Report from active participation in the 49th European Human Genetics Conference, June 6-9, 2015, Glasgow, UK - Anna Wojcicka

The conference was one of the premier events in the field of human genetics with over 3.000 delegates, more than 215 oral presentations, 13 workshops, 8 educational sessions, and over 150 exhibiting companies.

Title of presentation: A polymorphism in miR-146a tailors genetic predisposition to differentiated thyroid cancer, modulates its clinical outcome and alters proliferation of tumor cells.

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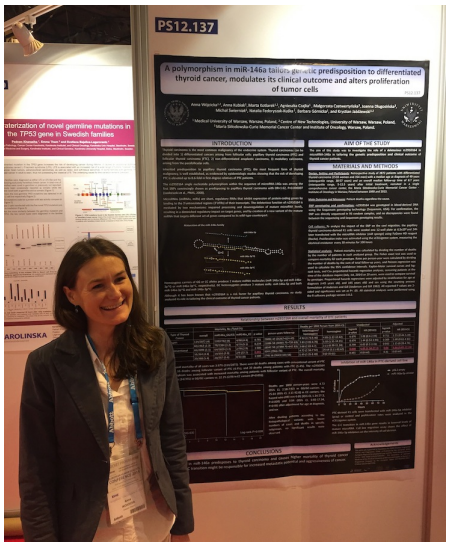
The presented work involved identification of a polymorphism in a microRNA gene that tailors genetic predisposition to papillary thyroid carcinoma and its clinical outcome. Rs2910164 in mir-146a was among the first polymorphisms described in a microRNA gene. The G-C substitution leads to reduction of the amount of miR-146a and to regulation of different set of target genes. The polymorphism was further shown to predispose to papillary thyroid carcinoma (OR=1.62). However, no study analyzed the influence of the SNP on the clinical outcome of thyroid cancer patients. In the presented study, the rs2910164 was genotyped using the Sequenom technology in blood-derived DNA from 2872 patients treated for differentiated thyroid cancer (overall median follow-up time 8.7 years). Genotyping in thyroid tissue samples was performed using the Taqman assay. The influence of miR-146a on the thyroid cancer cell lines was analyzed in K1 cells with induced overexpression or silencing of pre-miR-146a. Our work indicated that the germinal C allele in rs2910164 was associated with higher mortality among patients with follicular variant of papillary thyroid carcinoma. Deaths per 1000 person-years were 25.64 vs. 4.72 in CC vs. GG/CG patients (HR=5.88; *P=0.008)*. Moreover, a somatic G-C mutation in mir-146a was observed in 6.5% of the analyzed tumor samples. *In vitro* studies showed that miR-146a significantly increased proliferation of thyroid cancer-derived cell line and the presence of the variant C allele resulted in lower proliferation rates, possibly switching the cells towards migration. In conclusion, we showed that rs2910164 in miR-146a predisposes to thyroid carcinoma, causes higher mortality of thyroid cancer patients and undergoes somatic mutations in tumor. G-C transition might be responsible for increased metastatic potential and aggressiveness of cancer.



Anna Wojcicka during the poster session

Anna Wojcicka received a fellowship covering the registration fee for the conference

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Saturday, 14 March 2015

ACCEPTED FELLOWSHIP

Dear colleague,

We are pleased to inform you that the selection committee has favourably reviewed your application for fellowship linked to your abstract with the Control Number *2015-A-2240-ESHG*

for the **European Human Genetics Conference 2015**.

There are two benefits to you:

a) you do not have to pay a registration fee. However, all extras (e.g. lunch tickets, social event etc.) need to be paid by you, in case you wish to sign up for these functions.