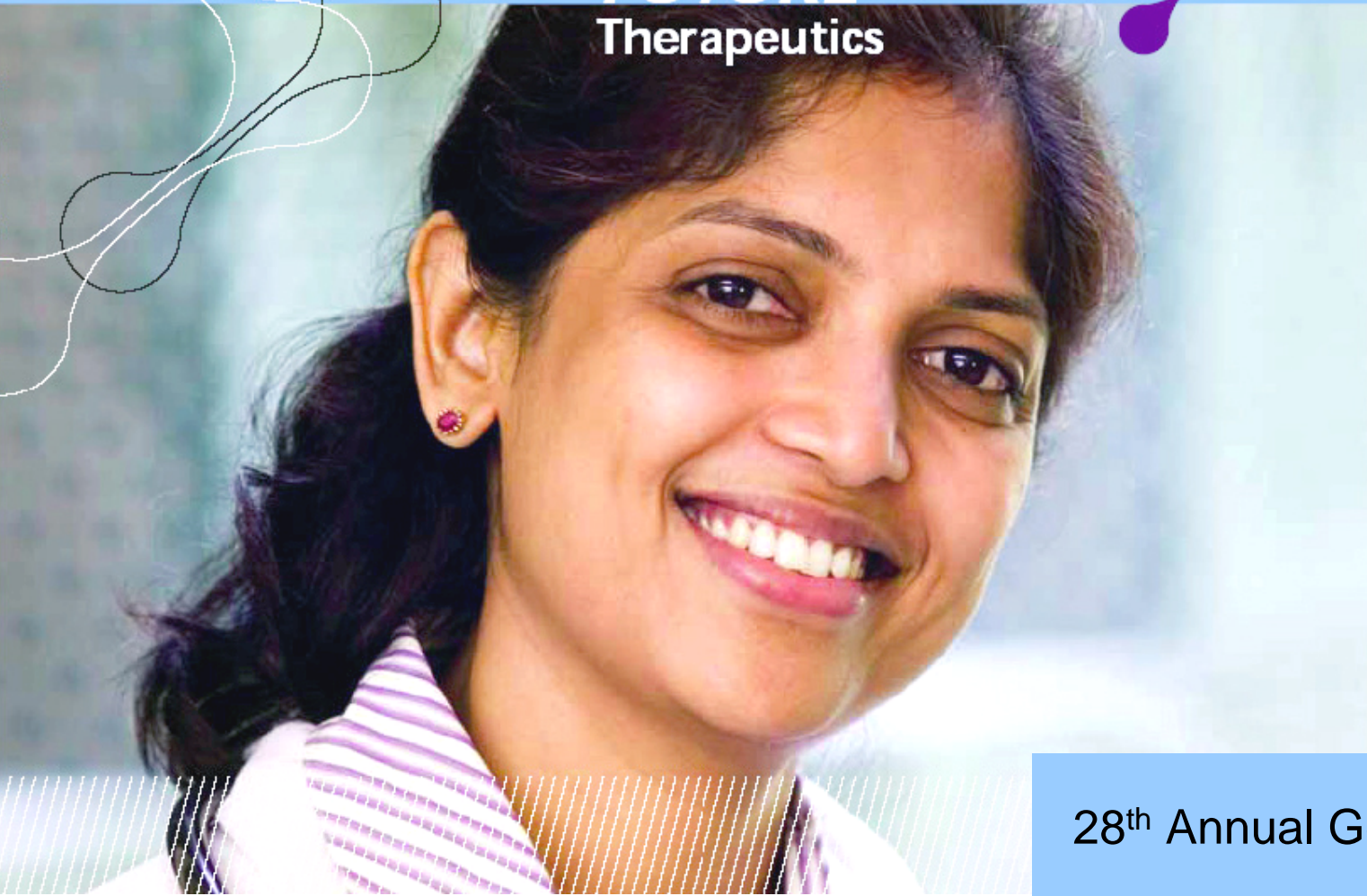




The Promise of  
*FUTURE*  
Therapeutics



28<sup>th</sup> Annual General Meeting

**B** **iototechnology**  
**iocon**  
**lockbuster**

**THE FUTURE IS NOW**

## **Biotechnology** *Fuelling a major transformation*

- The global biotechnology industry is a powerhouse with over **\$60 billion** in revenues and hundreds of marketed products
- Collective revenues of the world's publicly traded biotech companies grew by **18% in 2005** reaching an all-time high of \$63 billion and crossing the \$60 billion threshold for the first time
- More than **1/5th** of the new medicines launched on the world market each year are now biotechnology-derived
- As Biotechnology celebrates its **30th** anniversary, the promise to build bridges to better healthcare, a better environment and a more sustainable future remains unchanged.

# **Biotechnology *Fuelling a major transformation***



**70% of new molecules in the research pipelines of the Bio-pharma sector emanate from Biotechnology.**

**20% of new molecules in the approval pipeline at USFDA are Monoclonal antibodies**

**Big Pharma licensed 70% of their research molecules from small and medium Biotech companies**

**Big pharma spent \$X billion in licensing new molecules**

**70% of global research is being focused on Diabetes, Oncology and Cardiovascular disease**



*Syngene*

*Biocon  
Biopharmaceuticals*

**BIOCON  
PARK**

**AN INTEGRATED BIOPHARMACEUTICAL HUB**





Biocon Park  
Building Global  
scale







**Biocon Park  
Multi-faceted  
Bio-manufacturing**



# Key Areas of R&D focus

## Cardio –Diabetes

ORAL INSULIN  
INTRA NASAL INSULIN  
BASAL INSULIN  
ORAL BNP



## Oncology

ANTI EGFR MAB  
ANTI CD6 MAB  
ANTI TNF $\alpha$  MAB  
ANTI CD20 MAB  
CANCER VACCINES



## BIOCON'S DRUG DISCOVERY PIPELINE

■ Novel ■ Generic

Drug Pre-Clinical Phase 1 Phase 2 Phase 3 Launch

IN-105 → DIABETES

BVX 10 → INFLAMMATION

BVX 20 → ONCOLOGY

BIOMAb EGFR™ → ONCOLOGY

CD-6 → ONCOLOGY  
INFLAMMATION

Oral BNP → CARDIOVASCULAR

Streptokinase → CARDIOVASCULAR

GCSF → ONCOLOGY

Insulin → DIABETES

- *From the maturing US sector to the rapidly emerging Asia-Pacific, the industry generates over US\$60 billion in revenue and has created hundreds of products in human health alone.*

## Biocon is in the hot category

Imminent arrival of the inhalant and oral insulin could change the face of insulin therapy and of the drug delivery market as a whole

Oral insulin is the most acceptable of all insulin delivery routes – from the patients' perspective

Significantly reduces the pain, inconvenience and stigma of insulin therapy,

and therefore greater patient acceptance, satisfaction and compliance with treatment

It most closely mimics physiological insulin activity once it reaches the bloodstream

Results in less or no hypoglycaemia

Involves no known safety issues

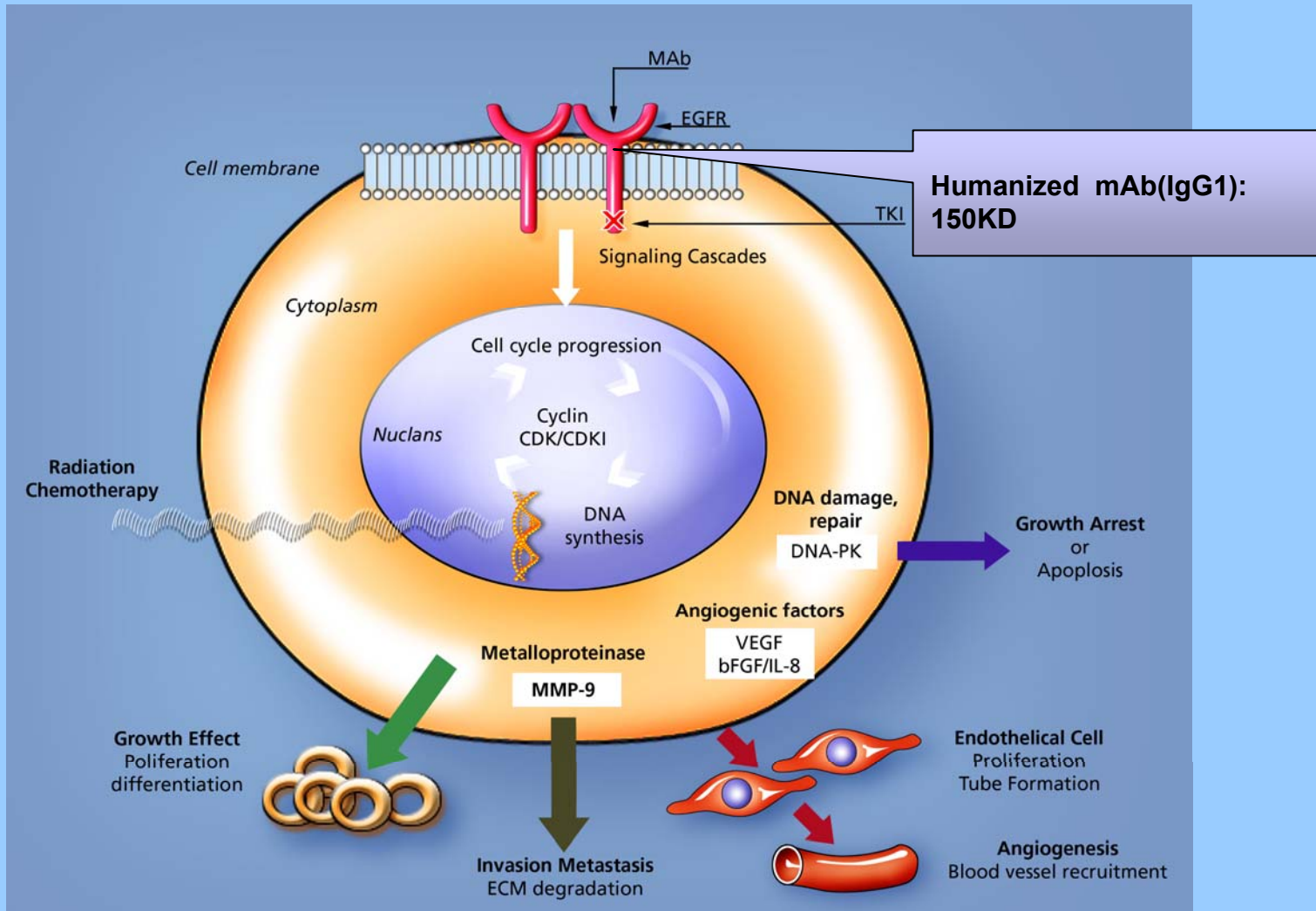
Estimated market potential of \$ 1-3 billion

# **Diabetes : A 21<sup>st</sup> century epidemic**

**A drug market of \$35 billion by 2012 up from \$17 billion in 2005.**

**The Asian Diabetic population is already in excess of 70 million and is said to rise to over 90 million**

# EGFR Signaling Pathway: One of the most validated oncology targets today





## Biocon Oncology Cancer Vaccine Pipeline

Molecule	Current Indications
EGF-P64	EGFR over expressing cancers including Head & Neck, Glioblastoma, NSCLC.
TGF-P64	
Her1	



biocon park

Huge unmet medical Need of Life-threatening diseases

Market Size ~ \$100 Million (India), \$2000 Million (Middle East/North Africa, SAARC)

Fast growing sector (30%)

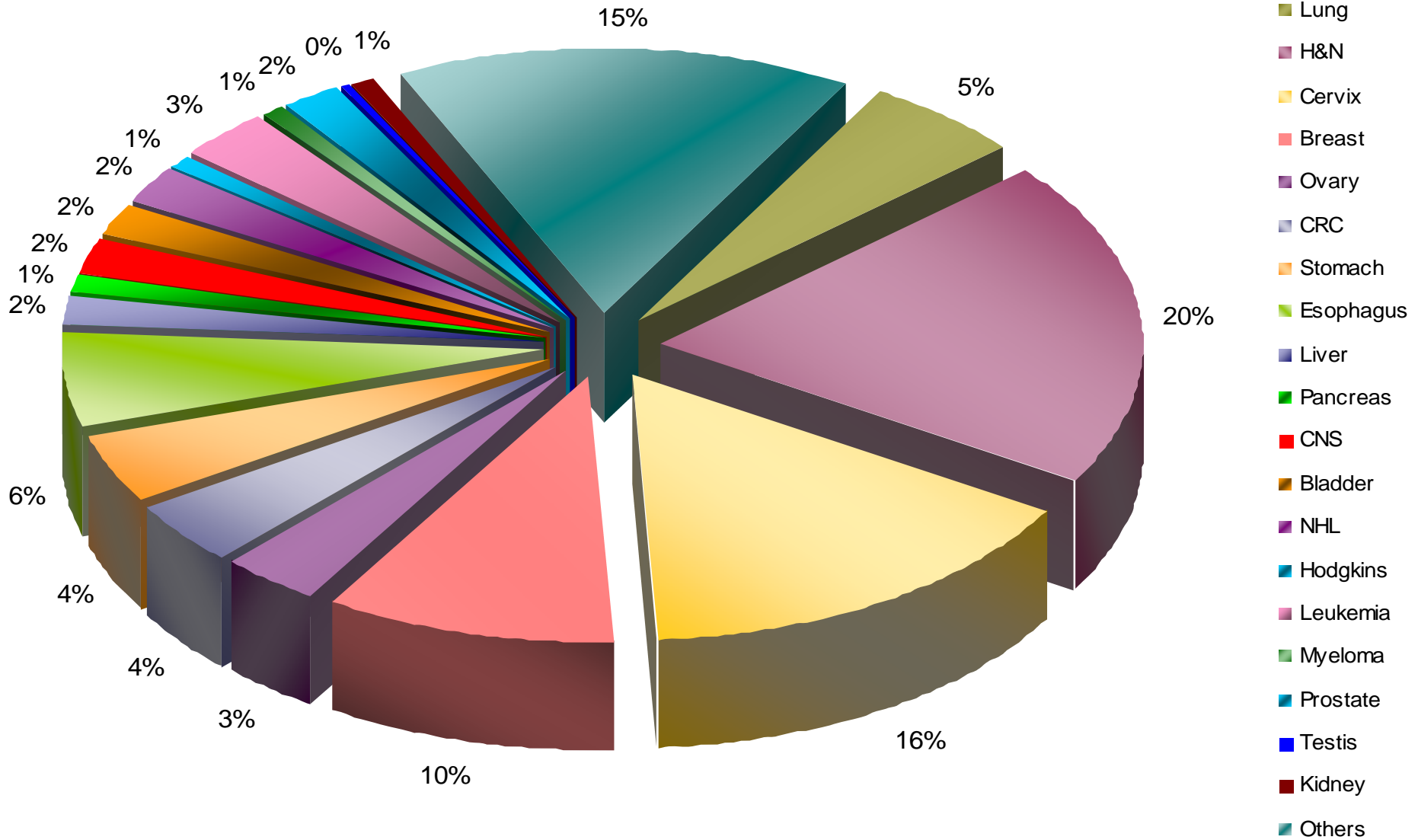
Favorable Regulatory climate : Mechanism that facilitates Accelerated Approval

Strategic Fit with Biocon pipeline

The monoclonal antibody market is one of the fastest growing sectors in the pharmaceutical industry. It still remains a relatively immature market with only 19 marketed products in 2004; however, it has substantial growth potential. Datamonitor estimates that the monoclonal antibody market grew by 48.1% to \$10.3 billion in 2004 from \$6.9 billion in 2003. The market is expected to continue to grow strongly over the next six years, with the value almost tripling by 2010. Datamonitor forecasts that the total market potential of the monoclonal antibody market is \$30.3 billion in 2010, growing at a CAGR of 19.8% from 2004 to 2010. Although, taking into account the likelihood of monoclonal antibody products in development failing to gain approval and reach the market, Datamonitor's risk-adjusted forecast values the monoclonal antibody market at \$27.6 billion, in terms of ethical sales in 2010.

# Indian Scenario

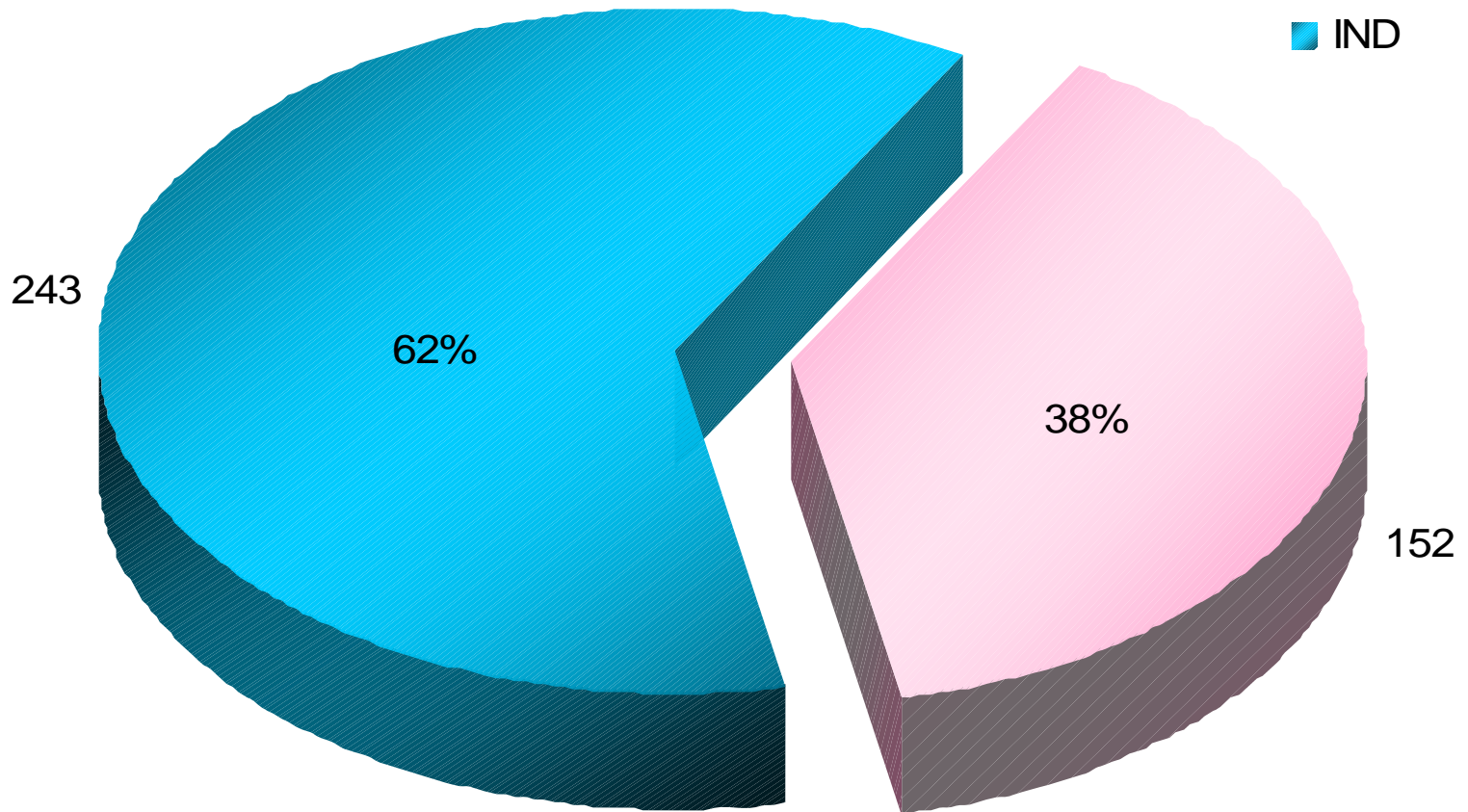
## *The Incidence*



# Indian Scenario

*The Market*

MNC  
IND



*Value Rs. Cr*

## **The Global Toll of Cancer**

In 2002, cancer accounted for an estimated 6.7 million deaths worldwide – that is one in eight of all deaths were due to cancer

The 5 leading cancer killers are:

- Lung – 1.2 million deaths/year
- Stomach – almost 700,000 deaths/year
- Liver – almost 600,000 deaths/year
- Colorectal – 529,000 deaths/year
- Breast – 411,000 deaths/year

Brain tumors are the second leading cause of cancer deaths in children while metastatic brain tumors (tumors spreading from other parts of the body) are the most common types of brain tumor

Approximately 60 percent of all cancer deaths currently occur in developing countries

By year 2050, 74 percent of cancer deaths will occur in developing countries

In much of the developing world, cancers caused by infection—stomach, liver, and cervix—are the leading killers

Currently, nearly 11 million people are diagnosed with cancer each year. The annual number of new cases is projected to increase to almost 16 million by 2020 and to 24 million by 2050

Long-term cancer survival rates average only 20-30% in developing countries

While in the developed world, the four deadliest cancers – breast, lung, colon, and prostate – are attributed to sedentary lifestyle and tobacco use, in developing countries cancers caused by infection – stomach, liver, and cervix – are the leading killers

## **Biotech-enabled cancer therapies**

Development of monoclonal antibodies has enabled development of new weapons of treatment against cancer

Out of the 400 new cancer drugs developed in 2003, almost 200 were biotechnology-derived. Approximately 40 of them were monoclonal antibodies

The monoclonal antibodies market is expected to almost triple in value over the next six years from \$10.3 billion in 2004 to \$30.3 billion. Oncology products will continue to dominate the market

The development focus of the industry is moving away from murine and chimeric antibodies, to humanized antibodies

. A wave of fully humanized antibodies is expected to launch from 2007 onwards, accounting for 12 of the 20 launches between 2007 and 2010.

Global revenues from biotech-enabled cancer therapies are expected to rise at an AAGR (average annual growth rate) of 14.5% from \$15 billion in 2003 to more than \$29 billion in 2008.

The market is being given a strong boost by demographics: cancer risk increases rapidly after age 55, and the baby boom generation is near that marker



**Projected Global Revenues from Biotech-Enabled Cancer Therapies**  
(\$ Millions)

<b>Application</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004(E)</b>	<b>2008(E)</b>	<b>2003-2008 AAGR%</b>
Hematological	2,140.50	3,139.1	3,892.10	4,319.1	9,000.2	18.3
Solid Tumors	2,763.18	3,247.9	3,648.85	4,686.0	10,084.4	22.5
Conditions related to Chemotherapy	4,912.00	6,261.0	7,440.80	8,053.0	10,358.0	6.8
<b>Total</b>	<b>9,815.68</b>	<b>12,648.0</b>	<b>14,981.75</b>	<b>17,058.1</b>	<b>29,442.6</b>	<b>14.5</b>

Source: BCC, Inc.

**Projected Global Revenues From Biotech-Enabled Cancer Therapies**  
(\$ Millions)