

Atlas of Genetics and Cytogenetics in Oncology and Haematology, year 2003

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ABSTRACT

The 'Atlas of Genetics and Cytogenetics in Oncology and Haematology' (<http://www.infobiogen.fr/services/chromcancer>) contains concise and updated cards on genes involved in cancer, cytogenetics and clinical entities in oncology, and cancer-prone diseases, a portal towards genetics/cancer, and teaching materials in genetics. This database is made for and by researchers and clinicians, who are encouraged to contribute. The Atlas is part of the genome project and it participates in research on cancer epidemiology.

INTRODUCTION

The 'Atlas of Genetics and Cytogenetics in Oncology and Haematology' <http://www.infobiogen.fr/services/chromcancer> is an internet database aimed at genes involved in cancer, cytogenetics and clinical entities in cancer, and on cancer-prone diseases (1–3). This database is made for and by researchers and clinicians, but it also reaches students in Medicine and Sciences. Contributions are reviewed before acceptance.

DATABASE STRUCTURE

Cards

Cards are well structured papers which represent the body of the Atlas. Cards on genes include data on: DNA/RNA, protein, mutations and diseases. Cards on cytogenetic/clinical entities include data on: clinics, cytogenetics, genes, hybrid gene and fusion protein. Cards on cancer-prone diseases include data on: inheritance mode, clinics, neoplastic risk, cytogenetics, genes and proteins, mutations. Cards also include hyperlinks towards MEDLINE, and towards the main complementary databases (nomenclature, cartography, gene structure, transcripts, proteins, domain families, diseases, mutations, probes).

Deep insights/case reports

Deep insights are more traditional review articles. The Case Reports Section is dedicated to rare cytogenetic entities of leukemia (less than 30 cases) to document these poorly known entities, to further delineate their epidemiology, including the associated prognosis: the Atlas intend to provide new information in cancer epidemiology.

Portal

The portal developed previously (<http://www.infobiogen.fr/services/chromcancer/dblinks.html>) towards Internet databases, sites and journals devoted to genetics and/or cancer has been updated with numerous links to new resources as soon as they appeared Goldenpath (<http://genome.ucsc.edu/>), Ensembl (<http://www.ensembl.org/>), SNP (<http://snp.cshl.org/>), transcriptome or proteome Moreover, our pages classified by chromosome point towards resources dedicated to mapping, probes, sequences, genomics and transcriptome databases (Fig. 1). We have also developed a page towards the 100 journals in Genetics and/or Cancer, with specific pages on both the latest issue and the archives, with indications on free access when available.

Teaching materials

Educational items in Genetics are being developed in English, French, German, Portuguese and Spanish, and we are (still) looking for an Italian translation. We are happy that some Universities already use the Atlas for teaching; they can also provide us with more authors.

COMMENTS

The Atlas is a peer reviewed on-line journal and database indexed by the Current Contents. More than a 220 collaborators are contributing and more than 600 papers are available. More than 17000 individual machines connect each month.

The Atlas is part of the genome project and participates in the research in cancer epidemiology. The Atlas is at the crossroads of research, university and post-university teaching (virtual medical university), and telemedicine. It contributes to 'meta-medicine', this mediation, using new information


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Chromosome 16



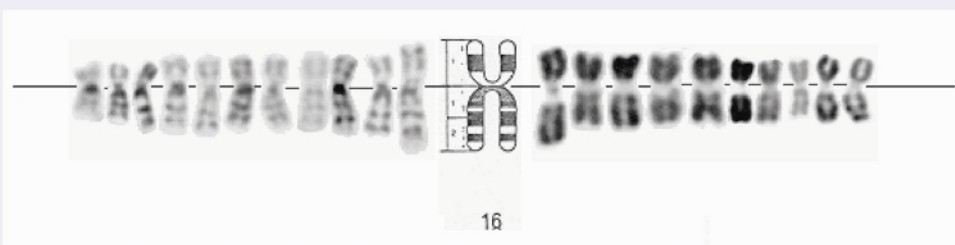
Leukaemia

[del\(16\)\(q22\)](#)
[inv\(16\)\(p13q22\)](#)
[t\(1;16\)\(q11;q11\)](#)
[t\(8;16\)\(p11;p13\)](#)
[t\(11;16\)\(q23;p13\)](#)
[t\(16;16\)\(p13;q22\)](#)
[t\(16;21\)\(p11;q22\)](#)
[t\(16;21\)\(q24;q22\)](#)

Genes

Symbol	Location
MYH11	16p13
MRP	16p13.1
MHC2TA	16p13
CBFB	16q22
CBP	16p13.3
LRP	16p11.2
FANCA	16q24.3
NOO1	16q22.1
XPF	16p13.1-13.2
TSC2	16p13.3

[Other genes](#) - Courtesy CancerGene
[GeneCards](#)
[GDB](#) - List of genes



Chromosome 16 : G-banding, diagram and R-banding - Courtesy Claude Léonard

Related links

- [Chromosome 16 - GoldenPath - Santa Cruz](#)
- [Chromosome 16 - Ensembl Project - Human integrated resource - EBI/SANGER](#)
- [Chromosome 16 - Map View - NCBI](#)
- [Chromosome 16 - Genome Channel - ORNL](#)
- [Chromosome 16 - LaunchPad HGMIS](#)

Figure 1. Chromosome 16 page (top part). Translocations and genes involved in cancer: list and internal hyperlinks towards Atlas cards. Diagram of chromosome 16. 10 or more examples of chromosome 16 with G-banding and with R-banding. Top part of the portal for chromosome 16 with external hyperlinks towards the main mapping resources, probes, sequences, genomics and transcriptome databases. Full chromosome 16 page in: http://www.infobiogen.fr/services/chromcancer/Indexbychrom/idx_16.html.

technology, between the overflowing information provided by the scientific community and the individual practitioner.

Contributions and collaborations are most welcome. It will serve the entire community of clinicians, researchers and students.

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