

German Stem Cell Network (GSCN)
c/o Max-Delbrück-Center
Robert-Rössle-Str. 10
13125 Berlin

02.07.2019

Report post-conference – ISSCR 2019

Dear Sir, Dear Ma'am,

I would like to thank GSCN once again for supporting my Participation at ISSCR – Los Angeles, 2019. It was a great opportunity to be able to participate and present my work at the largest Stem cell conference.

The conference covered all aspects of the global stem cell research, from embryonic, pluripotent and adult stem cells in various tissues. Several topics such as epigenetics, cell-fate decisions along with molecular mechanisms controlling the developmental as well as disease were presented. What was of immense interest for me was to know how organoids research has developed. Not only, we are able to use iPSC and ESs to form organoids, but also adult stem cells, which was a challenge in the past years. Today, we are not only growing organoids mimicking intestines, brain, lungs amongst other but also salivary glands, artificial muscle and snake venom glands. This opens a new avenue for not only translational and biomedical research but also paves a path for the potential industrial applications. Moreover, I thoroughly enjoyed the Plenary talks of Hans Clever, John B. Gurdon and Shinya Yamanaka. They not only gave interesting insights into stem cell research but also spoke about taking the risk to question the widely accepted scientific theories.

In the recent years, significant progress has been made to understand the mechanisms pertaining to of stem cell aging. This also applies to muscle stem aging. The works of Salvador Benitah, Pura-Munoz Canores, Helen Blau, Joseph Rodgers and Sharagim Tajbaksh amongst others is leading us to now better understand which molecular mechanisms may play a role in the muscle stem cell activation. How and what factors could perturb the activation in an aging stem cell and what factors one may employ as to rejuvenate the regeneration defects seen in aging muscle tissue. For example, how Circadian rhythms drive the stem cell decisions of staying quiescent or undergo activation. How stress can reprogram this upon aging. How stem cell activation can react to a distant injury and factors such as HGFA, PGE2, chemokines inhibitors can rejuvenate the muscle injury healing. Additionally, important work was shown as to how epigenetic histone markers are symmetrically distributed during cell-fate decisions and how micro-RNAs regulated myogenesis is disrupted in aging stem cell.

Poster Scientific Interactions:

I presented my poster on 27th June 2019 at ISSCR. I received great response at the poster. My poster was visited by several interested scientists of different grades viz. PhDs, Post-Docs and PIs. The session was highly interactive with questions, interest and inputs.

The Meet-up hubs at ISSCR was a great concept. For example, at the GSCN meet-up held on 27th June, I met a lot of young investigators from different labs around the world. Here, we could exchange our scientific research status-quo and experiences. Furthermore, the exhibition and innovation showcase sessions organized by industries was quite helpful. I was able to get a

glimpse into useful technologies that could be employed such as augmented florescence microscopes and culture mediums, which could come handy in future.

In conclusion, my participation at ISSCR LA 2019 was a fruitful experience. It not only gave a chance to gain important insights into the stem cell research from different parts of the world but also an opportunity to interact and network with scientific peers and PIs.

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