



Space
Medicine
Life
Sciences

*Space Medicine & Life
Sciences Project Group*

Annual Report 2019

PG Leads Rochelle Velho and Anthony Yuen

SMLS project group

The SGAC Space Medicine & Life Sciences (SMLS) Project Group was officially founded in January 2019 this year. Since then, the project group has gone from strength-to-strength and have achieved many significant goals as outlined in our original strategic and planning document.

Our vision

The core vision for the project group is to be an international, intercultural and interdisciplinary platform for young professionals with an interest in space biomedical science. Our project group objectives are:

1. To provide a global interdisciplinary platform to build a community of young professionals in space medicine and life sciences in collaboration with international stakeholders within the space sector.
2. To work towards tangible space applications that address terrestrial healthcare issues, aligned to the United Nations (UN) Sustainable Development Goals (SDGs).
3. To address space medical issues associated with the unique challenges associated with extreme space environments and work towards standardised evidence-based space medical guidelines.

SMLS – our achievements in 2019

The majority of the first year focussed on building a sustainable infrastructure to support the growing community platform of students and young professionals interested in space medicine and life sciences. Over the course of this year, we have achieved the following:

- Established a vision for the group
- Established the three key objectives for the group
- Built a website presence on the SGAC website with relevant information for our members: <https://spacegeneration.org/projects/smls>
- Designed and implemented a logo for our project group. An explanation of the logo design can be found: <https://spacegeneration.org/projects/smls/logo>
- Created a pathway for SGAC members interested in the field to become active members of the SMLS project group.
- Built a Slack community for the SMLS project group; an online platform for members to participate in interactive and invigorating discussions on issues relating to space medicine. In particular, this forum has empowered members to share events, research, funding and job opportunities relevant to space medicine and life sciences. At present, there are currently 143 members in the community, with over 2284 messages sent this year.
- Created a social media presence online for SMLS on Twitter, with 255 followers since the inception of the project group. https://twitter.com/SGAC_SMLS

- Creating a Mailchimp mailing list for any SGAC members interested in space medicine and life sciences to subscribe to our newsletter in order to keep up to date with SMLS project group activities. Three newsletters had been sent this year.
- Established additional team communication channels including a group email address, a Whatsapp channel for the committee, private Slack channels for subteams, Team Shared Document Drives and a Trello Board.
- Established monthly team meetings to continue to build momentum towards our activities, with regular catch up sessions with the co-leads, vice-leads and sub-team members.
- Due to the increasing volume of project group activities, our group opened a call and recruited a 11-member SMLS Committee to efficiently and effectively carry on the work of the Project Group. These include the roles of Vice-Lead (2), Research Coordinators (3), Event Coordinators (2), Membership Coordinators (2), and Web Coordinators (2).
- Onboarded the 11 new members of the SMLS Committee

Core areas – membership, research and events

Since the establishment of the committee, we have been able to immensely increase the scope and volume our Project Group activities. These activities are structurally divided within our Group to focus on the three areas of **membership, research and events**. These areas are discussed further as follows:

Membership

With regards to engaging members, the project team have been focusing on community engagement through our existing social networks (Slack and Twitter). Our aim is to provide a supportive community where members feel welcome and are involved in our group. Furthermore, a membership survey has been created and disseminated to our members (via Slack and the December newsletter) to obtain feedback on our activities this year and to help guide the forward view of our project group.

For public outreach, we have established a Space 4 Health Webinar series. This year there have been two webinar episodes, which have showcased an international group of experts to talk about their work within the field of space medicine and life sciences. Through the webinar series, we hope to expose budding students and young professionals to the variety of opportunities in the field, and to inspire them to pursue a space related a career.

Finally, in the area of external partnerships and collaboration, we have been in early discussions with a number of established groups in the field to look at potential opportunities for synergies. Our current standing partnerships include the [United Nations Committee on the Peaceful Uses of Outer Space - Space and Global Health Working Group](#).

Research

In terms of research, we are in the process of generating guidelines and best-practice pathways for interested individuals or groups to conduct space medicine and life sciences research.

At present, the project group is supporting a series of SMLS-led research projects, which are in their preliminary phase. These include:

- Non-invasive measurement of intracranial pressure, a spin-off project from our European Space Generation Workshop Space Medicine Track.
- UNOOSA Space for Global Health Working Group Questionnaire, a collaboration with the UN Working Group.
- NASA Human Research Program Exploration Medical Capabilities Element project on systematic review of atmospheric factors into degradation of pharmaceuticals in space.

Events

In our events portfolio, 2019 had been a tremendously successful year with multiple SMLS-lead working group tracks and events that generated invaluable discussion on the topic of space medicine and life sciences. These events include:



- The European Space Generation Workshop in London, United Kingdom with a Working Group Track on Space Medicine and a Scholarship sponsored by Merck



- The Space Generation Congress in Washington DC, United States of America with a Working Group Track on Space & Global Health sponsored by the Secure World Foundation.



- The Space 4 Earth Hackathon held as a side-event at the International Astronautical Congress 2019 in Washington DC, United States of America. This is a joint event with the STEA project group and involved 20 participants hacking for a day on applications of space technology in solving challenges relating to the SDG's. This was sponsored by the IAF, the United States Department of State, Airbus, and the Space Foundation.



Forward view

So overall, this report outlines our core project group activities for 2019. We endeavour to build on these preliminary outputs to widen access to aerospace medicine events, research and careers on a global level; which aligns with the objectives of SGAC.