

Nencki Institute of Experimental Biology

International conference "Visualizing senescent cells in vitro and in vivo"

2012-12-21



There were more than 150 participants and the majority of them were undergraduate and PhD students.

The participants listened to presentations which were given by twelve invited speaker, including three from Poland. Moreover there was a poster session and 11 oral presentations. Speakers presented a lot of results which has been recently published or will be published in the near future. From the presented data the importance of several features of the senescence process emerge. Namely, cellular replicative senescence is just one of the possible forms of senescence. There is a growing body of evidence concerning stress- induced senescence, which is quite rapid and caused by DNA damage of telomeric DNA. This process is characteristic not only for normal but also for cancer cells. Moreover the role of the so named programmed senescence in the development of organism was also indicated.

Furthermore the connection between metabolism and signaling pathways leading to senescence was underlined. A senescent cell is very demanding regarding it's energetic needs as it secretes a lot of different molecules, including pro-inflammatory cytokins. Due to the "secretome phenotype" senescent cell is just like a "ticking bomb" as it participates in the development of age-related diseases, including cancer. Moreover, the phenomenon of stemness of cancer cells induced to senescence by anticancer therapy, which could lead to cancer renovation, was evidenced.

The atmosphere of the conference can be best reflected by what was said by one of the speaker:

„Thanks again for inviting me; it was a fantastic conference – I really enjoyed not only meeting you and some other close friends from the senescence community but also discussing very interesting upcoming findings with the younger colleagues from your and other labs”.