

Cytogenetics

Technologies, Companies & Markets

By

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A Jain PharmaBiotech Report

A U T H O R ' S B I O G R A P H Y

Professor K. K. Jain is a neurologist/neurosurgeon with specialist qualifications including Fellowships of the Royal Colleges of Surgeons in Australia and Canada. He has trained, practiced and held academic positions in several countries including Switzerland, India, Iran, Germany Canada and USA. After retirement from neurosurgery, Prof. Jain remains a consultant in neurology. He is also working in the biotechnology/biopharmaceuticals industry and is a Fellow of the Faculty of Pharmaceutical Medicine of the Royal College of Physicians of UK. Currently, he is the CEO of Jain PharmaBiotech.

Prof. Jain's 490 publications include 35 books (6 as editor+ 29 as author) and 50 special reports, which have covered important areas in biotechnology, gene therapy and biopharmaceuticals, biomarkers: proteomics, molecular diagnostics, nanobiotechnology, and personalized medicine. Contributions to MedLink, an accredited continuing education program for neurologists, include 172 articles out of a total of 1200 articles by 450 authors. These articles are updated on a yearly basis.

Prof. Jain's earlier books were the first in the areas covered: "Handbook of Laser Neurosurgery" (Charles C. Thomas, Springfield, Ill, 1983) and "Textbook of Hyperbaric Medicine" (1st ed in 1990 and 6th ed by Springer, 2017). His "Textbook of Gene Therapy" was translated into Chinese in 2000. Recent books include "Handbook of Nanomedicine" (Springer 2008, Chinese edition by Peking University Press 2011, 3rd ed 2017), "Textbook of Personalized Medicine" (Springer 2009; Japanese ed 2012; 2nd ed Springer 2015, 3rd ed 2021), "Handbook of Biomarkers" (Springer 2010; Chinese ed, Chemical Industry Press 2016, 2nd ed 2017), "Drug-induced Neurological Disorders", 4th ed (Springer 2021), "Handbook of Neuroprotection" (Springer 2011, 2nd ed 2019), "Applications of Biotechnology in Cardiovascular Therapeutics" (Springer 2011), "Applications of Biotechnology in Neurology" (Springer 2013), and "Applications of Biotechnology in Oncology" (Springer 2014). He has also edited 3 editions of "Drug Delivery System" (Springer 2008, 20012 and 2018) and "Applied Neurogenomics" (Springer 2015). Lectures on personalized medicine given at Kazakh National Medical University, Kazakhstan were translated into Russian and published as a book "Essentials of Personalized Medicine" (LITERRA Publishing House, Moscow, 2019). Currently, he is writing "The Handbook of Alzheimer Disease" to be published by Springer in 2022.

A B O U T T H I S R E P O R T

This report will cover cytogenetics using the broad scope of cytogenetic analysis that extends beyond the simple description of the chromosomal status of a genome and enables the study of basic problems such as the nature of inherited syndromes, the genomic changes that are involved in tumorigenesis and the 3D organization of the human genome. It will include conventional FISH as well as cutting edge new technologies for molecular cytogenetics. Companies developing various technologies and the markets for these will be described.

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TABLE OF CONTENTS

0. Executive Summary	10
1. Introduction	12
Definitions	12
Historical evolution of cytogenetics	12
Scope of cytogenetics	13
Molecular cytogenetics	14
Basics of molecular biology relevant to cytogenetics	14
DNA	14
RNA	15
DNA transcription.....	15
Chromosomes	15
Mitochondrial DNA	16
Genes.....	16
The genetic code.....	16
Gene expression	17
The human genome	17
Variations in the human genome.....	18
Variations in DNA sequences	18
Single nucleotide polymorphisms	18
Copy number variations in the human genome	18
Genotype and haplotypes.....	20
Complex chromosomal rearrangements	20
Insertions and deletions in the human genome.....	20
Large scale variation in human genome	21
Structural variations in the human genome	21
Replication of the DNA helix	22
Transposons.....	22
Mapping and sequencing of structural variation from human genomes.....	23
2. Technologies used for cytogenetics	24
Introduction	24
Quantitative fluorescent polymerase chain reaction	24
RNA interference and cytogenetics	25
RNA-induced transcriptional silencing complex.....	25
RNAi and cancer cytogenetics	25
Single cell genetics by siRNA ablation	26
Role of miRNAs in cancer cytogenetics.....	26
Preimplantation genetic diagnosis.....	26
Preimplantation genetic haplotyping	27
Bioinformatics and cytogenetics	27
FISH probe design software	27
LS-CAP algorithm.....	28
Distance-based clustering of CGH data	28
3. Fluorescent In Situ Hybridization	30
Introduction	30
Innovative FISH technologies.....	32
Automation of FISH	32
Chromogenic in situ hybridization (CISH)	32
Direct visual in situ hybridization	33
Direct labeled Satellite FISH probes.....	33
Fiber FISH.....	33
FISH with telomere-specific probes	33
High-throughput quantitative FISH.....	34
In vivo FISH	34
Interphase FISH	35
Intron chromosomal expression FISH	35
Multicolor FISH	35
Multicolor chromosome banding	36
Oligonucleotide FISH	36
peT-FISH™	37
Primed in situ labeling	37
RNA-FISH	37
Single copy FISH probes	38
Use of peptide nucleic acid with FISH	38
Use of locked nucleic acids with FISH	40

Applications of FISH	40
Companies involved in FISH diagnostics.....	41
4. Genomic Technologies relevant to Cytogenetics	42
Introduction	42
Karyotyping based on sequencing	42
Microarrays/biochips for cytogenetics.....	42
Microarrays vs karyotyping	43
Tissue microarrays.....	43
Chromosome copy number analysis	43
Combination of FISH and gene chips	44
Combination of CGH+SNP microarrays	44
SignatureChip®.....	45
Molecular Combing	45
High density oligonucleotide arrays.....	45
Next Generation Screening®	46
Comparative genomic hybridization.....	46
Array-based comparative genomic hybridization	48
aCGH vs karyotyping.....	48
Comparison of array CGH and multipoint FISH.....	49
Combined use of tissue microarrays and aCGH	49
Single-cell array CGH	50
Regulatory requirements for array CGH	50
Future prospects of aCGH	50
Whole genome expression microarrays	51
Life Technologies Expression Array System	51
ArrayIt's® H25K	52
CytoScan® HD Array.....	52
Optical Mapping	52
Single cell cytogenetics	53
Single cell PCR.....	53
<i>LATE-PCR</i>	53
<i>AmpliGrid-System</i>	53
<i>Digital Counting</i>	54
Analysis of single-cell gene expression.....	54
<i>Fluorescent in situ RNA sequencing</i>	55
Application of single cell cytogenetics in preimplantation genetic testing	55
Direct molecular analysis without amplification	56
5. Molecular Imaging & Single Molecular Detection	58
Molecular imaging	58
Companies involved in molecular imaging	58
Single molecule detection	59
Spectrally resolved fluorescence lifetime imaging microscopy	59
Single-molecule fluorescence resonance energy transfer.....	60
Confocal laser scanning	60
Single Molecule Array	60
PCR systems for single molecule detection	61
<i>Real-time PCR</i>	61
<i>Digital PCR</i>	61
<i>Emulsion PCR</i>	62
Rolling circle amplification technology.....	62
Microfluidic assay for protein expression at the single molecule level	62
Bioinformatic and single molecule detection	63
6. Role of Nanobiotechnology in Cytogenetics	64
Introduction	64
Nanobiology and the cell.....	64
Visualization on nanoscale.....	65
Application of AFM for biomolecular imaging.....	65
<i>Future insights into biomolecular processes by AFM</i>	65
<i>Use of AFM for microdissection of chromosomes</i>	66
Scanning probe microscopy.....	66
Near-field scanning optical microscopy	66
Multiple single-molecule fluorescence microscopy	67
Nanoscale scanning electron microscopy	67
Nanotechnology-based FISH.....	67
<i>Study of chromosomes by atomic force microscopy</i>	67
<i>Quantum dot FISH</i>	67
Nanobiotechnology for single molecule detection	68
<i>Nanolaser spectroscopy for detection of cancer in single cells</i>	69

<i>Carbon nanotube transistors for genetic screening</i>	69
<i>Quantum-dots-FRET nanosensors for single molecule detection</i>	70
<i>3D single-molecular imaging by nanotechnology.....</i>	70
<i>Manipulation of DNA sequence by use of nanoparticles</i>	70
<i>Nanofluidic/nanoarray devices to detect a single molecule of DNA.....</i>	70
<i>Nanopore technology.....</i>	71
<i>Portable nanocantilever system for diagnosis.....</i>	71
<i>Nanobiosensors</i>	72
7. Biomarkers and Cytogenetics	74
Introduction	74
Definitions	74
Biomarkers and cytogenetics	74
Cancer biomarkers.....	74
Technologies for detection of cancer biomarkers	75
Telomerase as a biomarker of cancer	75
Digital karyotyping for cancer biomarkers	75
Optical systems for <i>in vivo</i> molecular imaging of cancer.....	76
Circulating cancer cells in blood as biomarkers of cancer.....	76
Array CGH for biomarker discovery in cancer.....	77
Genetic biomarkers.....	77
8. Applications of Cytogenetics.....	78
Introduction	78
Applications of cytogenetics in research.....	78
Cytogenetics of embryonic stem cells	78
Genetic disorders.....	79
Technologies for diagnosis of genetic disorders	79
<i>Cytogenetic microarrays for diagnosis of mental retardation.....</i>	79
<i>Detection of copy number variations in genetic disorders</i>	80
<i>Detection of non-recurrent DNA rearrangements by aCGH</i>	80
<i>Quantitative fluorescent PCR</i>	81
<i>Representational oligonucleotide microarray analysis.....</i>	81
<i>SignatureChip®-based diagnostics for cytogenetic abnormalities</i>	81
<i>Screening for cytogenetic abnormalities.....</i>	82
Cytogenetics in prenatal diagnosis	82
<i>aCGH for prenatal diagnosis</i>	82
<i>BAC HD Scan test</i>	83
<i>FISH for prenatal diagnosis</i>	83
<i>PCR for prenatal diagnosis of trisomy 21.....</i>	83
<i>Plasma DNA sequencing to detect fetal chromosomal aneuploidies</i>	84
<i>Concluding remarks and future prospects of prenatal diagnosis</i>	86
Cytogenetics in preimplantation genetic diagnosis.....	86
<i>Array CGH for PGD</i>	87
<i>Fluorescent PCR for PGD</i>	87
<i>FISH for PGD.....</i>	87
<i>PGD using whole genome amplification</i>	88
Conditions detected by preimplantation cytogenetic diagnosis	89
The future of preimplantation genetic diagnosis	89
Disorders of the nervous system	90
Application of cytogenetics in epilepsy	90
Neuropsychiatric disorders in children.....	90
Cardiovascular disorders	91
Infections	91
PNA-FISH for diagnosis of infections	91
Diagnosis of bacterial infections at single molecule level	92
Detection of single virus particles.....	92
Role of cytogenetics in drug discovery and development.....	92
Role of cytogenetics in the development of personalized medicine	93
Relation of cytogenetics to personalized medicine	93
Cytomics as a basis for personalized medicine	94
Molecular imaging and personalized medicine.....	94
Cytogenetics for gender determination	95
<i>Gender determination in competitive sport.....</i>	95
<i>Gender determination in forensic cases.....</i>	95
Regulatory aspects of FISH.....	95
9. Cancer Cytogenetics	98
Cancer genetics	98
Cytogenetic abnormalities in cancer	98
Cytogenetic technologies for molecular diagnosis of cancer	98

Applications of aCGH in oncology	99
Cytogenetics of tumor cells in body fluids.....	100
Cytogenetics and microRNAs	100
FISH-based techniques	101
<i>FISH on paraffin-embedded tissues</i>	101
<i>High-throughput Imaging Position Mapping</i>	101
Gene expression profiles predict chromosomal instability in tumors.....	101
Loss of heterozygosity	102
Molecular Combing for cancer diagnosis.....	102
Mutation detection at molecular level	102
Proteomic identification of oncogenic chromosomal translocation partners	103
SNPs and cytogenetics.....	103
Tissue microarrays for cancer diagnosis	103
Applications of cytogenetics in molecular diagnosis of cancer.....	104
Molecular cytogenetics in hematological malignancies.....	104
<i>Chromosome translocations in leukemias</i>	105
<i>Cytogenetics diagnostics for leukemia</i>	105
<i>Cytogenetics of acute myeloid leukemia</i>	106
<i>Detection of p53 deletions in chronic lymphocytic leukemia</i>	106
<i>Cytogenetics of lymphomas</i>	107
<i>Cytogenetics of myelodysplastic syndrome</i>	107
<i>Next generation sequencing and MDS</i>	108
<i>Cytogenetics of plasma cell myeloma</i>	108
Bladder cancer	108
Bone and soft tissue tumors	109
Brain tumors	110
Breast cancer	111
<i>Chromosomal aberrations in breast carcinomas</i>	111
<i>FISH vs CISH and SISH for determining of HER-2/neu amplification</i>	111
<i>Genomic profiles of breast cancer</i>	112
Colorectal cancer	112
Lung cancer	113
Ovarian cancer	113
<i>aCGH analyses of cisplatin-resistant ovarian cancer cells</i>	113
Prostate cancer.....	114
Renal cancer	114
Thyroid cancer.....	115
Cytogenetics-based anticancer strategies.....	115
aCGH-based strategies for targeting cancer pathways	115
Allele-specific inhibition	115
Prognostic and therapeutic significance of gene amplifications	116
RNAi-based approach for leukemia	116
Significance of double minutes	116
Online resources for cancer cytogenetics	117
The Cancer Genome Atlas	117
Concluding remarks on cancer cytogenetics	117
10. Cytogenetics Markets.....	120
Introduction	120
Methods for study of cytogenetic markets	120
Cytogenetic markets according to technologies.....	120
Market for FISH technologies.....	121
Array CGH markets	121
Sorting the markets of overlapping technologies	122
Markets for cytogenetics according to therapeutic areas.....	122
Geographical distribution of markets for cytogenetics.....	124
SWOT of competing technologies.....	124
Unfulfilled needs.....	125
Limitations of current technologies	127
Promising future developments in cytogenetics	127
Commercial aspects of genome sequencing technologies	127
<i>Cost of genotyping</i>	127
11. Companies	130
Profiles of companies.....	130
Collaborations.....	218
12. References.....	222

Tables

Table 1-1: Historical landmarks in the evolution of cytogenetics	12
Table 2-1: A classification of technologies used for cytogenetics	24
Table 3-1: Classification and scope of FISH and related technologies.....	31
Table 3-2: A selection of companies with FISH diagnostics.....	41
Table 4-1: Microarray/biochip-based technologies for cytogenetics	42
Table 4-2: Chromosomal structural abnormalities detected by CGH.....	46
Table 4-3: Companies with whole genome chips/microarrays	51
Table 5-1: Companies involved in developing molecular imaging	58
Table 5-2: Technologies for single molecule detection	59
Table 6-1: Nanobiotechnologies for single molecule detection.....	69
Table 7-1: Types of cancer biomarkers relevant to cytogenetics	75
Table 8-1: Applications of cytogenetics.....	78
Table 8-2: Application of preimplantation cytogenetic diagnosis in monogenic disorders	89
Table 9-1: WHO classification of myelodysplastic syndromes.....	108
Table 9-2: Fusion genes in malignant bone and soft tissue tumors	109
Table 9-3: Fusion genes in adenocarcinoma of the thyroid	115
Table 10-1: Cytogenetic markets according to technologies from 2020-2030	120
Table 10-2: Market size for cytogenetics according to applications 2020-2030.....	122
Table 10-3: Global cytogenetics markets 2020-2030.....	124
Table 10-4: SWOT of conventional FISH	124
Table 10-5: SWOT of innovative FISH technologies	125
Table 10-6: SWOT of PCR-based assays	125
Table 10-7: SWOT of aCGH	125
Table 10-8: SWOT of single molecule imaging	125
Table 11-1: Major suppliers of reagents/services/equipment for cytogenetics.....	130
Table 11-2: Major consumers of reagents	131
Table 11-3: Companies developing innovative technologies in cytogenetics.....	131
Table 11-4: Collaborations in cytogenetics	218

Figures

Figure 6-1: Scheme of a novel optical mRNA biosensor	72
Figure 8-1: Relation of various technologies to drug discovery and development	93
Figure 8-2: Relation of cytogenetics to personalized medicine	93
Figure 8-3: Relation of cytomics to personalized medicine.....	94
Figure 9-1: Basic scheme of genome-wide screening techniques for cancer.....	98
Figure 10-1: Distribution of applications of cytogenetics in the year 2025	123
Figure 10-2: Distribution of applications of cytogenetics in the year 2030	123
Figure 10-3: Unfulfilled needs in cytogenetics according to technologies	126
Figure 10-4: Unfulfilled needs in cytogenetics according to areas of application	126