



## **Business Opportunities with India** Healthcare-Pharma-Biotech

**Richard Perry**

Regional International Trade Adviser -EEI

[richardperry@eeia.com](mailto:richardperry@eeia.com)

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Leicestershire County Cricket Club

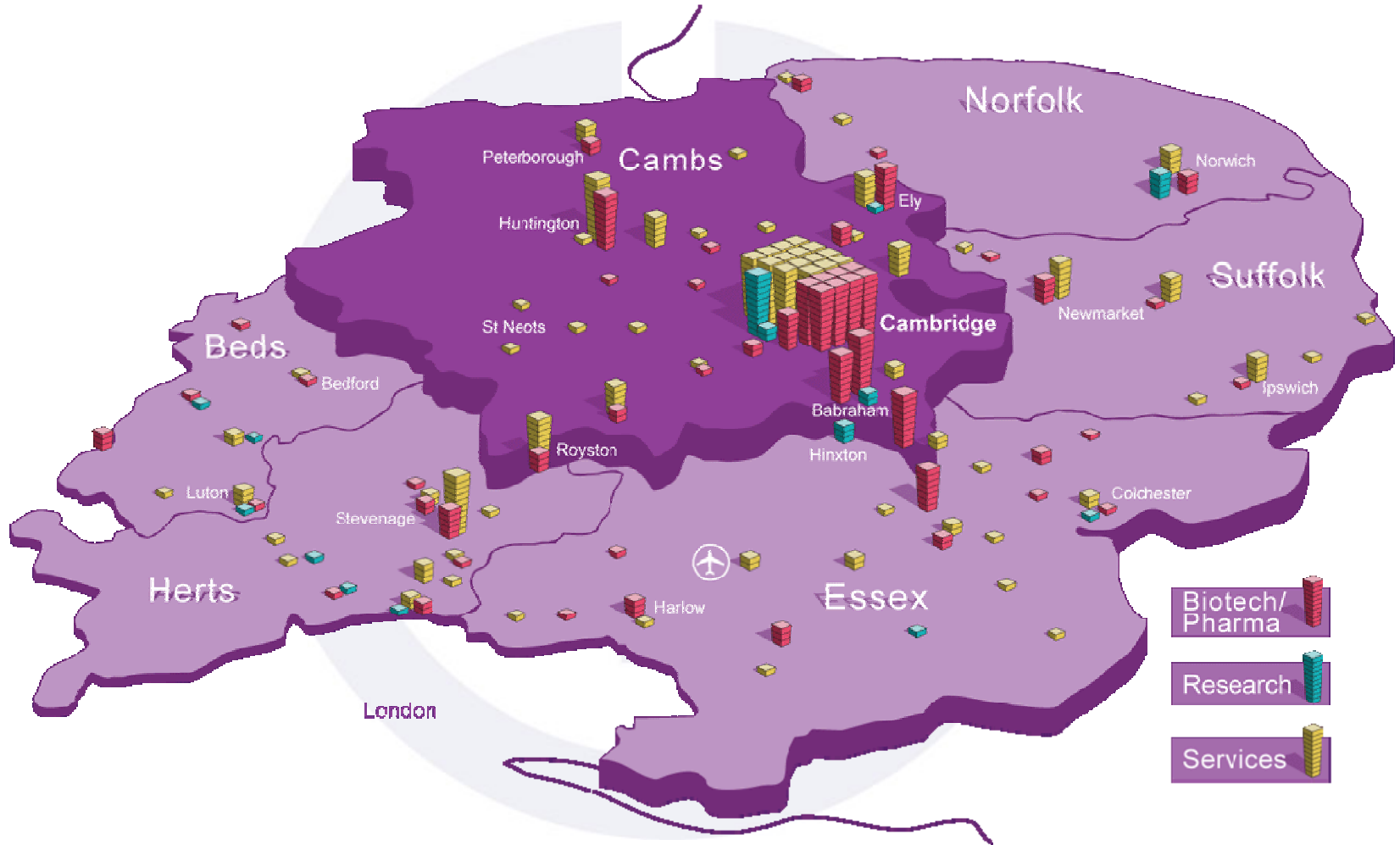
# Agenda

- My profile
- Sector Map: East of England
- High Growth & Emerging Markets
- Why is India so exciting ?
- Sector Overview : Life Sciences
- Key Messages
- Questions

# RICHARD PERRY

AstraZeneca – India - BearingPoint – EFR - UKTI

- Graduate of St.Andrew's University and Henley Management College
- ICI Explosives and Pharmaceuticals ( became AstraZeneca)
- Worked in Latin America, Eastern Europe and Asia
- Responsible for Eastern Europe based in Prague for AstraZeneca during merger
- Worked for AZ in marketing, sales, business development and corporate affairs
- Spent 3 years in India and set up company offering 'Insight Tours' to CIO's.
- Management Consultant with 'Bearing Point' in Life Science Team and worked with EFR ( Extra Financial Risk ) Ltd.
- UKTI East of England – Regional Healthcare Specialist.



<b>GlaxoSmithKline</b>	<b>UK</b>	<b>Stevenage: R&amp;D</b>
<b>Merck &amp; Co</b>	<b>USA</b>	<b>Hoddesdon, Herts: UK Headquarters, Sales &amp; Marketing, Market Research &amp; Administration, Neuroscience Research Centre</b>
<b>Novartis</b>	<b>SWI</b>	<b>Royston: Animal R&amp;D Braintree: R&amp;D &amp; Manufacturing</b>
<b>Astrazeneca</b>	<b>UK</b>	<b>Luton, Cambridge Antibody Technology at Granta Park</b>
<b>Aventis</b>	<b>FRA</b>	<b>R &amp; D Cambridge Dagenham Essex: Manufacturing Operations</b>
<b>Amgen</b>	<b>USA</b>	<b>Cambridge: European Clinical Development</b>
<b>Schering-Plough</b>	<b>USA</b>	<b>Mildenhall: Packing Plant/ Manufacturing</b>
<b>Bayer</b>	<b>GER</b>	<b>Sudbury: Manufacturing</b>
<b>Schering AG</b>	<b>GER</b>	<b>Welwyn Garden City</b>
<b>Napp</b>	<b>USA</b>	<b>Cambridge: R&amp;D, Manufacturing &amp; Sales &amp; Marketing</b>
<b>Roche</b>	<b>SWI</b>	<b>Welwyn, Herts, Development and Diagnostics</b>
<b>Xenova</b>	<b>USA</b>	<b>Cambridge: UK Headquarters, R&amp;D</b>
<b>Genzyme</b>	<b>USA</b>	<b>Cambridge: R&amp;D Haverhill, Suffolk: Manufacturing</b>

# High Growth & Emerging Markets-

## Why are they important?

- **“If you are not participating in the mass market segment of emerging economies you are not developing the capabilities you will need to compete back home” – McKinsey Quarterly- ‘InnovationBlowback’.**
- The number of people with an income over \$3000 should double within 3 years in these economies and in a decade over 800 million people will have crossed this threshold.- Goldman Sachs
- **A rising consumer class is driving demand and the need for innovation. Companies that fail to address emerging markets as a source of innovation and as markets to develop will not survive.**
- Market capitalisation in the BRIC economies could increase by a factor of 4 or \$4 Trillion.
- **The Indian economy is poised to overtake Italy in 2015, France in 2020, Germany in 2025 and Japan in 2035. ( USA No.1 and China No.2)**
- Return on equity for investments in China is c.50% of the figure for India.
- **Higher growth in emerging markets could offset impact of ageing populations and slower growth in the mature economies.**

# High Growth & Emerging Markets-

## Why are they important?

- **In 2005 the world share of GDP of developing countries was 50% and the trend is in their favour. There are still 4 billion people that live on \$2 per day.**
- **GDP ( in PPP terms) for the 'Bottom of the Pyramid' is \$12.5 Trillion. Which is 90% of developed world GDP and larger than GDP of Japan, Germany, France, Italy and UK combined.**
- **'The Economist' magazine includes 25 countries in its emerging markets indicators weekly.**

# Why is India so exciting ?

- Fastest growing Telecomms market in the world – 8mn new subscribers every month- still only 16% penetration to reach 40% by 2012.
- One out of every 10 new mobile phone users in the world is Indian
- It is the world's 2<sup>nd</sup> largest commercial aircrafts market
- Aircraft Orders at Paris Show
  - US Airlines - 260
  - European Airlines – 240
  - Rest of the World – 80
  - **India - 600**
- Of every 12 diamonds sold in the world, 11 are processed in India
- Over 100 of the Fortune 500 companies have their R&D centres in India
- 1/3<sup>rd</sup> of global offshore outsourcing business goes to India. With the current trends it is estimated that by 2008, 50% of the global offshoring business will be captured by India

## Cont'd

- India is one of only 3 countries in the world to have built a super computer
- India has the largest film industry in the world
- 50% of Fortune 500 companies source software from India
- India has the highest return on FDI  
India – 19.3% , China 14.7%
- India is one of only 6 countries with satellite launch capabilities
- India has one of the largest Television networks in the world with over 300 channels and 500 million viewers
- **Top 2 export items from UK to India**
  - Rough Diamonds (55%)
  - Scrap Metal (15%)

# Healthcare & Medical Sector

- Common Minimum Programme committed to increasing spending to 3% of GDP (0.9% today)
- The system reaches about 50% of the population.
- Only 2-3% of Indians are covered under health insurance.
- 80% of healthcare provided by private sector who promote 'regional hub' model
- 70% of medical equipment is imported and duties are down from 25% to 5%.
- Opportunities for accreditation, design services, nurse training, waste management and infection control to ensure world-class standards.
- **Healthcare is a core sector of the JETCO initiative between UK and India.**

## Healthcare: Areas of Opportunity ( E&Y data)

- **Medical Infrastructure** ( requires \$78bn to reach bed/1000 of 1.85)
- **Telemedicine**
- **Medical Equipment** (\$2.2Bn to \$4.9Bn 2012, Growth rate 15%)
- **Medical Textiles** ( \$400m to \$750mn 2012, growth rate 11%)
- **Health Insurance** ( Premiums 2006: \$711m, 2012: \$3.8 Bn)
- **Clinical trials** ( \$1 Bn by 2010)
- **Health services outsourcing** (\$3.7Bn, growth 11%. \$7.4Bn by 2012)
- **Medical value travel** (\$450mn ,growth 22%. \$1.4Bn by 2012)
- **Training & Education**
- **‘Bottom of the Pyramid’ model in Pharma and Healthcare ?**
  
- **Healthcare spending in India is expected to rise by 15% pa and could contribute as much as 6.1% of GDP in 2012 and employ 9 million people. 80% provided by private sector.**

# Healthcare- Drivers

- **Growing middle class prepared to spend. Family spend x4 since late 1980's.**
- Top 33% of income earners accounted for 75% of the total private spend.
- 45 cities with population of 1 million ( 53 by 2011)
- **1.1 million households with £50K disposable income by 2009.**
- Per capita spend on healthcare increases with level of education
- Shift from infectious diseases to 'life-style' diseases.
- **Quality private providers such as Fortis, Apollo and Max**
- Availability/willingness of funds to invest in a capital intensive industry.
- Increasing life expectancy ( still a very young demographic)
- Compelling case for Public Private Partnerships (PPP)

# Current Issues for Global Big Pharma

- **Wave of Patent expiries**
- Demographic changes
- **Decline in R&D productivity**
- Pressures of prices
- Government reviews of industry practices
- Challenges to IPR
- **Corporate reputation**
- Patchy development in lower cost geographies
- Focus in operating costs, compliance and risk
- **Unmet health needs in developing countries.**
- Time lag before pipeline benefits from biotech and 'personalised' medicine.
- **More markets TRIPS compliant. (Novartis' ' Gleevec' Mar 07)**

India : Part of the problem or the solution ?

# Indian Pharmaceutical Sector

- \$8Bn-2005, \$25 Bn-2010, \$100Bn - 2025 ( Economist, Mckinsey,CII)
- Growth rates 13%+ in domestic market .
- 16% of world population but less than 2% of global pharma market.
- Top 5 manufacturer of bulk drugs ( \$1.8Bn- 2005 and \$5.5Bn by 2010)
- Top 3 in terms of number of FDA approved manufacturing plants globally.
- Medicines spend is \$5.6 per capita ( Japan \$412, Germany \$220)
- India is 4th ( volume) and 13th ( value) in terms of pharma market.
- Employs 3.3 million people.
- TRIPs compliant but focus now on enforcement. ( Novartis- 'Gleevec' ?)

**Indian Pharma involved in global M&A deals in generics**

## Contract Research Organisations- CRO's

- Relative ease of recruiting patients
- **Cost savings of 50% in Phase 1 studies and 60% in Phase II and III.**
- Estimated as \$180 m industry in India today – Tata Consultancy Services
- **CRO's providing services in earlier stages of the pipeline ie. Drug discovery.**
- 90% of biotech revenues come from outsourcing, alliances and partnerships – Proximare Inc.
- **global alliance management skills more critical to feed innovation pipeline demands.**
- Clinical Trial Research is 70% of drug development cost so offshoring more attractive.

# Opportunities.....

- **R&D Productivity can be greatly increased by using low cost resources**
  - “Cost of innovation in India is 20% of that in Europe”. Biotech and Pharma
  - Offshoring R&D may reduce cost by as much as 80%
  - An India chemist costs \$60,000 pa compared to \$250,000 in USA.
- **Most big pharma already have R&D operations in emerging markets**
  - AZ \$100m in R&D networks in China “dip our toe in the local R&D community”
  - GSK has R&D alliance with Ranbaxy
  - EIU report in 2004- “ Companies are redistributing their product innovation set-up around the globe.
  - Pfizer have 80 strong dedicated clinical study group in Mumbai and 100 FTE’s for data management/biometrics
- **Whether in-house or outsourced**
  - The global market for drug development is estimated at \$105bn by 2010 with about 40% outsourced.
  - Novo Nordisk in-licensed 2 diabetes molecules from ‘Dr.Reddy’s’ ( Indian Pharma company)
- **There is lots of room for growth**
  - 90% of world’s disease burden falls on the developing world but only 3% of the R&D spend.- Economist 2005
  - By 2008 the number of life science researchers in India will rise 35% to 1.6 million and in USA the supply will drop 11% to 760,000- Mckinsey Global Institute
- **And some of the legal issues are being resolved**
  - China and India are TRIPs compliant - focus is now on enforcement.

## Biotech - \$1.45 BN ( 37% growth 05-06)

### Segments

- Bio-Pharma 72%
- Bio-Agri 9%
- Bio-informatics 2%
- Services 11%
- Bio-Industrial 6%

### Growth Rates

- 20%
- 60%

**JETCO 2007: Major deals signed with Ranbaxy, Serum Institute and Imperial Diabetes Centre planned.**

# Life Sciences- Key Issues

- **Pharma/ Biotech:**  
Intellectual property in practice, Global sourcing of R&D and Manufacturing, Partnering & Alliances, pricing, accessibility of drugs and treatment, Clinical trials, co-payment, industry reputation, pharmacogenomics, biotech funding, M&A's, parallel trade, innovation clusters, cost of 'drug-to-market', personalised medicine and generics.
- **Healthcare:**  
Medical equipment and devices, 'Theranostics', Telemedicine, Treatment Offshoring, consultancy, governance, Hospital projects, Engineering projects, role of academia, diagnostics, dental, Public-Private Partnerships. Non-clinical consultancy.

Healthcare and Life Sciences expect manpower shortages of 1.5mn by 2010.  
( Business Today Jan 2007)

( ITES- 500K, Telecom-450K, Retail- 200k)

# Investment & Partnering

- Sales & Distribution
- Manufacturing & Supply Chain
- R&D and Diagnostics
- Clinical Trials
- Consultancy
- Technology transfer
- Education & Training
- Energy Conservation
- Carbon Emission Trading
- Pollution Control
- Hazardous Waste Mngt
- BPO, IT and KPO
- Standards & Quality

## Key Messages- India

- A key market
- A source of innovation
- Attractive offshoring base
- Indian industry going global

## Further reading

- [www.pharmafutures.org](http://www.pharmafutures.org) – Scenario based pharma group
- [www.pharmashareownersgroup.org](http://www.pharmashareownersgroup.org) – Top 14 Institutional investors
- [www.thenextpractice.com](http://www.thenextpractice.com) – Consultancy firm of C K Prahalad
- [www.businessweek.com](http://www.businessweek.com)
- [www.economist.com](http://www.economist.com)
- [www.pharmabiz.com](http://www.pharmabiz.com)
- [www.gs.com](http://www.gs.com) – Goldman Sachs
- [www.worldbank.org](http://www.worldbank.org)
- **Books:**
- **‘The World is Flat’** – Thomas L Friedman . FT/Goldman Sachs business book of the year
- **‘ The Fortune at the Bottom of the Pyramid’** – Prof C K Prahalad , Uni of Michigan , Business School
- **‘Being Indian- The truth about why the 21st Century will be India’s’**. – Pavan Varma ( [www.penguinbooksindia.com](http://www.penguinbooksindia.com))

# Useful Websites: East of England

- [www.babraham.com](http://www.babraham.com) ( Finance and Regulatory Advice Service-FRAS)
- [www.i10.org.uk](http://www.i10.org.uk) ( EoE University network)
- [www.ecri.org](http://www.ecri.org) Medical Device/Technology data.
- [www.mhra.gov.uk](http://www.mhra.gov.uk)- Regulatory approval.
- [www.gambica.org.uk](http://www.gambica.org.uk) – Laboratory instruments
- [www.innovation-east.co.uk](http://www.innovation-east.co.uk) – St’John’s Innovation Centre, Cambridge
- [www.hee.org.uk](http://www.hee.org.uk) – NHS Innovation Hub Papworth, Cambridge
- [www.twi.co.uk](http://www.twi.co.uk) – Materials Research Centre, Granta Park, Cambridge
- [www.healthtechktn.com](http://www.healthtechktn.com)- DTI Knowledge Transfer Network
- [www.ttp.com](http://www.ttp.com) – The Technology Partnership
- [www.paconsulting.com](http://www.paconsulting.com)- Global Technology consultants
- [www.abhi.org.uk](http://www.abhi.org.uk) – Association of British Healthcare Industries
- [www.medilinkeast.com](http://www.medilinkeast.com) – Medical Devices industry group.
- [www.createpartners.com](http://www.createpartners.com) – Venture Capital company
- [www.exporeastofengland.org.uk](http://www.exporeastofengland.org.uk)- UKTI East of England website
- [www.enterprise.cam.ac.uk](http://www.enterprise.cam.ac.uk) – Cambridge University commercialization unit.
- [www.cambridgenetwork.co.uk](http://www.cambridgenetwork.co.uk) – Leading tech & finance network