Leukaemia Section
Short Communication

**t(1;21)(q21;q22)**

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**Identity**

![Chromosome Banding Image](Image)

**t(1;21)(q21;q22)** G-banding - Courtesy Melanie Zenger and Claudia Haferlach.

**Clinics and pathology**

**Disease**
Acute myeloid leukaemia (AML).

**Epidemiology**
Only one case to date, a 1 year old boy with M1 AML.

**Prognosis**
No data.

**Genes involved and Proteins**

**ZNF687**

**Location:** 1q21

**Protein**
10 zinc fingers; krueppel C2H2-type zinc-finger protein; transcription factor.

**RUNX1**

**Location:** 21q22

**Protein**
Transcription factor (activator) for various hematopoietic-specific genes, which expression is limited to hematopoietic stem cells, and endothelial cells and mesenchymal cells in the embryo; core binding factor family member which forms heterodimers with CBFB; binds to the core site 5’ PyGPyGGTPy 3’ of promoters and enhancers.

**Results of the chromosomal anomaly**

**Hybrid gene**

**Description**
5’ RUNX1- 3’ ZNF687

**References**

Nguyen TT, Ma LN, Slovak ML, Bangs CD, Cherry AM, Arber DA. Identification of novel Runx1 (AML1) translocation partner genes SH3D19, YTHD12, and ZNF687 in acute myeloid leukemia. Genes Chromosomes Cancer 2006;45:918-932.

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