The Fourth European Cytogenetics Conference (FECC) was held in Bologna, Italy, from Sept. 6 - 9, 2003. The theme of the conference was 'Cytogenetics in the post-genomic era.' It was attended by many well known cytogeneticists. The red inaugural was in the majestic Europa Auditorium fully furnished in red. Professor Eric Engel, pioneer of the concept of uniparental disomy (UPD), gave the honorary lecture. It was amazing to see how mentally alert a person way past retirement age and hard of hearing can be! He started right from the days when his paper on UPD was rejected by leading journal because of this revolutionary concept.

As is well known now, many disorders are caused because an individual inherits both homologues of a chromosome form a single parent. The classic example is Prader-Willi syndrome where both copies of chromosome 15 are inherited from the mother. Uniparental holodisomy (for the whole of a pair) is now known for 18 maternal and 14 paternal pairs and is mainly cause by 'trisomy rescue' (correction of a trisomy). The role of chromosomal imprinting, a secondary (epigenetic) reversible change of gene expression as a function of transmission from the maternal or paternal parent has been affirmed through cases of UPD. Some cases of fetal demise, abortions particularly in older women and loss of heterozygosity (LOH) leading to cancer have also been attributed to UPD. Dr. Engel got well deserved words of praise from Lidia Larizza and Albert Schinzl.

Other renowned speakers included Eichler (origin and impact of segmental duplications), Zuffardi (chromosome rearrangements), Fryns (behavioural phenotypes), Felix Mitelman (cytogenetics in epithelial tumors), Yuri Verlinsky (PGD), Stuppi (male infertility), Schwab (fragile sites), Mariano Rocchi (molecular cytogenetics), Kramer (centrosome aberrations and cancer development), Cremer (chromosome structure, function and interphase nucleus studies) and Carter (DNA microarrays). The Abbott Satellite Symposium was on 'Genetic testing in pre-and postnatal diagnostics: Clinical practice and future trends.' The speakers were David Ledbetter (Array CGH), Luca Gianaroli (clinical aspects of preimplantation genetic diagnosis – PGD), Cristina Magli (technical aspects of PGD), Andreas Plesch (automated FISH analysis) and Glaubiz (FISH analysis – 10,000 samples).

A lot of knowledge was gained by attending the conference. The numerous poster presentations gave a lot of information on the current status of cytogenetics worldwide. The abstracts are published in Abbales de Genetique, 4:2 – 3, Sept., 2003. They are also displayed on the website: <http://www.FECCBologna.it>. The sponsoring companies had stalls that gave an idea of the numerous advances in cytogenetics, especially image analysis and newer molecular techniques like CGH and microarrays. The official dinner was in the historic area of Bologna with cobbled streets at the
Palazzo Isolani. The splendour of the olden days is still maintained here.

Our abstract ‘45,X,t(Y;13)(q11.2;q11), -der (13) with Y microdeletions in an azoospermic male’ was one of the few selected for oral communication, and was well appreciated. This was a case of a couple married since 16 years with a history of primary infertility. Testicular biopsy done earlier showed complete maturation arrest. The karyotype on first impression was 45,X. As this was improbable, we carried out interphase FISH, using Vysis centromeric probes for X,Y and 18. The centromere of the Chromosome was present in all cells. Sequential FISH on previously G-banded metaphases was then carried out and the centromere of the Y chromosome was found to be located at the centromeric region of an homologue of chromosome 13. Closer examination of G-banded karyotypes, revealed a very small increase in the length of the short arm of chromosome 13, which was not noticed earlier. This was therefore a case of a Y/13 translocation. The derivative 13 (13 pter→13q11::Yq11.2→qter) was lost and did not have any clinical consequence except azoospermia. Only the part of the Y chromosome which is essential for development of a male *Y pter → Y q11.2) was translocated to chromosome 13. Y microdeletion detection analysis by multiplex PCR (Promega, version 1.1) showed a deletion of 16/18 STSs from all the AZF regions. The only 2 loci not deleted were DYS215 and DYS223 in the AZFb region. The couple agreed to assisted reproduction using donor sperm.