieve a leadership position in biotechnology, this is foremost in all sectors of biotechnology, i.e., biopharma (including diagnostics & devices), agri-biotech and industrial biotech including food & nutrition. Indeed, it goes without saying that investor confidence is directly linked to a clear and streamlined regulatory landscape.

#### Early Stage Funding

The unique nature of this sector necessitates very early stage funding especially at the “pre-prototype” stage, for this is where the risks are at their highest for both big and small biotech firms alike. While SBIRs and BIPPs have injected much-needed early stage funding, India has to find a mechanism to scale-up these funding mechanisms. The recent DBT- Wellcome Trust initiative in “R&D for affordable healthcare” is indeed a step in the right direction. Another important bottleneck has been the “DSIR certification” criteria for access to these funding schemes. Perhaps streamlining the DSIR certification process such that valuable time and energies are not lost for firms will go a long way.

#### Access to Technology Resources



Common access to efficiently-run technology platforms for the industry is crucial as it saves cost and time while it allows firms to conduct cutting edge development of products.

#### The Future Ahead

Indian biotechnology industry is showing signs of consistent and mature growth in the 20 percent range. It has done well despite the global recession. Indian biotech firms are globalizing and strategically partnering with other firms – the Pfizer-Biocon and Glenmark-Sanofi deals are indicators of the kinds of new partnerships to emerge.

It is clear that vaccines, diagnostics and devices along with biosimilars will be key growth areas in biopharma. The agri-biotech sector is poised to grow – especially, the seed business in the area of new hybrids. Regulatory clarity in both biopharma/healthcare & agribiotech will be crucial for the future. There is a perceptible dynamism in systems biology (or BioIT) firms that are building predictive models, both disease and organ models, and enabling drug discovery research.

#### Global Vaccine Market To Top 23 Billion Dollars

Vaccines are another prominent area of growth. India is one of the largest vaccine producers in the world, with many new vaccines set to be launched in the next five years. The vaccines segment was around US\$780 million in March 2008, growing at a compounded annual growth rate (CAGR) of 15%.<sup>67</sup> India currently exports vaccines to about 150 countries. It also meets around 40-70% of the World Health Organisation (WHO) demand for the DPT (diphtheria, pertussis or whooping cough, and tetanus) and the BCG (bacille calmette-guérin) vaccine against tuberculosis, and almost 90% of its demand for the measles vaccine.<sup>68</sup> The Serum Institute of India, founded in 1966, is a leading player which produces and supplies low-cost, life- saving vaccines for children and adults. The Institute is also the world's largest producer of measles and DPT vaccines. Figure 4: India has more US FDA-approved manufacturing plants than any country except the US Source: Crisil Research, Bulk drug exports to scale up in the regulated markets (December 2008) for India; ICICI Securities, Indian Pharma Sector: Sector Update (December 2008) for Italy, China, Spain, Taiwan, Israel and Hungary.

It has been commissioned by the WHO to develop vaccines against the latest strain of H1N1. An estimated two out of every three immunized children in the world have received a vaccine manufactured by the Serum Institute.<sup>69</sup> As the risk of global pandemics grows, so do potential markets for new vaccines

The global vaccine market is expected to top \$10 billion this year and \$23.8 billion by 2012, according to an analyst. Pediatric vaccines have historically dominated this field, but adult vaccines will see a big spike due to increased uptake of influenza and hepatitis vaccines, predicts a report from Kalorama Information. Cancer vaccines will also become a major player in the vaccine market, rising from its current level of \$135 million to more than \$8



billion by 2012. .

Merck's cervical-cancer vaccine Gardasil is paving the way for this sector. In addition to Gardasil and GlaxoSmithKline's Cervarix, there are several other vaccines targeted at different cancers will become significant players. Prostate cancer will also be a significant opportunity. Cell Genesys' Gvax and Dendreon's Provenge will lead this area, which is anticipated to be worth \$3.2 billion by 2012. Another top runner is Merck KGaA's lung-cancer vaccine Stimuvax, which is expected to generate \$699 million in sales by 2012.

Adult vaccines will rise from \$3.7 billion (their total worth in 2005) to \$7.5 billion in 2012. The report projects the combined global adult and pediatric vaccine markets will total \$15 billion by 2012.

"The fastest growing segment in the adult vaccines area is influenza vaccines, Hepatitis vaccines, with a projected growth rate of 8-9 percent, are the second fastest growing. Flu vaccines, which are forecasted to grow by 13.2 percent, will top \$4 billion by 2012. The leading flu-vaccine manufacturers include Sanofi and Novartis.

Hepatitis vaccines are projected to reach \$1.5 billion by 2012. The top-selling hepatitis B vaccine currently is GSK's Engerix-B. influenza, HIV and cancer will be the biggest growth areas in the vaccine market. The biggest growth in the flu-vaccine market will come in the area of vaccines for pandemics that could be caused by the H5N1 strain of bird flu. "A number of companies are developing vaccines against the H5N1 strain, including GSK, Sanofi, Novartis and Baxter.

For the regular annual flu vaccine, some companies are working on developing a multivalent vaccine that might protect individuals against five or six variants of flu strains rather than the three offered by current vaccines.

But the main thrust right now is in developing vaccines to protect against a flu pandemic. Although several pharmaceutical and biotech companies are developing HIV vaccines, it was unlikely any would pan out in the foreseeable future. A major problem inhibiting development of an effective vaccine is that it's not well understood how the immune system controls HIV infection, if at all. This vaccine, which is still in clinical development, is intended to reduce the number of shots required from three to two. But it's too early to project how much revenue that would generate, Woolsey said.

The growth potential of BioIT firms in India built on India's strengths in IT and biology remains high. The CRO industry has become highly competitive and many CROs now have to show unique differentiation other than cost arbitrage. Many CROs have chosen to follow a risk-sharing model for growth to transition themselves into drug discovery firms. While this transition might take years it is a positive trend for the industry.

Biotechnology Regulatory Act in order to set up the National Biotechnology Regulatory Authority (NBRA). The NBRA is expected to be an autonomous body formed specifically to regulate the biotechnology segment and reduce regulatory overlap. Further funding support from the Government will be critical in ensuring continued growth in the biotech industry.



The Government can play a vital role in funding incubation and early stage ventures. A growing biotech industry should help India to gain a share of the global opportunity currently emerging around biosimilars. The biosimilars market is likely to grow by around US\$2 billion by 2014, to reach a total of US\$19.4 billion, following key patent expiration for epoetin alpha, filgrastim, interferon beta 1a, interferon alpha, human growth hormone (hGH), and insulin-glargine. This represents a CAGR of 89.1% from 2009 to 2014. All told, around US\$25 billion worth of biologics are expected to go off patent by 2016. These patent expirations open the route for biosimilars, the equivalent of generics for biologics. Indian biotech companies are slowly building capabilities in development and manufacturing of biosimilars. Intas Biopharmaceuticals is now developing a biosimilar of a protein used to treat the side effect of cancer therapy, for example. Biocon has initiated registration of its human recombinant insulin with the European regulatory agency, EMEA and intends to launch it by 2011. Reliance Life Sciences has launched three biosimilars—ReliPoietin (Erythropoietin), ReliGrast (GCSF), and ReliFeron (Interferon Alpha 2b) in the domestic market in 2008 and is currently conducting clinical studies for erythropoietin and granulocyte colony stimulating factor (GCSF) in Europe. Wockhardt has launched its recombinant erythropoietin, Wepox and insulin, Wosulin in the domestic market and is conducting clinical trials in the US for Wosulin. It has built capacities in erythropoietin, hepatitis vaccine, recombinant insulin and insulin glaritus. DRL has already launched filgrastim and rituximab in emerging markets and has a pipeline of 10 biogenerics in various stages. The challenge for the development of biosimilars arises from the fact that biologics are more complex than small molecules and chemically synthesized drugs; therefore their replica are – in contrast to ‘traditional’ small-molecule generics – ‘similar’ but not identical to the original drug. Consequently, the registration of biosimilars requires more data than is required for generics, and manufacturers have to demonstrate safety in pre-clinical and clinical studies. This makes the registration of biosimilars a costly and time-consuming process, and lessens the chances of a successful launch. Developing biosimilars is costlier than developing chemical based generics, requires a greater capital investment and operating costs of manufacturing are higher. These factors mean that developing biosimilars represents a higher risk area of R&D. Pharma companies need to balance the risks and rewards when considering whether to enter the biosimilars market. The decision to enter the market should only be made based on a clearly defined long-term biosimilar strategy, including development and manufacturing capabilities, marketing, pricing and regulatory expertise. India’s cost advantages in many of these areas could help it gain a stronghold globally in this growing market. The bottom line: India’s developing biotech industry and cost advantages should drive significant growth in local development of biosimilars for the global market. Global pharma looks to India: Prospects Bioinformatics in India The bottom line: India’s existing knowledge capital in IT provides a natural base for the development of bioinformatics research and operations.



The modern process for drug discovery and testing now generates very large quantities of data through computer modeling and simulations, genetic sequencing, and other data-intensive processes. Further, as we noted in Pharma 2020: The vision, pharma companies are under increasing pressure to document the efficacy of their products; tracking patient outcomes represents a further source of large quantities of data. In order to facilitate the storage, management, retrieval and analysis of this large pool of data, a new subsector of the IT sector has emerged – bioinformatics. Tools have been developed which can help lower cost, improve efficiency, and streamline the process of documenting a drug's efficacy throughout development until launch and beyond. India's strength in the IT sector and its growing pharmaceutical sector are driving growth of this emerging area. Revenues for the Indian bioinformatics industry were around US\$48 million as of March 2009. It is an export driven segment with earnings of around US\$37 million from overseas. Domestic revenues contribute around US\$11 million. Some companies provide only specialized bioinformatics services; in other cases, local life sciences companies are integrating bioinformatics services into a complete portfolio of research capabilities. India is now actively targeting the bioinformatics market, with the construction of its first biotech-IT park in Bangalore, at a total cost of about US\$87 million. The first phase of the park has been completed and a tender for the development for phase-II is expected soon from the local state Government. Several Indian companies, including the Bangalore based Strand Genomics and Ocimum Biosolutions, have already made forays into the bioinformatics industry. Recently, Ocimum was granted a patent for its method and system to manage and query gene expression data based on quality. The Institute of Bioinformatics has also developed a comprehensive database of all known human proteins and their characteristics, and the Centre for DNA Fingerprinting and Diagnostics in Hyderabad along with Sun Microsystems has operationalised a Centre of Excellence focusing primarily on medical bioinformatics. Some global pharma companies are already drawing on the emerging resources. Tata Consultancy Services has signed a deal with GSK to set up a support centre in Mumbai for the company's global drug development programme. Biocon has taken its tie-up with Bistol-Myers Squibb further by setting up a dedicated research facility, through its subsidiary Syngene International.

#### Stem cell research

Stem cells are seen by many as a powerful tool for improving the research and development process in the pharma industry. Stem cells are being used to develop some types of direct therapeutic applications; they are also becoming increasingly important as a tool to test potential drug toxicity. India has already made considerable progress in this area. India's entry into stem cell research has progressed from a few institutions to currently over 40 institutions and hospitals involved in stem cell research. In 2008, Stempeutics, a leading stem cell company, launched its second stem cell laboratory on the Manipal University campus for advanced stem cell research in human embryonic stem cells. Further activities



followed in 2009 –one example is a joint venture formed by Stem Cyte in India with Apollo Hospitals and Cadila Pharmaceuticals to provide stem cell therapies. Several major research institutes, such as the National Centre for Biological Sciences in Bangalore, the Centre for Cellular and Molecular Biology in Hyderabad, the National Centre for Cell Sciences in Pune and the National Brain Research Centre near Delhi, are investigating the use of stem cells to regenerate nerve, heart and adult muscle cells, and repair damaged bone tissue. The L.V. Prasad Eye Institute has also treated blindness using stem cells derived from the eye. While the Indian Government is strongly promoting biotech generally, concrete Government funding for stem cell research in India still lags far behind that provided in other countries such as the US. There are also no laws per se governing stem cell research, although there are specific guidelines which classify stem cell use into three categories: permissive, restricted, and prohibited. The Indian Council of Medical Research is currently drawing up plans for a national stem cell initiative to promote clinical applications of stem cell research in ophthalmology, cardiology and spinal cord repair, and build links between scientists and doctors. India's ex-president Dr. A.P.J. Abdul Kalam had also identified stem cell research as one of the areas on which the country should focus its efforts. Given India's growing presence in biotech, drug discovery, and clinical testing, the country may be well positioned to take a leading role in leveraging the potential of stem cell technology throughout the pharma value chain.

India has made considerable progress in stem cell research and is well- positioned to leverage growing capabilities in this area. Global pharma looks to India: Prospects for growth

#### I II.III.III Opportunities and Threats: IND

The global biotechnology industry delivered solid top- and bottom-line growth in 2010, with the industry achieving aggregate profitability for the second year in a row.

Yet funding for research and development has grown increasingly scarce for the vast majority of firms in the sector, which tend to be pre-commercial stage companies that depend on years of funding to support drug development. This has placed new pressure on the traditional biotech business model, and may reshape how companies pursue R&D in the future, according to Beyond borders: global biotechnology report 2011, Ernst & Young's 25th annual report on the biotech industry.

"While the biotech industry's aggregate performance improved in 2010, there is now a widening gap between large, established companies and those at earlier stages for whom access to capital continues to be difficult," said Glen Giovannetti, Ernst & Young's Global Biotechnology Leader. "Biotech firms will need to adapt creatively to this environment by doing more with the funding that is available and by working from the earliest stages of development to demonstrate the potential value of their products to investors, payers and regulators."



### Key results

- Record-breaking profitability: Companies in the industry's established biotech centers of Australia, Canada, Europe and the US had a record-breaking aggregate net profit of \$4.7 billion, a 30 percent increase from the previous year.
- Aggregate funding rebounds: Companies in Canada, Europe and the US raised \$25 billion in 2010 — equaling the average for the four years before the global financial crisis.
- Funding for innovation declines: In the US, large debt financings by mature, profitable companies grew by 150 percent over 2009. Conversely, there was a 20 percent decline in the amount of “innovation capital” for the sector, defined as total funding minus large debt financings.
- More skewed funding: 82.6 percent of funding went to just 20 percent of US companies, up from 78.5% in 2009. The bottom 20 percent of companies raised 0.4 percent of funds, down from 0.6 percent in 2009.
- Alliances remain strong, but not up-fronts: The total potential value of strategic alliances remained strong, totaling more than US\$40 billion. However, up-front payments from partners to biotech companies dropped 37 percent to US\$3.1 billion.
- Deal making slows: Merger and acquisitions (M&As) involving European or US biotech firms dropped sharply from 58 deals in 2009 to 45 deals in 2010, while the aggregate value of these transactions remained relatively flat (after normalizing the 2009 numbers to exclude the mega-acquisition of Genentech).

### Sustaining innovation

The Beyond borders report notes a confluence of challenges that will make it difficult for the industry to sustain its historical level of innovation. In addition to less available “innovation capital,” biotech companies face increased competition from other sectors for a smaller pool of venture capital.

Even with less capital available, companies are being asked to do more, as the process of discovering and developing drugs has become increasingly lengthy, expensive and risky. Drug approvals continue to be near historic lows and it is becoming increasingly common for regulators to request additional data for approval after a company has undertaken clinical studies, increasing the time, expense and risk of developing products.

Giovannetti also points out, “Health care systems across the globe are under increasing pressure to rein in costs, creating continued downward pressure and uncertainty on the prices that innovators can secure for their products. This lack of sustainability in health care is also leading to a sweeping movement under which companies will need to move from simply producing new medicines to demonstrating improvements in health outcomes.”



The report identifies four complementary approaches for biotech companies to sustain innovation in this increasingly challenging environment:

1. Prove it or lose it. In an outcomes-driven ecosystem, companies will be under more pressure to prove that their products are truly differentiated. As a result, they will need to tailor their strategies from the early stages of development to demonstrate comparative effectiveness for regulators and be willing to engage in creative pricing approaches for payers including outcomes-based pricing approaches.
2. Do more with less. Companies will need to find new ways to conduct capital raising/ deployment and R&D more efficiently. On the capital side, companies will need to be creative in raising, optimizing, preserving and investing scarce capital — from new ways of monetizing existing intellectual property to pursuing “virtual” company models to reduce fixed infrastructure. On the R&D side, targeted products for smaller populations can be more efficient, requiring smaller trials, less generic competition and fewer safety issues.
3. Build new competencies. To support the first two imperatives, managers will need different competencies: awareness of changing market dynamics (e.g., regulators, payers, pharma); project management discipline and performance measurement; the ability to measure value (e.g., analytical techniques) and communicate value; and the creativity to develop new models and approaches.
4. Collaborate for coordinated action. Sustaining innovation will also take changes that biotech companies cannot make alone, requiring coordinated action with other stakeholders. Examples include: encouraging a system of adaptive clinical trials and conditional drug approvals; realigning payment mechanisms around health outcomes; developing incentives to retain biotech investors; and working on transparency and access to build trust.

#### Collaboration is Key

While all this growth is expected to offer many new career opportunities, since work in life sciences requires knowledge that crosses many different disciplines, collaboration is key. As stated by IEEE President Moshe Kam, “The understanding of many processes in the vast area called life sciences—from molecular biology to proteomics, to genomics, the advance in computational biology—have now created an opportunity to import technology, algorithms, mathematical ideas, from the hard sciences and form engineering into biology and life sciences in a way that will really be very important in the coming 30 to 50 years, in terms of therapeutics, in terms of pharmaceuticals, in terms of fighting diseases and plagues”.

With its unmatched diversity of expertise, richness of programs and proven standards-development capability, IEEE plans to play a strong global and unifying role in the life sciences arena. Articles highlighted on this portal are examples of how collaboration among disciplines at the intersection of engineering and life sciences are advancing technology for humanity and can improve the quality of life for all people.



### I. Internal Control Systems and their Adequacy

The company has an adequate internal control system commensurate with the size and complexity of the organization. The company has undertaken a comprehensive review of all internal control systems to take care of the needs of the expanding size of the company. The Audit Committee periodically reviews the adequacy of the internal audit functions.

We have been continuously upgrading our production technologies for improving efficiency.

Discussions of financial performance with respect to operational performance.

#### 1. Shareholders Fund:

The company has an authorized capital of Rs.25 Crores comprising of 250 lakhs equity shares of Rs. 10/- each. The company has a paid-up capital of Rs.18.90 Crores and the company has converted 10 lakhs share warrants in to share capital of face value Rs. 10/- each with a premium of Rs. 10.15 resulting an increase in paid up capital by Rs. 10000000/-.

Company's reserves and surplus consist of share premium amounting to Rs. 26.08 Crores and Profit and Loss account balance of Rs.56.30 Crores by including current year profit of Rs.11.72Crores.

#### 2. Secured Loan:

The company has an outstanding term loan liability of Rs. 84.62 Lakhs with Oriental Bank of Commerce and 1240.94 lakhs with Punjab National Bank.

#### 3. Fixed Assets:

The fixed assets of the company includes capital expenditure of Rs. 5164.44 lakhs, which will be capitalized after the completion of the Bio-Pharma unit.

#### 4. Revenue:

The company has generated net revenues of Rs. 5543.95lakhs with a PAT of Rs. 1172.21 lakhs.

### II. Material development in Human Resources / Industrial Relations front including number of people employed:

There are no material developments in the Human Resources area. The industrial relations have been cordial. The company constantly reviews the man power requirements and has a properly equipped Department to take care of the requirements. The total number of people employed by the company on an average is 90 approximately.

#### Cautionary Statement:

Statement in the Management Discussion and Analysis describing the company's objectives, projections estimates and expectation may be forward looking statements within the meaning applicable securities laws and regulations. Further the discussion on risks, concerns, opportunities etc are valid only at the time of making statements. A variety of factors known/unknown expected or otherwise may influence the financial results. These statements are not expected to be updated or revised to take care of any changes in the underlying presumptions.



## REPORT OF CORPORATE GOVERNANCE.

## Company's Philosophy on Code of Governance

Pochiraju Industries Limited is committed to good corporate governance and always strive to improve performance at all levels by adhering to corporate governance practices, such as managing its affairs with diligence, transparency, responsibility and accountability. The Board of Directors of the company believes in good governance and fully supports the principles of Corporate Governance. While striving to achieve the financial targets, the company seeks to follow the business principles and ethics and in all its dealings. The company has been regularly implementing the best practices of corporate governance in order to attain total transparency, accountability and integrity.

The company has designed its system to enhance overall performance and maximize shareholder value in the long run. The company's core philosophy on the code of corporate governance is to ensure:

- Fair and transparent business practices.
- Accountability for performance.
- Compliance of applicable statute
- Transparent and timely disclosure of financial and management information.
- Effective management control and monitoring of executive performance by the Board.
- Adequate representation of professionally qualified non executive and independent Directors on Board.

We have pleasure in reporting that requirement of Stock Exchange Regulations and the provisions of the Listing Agreement, the compliance report on the corporate governance have been complied with in all features and the same is reproduced here under:

## 1. Board of Directors:

In terms of the Articles of Association of the company, the strength of the board shall not be less than three Directors and not more than twelve Directors.

## Composition of Board:

As on 31<sup>st</sup> March, 2011 the Board comprised seven Directors including chairman and Managing Director and four Independent Directors. The Directors bring to the board wide range of experience and skills.



Key information Pertaining to directors as on 31<sup>st</sup> March, 2011.

	P Sudhakar	B V Ramana Reddy	Dr. A Ramaiah	Dr. K Siva Sai	Dr. S S N Murthy	P Sailaja	P. B. T. Sundary
Category	Managing Director	Independent Non-Executive Director	Independent Non-Executive Director	Independent Non-Executive Director	Independent Non-Executive Director	Promoter Non-Executive Director	Promoter Non-Executive Director
Date of appointment Directorship in other companies	Nil	04/05/1995	20/03/2006	20/03/2006	21/09/2007	21/09/2007	30/04/07
Chairmanship / membership in committees of Board of other companies	Nil	Nil	Nil	Nil	Nil	Nil	Nil
No. of Board Meetings Attendance at the last AGM held on September 22, 2008	5	5	5	5	5	5	2
No. of shares held	2,841,201	Nil	Nil	Nil	Nil	1,680,619	224,499
Date of Ceasing as Director	NA	NA	NA	NA	NA	NA	10/02/2011 Due to Natural Death

### Board Meetings

During the Financial Year 2010-2011, the Board of Directors met 6 times on the following dates: 28-04-2010, 28-07-2010, 24-08-2010, 27-10-2010, 29-01-2011 and 29-03-2011.



## 2. Audit Committee

The Audit Committee was formed by the Board of Directors. The terms of reference of this committee cover the matters specified in the clause 49 of the Listing Agreement and as may be referred to the committee by the Board of Directors of the company.

Audit committee reports to the Board of Director. Our Audit Committee met five times during the financial year on 28-04-2010, 28-07-2010, 24-08-2010, 27-10-2010 and 29-01-2011. Statutory Auditors are invitees to the meeting.

The composition of Audit Committee and their attendance are tabled below:

Name	Position	Category	Number of meetings attended
Mr. BV Ramana Reddy	Chairman	Independent, non-executive	5
Mr. P Sudhakar	Member	Promoter, executive	5
Mr. Dr. K Siva Sai	Member	Independent, non-executive	5
Mr. Dr. A Ramaiah	Member	Independent, non-executive	5

## 3. Compensation Committee

The primary responsibilities of the compensation committee are to determine and recommend terms of appointment, salaries / remuneration to Senior Management and executive directors for approval of the Board as well as shareholders.

Remuneration policy is to review periodically the remuneration of Managing / Whole time Director and recommend suitable revision to the Board. The committee has met twice on 27-10-2010 and 29-01-2011.

The composition of the compensation committee and their attendance are tabled below

Name	Position	Category	Number of meetings attended
Mr. BV Ramana Reddy	Chairman	Independent, non-executive	2
Mr. P Sudhakar	Member	Promoter, executive	2
Mr. Dr. S S N Murthy	Member	Independent, non-executive	2
Mr. Dr. A Ramaiah	Member	Independent, non-executive	2



Details of sitting fees paid to the Non-Executive Directors for attending Board Meetings and Committee meetings and Remuneration paid to Executive Director for the year ended 31.03.2011

Name of the directors	Sitting Fees	Salary	Cont to Provident fund	Total
Mr. P. Sudhakar	N.A.	31,50,000	Nil	31,50,000
Mr. BV Ramana Reddy	Nil	N.A.	N.A.	Nil
Dr. A Ramaiah	Nil	N.A.	N.A.	Nil
Dr. S S N Murthy	Nil	N.A.	N.A.	Nil
Dr. K S R Siva Sai	Nil	N.A.	N.A.	Nil
Smt. P Sailaja	Nil	N.A.	N.A.	Nil

The company does not have any stock option plan or performance linked incentive for the Executive Directors. The appointments are made for a period of five years on the terms and conditions contained in the respective resolutions passed by the members in the General Meetings.

1. Shareholders & Investors Grievance Committee:

The Shareholders'/Investors' Grievance Committee is responsible for resolving investor's complaints pertaining to share transfers, non receipt of annual reports, issue of duplicate share certificates, transmission of shares and other related complaints. The Chairman of the Committee is an independent non executive director.

The Shareholders/Investors Grievance Committee is constituted with the following members:

Name	Position
Dr. A Ramaiah	
Independent, Non – Executive.	Chairman
Mr. P Sudhakar	
Managing Director	Compliance Officer
Mr. B. V. Ramana Reddy	Member



The status on the shareholder queries and complaints we received during the financial year, and our response to the complaints and the current status of pending queries if any, is Tabulated below:

Description	Received	Replied	Pending
Non receipt of Securities	0	0	0
Non receipt of Annual Reports	10	10	0
SEBI / Stock Exchange Complaints	0	0	0
Others	0	0	0

5. Information on General Body Meetings:

The last 3 Annual General Meetings were held as under:

Financial Year	Date	Time	Venue
2009-10	28.09.2010	11.00AM.	1/102, Sathyamangalam Village, Hosur taluk, Krishnagiri Dist, Tamil Nadu – 635 105.
2008-09	26.09.2009	3.00 P.M	1/102, Sathyamangalam Village, Hosur taluk, Krishnagiri Dist, Tamil Nadu – 635 105.
2007-08	22.09.2008	3.00 P.M	1/102, Sathyamangalam Village, Hosur taluk, Krishnagiri Dist, Tamil Nadu – 635 105.

6. Disclosures

- i) There are no materially significant related party transactions i.e., transactions of the Company of material nature, with its promoters, directors or the management, their subsidiaries or their relatives etc. that may have potential conflicts with the interest of the company at large other than conversion of 10 lakh number of share warrants converted and allotted to Sri P. Sudhakar, promoter and Managing Director of the company at the Board meeting held on 29<sup>th</sup> March, 2011;
- ii) The Company has complied with the requirements of the Stock Exchange and SEBI on matters related to Capital Markets, as applicable. There are no penalties, strictures imposed on the Company by Stock Exchange or SEBI or other authority on any non-compliance of laws related to capital markets, during last three years;
- iii) Your board has laid down a code of conduct covering the ethical requirement to be complied with covering all the Board members and Senior Management Personnel



of the company. Information of compliance with the code is received from them on an annual basis.

#### 7. Means of Communication:

We have established procedures to disseminate, in a planned manner, relevant information to our shareholders, analysts, employees and the society at large.

Our quarterly results are published in widely circulated national newspapers such as The Financial Express and the local daily Malai Murasi Tamil Nadu. The Quarterly Results, Shareholding Pattern and Annual Report of the Company are also posted on BSE & NSEs' website.

Apart from this, we also intimate the stock exchange of material information on any latest developments.

#### 8. General Shareholder Information:

##### i) Annual General Meeting

Date : 29-09-2011

Time : 11.30 A.M.

Venue : 1/102, Satyamangalam Village, Hosur Taluk,  
Krishnagiri Dist, T N – 635 105.

##### ii) Financial Calendar: 1<sup>st</sup> April, 2010 to 31<sup>st</sup> March, 2011.

Financial Reporting for 2011-2012 (tentative schedule)

The first quarter results	Before 15.08.2011
The second quarter results	Before 15.11.2011
The third quarter results	Before 15.02.2012
The Fourth quarter results	Before 15.05.2012

##### iii) Book Closure : 23.09.2011 to 29.09.2011 (both dates inclusive).

##### iv) Listing on Stock Exchanges(ISIN : INE332G01032):

Sl. No.	Equity Shares	Stock Codes
1	National Stock Exchange of (India) Limited	POCHIRAJU
2	Bombay Stock Exchange Limited	532803

The Company has paid Annual Listing Fees for the year 2010-11.



## v) Market Price Data

NATIONAL STOCK EXCHANGE OF (INDIA) LIMITED							
PRICE TRADED – Pochiraju							
2010–11	Monthly Volume	HIGH			LOW		
		Date	Price (Rs.)	Volume	Date	Price (Rs.)	Volume
April	3653267	29 Apr 10	28.15	168489	01 Apr 10	18.85	50461
May	919526	06 May 10	26.50	59658	26 May 10	18.00	45852
June	592749	28 Jun 10	25.00	18043	01 Jun 10	18.90	49096
July	4313771	30 Jul 10	28.00	191929	05 Jul 10	20.40	19247
August	1026493	04 Aug 10	25.90	62241	31 Aug 10	21.00	27924
September	2243227	14 Sep 10	24.80	153542	01 Sep 10	21.00	11009
October	2916865	22 Oct 10	27.60	664273	04 Oct 10	21.40	49593
November	1108971	25 Nov 10	25.80	67541	26 Nov 10	19.00	85180
December	583420	02 Dec 10	22.00	33731	10 Dec 10	17.00	36876
January	317371	04 Jan 11	21.75	28701	31 Jan 11	17.35	31640
February	296176	08 Feb 11	18.25	18069	09 Feb 11	14.50	27786
March	320740	09 Mar 11	17.55	10912	15 Mar 11	14.65	9778

BOMBAY STOCK EXCHANGE LIMITED							
PRICE TRADED – Pochiraju (532803)							
2010–11	Monthly Volume	HIGH			LOW		
		Date	Price (Rs.)	Volume	Date	Price (Rs.)	Volume
April	2527886	22 Apr 10	25.60	112909	01 Apr 10	18.90	17896
May	511778	03 May 10	24.50	26771	24 May 10	17.80	30298
June	445943	24 Jun 10	21.75	30110	01 Jun 10	19.00	29391
July	4060423	28 Jul 10	27.55	1450057	01 Jul 10	20.60	26885
August	890493	02 Aug 10	29.70	64226	20 Aug 10	18.40	39582
September	1636227	06 Sep 10	24.70	111553	23 Sep 10	21.00	34244
October	2213497	22 Oct 10	27.65	510464	04 Oct 10	21.30	37148
November	681922	01 Nov 10	24.45	12820	26 Nov 10	19.05	32420
December	319194	03 Dec 10	22.15	9572	10 Dec 10	17.05	28861
January	188212	04 Jan 11	21.70	11116	31 Jan 11	17.35	7472
February	167925	07 Feb 11	17.80	4833	10 Feb 11	14.75	12991
March	163164	09 Mar 11	17.60	10556	30 Mar 11	15.00	16684



- vi) Registrars and Transfer Agents  
(for shares held in both physical and Dematerialized form) M/s  
Aarthi Consultants Private Limited  
H. No. 1-2-285, Domalguda,  
Hyderabad – 500 029  
Andhra Pradesh, India.  
Phone: 040 - 27642217/27638111/27634445  
Fax: 040 – 27632184  
Web: [www.aarthiconsultants.com](http://www.aarthiconsultants.com)

vii) Share Transfer System:

Your Board has delegated the power of share transfer to its Registrar and Share Transfer Agents for processing of share transfers to Aarthi Consultants Pvt. Ltd, Registrars of the Company at the address given above. The turnaround time for completion of transfer of shares in physical form is generally less than 7 days from the date of receipt, if the documents are clear in all respects. We have internally fixed turnaround times for closing the queries/complaints within 7 days of receipt from the shareholders.

Address for correspondence:

All correspondence relating to the shares of the Company should be addressed to Registrars & transfer Agents at the address given below: M/s

Aarthi Consultants Private Limited

H. No. 1-2-285, Domalguda,

Hyderabad – 500 029

Andhra Pradesh, India.

Phone: 040 - 27642217/27638111/27634445

Fax: 040 – 27632184

Shareholders' grievance can also be sent through e-mail to the following designated e-mail id: [info@arthiconsultantsy.com](mailto:info@arthiconsultantsy.com) quoting the Company name Pochiraju Industries Limited.

viii) Dematerialization of shares:

The Company's shares are dematerialized on National Securities Depositories Limited (NSDL) and Central Depository Services (India) Limited.



xi) Shareholding Pattern As On 31-03-2011  
Distribution of Shareholding as on 31<sup>st</sup> March, 2011

Category	% of shareholding	No. of shares held as on 31.03.2011
Promoters	33.44	6322264
Individuals	47.02	8890264
Domestic Companies	9.87	1865875
FIs, Mutual Funds and Banks	9.67	1828272
<b>Total</b>	<b>100.00</b>	<b>18906675</b>

Sl. No.	Category	Holders	Holder %	Shares	Amount	Amount %
1	1 - 5000	12493	82	2422001	24220010	12.81
2	5001 - 10000	1539	10	1331960	13319600	7.04
3	10001 - 20000	627	4	999484	9994840	5.29
4	20001 - 30000	210	1	538155	5381550	2.85
5	30001 - 40000	98	1	357097	3570970	1.89
6	40001 - 50000	91	1	436521	4365210	2.31
7	50001 - 100000	133	1	1004763	10047630	5.31
8	100001 & Above	128	1	11816694	118166940	62.50
	<b>TOTAL :</b>	<b>15319</b>	<b>100</b>	<b>18906675</b>	<b>189066750</b>	<b>100</b>



## AUDITORS CERTIFICATE ON CORPORATE GOVERNANCE

The company has obtained a certificate from the Auditors of the Company regarding compliances of conditions of Corporate Governance as stipulated in the Listing Agreement with the Stock Exchanges. The said Corporate Governance is as under:

## CERTIFICATE

To

The Members of

POCHIRAJU INDUSTRIES LIMITED

We have examined the compliance of conditions of Corporate Governance by Pochiraju Industries Limited, for the period of 12 months ended on 31st March 2011, as stipulated in clause 49 of the Listing Agreement of the said Company with stock exchanges of India.

The compliance conditions of Corporate Governance are the responsibility of the management. Our examination was limited to a review of the procedures and implementation there of, adopted by the Company for ensuring the compliance with the conditions of the Corporate Governance. It is neither an audit nor an expression of opinion on the financial statements of the Company.

In our opinion and to the best of our information and according to the explanations given to us, and the representations made by the directors and the management, we certify that the Company has complied with the conditions of Corporate Governance as stipulated in Clause 49 of the abovementioned Listing Agreement.

As required by the Guidance note issued by the Institute of Chartered Accountants of India, we have to state that the Company has certified that as on 31st March 2011 there were no investor grievances remaining unattended/pending for a period exceeding one month.

We further state that such compliance is neither an assurance as to the future viability of the Company nor the efficiency or effectiveness with which the management has the affairs of the company.

For B Rama Rao & Co.

Chartered Accountants

G.V Ranga Babu Partner

Place: Hyderabad

Date: 22.08.2011

Declaration as required under Clause 49 (I)(D)(ii) of the Stock Exchange Listing Agreement:

All Directors and senior management personnel of the Company have affirmed compliance with Pochiraju's Code of Business Conduct and Ethics for the financial year ended March 31, 2011.

Sd/-

P Sudhakar

Managing Director

Date: August 22, 2011



## AUDITORS REPORT

To

The Members of

M/s POCHIRAJU INDUSTRIES LIMITED

We have audited the attached Balance Sheet of M/s POCHIRAJU INDUSTRIES LIMITED ("the Company"), as at 31<sup>st</sup> March, 2011 and also the Profit and Loss Account and Cash Flow Statement for the year ended on that date annexed thereto. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in India. These Standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

1. As required by the companies (Auditor's Report) Order, 2003(CARO) issued by the Central Government in terms of Section 227(4A) of the Companies Act, 1956, we enclose in the Annexure hereto a Statement on the matters specified in paragraphs 4 and 5 of the said order, to the extent applicable to the Company.
2. Further to our comments in the Annexure referred to in paragraph (1) above, we state that:
  - a) We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purposes of our Audit;
  - b) In our opinion, proper books of account, as required by law, have been kept by the company, so far as appears from our examination of those books;
  - c) The Balance Sheet, Profit & Loss Account and Cash Flow Statement referred to in this report are in agreement with the books of account.
  - d) In our opinion, the Balance Sheet, Profit and Loss Account and Cash Flow Statement dealt with by this Report, complies with the Accounting Standards referred to in Section 211 (3C) of Companies Act, 1956;
  - e) On the basis of written representations received from the directors as on 22<sup>nd</sup> August, 2011 and taken on record by the Board of Directors, none of the directors of the Company are disqualified as on 31<sup>st</sup> March, 2011 from being appointed as a



director in terms of clause (g) of sub-section (1) of section 274 of the Companies Act, 1956;

- f) In our opinion and to the best of our information and according to the explanations given to us, the said accounts together with the notes thereon, give the information required by the Companies Act, 1956, in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India;
- (i) In the case of the Balance Sheet, of the State of Affairs of the Company as at 31<sup>st</sup> March, 2011
- (ii) In the case of the Profit and Loss Account, of the Profit, of the Company for the year ended on that date; and
- (iii) In the case of the Cash Flow Statement, of the Cash Flow for the year ended on that date.

For B. RAMA RAO & CO,  
Chartered Accountants

Place: Hyderabad

Date: 22-08-2011

Sd/-  
G V RANGA BABU  
Partner  
Membership No. 202432

ANNEXURE TO AUDITORS' REPORT

With reference to the annexure referred to in Para No. 3 of the Auditor's Report to the members of M/s Pochiraju Industries Limited ("the Company") on the financial statement for the year ended as on 31<sup>st</sup> March, 2011 we report that:

In respect of its fixed assets:

- a) The company has maintained proper records showing full particulars including quantitative details and situation of fixed assets.
- b) As explained to us, all the fixed assets have been physical verified by the management in a phased periodical manner, which in our opinion is reasonable, having regards to the size of the company and the nature of its assets. No material discrepancies were noticed on such physical verification.
- c) As per information and explanations given to us, during the year, the company has not disposed off any substantial part of fixed assets that would affect the going concern.

1) In respect of its inventories:

- a) As explained to us, inventories have been physically verified by the management at reasonable intervals.
- b) In our opinion and according to the information and explanations given to us, the procedure for physical verification of Inventories followed by the management is reasonable and adequate in relation to the size of the company and the nature of its business.
- c) As explained to us, no material discrepancies have been noticed on physical verification of inventories as compared to book records.

3) The company has neither granted nor taken any loans, secured or unsecured, to/from companies, firms or other parties listed in the Register maintained under section 301 of the Companies Act, 1956. During the year from the parties mentioned above.

4) According to the information and explanations given to us, there are adequate internal control procedures commensurate with the size of the company and nature of its business for the purchase of inventory and fixed assets, sales of goods and services, we have not observed any major weakness in such internal control system.

5) (a) According to information and explanations given to us, we are of the opinion that the transactions, if any, made in pursuance of contracts or arrangements that needed to be entered in the register maintained under section 301 of the Companies Act, 1956 have been so entered.



- (b) Where each of such transaction is in excess of Rs 5 lakhs in respect of any party, the transactions have been made at prices which are prima facie reasonable having regard to the prevailing market prices at the relevant time.
- (c) According to the information and explanations given to us, the company has not accepted any deposits from the public during the year.
- 6) In our opinion, the company has an internal audit system commensurate with its size and nature of its business.
- 7) The Central Government has not prescribed maintenance of cost records under section 209 (1) (d) of the Companies Act, 1956 in respect of activities carried on by the company. Hence the provisions of clause 4 (viii) of the companies (Auditor's Report) order, 2003 are not applicable to the company.
- 8) (a) According to the records of the company, the company has been regular in depositing with appropriate authorities undisputed statutory dues including, Income-Tax, Sales- Tax, Wealth Tax, Service Tax, Custom Duty, Excise Duty and other statutory dues.
- (b) According to the information and explanations given to us, no undisputed amounts payable in respect of such statutory dues were outstanding as at 31<sup>st</sup> March, 2011 for a period of more than six months from the date they became payable.
- 9) The Company neither has accumulated losses nor has it incurred any cash losses during the current financial year and in the immediately preceding financial year.
- 10) In our opinion and according to the information and explanation given to us, the company has not defaulted in repayment of dues to banks and financial institutions.
- 11) In our opinion, the company is not a chit fund, a nidhi or a mutual benefit society. Therefore, the provisions of clause 4 (xiii) of the Companies (Auditor's Report) Order, 2003 are not applicable to the Company.
- 12) Term loans obtained by the company were applied for the purpose for which the loans were obtained, other than temporary deployment pending application.
- 13) According to Cash Flow Statement and other records examined by us and the information and explanation given to us, on an overall basis, funds raised on short term basis have not, prima facie, been used during the year been used for long term investment.
- 14) According to the information and explanation given to us, the company is not dealing or trading in shares, securities, debentures and other investments.
- 15) During the year the Company has not made any preferential allotment of equity shares to a Company, covered in the register maintained under section 301 of the Companies Act, 1956, at price which is prejudicial to the interest of the Company.
- 16) The Company has not issued any debentures during the year ending on 31.03.2011.



- 17) The company has not raised any money by public issues during the year.
- 18) To the best of our knowledge and belief, and according to the information and explanations given to us, no fraud on or by the company was noticed or reported during the year.

For B. RAMA RAO & CO,  
Chartered Accountants

Sd/-

G V RANGA BABU

Partner

Membership No. 202432

Place: Hyderabad

Date: 22-08-2011



## BALANCE SHEET AS ON 31ST MARCH, 2011

PARTICULARS	SCHEDULE REFERENCE	AS AT 31.03.2011 (Rs.)	AS AT 31.03.2010 (Rs.)
<b>SOURCE OF FUNDS:</b>			
<b>SHAREHOLDERS' FUNDS:</b>			
Share Capital	A	189,066,750	179,066,750
Share Warrants		15,340,000	-
<b>RESERVES &amp; SURPLUS:</b>			
Reserves	B	260,842,500	250,692,500
Profit & Loss Account		563,234,931	446,013,821
<b>LOAN FUNDS:</b>			
Secured Loans	C	132,555,169	18,937,258
<b>TOTAL</b>		<b>1,161,039,350</b>	<b>894,710,329</b>
<b>APPLICATION OF FUNDS:</b>			
<b>FIXED ASSETS:</b>			
Gross Block	D	266,254,070	186,384,520
Accumulated Depreciation		96,366,693	79,074,580
Net Block		169,887,377	107,309,940
Capital Work in Progress including Capital Advances		516,444,375	373,237,637
<b>CURRENT ASSETS, LOANS &amp; ADVANCES:</b>			
<b>Current Assets</b>			
a) Inventories		74,551,642	74,343,530
b) Receivables		153,984,475	142,992,821
c) Cash & Bank Balances		26,405,272	7,017,322
d) Loans & Advances		54,321,460	45,857,105
<b>Total Current Assets, Loans &amp; Advances</b>		<b>309,262,849</b>	<b>270,210,778</b>
<b>LIABILITIES &amp; PROVISIONS: Current Liabilities</b>			
Provisions	F	2,395,152	2,099,257
Total Current Liabilities & Provisions		6,048,859	4,247,779
Net Current Assets		8,444,011	6,347,036
<b>MISCELLANEOUS EXPENDITURE</b>			
(to the extent not written off or adjusted)	G	300,818,838	263,863,742
<b>TOTAL</b>		<b>173,888,760</b>	<b>150,299,010</b>
<b>NOTES ON ACCOUNTS</b>	Q	1,161,039,350	894,710,329
		-	-

Schedule A to I and O form an integral part of the Balance Sheet. As per our report of even date annexed.

For B. RAMARAO & CO  
Chartered Accountants

Sd/-  
G. V. RANGA BABU

Partner

M No 202432

Place : HYDERABAD

Date : 22.08.2011.

For and on behalf of board  
FOR POCHIRAJU INDUSTRIES LTD

Sd/-  
P. SUDHAKAR

Managing Director.

Sd/-

P SAILAJA

Director

PROFIT & LOSS ACCOUNT FOR THE YEAR ENDED 31<sup>ST</sup> MARCH, 2011

PARTICULARS	SCHEDULE REFERENCE	AS AT 31.03.2011 (Rs.)	AS AT 31.03.2010 (Rs.)
<b>A. INCOME:</b>			
Net sales	H	554,394,598	433,354,175
Increase in Closing Stock	I	(3,195,248)	3,305,285
Other income	J	-	1,800,770
		551,199,350	438,460,230
<b>B. EXPENDITURE: Material consumption Manufacturing expenses. Staff Cost</b>	K	340,438,218	250,751,440
Administrative Expenses	L	23,591,153	20,462,693
Selling Expenses Financial	M	20,730,749	13,226,331
Expenses Depreciation	N	13,138,985	11,185,240
	O	13,331,451	10,823,894
	P	1,949,571	3,415,310
Profit for the year before tax	D	17,292,113	13,890,337
Less: Tax Expense:		430,472,240	323,755,245
Current tax		120,727,110	114,704,985
Deferred Tax			
Profit after tax for the year		3,506,000	2,195,000
Profit brought forward from the last Balance Sheet		-	-
Net Profit c/d to Balance Sheet		117,221,110	112,509,985
Basic & Diluted Earning per Share		446,013,821	333,503,836
No. of Share used in computing Basic and Diluted EPS		563,234,931	446,013,821
Notes on Account		6.54	6.28
	O	18,906,675	17,906,675

Schedule A to I and O form an integral part of the Balance Sheet. As per our report of even date annexed.

For B. RAMARAO & CO  
Chartered Accountants

Sd/-  
G. V. RANGA BABU  
Partner

M No 202432

Place : HYDERABAD

Date : 22.08.2011.

For and on behalf of board  
FOR POCHIRAJU INDUSTRIES LTD

Sd/-  
P. SUDHAKAR  
Managing Director.

Sd/-

P SAILAJA  
Director



## SCHEDULES FORMING PART OF ACCOUNTS

PARTICULARS	AS AT 31.03.2011 (Rs.)	AS AT 31.03.2010 (Rs.)
<b>SCHEDULE - A:</b>		
<b>SHAREHOLDERS FUNDS:</b>		
<b>AUTHORISED CAPITAL:</b>		
2,50,00,000 equity shares of Rs. 10/- each	250,000,000	250,000,000
<b>ISSUED, SUBSCRIBED &amp; PAID UP:</b>		
1,89,06,675 equity shares of Rs. 10/- each.	189,066,750	179,066,750
(1,79,06,675 equity shares of Rs. 10/- each)	189,066,750	179,066,750
Share Warrants		
Share Warrant Application Money	15,340,000	-
<b>TOTAL</b>	<b>15,340,000</b>	<b>-</b>
<b>SCHEDULE - B:</b>		
<b>RESERVES &amp; SURPLUS:</b>		
Share premium.	260,842,500	250,692,500
<b>PROFIT AND LOSS ACCOUNT:</b>		
Opening balance.	446,013,821	333,503,836
Add: Profit for the year.	117,221,110	112,509,985
<b>TOTAL</b>	<b>563,234,931</b>	<b>446,013,821</b>
<b>SCHEDULE - C:</b>		
<b>SECURED LOANS:</b>		
Term Loan 1	2,374,613	8,654,787
Term Loan 2	6,086,949	10,282,471
(Term loans from Oriental Bank of Commerce is secured by way of equitable mortgage of company's Land, Buildings and other Fixed Assets and further secured by personal guarantee of the managing director)		
Term Loan from Punjab National Bank	124,093,607	-
(Term loans from Punjab National Bank is secured by way of hypothecation of Biopharma Unit situated at Shameerpet Hyderabad and Second charge on the company's Floriculture Assets like Land, Buildings and other Fixed Assets and further secured by personal guarantee of the managing director)		
<b>TOTAL</b>	<b>132,555,169</b>	<b>18,937,258</b>



**POCHIRAJU INDUSTRIES LIMITED**

SCHEDULE-4  
STATEMENT OF FIXED ASSETS

S. No	DEPRECIATION	GROSS BLOCK			DEPRECIATION			NET BLOCK	
		Cost as on 01.04.10	Additions	Cost as on 31.03.11	up to the 01/04/2010	For the year Rupees	up to the 31/03/11	As at 31.03.11	As at 31.03.10
1	Land & Developments	15,763,957	-	15,763,957	-	-	-	15,763,957	15,763,957
2	Buildings	33,095,944	-	33,095,944	2,183,271	1,105,405	3,288,676	29,807,268	30,912,673
3	Irrigation	13,628,471	-	13,628,471	2,547,143	647,352	3,194,495	10,433,976	11,081,328
4	Misc. Fixed Assets	3,349,625	-	3,349,625	1,923,188	159,107	2,082,295	1,267,330	1,426,437
5	Green House	40,085,001	-	40,085,001	13,424,820	1,904,038	15,328,858	24,756,143	26,660,181
6	Planting Materials	67,933,159	4,000,000	71,933,159	55,314,712	12,746,447	68,061,159	3,872,000	12,618,447
7	Electricals	2,234,762	-	2,234,762	1,225,446	106,151	1,331,597	903,165	1,009,316
8	Cold Chain Facilities	5,888,824	-	5,888,824	1,566,177	279,719	1,845,896	4,042,928	4,322,647
9	Office Equipment	587,832	-	587,832	162,189	27,922	190,111	397,721	425,643
1	Furniture & Fittings	2,641,838	-	2,641,838	536,187	125,487	661,674	1,980,164	2,105,651
11	Computers	1,175,107	-	1,175,107	191,447	190,485	381,932	793,175	983,660
12	Capital Work in Progress	-	75,869,550	75,869,550	-	-	-	75,869,550	-
	<b>TOTAL</b>	<b>186,384,520</b>	<b>79,869,550</b>	<b>266,254,070</b>	<b>79,074,580</b>	<b>17,292,113</b>	<b>96,366,693</b>	<b>169,887,377</b>	<b>107,309,940</b>
	PREVIOUS YEAR	154,062,659	32,321,861	186,384,520	65,184,243	13,890,337	79,074,580	107,309,940	88,878,416

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POCHIRAJU INDUSTRIES LIMITED



## SCHEDULES FORMING PART OF ACCOUNTS

PARTICULARS	AS AT 31.03.2011 (Rs.)	AS AT 31.03.2010 (Rs.)
SCHEDULE - E:		
CURRENT ASSETS, LOANS & ADVANCES:		
INVENTORIES		
Stock of Materials	51,633,657	48,230,297
Finished goods. Sub	22,917,985	26,113,233
Total	74,551,642	74,343,530
RECEIVABLES:		
Sundry Debtors more than 6 months	5,450,975	4,667,845
Sundry Debtors less than 6 months (Unsecured considered good for which the company holds no security other than debtors personal security)	148,533,500	138,324,976
Sub Total	153,984,475	142,992,821
CASH & BANK BALANCES:		
Cash and bank balance	26,405,272	7,017,322
Sub Total	26,405,272	7,017,322
LOANS, ADVANCES & DEPOSITS:		
Advances receivable in cash or in kind or for value to be received	41,989,860	32,822,793
Tax Deducted at Source	-	922,287
Other Deposits	12,331,600	12,112,025
Sub Total	54,321,460	45,857,105
TOTAL	309,262,849	270,210,778



## SCHEDULES FORMING PART OF ACCOUNTS

PARTICULARS	AS AT 31.03.2011 (Rs.)	AS AT 31.03.2010 (Rs.)
SCHEDULE - F:		
CURRENT LIABILITIES & PROVISIONS:		
Current Liabilities: Creditors		
for Supplies. Total	2,395,152	2,099,257
Current Liabilities	2,395,152	2,099,257
Provisions:		
Provision for	3,506,000	2,195,000
TncomeTax. Outstanding	2,542,859	2,052,779
Expenses. Total Provisions	6,048,859	4,247,779
TOTAL	8,444,011	6,347,036
SCHEDULE - G:		
MISCELLANEOUS EXPENDITURE: Public		
Issue Expenses. Preliminary & Pre-	61,343,858	61,343,858
operative Expenses Market Development	40,427,750	40,427,750
Expenses Research & Development	10,034,250	10,034,250
Expenditure	62,082,902	38,493,152
TOTAL	173,888,760	150,299,010
SCHEDULE - H:		
NET SALES:		
Agri Division	550,353,344	421,720,763
Pharmaceutical Formulations	40,41,254	11,633,412
TOTAL	554,394,598	433,354,175
SCHEDULE - I:		
INCREASE /DECREASE IN STOCK OF FINISHED GOODS:		
Opening Stock	26,113,233	22,807,948
Closing Stock	22,917,985	26,113,233
TOTAL	(3,195,248)	3,305,285
SCHEDULE - J:		
OTHER INCOME:		
Interest on Fixed Deposits (Gross)	-	3,658,075
Less: Interest paid on Term Loan		
3 Taken for Biopharma	-	1,863,745
Other Income	-	6,440
TOTAL	-	1,800,770



## SCHEDULES FORMING PART OF ACCOUNTS

PARTICULARS	AS AT 31.03.2011 (Rs.)	AS AT 31.03.2010 (Rs.)
SCHEDULE - K:		
MATERIALS CONSUMPTION:		
Opening stock.	43,833,578	5,853,128
Add: Purchases:		
Purchases Nursery	37,360,704	31,067,850
Materials Flowers	87,320,471	72,512,340
Fruits and Vegetables	160,335,630	136,494,559
	59,135,217	48,657,141
Less: Closing stock.	387,985,600	294,585,018
Consumption for the year	47,547,382	43,833,578
	340,438,218	250,751,440
SCHEDULE - L:		
OTHER DIRECT EXPENSES:		
Carriage inwards. Loabour		
Wages Electricity Charges	10,250	8,697
Power & Fuel	12,573,903	10,984,859
Repairs & Maintenance	1,493,585	1,268,976
Jobwork Charges	837,548	678,954
Factory Maintenance	1,117,851	982,634
Other Manufacturing Expenses	161,304	129,607
TOTAL	313,452	251,990
	7,083,260	6,156,976
SCHEDULE - M:		
STAFF COST:		
Salaries	23,591,153	20,462,693
Contribution to Provident Fund		
ESI Professional	19,091,950	11,858,975
Tax Staff Welfare	35,150	30,134
	8,000	7,068
TOTAL	48,590	43,200
	1,547,059	1,286,954
	20,730,749	13,226,331



## SCHEDULES FORMING PART OF ACCOUNTS

PARTICULARS	AS AT 31.03.2011 (Rs.)	AS AT 31.03.2010 (Rs.)
SCHEDULE - N:		
ADMINISTRATIVE EXPENSES: Audit		
Fee Meeting & Conference	250,000	150,000
Expenses Bank charges.	265,825	221,074
Book & Periodicals	405,387	322,898
Consultancy Charges	76,436	67,890
Computer Maintenance	-	40,000
Conveyance.	102,855	75,325
Custodial Fee	497,776	596,874
D-mat Charges Directors	101,275	101,275
Remuneration. Donation	55,670	55,670
Filing Fee	3,150,000	3,150,000
Insurance	-	5,000
Legal Expenses	250,000	8,750
Licenses & taxes	26,705	135,383
Listing Fee	437,330	122,750
Membership & Subscriptions	-	11,850
Miscellaneous Expenses Office	107,843	81,786
Expenses	209,854	172,875
Postage	240,234	184,312
Printing & Stationary	605,896	478,651
Printing Statutory	219,371	178,962
Professional Charges	379,569	296,875
Pooja Expenses	385,685	296,805
Rates & Taxes	185,500	150,250
Rent	49,856	35,347
Repairs & Maintenance	375,000	152,698
Security Charges Service	1,040,802	877,865
Charges	259,859	207,126
Telephone & communication Charges	536,520	446,980
Travelling Expenses Domestic	275,695	215,650
Vehicle Maintenance	634,117	522,986
Vehicles Hire Charges	1,336,539	1,289,654
SUBTOTAL	677,386	521,929
	-	9,750
	13,138,985	11,185,240





## SCHEDULES TO BALANCE SHEET

## SCHEDULE – 16

## NOTES ON ACCOUNTS

- 1) SIGNIFICANT ACCOUNTING POLICIES AND NOTES ON ACCOUNTS FORMING PART OF THE ACCOUNTS FOR THE YEAR ENDED 31ST MARCH, 2011.
  - a) Basis of Accounting  
The accounts are prepared under the Historical Cost Convention. The Company adopts the accrual basis in the preparation of accounts in accordance with the Accounting standards referred to in Section 211(3C) of the Companies Act 1956.
  - b) Revenue recognition  
Sale of goods is recognized on transfer of property to the buyers for consideration. Interest on deployment of surplus funds is recognized using the time proportion method, based on interest rates implicit in the transaction.
  - c) Fixed Assets
    - i) Fixed Assets are stated at cost of acquisition inclusive of duties (net of Cenvat), taxes, incidental expenses, erection/ commissioning expenses etc. upto the time asset is ready for its intended use.
    - ii) Capital Work in progress is stated at the expenditure incurred upto the date of the Balance Sheet including capital advances.
    - iii) The carrying amounts of assets are reviewed at each Balance Sheet date to determine if there is any indication of Impairment based on external/ internal factors. An impairment loss is recognized wherever the carrying amount of the asset exceeds its recoverable amount which represents the greater of the net selling price of assets and their ' value in use'. The estimated future cash flows are discounted to their present value of the weighted average cost of capital.
  - d) Depreciation  
Depreciation on the Assets has been provided on straight-line methods at the rates and in the manner specified in schedule-XIV of the Companies Act, 1956. Depreciation on impaired assets is calculated on its residual value, if any, on a systematic basis over its remaining useful life. Planting material is written off over a period of 5 years equally.
  - e) Investments  
Long term investments, if any, are stated and carried at cost. However, unutilized issue proceeds are invested in fixed deposits with the company's bankers.
  - f) Miscellaneous Expenses  
Miscellaneous Expenditure includes public issue expenses and pre-operative expenses



of the expansion project under implementation and expenditure on Research and Development, Market Development.

g) Foreign Currency Transactions

Foreign Exchange Transactions are recorded at the exchange rates prevailing on the date of transaction and any exchange differences arising on foreign transactions are recognized as income or expense in the year in which they arise.

h) Borrowing costs:

Borrowing costs are charged to profit and loss account except in cases where the borrowings are directly attributable to the acquisition, construction or production of a qualifying asset.

i) Retirement Benefits:

As regards to provident fund benefits, the company makes the stipulated contribution in respect of certain class of employees to regional provident fund authority under which the company's liability is limited to the extent of contribution. Gratuity will be accounted for on payment basis.

j) Taxation:

Tax expense comprises of current and fringe benefit tax. Current Income tax and Fringe Benefit Tax is measured at the amount expected to be paid to the tax authorities in accordance with the Indian Income Tax Act 1961.

k) Earnings per share:

Earning per share is calculated by dividing the net profit or loss for the year attributable to equity shareholders by the weighted average number of equity shares outstanding during the period.

l) Expenditure during construction period:

The expenditure incidental to the expansion/ new projects is allocated to Fixed Assets in the year of commencement of commercial production. Interest on Loans raised for the expansion/ diversification project is set off against interest earned on unutilized Public issue funds.

m) Raw materials, stores and spare parts, packing materials, finished goods and work in progress are valued at lower of cost and Net realizable value (as certified by the management).

n) Deferred Tax Liability:-

The income from Agro based operations of the company comprises Horticulture and Nursery operations, which is exempted from Income Tax. Hence, Accounting Standard on deferred Tax Liability is not applicable in so far as it relates to the income from its agro based operations. However, for its Bio tech and Pharmaceutical operations, differed liability/ asset can be recognized once the diversification projects are completed.

o) Contingent Liabilities

All known liabilities, wherever material, are provided by way of Notes to accounts.

1) NOTESTOACCOUNTSPARTICULARS31.03.201131.03.2010

## a) Capital Commitments

Estimated amount of contracts remaining to be  
Executed on Capital Account and not provided  
for (net of advances)

Nil

Nil

## b) Contingent Liabilities not provided for

Nil

Nil

c) DUESTOSSI:

There are no dues to SSI units in respect  
of sundry creditors as required to be disclosed  
in accordance with section 211 read with part 1 of  
schedule VI of the Companies Act, 1956.

## d) Managing Director Remuneration

Rs. 31,50,000

Rs. 31,50,000

## 3) Information pursuant to the provisions of part II of Schedule V of the Companies Act, 1956.

PARTICULARS31.03.201131.03.2010

## a) Licensed and installed capacity and production

## 1) Licensed Capacity

120.00 lakhs

120.00 lakhs

## 2) Installed Capacity

120.00 lakhs

120.00 lakhs

## 3) Production

118.50 lakhs

118.50 lakhs

## b) CIF value of Imports

NIL

Nil

## c) Expenditure in Foreign Currency

Foreign Travel

Rs. 12.75 Lacs

Rs. 7.56 Lacs

## d) Earnings in Foreign Currency

NIL

Nil

e) Remittances made in foreign Currency  
in respect of dividends (Net of Taxes)

NIL

Nil

## f) Auditor's Remuneration

Audit Fee

Rs. 1,50,000

Rs.

1,00,000

Tax Audit Fee

Rs. 50,000

Rs. 25,000

Certification Fee

Rs. 50,000

Rs. 10,000

## 4) The term loan facilities with Oriental Bank of Commerce are secured by first charge on the Immovable properties, and Movable properties of the company and also by the personal Guarantee of the promoter directors Sri P Sudhakar, Smt. P Sailaja and Smt. P B T Sundari. The term loan from Punjab National Bank is secured by first charge in the assets of the biopharma unit and second charge on the assets of the floriculture unit and personal guarantees of Sri. P, Sudhakar and Smt. P. Sailaja

## 5) Managerial remuneration:

The computation of net profit in accordance with the provisions of section 349 of the Companies Act, 1956:



Particulars	Year ended 31-3-2011	Year ended 31-3-2010
Net profit as per profit and Loss account	117221110	112509985
Add:		
Directors sitting fees	-	-
Managerial remuneration	3150000	3150000
Commission paid to non executive directors	-	-
Depreciation	17292113	13890337
Loss on sale of fixed assets	-	-
Provision for doubtful debts and advances	-	-
	137663223	129550322
Less:		
Depreciation u/s 350	17292113	13890337
Net profit as per section 198/ 349 of the companies Act, 1956	120371110	115659985
Maximum permissible remuneration to Managing director as per Section 198/309	6018556	5782999
Maximum permissible remuneration to Non executive director as per Section 198/309 per Section 198/309	N A	N A



6) Segment information	2010-11	2009-10
	Rs. in lacs	Rs. in lacs
Segment Revenue		
Floriculture	5503.53	4217.20
Pharma	40.41	116.34
Total	5543.94	4333.54
Segment Result		
(Profit before tax and interest net of interest income)		
Floriculture	1219.55	1096.42
Pharma	8.3	32.62
Total	1227.87	1129.04
Add interest income (net)	-20.60	18.01
Profit Before Tax	1207.27	1147.05
Capital Employed		
(Segment Assets-Segment liabilities)		
Floriculture	4984.73	3930.76
Pharma	944.46	534.88
Bio Pharma	5958.87	4292.09
Total	1888.06	8757.73





## CONSUMPTION OF RAW MATERIALS

	2010 -11		2009 – 10	
FLORI DIVISION		Rs. in lacs		Rs. in lacs
a) Fertilizers	584.08	268.12	596.60 MT	221.52
b) Pesticides		97.7		82.30
c) Packing Materials	90.22	75.42	83.03	59.84
Value of imported and indigenous raw materials etc. and percentage of the Total Consumption.				
Imported		Nil		Nil
Indigenous	100%		100%	
PHARMA DIVISION	2010 -11		2009 – 10	
Raw Material			Rs. in Lacs	
Consumables	0	0	0	0
Packing Material	0	0	0	0

**8) RELATED PARTY DISCLOSURES:**

Transaction with related parties pursuant to AS-18 for the financial year 2010-11

Sl. No.	Name of the party	Nature of transaction	Amount Rs. in lacs
1	Shri P. Sudhakar	Remuneration	31.5
2	Shri P. Sudhakar	Share Warrant Conversion	100.0

**9) EARNINGS PER SHARE**

	2010-11	2009-10
Profit after tax (as per profit and loss A/c)	1172.21	1125.10
No. of Equity shares	1,89,06,675	1,79,06,675
Earnings per share (in Rs.)		
Nominal value Rs. 10 per share	6.54	6.28



- 10) In the opinion of the management, the current assets, loans and advances have a value on realization in the ordinary course of business at least equal to the amount at which they are stated, unless specifically mentioned otherwise and provisions for all known liabilities have been made.
- 11) Sundry Debtors, sundry creditors, other liabilities, loans and advances, advances from customers etc., are subject to confirmation.
- 12) The figures are rounded to the nearest rupee and previous year's figures have been re-arranged/re-grouped wherever necessary to confirm to the current year's classification.
- 13) Information pursuant to the provisions of part IV of Schedule of the Companies Act, 1956. Balance Sheet Abstract and Company's General Business Profile:

## I) Registration Details

Registration No.:	10762
State Code:	18
Balance Sheet Date:	31.03.2011

## II) Capital raised during the year

(Amount in Rs. Thousand)

Public Issue:	Nil
Rights Issue:	Nil
Bonus Issue:	Nil
Share Capital ( Share warrants conversion)	100000

## III) Position of Mobilization and Deployment of funds

(Amount in Rs. Thousand)

Total Liabilities :	1161039
Total Assets :	1161039
Sources of Funds:	
Paid-up Capital :	189067
Share Application Money (Share warrant Application Money)	15340
Reserves & Surplus :	824077
Secured Loans :	132555
Total :	1161039

## Application of Funds:

Net Fixed Assets :	169887
Capital Work-in-Progress :	516444
Net Current Assets :	300819
Miscellaneous Expenditure	173889
Total :	1161039



IV) Performance of Company	(Amount in Rs. Thousand)
Turnover :	Rs.554395
Total Expenditure :	Rs. 430472
Profit :	
Profit before Tax :	Rs. 120727
Profit after Tax :	Rs. 117221
Profit after tax and Prior Period items	Rs. 117221
Earnings per Share (Rs.) :	Rs. 6.54
Dividends (Rate %) :	Nil
V) Generic Names of three Principal Products/ Services of Company (as per monetary items)	
1) Item Code No. (ITC Code) :	01
Product Description :	Cut Flower Roses
2) Item Code No. (ITC Code) :	24
Product Description :	Pharmaceutical formulations
3) Item Code No. (ITC Code) :	Nil
Product Description :	Nil

Schedule A to I and O form an integral part of the Balance Sheet. As per our report of even date annexed.

For B. RAMARAO & CO

Chartered Accountants

Sd/-

G. V. RANGA BABU

Partner

M No 202432

Place : HYDERABAD

Date : 22.08.2011.

For and on behalf of board

FOR Pochiraju Industries Ltd

Sd/-

P. SUDHAKAR

Managing Director.

Sd/-

P SAILAJA

Director

CASHFLOW STATEMENT FOR THE PERIOD ENDED MARCH 31<sup>ST</sup> 2011

PARTICULARS	AS AT	AS AT
	31.03.2011	31.03.2010
	Rs.	Rs.
<b>CASH FLOW FROM OPERATION ACTIVITIES:</b>		
Net Profit before Tax	120,727,110	114,704,985
ADD: Depreciation	17,292,113	13,890,337
ADD: Interest Less:	1,949,571	3,415,310
Interest Received	-	1,794,330
Less: Misc. Income	-	6,440
<b>Operating Profit before working capital changes</b>	<b>139,968,794</b>	<b>130,209,862</b>
Adjusted for increase/decrease of Current Assets And Current Liabilities		
Increase in Inventories	(208,112)	(193,413)
Increase in Debtors	(10,991,654)	28,705,646
Increase in Loan & Advances	(8,464,355)	(24,145,704)
Increase/Decrease in Current Liabilities	2,096,975	(5,775,990)
<b>Net Cash Generated from operating activities</b>	<b>122,401,648</b>	<b>128,800,401</b>
less: Tax Expense	3,506,000	2,195,000
Less: Interest Paid	1,949,571	3,415,310
<b>Cash from Operations</b>	<b>116,946,077</b>	<b>123,190,091</b>
Add: Misc. Income	-	6,440
Add: Additions to Fixed Assets Add:	(79,869,550)	(32,321,861)
Decrease in Fixed Deposits Add:	-	115,698,843
Miscellaneous Expenses	(23,589,750)	(26,074,058)
Add: Increase in Capital Work in Progress	(143,206,738)	(137,641,644)
Add: Interest Received	-	1,794,330
<b>Net Cash Used in Investing Receipts</b>	<b>(246,666,038)</b>	<b>(78,537,950)</b>
from Share Capital Receipts from New Borrowings	35,490,000	-
<b>Net Cash Used Financing Activity</b>	<b>113,617,911</b>	<b>(45,277,513)</b>
<b>Net cash Flow</b>	<b>149,107,911</b>	<b>(45,277,513)</b>
Opening Balance	19,387,950	(625,372)
Net cash Flow	7,017,322	7,642,694
<b>Cash and Cash Equivalents</b>	<b>19,387,950</b>	<b>(625,372)</b>
	26,405,272	7,017,322

As per our report of even date

For B. RAMARAO & CO  
Chartered Accountants  
Sd/-  
G. V. RANGA BABU  
Partner  
M No 202432  
Place : HYDERABAD  
Date : 22.08.2011.

For and on behalf of board  
FOR Pochiraju Industries Ltd  
Sd/-  
P. SUDHAKAR  
Managing Director.  
Sd/-  
P SAILAJA  
Director



POCHIRAJU INDUSTRIES LIMITED

Regd. Off. : 1/102. Satyamangalam Village, Thummanapalli Post, Hosur  
(Tq) Krishnagiri (Dt), T N – 635 105

ATTENDANCE SLIP

I hereby record my/our presence at the 16<sup>th</sup> Annual General Meeting of the Company at the registered office on Thursday, 29 September 2011, at 11.30 am

Name of the Shareholder/ Proxy\* \_\_\_\_\_  
No. of Shares Held: \_\_\_\_\_

FOLIO No.	DP ID:	CLIENT ID:
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Signature of the Shareholder/Proxy\* \_\_\_\_\_

Notes:

- a. Shareholder/Proxy holder wishing to attend the meeting must bring the Admission Slip and hand over at the entrance duly signed.
- b. No gifts / Coupons will be distributed at the Annual General Meeting.
- c. Shareholder/Proxy should bring his/her copy of the Annual Report.

POCHIRAJU INDUSTRIES LIMITED

Reg. Off: 1/102. Satyamangalam Village, Thummanapalli Post, Hosur  
(Tq) Krishnagiri (Dt), T N – 635 105

PROXY FORM

FOLIO No.	DP ID:	CLIENT ID:
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I/We \_\_\_\_\_ of \_\_\_\_\_  
in the District of \_\_\_\_\_ being a member(s) of the above  
named company, hereby appoint Mr./Mrs./Ms \_\_\_\_\_ in the District of  
\_\_\_\_\_ as my/our Proxy to attend and vote for me /us on my /  
our behalf at the 16<sup>th</sup> Annual General Meeting of the Company to be held at Registered office  
of the company on Thursday, 29 September 2011, at 11.30 am.

Signed this \_\_\_\_\_ day of \_\_\_\_\_ 2011  
Address \_\_\_\_\_

No. of shares: \_\_\_\_\_ Signature: \_\_\_\_\_

Note: The proxy in order to be effective must reach duly filled  
and signed in at least 48 (forty-eight) hours before the time  
of holding the aforesaid meeting. A proxy need not be a member.

