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# Leukaemia Section
## Short Communication

# t(2;18)(q11;q21)

**Jean-Loup Huret**

Genetics, Dept Medical Information, University of Poitiers, CHU Poitiers Hospital, F-86021 Poitiers, France (JLH)

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## Clinics and pathology

### Disease

Non Hodgkin lymphoma.

### Phenotype/cell stem origin

One case to date, a 65-year-old female patient with a follicular lymphoma stage II-a (Impera et al., 2008).

### Evolution

Complete remission was obtained.

## Cytogenetics

### Additional anomalies

A complex karyotype was found, with +11, and other anomalies.

## Genes involved and proteins

### AFF3

**Location**
2q11.2
**Protein**
AFF3 belongs to a family of putative transcription factors also comprising AFF1 (AF4, FEL, MLLT2) in 4q21, AFF2 (FMR2, FRAXE) in Xq28 and AFF4 (AF5Q31) in 5q31. AFF3 has been found a susceptibility gene in autoimmune diseases, namely rheumatoid arthritis, psoriatic arthritis, and juvenile idiopathic arthritis (Barton et al., 2009; Castelino and Barton, 2010; Hinks et al., 2010). AFF3 is deleted in Nievergelt syndrome, an autosomal dominant mesomelic dysplasia (Steichen-Gersdorf et al., 2008). AFF3 was also found expressed in 20% of mammary tumor cells but not in normal acini in a study (To et al., 2005).

### BCL2

**Location**
18q21.33
**Protein**
Antiapoptotic protein.

## Result of the chromosomal anomaly

### Hybrid gene

**Description**
Fusion of AFF3 exon 1 to BCL2 exon 2.

### Fusion protein

**Oncogenesis**
Leads to the overexpression of BCL2.

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