Biotechnology - Plant Biotechnology

(Transgenic plants, Herbicide Resistant Plants, Glyphosate Tolerant Plants, Sulphonylurea Tolerant Plants, Atrazine Tolerant Plants, Phosphinothricin Tolerant Plants, Bromoxynil Tolerant Plants, Insect Resistant Plants, Animal Cells, Plant Cells, Tissue Cultures, Viruses, Prokaryotes)

Introduction

Plant biotechnology is a precise process in which scientific techniques are used to develop molecular and cellular based technologies to improve plant productivity, quality and health; to improve the quality of plant products; or to prevent, reduce or eliminate constraints to plant productivity caused by diseases, pest organisms and environmental stresses. It can be defined as human intervention on plant material by means of technological instruments in order to produce permanent effects, and includes genetic engineering and gene manipulation to obtain transgenic plants. Plant genetic engineering is used to produce new inheritable combinations by introducing external DNA to plant material in an unnatural way. The results are genetically modified plants (GMPs) or transgenic plants.

The key instrument used in plant biotechnology is the plant tissue culture (PTC) technique which refers to the in vitro culture of protoplasts, cells, tissues and organs. Plant biotechnology in use today relies on advanced technology, which allows plant breeders to make precise genetic changes to impart beneficial traits to plants. The application of biotechnology in agriculture has resulted in benefits to farmers, producers and consumers. Plant biotechnology has helped make both insect pest control and weed management safer and easier while safeguarding plants against disease. The worldwide demand for food, feed and modern textile fibers can only be met in the future with the help of plant biotechnology. It has the potential to open up whole new business areas that will totally redefine the current market scope and perception.

Market Outlook

The Indian biotech industry holds about 2 per cent share of the global biotech industry. The biotechnology industry in India, comprising about 800 companies, is valued at US$ 11 billion and is growing at a Compound Annual Growth Rate (CAGR) of 20 per cent. If there is an annual investment of US$ 4.01 billion to US$ 5.02 billion in the next five years, the biotech industry can grow to US$ 100 billion by 2025, with a 25 per cent return on investment, and set a growth rate of 30 per cent year-on-year.

The global market for agricultural biotechnology is expected to grow to $46.8 billion by 2019, with a five-year compound annual growth rate (CAGR) of 11%. The biotechnology tools category, the fastest growing segment of the market, is moving at phenomenal 49.9% CAGR.

Table of Contents

1. The organisms of biotechnology

2. Transgenic plants

Herbicide Resistant Plants

1. Glyphosate Tolerant Plants
2. Sulphonylurea Tolerant Plants
3. Atrazine Tolerant Plants
4. Phosphinothricin Tolerant Plants
5. Bromoxynil Tolerant Plants

Insect Resistant Plants

1. Transgenic Plants with Bt Toxin
2. Transgenic Plants with Bt Toxin and Serine Protease Inhibitor Gene

3. Transgenic Plants with Cowpea Trypsin Inhibitor
4. Transgenic Plants with Nicotiana alata Proteinase Inhibitor

Virus Resistant Plants

1. Transgenic Plants with Viral Coat Protein
2. Transgenic Plants with Viral Nucleoprotein
3. Transgenic Plants with Viral SAT RNA
4. Transgenic Plants with Antisense RNA

Transgenic Plants Resistant to Fungi and Bacteria
Transgenic Plants with Improved Storage Proteins
Sweet Proteins
Enriching the Carbohydrate Contents
Improving the Quality of Oils and Fats

Male Sterility and Fertility Restoration
Changing the Flower Colours
Stress Tolerant Plants
Cold Tolerant Plants
Drought Tolerant Plants
Plant Tolerant to High Light Intensity
Engineering for Preservation of Fruits
Enhancing the Photosynthetic Efficiency
Transgenic Plants as Bioreactors
Vaccines
Interferons
Pharmaceutical Compounds
Biodegradable Plastics

3. Biological Nitrogen fixations

Non-symbiotic Nitrogen Fixation
Features Favourable for Non-symbiotic Nitrogen Fixation

1. Special separation of Nitrogen Fixing Cells
2. Protein-Nitrogenase Association
3. High Rate of Respiration
4. Time specific Nitrogenase Activity
5. Association with Rapid Oxygen Consumers
6. Presence of hydrogenase
7. Colonization

Nitrogenase
Basic requirements for Nitrogen Fixation

Mechanism of Nitrogen Reduction
Assimilation of Ammonia
Route I

Route II
Symbiotic Nitrogen Fixation
Host Specificity
Root Nodulation
Mechanism of Nitrogen Fixation

(a) Oxygen Transpot by Leghaemoglobin
(b) Utilization of Oxygen by Hydrogenase

Nitrogenase
Requirement for Nitrogen reduction
Assimilation of Ammonia

4. Genetics of Nitrogen Fixation

Nif-genes of Klebsiella Pneumoniae
Regulation of Nif Genes
Nif-genes of Azotobacter
Nif-genes of Anabaena
Genetics of Legume-Rhizobium Nitrogen Fixation

1. **Rhizobial Genes**

a) Nod Genes
b) Nif Genes
c) Hup Genes

2. Legume Nodulin Genes

Leghaemoglobin Gene
Overall Regulation of Genes
Gene Transfer for Nitrogen Fixation

1. Transfer of Nif Genes to Non-Nitrogen Fixing Bacteria
2. Transfer of Nif Genes to yeasts
3. Transfer of Nif-Genes to plants
4. Transfer of Nod Genes
5. Transfer of Hup Genes

5. Mycorrhizae for Agriculture and Forestry

Mycorrhizal types and their structural and nutritional features
Ectomycorrhizae
Mechanism of ECM formation
Morphology and structure
Synthesis of mycorrhiza
Cultural study
Vesicular arbuscular Mycorrhiza
Introduction
Evolution

Taxonomy
Classification
Distribution
Lifecycle
Reproduction
Sexual reproduction
A sexual production
Method of Inoculum production of VAM
Some important steps in production of VAM
Host plant/growth medium

Fertilizations/micronutrients
Chemical application
Control of fungal pathogens
Plant vesicular arbuscular mycorrhizal fungal interactions
VAM and soil biota
Control of root diseases
Endomycorrhiza fungi and tree diseases
Mechanism of disease control

6. Animal and plant cell cultures

Historical perspectives
Products and potentials
Animal cells
Immuno biological

1. Virus vaccines
2. Monoclonal antibodies
3. Immunoregulator materials

Insectisides
Enzymes
Hormones
Whole cells

Plant cells
Pharmaceuticals
Food additives
Agrochemicals
Perfumes
Enzymes
Speciality Chemicals
Biomass applications of plant cell cultures
Cell culture and product synthesis
The nature of animal and plant cells in culture
Cell culture initiation
Culture development
Secondary cultures
Culture replication
Industrially useful cell cultures

Substrate independent cultures
Individuality of cell lines in relation to the productivity
Culture media
Growth media
Water
Inorganic salts
Trace elements
Vitamins
Buffers
Sources of energy and carbon
Nitrogen sources

1. Defined nitrogen sources
2. Undefined nitrogen sources

Growth factors
Other ingredients
Maintenance media
Cell culture technologies
Cellular characteristics which influence the choice of cell culture technology
Mixing
Aeration
Doubling times

1. Sterlization of media
2. Sterlization of equipment

Cell stickness
Immobilized cell systems

The growth and exploitation of cell grown on the surface of a supporting solid substratum

1. Multiple process
2. Unit process

The growth of animal and plant cells immobilized within a confining matrix

1. Gel entrapment systems
2. Applications of entrapped cells

Dynamic cell systems
Air driven systems
Impeller and air driven systems
Impeller mixed systems

7. Somaclonal variation, cell selection an genotype improvement

Somaclonal variation
Historical perspective
The manifold incidence of somaclonal variation
Range of species
Characters displaying variation
Genetic nature of somaclonal variants
Pre-existing or culture induced variation
Genetic and explant sources effects

The origin of somaclonal variation
Chromosomal abnormalities
Molecular possibilities
Gene amplification and diminution
Tranposable elements
Cell selection
Disease resistance
Herbicide tolerance
Nutritional quality
Other cell selection systems

8. Virus-free clones through plant tissue culture

Distribution of viruses in plants
Techniques for eradication
Heat treatment
Chemotherapy
Meristem culture
Culture media
Factors affecting developments and rooting
Virus eradication
Major use of virus-free clones
Study effect of virus infection
Source for clonal propagation
Source for in vitro mass propagation
Concluding remarks

9. Microbial metabolism of carbon dioxide

Autotrophic carbon dioxide fixation
The calvin cycle
Molecular structure and properties of RuBP case
Phosphoribulokinase
Carboxysomes
Regulation of ribulose 1,5-biphosphate carboxydase and phosphoribulakinase synthesis
The reductive carboxylic acid cycle
The anaerobic non-phototrophic autotrophs
Heterotrophic carbon dioxide fixation

10. Microbial metabolism of Hydrogen

Introduction
The role of Hydrogen in the biosphere
Enzyme catalysing the evolution and oxidation of Hydrogen
H2 :+ Ferredoxin Oxidoreductase
H2 : Ferricytochrome C3 oxidoreductase
H2 : NAD- Oxidoreductase
H2 : Coenzyme F420 oxidoreductase
Membrane-bound hydrogenases
Formate hydrogenlyase
Nitrogenase
Organisms involved in the conversion of hydrogen

Hydrogen-producing micro-organisms
Anaerobic conditions

1. Fermentation and fermentative bacteria
2. Anoxygenic photosynthesis and phototrophic bacteria
3. Oxygenic Phototrophic bacteria (Cyanobacteria)
4. Oxygenic green algae

Aerobic conditions : Nitrogen fixing bacteria
Hydrogen consisting organisms
Hydrogen utilization by anaerobes

1. Nitrate-reducing dentifying bacteria
2. Sulfate reducing bacteria
3. Methanogenic bacteria

4. Acetogenic bacteria
5. Furmarate-reducing bacteria

Hydrogen utilization by phototrophs

1. Anoxygenic phototrophs
2. Cyan bacteria
3. Green algae

Hydrogen utilization by aerobic hydrogen-oxidizing bacteria
The potential use of Hydrogenases and hydrogen in biotechnology

11. Microbial grwoth dynamics

Microbial growth in unlimited environments
Basic growth equation from cell number increase
Basic growth equation from increment increase in the population over a small growth time.
Basic growth equations.
Microbial growth in limited environments
Growth limitation by substrate exhaustion
Variation in the observed growth yield
Influence of the growth-limiting substrate on growth rate
Deviation of the Monod equation at High substrate concentrations
Basic growth limiting substrate equation
Modelling microbial growth in limited environments
The logistic equation

The saturation model
Microbial growth in open environments
Chemostat growth kinetics
The dilution rate
The dilution rate and biomass concentration
The dilution rate and growth limiting substrate concentration
Biomass and growth-limiting substrate concentrations in the steady state
Determination of Âμmax from washout kinetics
Establishing and maintaining the steady state
Deviations from theoritical chemostat kinetics
Influence of variation in the observed growth yield
Microbial competition
Competition in closed environments
Competition in open environments

12. Stoichiometry of microbial growth

Growth yields and material balances
Relation between ATP production and growth yields, YATP
Influence of growth rate and maintenance energy on YATP : anaerobic chemostat cultures
Aerobic yield studies and the influence of the efficiency of oxidatie phosphorylation on growth yields
Theoritical calculations on the ATP requirements for the formation of microbial biomass
Influence of Cell Composition

Influence of the carbon source and complexity of the medium
Theoritical calculations on the ATP requirement for the formation of microbial biomass
Influence of the Nitrogen source
Influence of the carbon assimilation pathway of the growth substrate
Energy-dissipating mechanisms during growth with excess carbon and source.
Influence of the degree of reduction of the growth substrate
Heat production
The stoichiometry of product formation

13. Ageing and death in microbes

Basic principles
Death of microbes
Ageing of microbes
Viability among microbes
Survival of populations : Cryptic growth
Injury among microbes
Stress and survival
The physiological status of the population
Overt and actual stress
Starvation
Substrate accelerated death (SAD)
Metabolic and structural injury
Thymine less death
Survival of slowly growing bacteria
Differentiation and survival

14. Effect of environment on microbial activity

Mechanisms of micro-organisms response to the environment
Primary response due to direct chemical or physicochemical effects
Enzyme inhibition and stimulation
Induction and repression of protein synthesis
Changes in cell morphology
Change in genotype
Dissolved oxygen
Cell Interactions with oxygen
Respiration
Oxygen incorporation
Oxygen as an inhibitor
Oxygen as an enzyme regulator

Measurement of dissolved oxygen
Generalized response to DOT
Diffusion limitation
Response of growing micro-organisms
Respiration rate
Change in cell constituents
Changes in metabolic products
Transient responses to changes in DOT
Control of DOT
Redox potential
Responses to carbon dioxide
Requirement for carbon dioxide
Inhibition by carbon dioxide
Water activity
Introduciton

Halotolerance and halophily
Effects of pH
Introduction
Cellular level responses
Intracellular pH
Effects of pH membrane function
Effects of pH on uptake of substrate
Effects of pH on products of metabolism
Effects of pH on cell morphology an structure
Effects of pH on the chemical environment
Effects of pH on flocculation and adhesion
Optimum pH values for growth
Causes of pH changes in cultures
Product formation
Nutrient uptake
Oxidation/reduction reaction

Chage in buffering capacity
Control of pH
By means of a buffer
By balancing metabolism
By feedback control
Temperature
Cellular-level Responses
Temperature ranges for growth
Response of growth rate to temperature
Effects of temperature on cell death
Effects of temperature on cellular components

1. Membranes
2. DNA
3. RNA
4. Proteins

Cultural effects of temperature
Response to temperature shifts
Effects on substrate utilization
Effects on product formation
Heat generation
Shear
Generation of shear
Effects of shear on filamentous fungi
Effects of shear on protozoa and animal cells in culture
Effects of products on shear rate
General control strategies

15. Biosynthesis of fatty acids and lipids

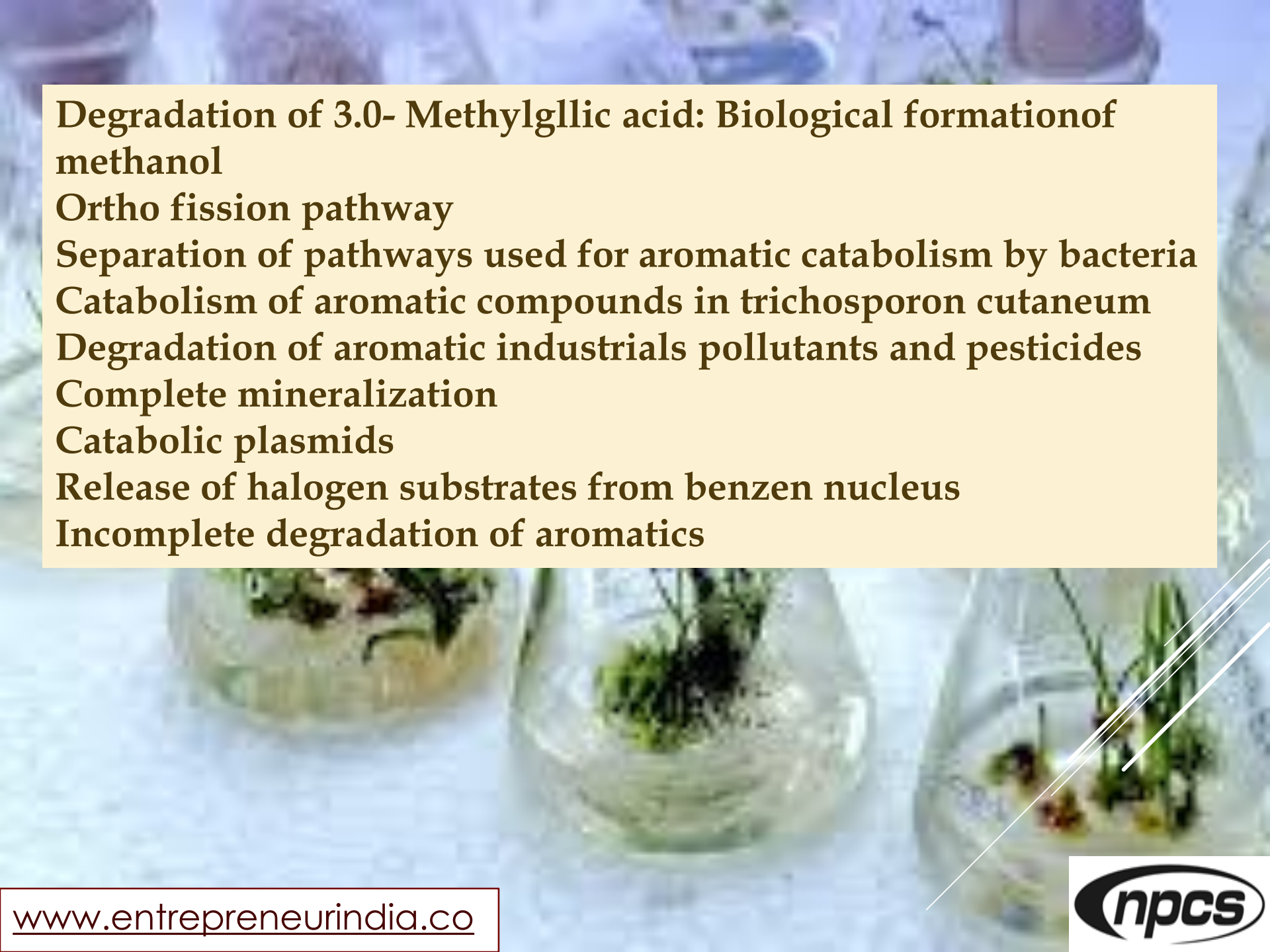
Nomenclature
Relevance and importance of lipids
Lipid composition of micro-organism
General survey
Bacteria
Yeasts
Fungi
Oleaginous micro-organism
Patterns of lipid accumulation
Factors influencing lipid biosynthesis
Growth rate
Substrate
Temperature

Growth substrate
Oxygen
pH and salinity
Other factors
Lipid biosynthesis
Acetyl- CoA carboxylase
Fatty acid sythetase
Origin of acetyl - CoA
Bacteria
Eukaryotic micro-organism
Biosynthesis of unsaturated fatty acids
Biosynthesis of other fatty acids
Biosynthesis of lipids from fatty acids
Triacylglycerols
Phospholipids

Waxes
Poly B- hydroxybutyrate
Microbial metabolism of alkanes and fatty acids
Alkane-utilizing organisms
Uptake of alkanes
Mechanisms of alkane oxidation
Oxidation of primary alcohols to fatty acids
Metabolism of fatty acids derived from alkanes
B-oxidation
a-oxidation
Microbial products derived from alkanes
Fatty alcohols and aldehydes
Fatty acids
Surfactants

16. Microbial metabolism of aromatic compounds

Fission of the Benzene nucleus
Pereparation of nucleus for aerobic fission
Reactions which follow ring fission
Pathways of degradation
Meta fission pathways
Degradation of 4-hydroxyphenlacetic, homoproto catacleuic
Homogentistic and genetoside acids
Procalecluate 4.5 dioxygenase



Degradation of 3.0- Methylgllic acid: Biological formationof methanol
Ortho fission pathway
Separation of pathways used for aromatic catabolism by bacteria
Catabolism of aromatic compounds in trichosporon cutaneum
Degradation of aromatic industrials pollutants and pesticides
Complete mineralization
Catabolic plasmids
Release of halogen substrates from benzen nucleus
Incomplete degradation of aromatics

17. Bacterial respiration

The generation of the proton motive force
Bacterial respiratory chains
Respiration linked proton translocation
The proton motive force
The utilization of the proton motive force
ATP synthesis
Active transport of solutes
Biotechnological aspects of bacterial respiration
Biomass production
Waste treatment and metabolite production

18. Mechanisms of enzyme catalysis

The events in an enzyme catalysed reaction
Enzyme mechanisms
Enzyme kinetics
Binding of the substrate to the enzyme
Conformational changes
Covalent bond making and breaking
Glucose isomerase

19. Enzyme evolution

Regulation of metabolism
Induction
Nutritional repression
Feedback regulation
Limiting accumulation of end products
Feedback resistance mutations
Additional types of regulations
Permeability consideration
Recent approaches to strain construction
Amino-acid production by genetically engineered strains of E-Coli and related organisms
Strain construction in other species

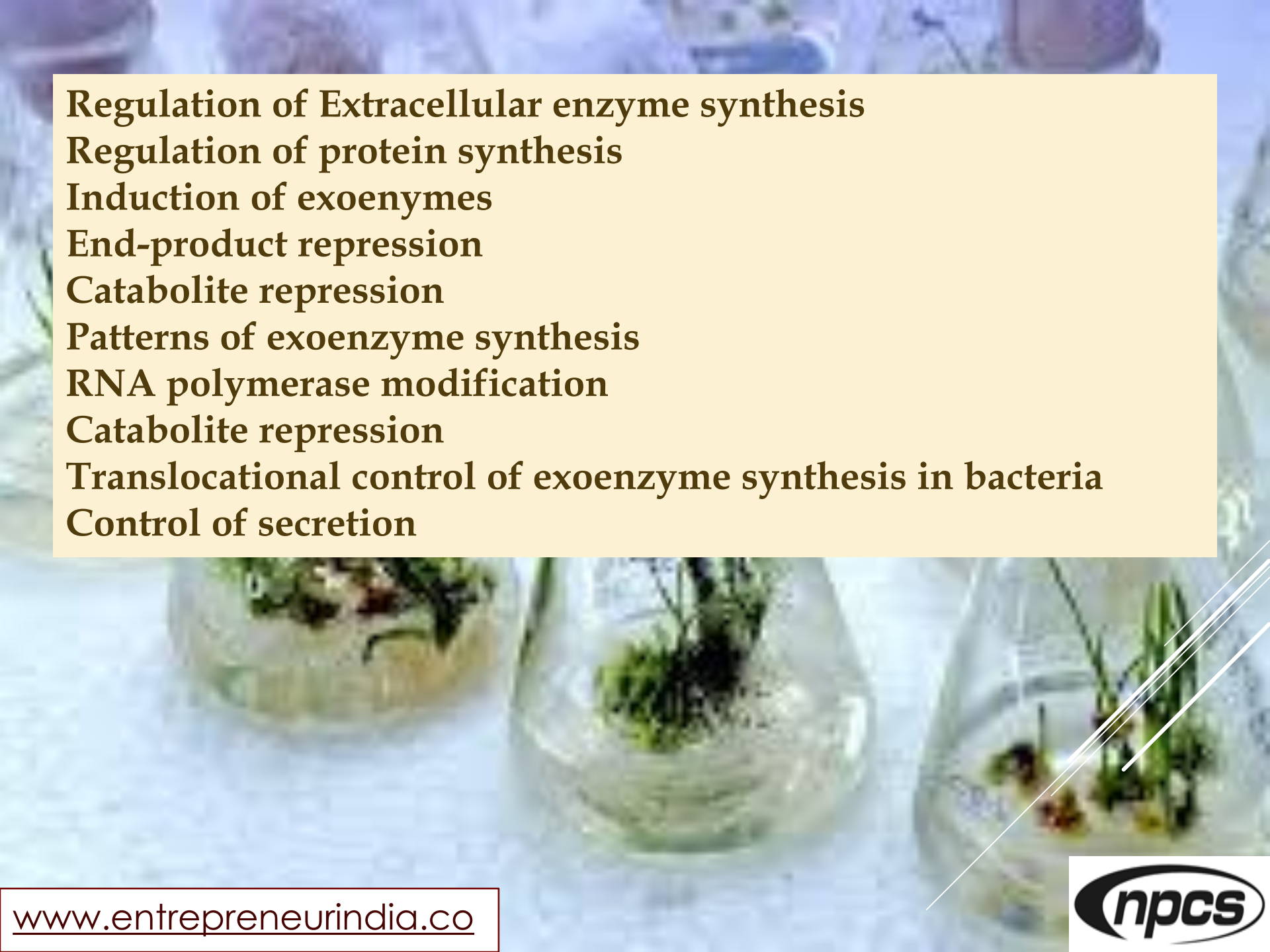
20. Microbial photosynthesis

Historical background
General characteristics of microbial photosynthesis
Structure and synthesis of photosynthetic pigments
Chlorophylls and bacteriochlorophylls
Carotenoids
The phycobissins
The initial reactions primary photochemistry and electron transport
Light harvesting
Charge separation and electron transport in an oxygenic photosynthesis
ATP synthesis

The eubacterial photosynthetic microbes
Introduction
The anoxygenic phototrophic bacteria
The major groups
Development of the photosynthetic appartus
Carbon metabolism
The Cyano bacteria: oxygenic photosynthesis in a diverse prokaryotic group
Organization of the photosynthetic appartus
Interrelationship between photosynthetic and chemosynthetic carbon metabolism in cyanobacteria

21. Extra cellular enzymes

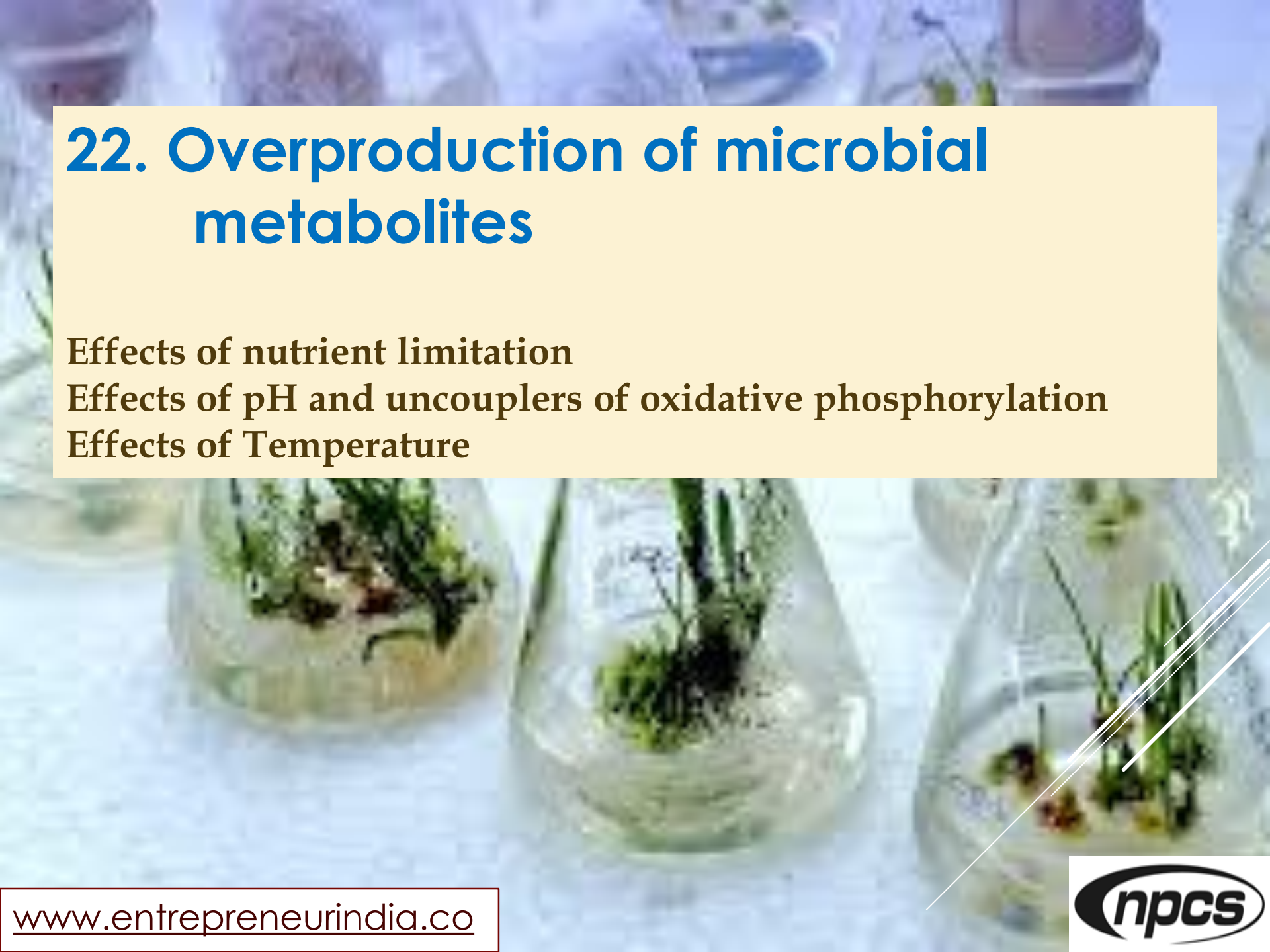
Mechanism of Secretion
Signal hypothesis
Signal hyprosthesis in bacteria
Signal sequence structure
Function of signal peptide and translocation
Processing of the precursor
Gene fusion studies
Membrane associate intermediates
Alternative export mechanisms; post translocational secretion
Aspects of enzyme secretion in fungi



Regulation of Extracellular enzyme synthesis
Regulation of protein synthesis
Induction of exoenymes
End-product repression
Catabolite repression
Patterns of exoenzyme synthesis
RNA polymerase modification
Catabolite repression
Translocational control of exoenzyme synthesis in bacteria
Control of secretion

22. Overproduction of microbial metabolites

Effects of nutrient limitation
Effects of pH and uncouplers of oxidative phosphorylation
Effects of Temperature



23. Regulation of metabolite synthesis

A phospholactase system in Klebsiella
Catabolism of unnatural sugars
Regulatory mutations
Modular pathways
Evolution of an aliphatic amidase in pseudomonas
Evolution of a new ÃŸ-Galactosidase in E-Coli
Properties of the wild-type proteins
Evolution of lactose utilization
Evolution of new activities for ebg enzymes
Evolution of the ebg repressor
Decryptifying Existing Genes

Tags

Plant Biotechnology, Biotechnology Industry in India, Opportunities in Biotechnology and Business, Commercialization of Plant Tissue Culture in India, Agricultural Biotechnology, Biotechnology Industry in India, Biotechnology in India, Plant Biotech, Plant Tissue Culture, Plant Biotechnology and Agriculture, Plant Biology & Plant Biotechnology, Profitable Biotechnology Business Ideas, Small Business Ideas in Plant Biotechnology Industry, How to Start Small Scale Plant Biotech Industry in India, Start Tissue Culture Biotechnology, Plant Biotechnology Ideas for Small Business, Plant Biotechnology Business Plan, Plant Biotechnology Ideas, Plant Biotechnology Startups in India, Organisms of Biotechnology, Animal Cells, Plant Cells, Transgenic Plants, Herbicide Resistant Plants, Glyphosate Tolerant Plants, Sulphonylurea Tolerant Plants, Atrazine Tolerant Plants, Phosphinothricin Tolerant Plants, Bromoxynil Tolerant Plants, Insect Resistant Plants, Transgenic Plants With Cowpea Trypsin Inhibitor, Transgenic Plants With Viral Coat Protein, Transgenic Plants With Viral Nucleoprotein, Transgenic Plants With Viral SAT RNA, Transgenic Plants With Antisense RNA, Transgenic Plants Resistant to Fungi and Bacteria, Transgenic Plants With Improved Storage Proteins, Stress Tolerant Plants, Cold Tolerant Plants, Drought Tolerant Plants, Pharmaceutical Compounds, Biodegradable Plastics, Biological Nitrogen Fixations, Non-Symbiotic Nitrogen Fixation, Non-Symbiotic Nitrogen Fixation, Nif-Genes of Azotobacter, Nif-Genes of Anabaena, Legume Nodulin Genes, Transfer of Nif Genes to Yeasts, Transfer of Nif-Genes to Plants, Transfer of Hup Genes, Mechanism of ECM Formation, Method of Inoculum Production of VAM, Animal and Plant Cell Cultures,

Tags

Monoclonal Antibodies, Pre-Existing or Culture Induced Variation, Virus-Free Clones Through Plant Tissue Culture, Microbial Metabolism of Carbon Dioxide, Microbial Metabolism of Hydrogen, Stoichiometry of Microbial Growth, Cell Composition, Ageing and Death in Microbes, Effects of PH on Products of Metabolism, Effects of PH on Flocculation and Adhesion, Biosynthesis of Fatty Acids and Lipids, Oleaginous Micro-Organism, Eukaryotic Micro-Organism, Mechanisms of Alkane Oxidation, Microbial Metabolism of Aromatic Compounds, Degradation of 4-Hydroxyphenlacetic, Homoproto Catacleuic, Bacterial Respiration, Enzyme Mechanisms, Mechanisms of Enzyme Catalysis, Enzyme Evolution, Microbial Photosynthesis, Overproduction of Microbial Metabolites, NPCS, Niir, Process Technology Books, Business Consultancy, Business Consultant, Project Identification and Selection, Preparation of Project Profiles, Startup, Business Guidance, Business Guidance to Clients, Startup Project, Startup Ideas, Project for Startups, Startup Project Plan, Business Start-Up, Business Plan for Startup Business, Great Opportunity for Startup, Small Start-Up Business Project, Best Small and Cottage Scale Industries, Startup India,

Tags

Stand Up India, Small Scale Industries, New Small Scale Ideas for Plant Biotechnology Industry, Plant Biotechnology Business Ideas You Can Start on Your Own, Guide to Starting and Operating Small Business, Business Ideas For Plant Biotechnology, Starting Plant Biotechnology Business, Start Your Own Plant Biotechnology Business, Business Plan for Plant Biotechnology, Small Scale Industries in India, Plant Biotechnology Based Small Business Ideas in India, Small Scale Industry You Can Start on Your Own, Business Plan for Small Scale Industries, Profitable Small Scale Manufacturing, How to Start Small Business in India, Free Manufacturing Business Plans, Small and Medium Scale Manufacturing, Profitable Small Business Industries Ideas, Business Ideas for Startup

Niir Project Consultancy Services (NPCS) can provide Process Technology Book on

Biotechnology - Plant Biotechnology

(Transgenic plants, Herbicide Resistant Plants, Glyphosate Tolerant Plants, Sulphonylurea Tolerant Plants, Atrazine Tolerant Plants, Phosphinothricin Tolerant Plants, Bromoxynil Tolerant Plants, Insect Resistant Plants, Animal Cells, Plant Cells, Tissue Cultures, Viruses, Prokaryotes)

See more

https://goo.gl/Tf0VTG
https://goo.gl/DySPuV
https://goo.gl/cncY7m


VISIT US AT
www.entrepreneurindia.co
npcs

Take a look at
Niir Project Consultancy Services
on #Street View

https://goo.gl/VstWkd

Locate us on

Google Maps

https://goo.gl/maps/BKkUtq9gevT2

www.entrepreneurindia.co

OUR CLIENTS

Our inexhaustible Client list includes public-sector companies, Corporate Houses, Government undertaking, individual entrepreneurs, NRI, Foreign investors, non-profit organizations and educational institutions from all parts of the World. The list is just a glimpse of our esteemed & satisfied Clients.

Click here to take a look

https://goo.gl/G3ICjV

Free Instant Online Project Identification & Selection Search Facility

Selection process starts with the generation of a product idea. In order to select the most promising project, the entrepreneur needs to generate a few ideas about the possible projects.

Here's we offer a best and easiest way for every entrepreneur to searching criteria of projects on our website www.entrepreneurindia.co that is "Instant Online Project Identification and Selection"

NPCS Team has simplified the process for you by providing a "Free Instant Online Project Identification & Selection" search facility to identify projects based on multiple search parameters related to project costs namely: Plant & Machinery Cost, Total Capital Investment, Cost of the project, Rate of Return% (ROR) and Break Even Point % (BEP). You can sort the projects on the basis of mentioned pointers and identify a suitable project matching your investment requisites.

Click here to go

http://www.entrepreneurindia.co/project-identification

Contact us

Niir Project Consultancy Services

106-E, Kamla Nagar, Opp. Spark Mall,

New Delhi-110007, India.

Email: npcs.ei@gmail.com , info@entrepreneurindia.co

Tel: +91-11-23843955, 23845654, 23845886, 8800733955

Mobile: +91-9811043595

Website : www.entrepreneurindia.co , www.niir.org

Take a look at NIIR PROJECT CONSULTANCY SERVICES on #StreetView

https://goo.gl/VstWkd

NIIR PROJECT CONSULTANCY SERVICES

AN ISO 9001:2008 COMPANY

www.entrepreneurindia.co

npcs

Who are we?

- *One of the leading reliable names in industrial world for providing the most comprehensive technical consulting services*
- *We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad*

We at NPCS want to grow with you by providing solutions scale to suit your new operations and help you reduce risk and give a high return on application investments. We have successfully achieved top-notch quality standards with a high level of customer appreciation resulting in long lasting relation and large amount of referral work through technological breakthrough and innovative concepts. A large number of our Indian, Overseas and NRI Clients have appreciated our expertise for excellence which speaks volumes about our commitment and dedication to every client's success.

npcs

We bring deep, functional expertise, but are known for our holistic perspective: we capture value across boundaries and between the silos of any organization. We have proven a multiplier effect from optimizing the sum of the parts, not just the individual pieces. We actively encourage a culture of innovation, which facilitates the development of new technologies and ensures a high quality product.

What do we offer?

- *Project Identification*
- *Detailed Project Reports/Pre-feasibility Reports*
- *Business Plan*
- *Industry Trends*
- *Market Research Reports*
- *Technology Books and Directory*
- *Databases on CD-ROM*
- *Laboratory Testing Services*
- *Turnkey Project Consultancy/Solutions*
- *Entrepreneur India (An Industrial Monthly Journal)*

How are we different ?

- *We have two decades long experience in project consultancy and market research field*
- *We empower our customers with the prerequisite know-how to take sound business decisions*
- *We help catalyze business growth by providing distinctive and profound market analysis*
- *We serve a wide array of customers , from individual entrepreneurs to Corporations and Foreign Investors*
- *We use authentic & reliable sources to ensure business precision*

Our Approach

- Requirement collection
- Thorough analysis of the project
- Economic feasibility study of the Project
- Market potential survey/research
- Report Compilation

Who do we serve?

- *Public-sector Companies*
- *Corporates*
- *Government Undertakings*
- *Individual Entrepreneurs*
- *NRI's*
- *Foreign Investors*
- *Non-profit Organizations, NBFC's*
- *Educational Institutions*
- *Embassies & Consulates*
- *Consultancies*
- *Industry / trade associations*

Sectors We Cover

- *Ayurvedic And Herbal Medicines, Herbal Cosmetics*
- *Alcoholic And Non Alcoholic Beverages, Drinks*
- *Adhesives, Industrial Adhesive, Sealants, Glues, Gum & Resin*
- *Activated Carbon & Activated Charcoal*
- *Aluminium And Aluminium Extrusion Profiles & Sections,*
- *Bio-fertilizers And Biotechnology*
- *Breakfast Snacks And Cereal Food*
- *Bicycle Tyres & Tubes, Bicycle Parts, Bicycle Assembling*

Sectors We Cover Cont...

- *Bamboo And Cane Based Projects*
- *Building Materials And Construction Projects*
- *Biodegradable & Bioplastic Based Projects*
- *Chemicals (Organic And Inorganic)*
- *Confectionery, Bakery/Baking And Other Food*
- *Cereal Processing*
- *Coconut And Coconut Based Products*
- *Cold Storage For Fruits & Vegetables*
- *Coal & Coal Byproduct*

Sectors We Cover Cont...

- *Copper & Copper Based Projects*
- *Dairy/Milk Processing*
- *Disinfectants, Pesticides, Insecticides, Mosquito Repellents,*
- *Electrical, Electronic And Computer based Projects*
- *Essential Oils, Oils & Fats And Allied*
- *Engineering Goods*
- *Fibre Glass & Float Glass*
- *Fast Moving Consumer Goods*
- *Food, Bakery, Agro Processing*

Sectors We Cover Cont...

- *Fruits & Vegetables Processing*
- *Ferro Alloys Based Projects*
- *Fertilizers & Biofertilizers*
- *Ginger & Ginger Based Projects*
- *Herbs And Medicinal Cultivation And Jatropha (Biofuel)*
- *Hotel & Hospitability Projects*
- *Hospital Based Projects*
- *Herbal Based Projects*
- *Inks, Stationery And Export Industries*

Sectors We Cover Cont...

- *Infrastructure Projects*
- *Jute & Jute Based Products*
- *Leather And Leather Based Projects*
- *Leisure & Entertainment Based Projects*
- *Livestock Farming Of Birds & Animals*
- *Minerals And Minerals*
- *Maize Processing(Wet Milling) & Maize Based Projects*
- *Medical Plastics, Disposables Plastic Syringe, Blood Bags*
- *Organic Farming, Neem Products Etc.*

Sectors We Cover Cont...

- *Paints, Pigments, Varnish & Lacquer*
- *Paper And Paper Board, Paper Recycling Projects*
- *Printing Inks*
- *Packaging Based Projects*
- *Perfumes, Cosmetics And Flavours*
- *Power Generation Based Projects & Renewable Energy Based Projects*
- *Pharmaceuticals And Drugs*
- *Plantations, Farming And Cultivations*
- *Plastic Film, Plastic Waste And Plastic Compounds*
- *Plastic, PVC, PET, HDPE, LDPE Etc.*

Sectors We Cover Cont...

- *Potato And Potato Based Projects*
- *Printing And Packaging*
- *Real Estate, Leisure And Hospitality*
- *Rubber And Rubber Products*
- *Soaps And Detergents*
- *Stationary Products*
- *Spices And Snacks Food*
- *Steel & Steel Products*
- *Textile Auxiliary And Chemicals*

Sectors We Cover *Cont...*

- *Township & Residential Complex*
- *Textiles And Readymade Garments*
- *Waste Management & Recycling*
- *Wood & Wood Products*
- *Water Industry(Packaged Drinking Water & Mineral Water)*
- *Wire & Cable*

Contact us

Niir Project Consultancy Services

106-E, Kamla Nagar, Opp. Spark Mall,

New Delhi-110007, India.

Email: npcs.ei@gmail.com , info@entrepreneurindia.co

Tel: +91-11-23843955, 23845654, 23845886, 8800733955

Mobile: +91-9811043595

Website : www.entrepreneurindia.co , www.niir.org

Take a look at NIIR PROJECT CONSULTANCY SERVICES on #StreetView

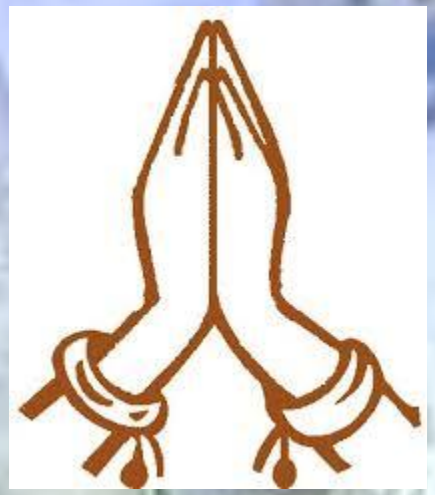
https://goo.gl/VstWkd

Follow Us

- https://www.linkedin.com/company/niir-project-consultancy-services
- https://www.facebook.com/NIIR.ORG
- https://www.youtube.com/user/NIIRproject
- https://plus.google.com/+EntrepreneurIndiaNewDelhi
- https://twitter.com/npcs_in
- https://www.pinterest.com/npcsindia/

www.niir.org

www.entrepreneurindia.co



THANK YOU!!!

For more information, visit us at:

www.entrepreneurindia.co