



GLOBAL
YOUNG
ACADEMY

2020

In Memoriam



Alexander (Sasha) Kagansky (Russia)

Sasha was the Director of the Center for Genomic and Regenerative Medicine, School of Biomedicine at the Far Eastern Federal University in Vladivostok, Russia.

A GYA member from 2015-2020 and Executive Committee member in 2017/2018, Sasha made countless meaningful connections and initiated and collaborated on many inspiring projects.

Sasha was one of the most active GYA members and a true inspiration.



Jon Tennant (Indonesia)

Jon completed his award-winning PhD at Imperial College London, where he researched evolutionary patterns in animals such as dinosaurs and crocodiles. He was the founder of the Open Science MOOC, and the digital publishing platform paleorXiv.

John was set to join our ranks in 2020 and his shining light would have bolstered the GYA in ways that we can now only imagine.



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GYA in 2020

The historical occurrences of 2020 will be examined for years to come, and our own first look back as an organisation fills us with pride at how GYA members, alumni and Office staff reacted to the COVID-19 pandemic.

Not only did the GYA quickly adopt a Statement and an Infographic with recommendations on how to stay safe and healthy, various members and Working Groups provided guidance to avoid contracting the disease itself, as well as how to deal with the unprecedented pressures that early-career researchers (ERCs) suddenly found themselves facing.

With lockdowns being implemented and travel restricted worldwide, our Annual General Meeting (AGM) and International Conference of Young Scientists, originally planned for Kolkata, India, was moved online, and the challenges that this presented were both myriad and time-intensive for all involved.

Nonetheless, the vibrancy of the GYA community was evident throughout, and with 180 members and alumni from around the globe taking part, the first-ever virtual AGM and Conference was a great success.

As the AGM and Conference was taking place, events in the United States sparked a global debate about inequality, and these discussions in part resulted in GYA members adopting three focus areas as priority topics for 2020/21: Addressing systemic discrimination; Enabling access to online education; and Harmonising reason with sensibility. Devoting energy to these focus areas led to vital GYA output throughout the year, and also resulted in the premiere episode of the GYA’s podcast “Voices of Young Scientists”.

Another positive development of 2020 was the GYA becoming an Affiliate Member of the International Science Council. The GYA now stands together with nearly 200 international scientific organisations uniting the natural and social sciences. The ISC’s vision to advance science as a global public good, and its mission to be the global voice of science, harmonises with the GYA’s vision – science for all; science for the future – and mission to give a voice to young scientists. We look forward to continued productive cooperation with the ISC.

The Global State of Young Scientists (GloSYS) project moved across the Atlantic in 2020, as focus shifted from Africa to Latin America and the Caribbean (LAC). GloSYS LAC will analyse the circumstances of ERCs in this region through six focal countries, and we expect to learn much about the current state of ERCs in LAC.

We close as we began, by noting that COVID-19 continues to disrupt the world in so many ways. Still, we very much hope that our plan to see you face-to-face in Japan for our 2022 AGM and Conference comes to fruition.

We do hope you enjoy our 2020 Yearly Report. Stay safe and healthy, everyone.

Anindita Bhadra, Co-Chair
(Indian Institute of Science Education and Research Kolkata, India)

Michael Saliba, Co-Chair
(University of Stuttgart, Forschungszentrum Jülich, Germany)

Stories

1 | COVID-19 and the GYA 6

2 | Women in Science Working Group 7

3 | Going virtual 8

4 | Heal the Earth! 9

5 | 2020 in numbers 10

6 | News from the global network of Young Academies 12

7 | Advancing science as a global public good 13

8 | GYA joins Open Research Europe consortium 14

9 | GYA adopts three Focus Areas for 2020/21 15

10 | Working Group spotlight 16

11 | Global State of Young Scientists in Latin America and Caribbean 17

12 | North-South Interdisciplinary Grant funds innovative research 18



1

COVID-19 and the GYA

The year everything changed

The year 2020 was defined by the spread of COVID-19, and from the very beginning, GYA members and alumni contributed to raising awareness of the disease, effectively combating its spread, and providing advice during the various rounds of lockdown.

One of the GYA's first actions as an organisation was to craft and release "[Beyond Boundaries: A global message from young scientists on COVID-19](#)". This Statement delivered specific recommendations for governments, the public, and young researchers worldwide on the importance of global health solidarity, rapid and transparent information exchange, adequate precautions for curbing COVID-19 transmission, and the avoidance of spreading misinformation.

As the year continued and various National Young Academies began producing and sharing important information that could potentially save lives, the GYA launched a dedicated [COVID-19 repository page](#) for such information.

In addition to the Beyond Boundaries Statement itself, the repository contains an accompanying [Beyond Boundaries infographic](#) created by GYA member [Felix Moronta](#) (International Centre for Genetic Engineering and Biotechnology, Italy). The original infographic was created in English, but very quickly our members and alumni adapted it to their native tongues; it is now available in 26 languages.

Many individual GYA members and alumni took up the baton to help combat the virus. Executive Committee member [Sandra Lopez-Verges](#) (Gorgas Memorial Institute for Health

Studies, Panama) penned a COVID-19 Primer ([available here](#)). Executive Committee member Yoko Shimpuku (Hiroshima University, Japan) and 2019/2020 Co-Chair [Koen Vermeir](#) (CNRS, France) represented the GYA in the group of National Science Academies of the G7 countries (GScience) to help formulate the statement "[The Critical Need for International Cooperation during COVID-19 Pandemic](#)".

GYA members in Latin America recognised the vulnerable position of that region's health care sector and teamed up to discuss with the general public their perspectives on the pandemic. The resulting webinar (in Spanish, [available here](#)), was moderated by Felix Moronta, and included short talks and a Q&A with participants.

The [Women in Science](#) working group also published a paper ([available here](#)) exploring group members' individual experiences balancing work and family responsibilities during lockdown, and in a vivid demonstration of their combined abilities to actually do so, they also released a second publication titled "[Motherhood in Science - How children change our academic careers](#)".

Despite all these accomplishments, just as the world was disrupted by COVID-19, so too was the GYA. As you'll read in the stories to follow, COVID-19 has transformed how we work, travel, and interact with colleagues.

The one thing it won't change, however, is the indomitable spirit of cooperation and collegiality that the GYA embodies.



Scan the QR code for links related to this article.

2

Women in Science Working Group

Making the voice of women scientists widely heard

One of the GYA's most active groups, the working group on [Women in Science](#) (WiS), kicked off 2020 with a message sent on the occasion of the United Nations International Day of Women and Girls in Science in February 2020.

Led by the group's co-leads Executive Committee member [Shalini Arya](#) (EEL USP Lorena, Brazil) and [Roula Inglesi-Lotz](#) (University of Pretoria, South Africa), the group joined the international community in celebrating the achievements of women in science, while also acknowledging the struggles involved with realising a future where women and girls, men and boys, as well as non-binary people enjoy equal rights, equal education, equal jobs, and equal pay.

The WiS group aims to help make the voice of women scientists widely heard to reach policy- and decision-makers with the target of a better future for female scientists. To this end, in their message the WiS group called on women scientists to act as proud role models for future generations and work together to overcome persistent challenges.

The GYA is a place to come together to tackle newly-emerging challenges to early-career researchers, and when the COVID-19 pandemic struck in early 2020, the WiS group members did exactly that. Together, members of the group produced a motivational paper titled "[GYA Women in Science stay and work from home: How might we make Covid-19 lockdown work for us?](#)"

The paper was a reaction to working conditions and everyday challenges everyone was suddenly facing during the pandemic. Starting from the observation that pre-pandemic conditions were already challenging and have worsened during the ongoing crisis, the authors share their inspiring experiences on how they dealt with the challenges of balancing work and family responsibilities.

The paper includes some general observations, but mainly consists of personal stories and experiences from group members on navigating the young scientist-work-family-motherhood nexus, using technology to one's advantage, interacting better with students online, enjoying motherhood even in times of stress, allowing for imperfections, and keeping a positive mindset.

The WiS group continued to collaborate throughout the year, and in late 2020 published a collection of 18 fascinatingly personal stories about being a scientist and a mother. The publication, "[Motherhood in Science - How children change our academic careers](#)", sheds light on the challenges of motherhood in the science sphere and academia, and highlights the situations of working mothers from vastly different cultures such as Panama and the United States, Turkey, Ethiopia and India.



Scan the QR code for links related to this article.



3

Going virtual

GYA meets the challenge of moving its meetings online

When the global community was faced with varying degrees of travel restrictions and lockdowns, the GYA was in the run-up to its Annual General Meeting and international conference (AGM). Cancelling or postponing was not an option, so in short order the entire in-person event (which was to take place in Kolkata, India) was transformed to a virtual event. This was a challenge unlike any the GYA has met before, and everyone involved hit the ground running.

Each step presented its own unique challenges. The central challenge was the fact that as a global network, GYA membership could not have more technologically-diverse setups. Solutions needed to be simple, easily accessible, and use tools our members and partners around the world knew.

One of the key elements of the 2020 eAGM was the decision to accomplish so much of it asynchronously, as opposed to a synchronous event that takes place in real time. Reports that needed to be read were mixed up with documents provided for online collaboration, and many of these were provided in the form of short videos.

An overarching challenge that shadowed over these preparations was faced by many conference organisers in 2020. At normal AGMs and conferences, attendees are away from their work, family and friends, and can fully dedicate a week of their time to the demands of such meetings. However, in 2020 everyone was still at home. And family – be it with smaller children or other family members to look after – always takes precedence.

A major step was to pick the right event platform from the incredible variety on the market. The goal was something not too complicated that could be

used on a mobile phone. This way, looking at the AGM schedule for the day could be a part of each member's morning routine.

To further cater to this new situation where the attendees were located in different time zones, the decision was made to space out the normal one-week timeframe of the AGM and conference into two weeks. Then, after a two-week break, the ten-day conference followed.

Despite the new and unusual setting for this meeting, meaningful interaction and constructive discussions were a great part of the event. A high level of motivation was palpable even in the digital medium. Concerns about whether or not the AGM's spirit could be transferred to a virtual setting were misplaced. The vibrancy of the community was evident.

Revisiting the aspect of equality and inclusivity, it became clear that this virtual meeting increased inclusivity in that those who would not have been able to travel due to career or family commitments, financial constraints or visa restrictions, could still join and contribute meaningfully.

However, digital access was a challenge for some, and the GYA helped those in need by funding additional data plans for the duration of the event.

All of this was done during lockdown, facing shutdowns, with family and children underfoot, in between sessions of home-schooling or small-radius traveling to look after family members who needed a hand.

So, to look back upon an AGM that pulled in 180 members and alumni from around the globe, the GYA's first ever virtual Annual General Meeting was a resounding success.

4

Heal the Earth!

Cross-disciplinary solutions to global problems

The [2020 GYA International Conference of Young Scientists “Heal the Earth: Sustainable Development Goals in a Changing World”](#) was held online with over 200 young scientists and researchers, as well as representatives of GYA partner organisations participating across the globe. Within four panel discussions ([on YouTube here](#)) focusing on global health and COVID-19, diminishing resources, science communication, and challenges to higher education during a global pandemic, the conference addressed urgent issues and ongoing challenges to sustainable development that require collaborative efforts across sectors, disciplines and borders to identify and implement solutions. A pre-conference Open Science workshop with UNESCO is [available here](#).

In a [Conference Statement](#), the GYA integrated perspectives from early-career researchers from different corners of the world. The Conference Statement emphasises the need for continued global collaboration, calling upon academics, businesses, foundations, governments, multilateral agencies, NGOs and other stakeholders to take meaningful and transformative steps to meet the United Nations Sustainable Development Goals (UN SDGs). The Conference Statement contains four key recommendations:

Enable and strengthen resource sharing. Through Open Science, science diplomacy and global research cooperation, science can contribute to evidence-based solutions reaching more people in the world. The GYA encourages early-career researchers to familiarise themselves and interact with their local science-policy interface, as well as with international agreements and global scientific assessments.

Examples include the UN GSDR, reports by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, and the UN Intergovernmental Panel on Climate Change.

Communicate science to engage, educate and inspire. Scientists can contribute to increased awareness and trust in science. At the same time, policymakers and science organisations are called upon to increase science literacy through education, and to support science journalism. Awareness and trust in evidence are needed to drive collaborative, sustainable, evidence-based solutions to crises such as the COVID-19 pandemic and the ongoing loss of biodiversity worldwide.

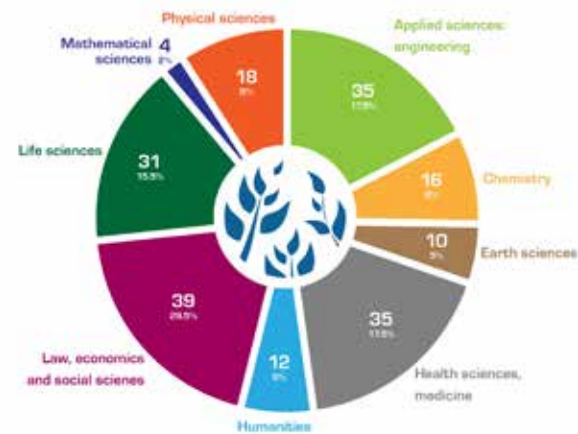
Treat public health and the environment as cross-cutting issues. Implement multi-sectoral approaches, such as the WHO “One Health” approach, at local, national, regional and global levels. Sustainable development policy and technologies need to be based on a paradigm of co-viability between humans, the environment and economic development. To combat the current pandemic, and to encourage innovation to reach all UN SDGs, continued and strengthened investment in research is critical.

In higher education, use the COVID-19 pandemic as an opportunity for innovation and inclusion. Around the world, many universities have moved online, creating challenges and opportunities for researchers, teachers and students alike. The GYA calls on Higher Education Institutions to embrace innovative solutions, while considering obstacles to digital learning, in order to ensure the inclusion of all students and staff.

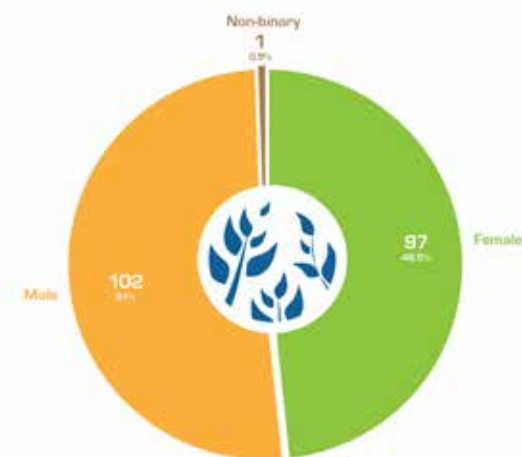


2020 in numbers

The GYA is an independent academy of 200 members. In 2020, we had 297 alumni and were represented in 86 countries (shaded blue above, with orange representing newly-represented countries).



GYA disciplines

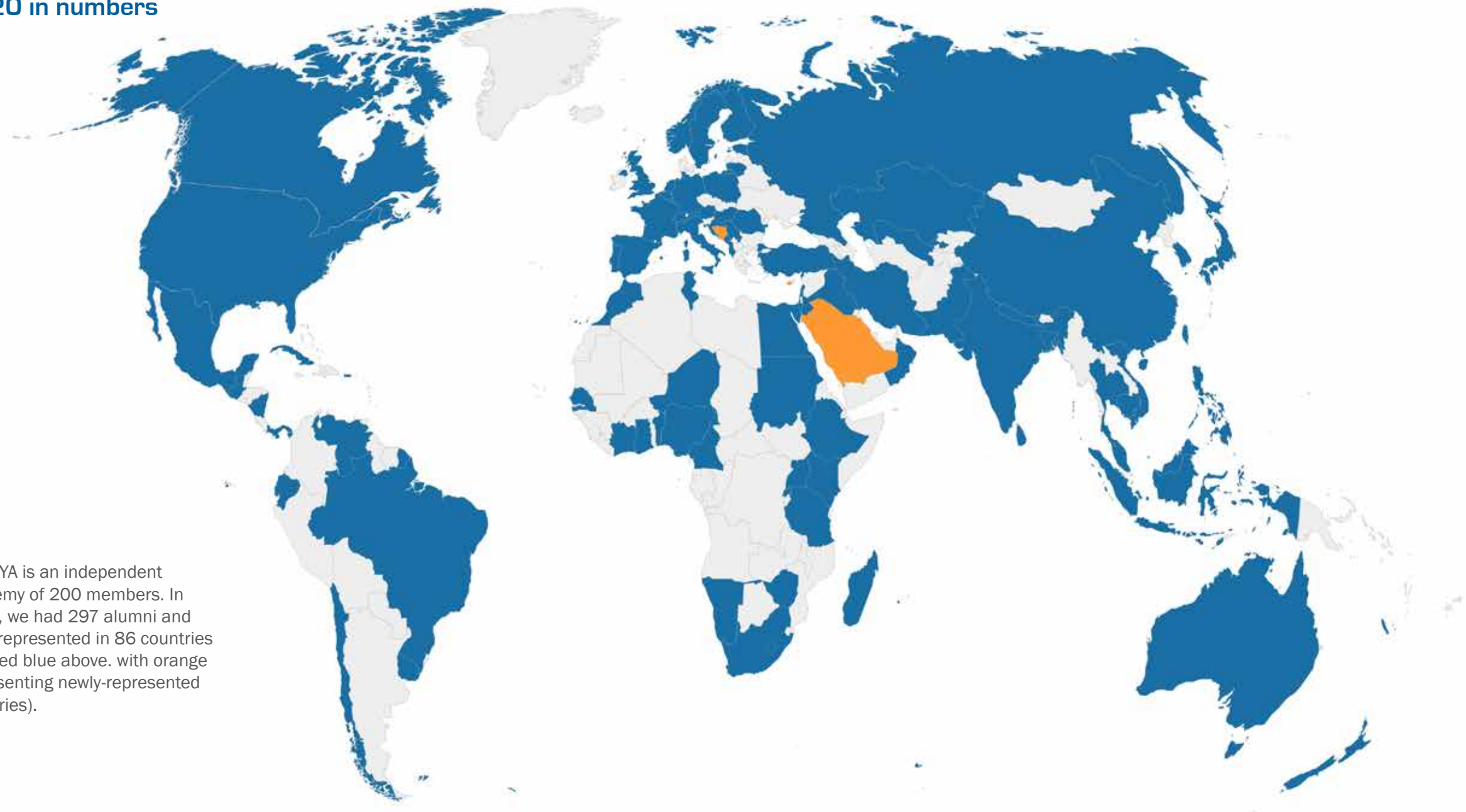


GYA gender balance



GYA members by continent

2020 in numbers





6

News from the global network of Young Academies

Another active year for the GYA and the worldwide National Young Academy movement

Since its foundation, the GYA has acted as a supporter of the growing global network of Young Academies and a facilitator of joint projects and statements, as well as regional and worldwide meetings of Young Academies.

These academies are formed by early- and mid-career young scientists and scholars, typically selected for the excellence of their science research and their commitment to service for society. Young Academies and their members work towards giving a voice to young scientists vis-à-vis society, the media and policy-makers.

In 2020, the group of National Young Academies and similar organisations again grew – there now exist more than 50 such young scientist organisations worldwide. Additions in 2020 included the D. R. Congo Young Academy of Sciences, the Romanian Young Academy, and the Young Scientists Forum Nepal. The network of Young Academies continues to grow dynamically, with more than 10 initiatives currently active in countries such as Colombia, Chile, Croatia, Ireland, and the United Kingdom.

The GYA continues to support cooperation among Young Academies, and in September 2020 organised the [first-ever online meeting of Young Academies from around the world](#). The meeting was the largest such gathering so far, with almost 70 representatives from over 40 Young Academies and initiatives in attendance.

Although only a few hours long, due to the online setting the meeting offered a great opportunity for Young Academy representatives to exchange

experiences as well as discuss successful activities and common challenges.

The [San Francisco Declaration on Research Assessment \(DORA\)](#) and its potential relevance for Young Academies was also discussed during this meeting. Young Academies have an important role to play in outlining future policies for research assessment; they can also apply the DORA principles themselves when selecting their members, as the selection of excellent young scientists requires a clear sense of standards of research quality and a robust system of research assessment.

The GYA and a number of other Young Academies have already [signed DORA](#), and further Young Academies could also do so, to signal their clear commitment to such principles.

The year ended with a new beginning when the Young Academies Science Advice Structure (YASAS) was officially launched in early December 2020. The GYA is part of this group of currently 14 Young Academies from Europe that contribute to the delivery of science advice in Europe. YASAS is open to further Young Academies in Europe joining at any time, and aims to contribute to the European Commission's Scientific Advice Mechanism by joining the Science Advice for Policy by European Academies (SAPEA) project from 2022.



7

Advancing science as a global public good

GYA becomes Affiliate Member of the International Science Council

In April 2020, the [International Science Council](#) (ISC) officially welcomed the GYA to its ranks as an Affiliate Member. The GYA now stands together with over 180 international scientific unions and associations, as well as national and regional scientific organisations, including academies and research councils, forming the largest international non-governmental organisation that unites the natural and social sciences. The ISC's vision to advance science as a global public good, and its mission to be the global voice of science, harmonises with the GYA's vision – *science for all; science for the future* – and mission to give a voice to young scientists. The GYA brings an active interdisciplinary, global membership into the partnership, to contribute the voice of early-career researchers (ECRs) and scientists to ongoing and new deliberations and projects.

Based on good relationships established even before formalising the GYA's Affiliate Membership of the ISC, both organisations continue to cooperate productively at various levels. In November, the GYA nominated two of its members, co-leads of the GYA Focus Group [Addressing Systemic Discrimination](#) and the [GYA Rainbow Group](#), respectively, to provide ECRs' perspectives to an editorial advisory group that counsels the ISC-led sections of podcasts in the [“Nature Working Scientist” podcast series](#).

In another cooperative project in 2020, the GYA and ISC held a joint interactive webinar on the role of scientific knowledge in “Rethinking Human

Development”. Coordinated by the GYA's [Science Advice](#) Working Group, and featuring keynotes by prominent scientists and short video inputs by GYA members representing different disciplines and world regions, the meeting aimed to collect ECRs' perspectives. The discussion contributed to a wider, global conversation facilitated by the ISC on the concept of human development, as originated in the first UN Human Development Report (HDR) in 1990. Since that time, the HDR has widely influenced how policymakers view the many dimensions of human and economic development.

The ISC multi-stakeholder project [Conversations on Rethinking Human Development](#) collected contributions from scientists around the world on a multimedia website, and garnered main insights into a final publication. The project emphasises that income and economic development alone are no longer fitting measures of human progress in the 21st century; rather, enhanced choices and wellbeing, as well as living within sustainable planetary boundaries need to be taken into account. Videos and more from the GYA-ISC dialogue on Rethinking Human Development are [available here](#).

The role of science will become increasingly important to provide evidence and drive progress in this direction, and young scientists are poised to contribute to a more sustainable, inclusive human development.





8

GYA joins Open Research Europe consortium

GYA provides vital input to open access publishing platform

Developments in Open Science (OS), particularly in the European context, continued to race ahead in 2020, and the GYA's impact on both OS policy and publishing kept apace.

Headed by GYA alumnus and former [OS working group](#) co-lead and 2019/2020 GYA Co-Chair [Koen Vermeir](#) (CNRS, France), the GYA became part of a consortium, led by [F1000 Research](#), a leading Open Access publisher, and also including the [European Council of Doctoral Candidates and Junior Researchers](#) (Eurodoc) and [LIBER](#) as partners, that was awarded the contract to build and promote the [Open Research Europe](#) (ORE) publishing platform. LIBER is the voice of Europe's research library community, and helps the project reach library and research audiences. Eurodoc represents European early-career researchers in matters of education, research, and professional development.

The GYA's involvement in ORE focuses on capturing researchers' attitudes towards current changes in the publication system, suggesting ideas for new innovations in ORE and providing input on the future of academic publishing.

The ORE platform itself will provide all [Horizon 2020](#) (H2020) beneficiaries and their collaborators with an easy, high-quality venue to publish Horizon 2020-funded research at no cost and in full compliance with the [European Commission's Open Access policies](#).

The platform will not only publish research articles, but also reports, data notes, method articles, software tool articles, study protocols, clinical practice article, case studies, and more.

ORE aims to be an innovative player in a fast-changing publication landscape. The ORE platform challenges the traditional "journal model" and welcomes submissions from all disciplines, both during and after the end of researchers' H2020 grants. The platform will use a model of immediate publication followed by transparent, invited and open peer review to enable everyone, early-career researchers in particular, to start an open a constructive dialogue with other experts in their respective fields and build potentially important new connections and networks.

The platform also supports the inclusion of all supporting data, allowing for reanalysis, replication attempts and data reuse – bringing benefits to researchers, institutions and society more broadly.

Another innovation for Horizon 2020 grant holders who publish on Open Research Europe is versioning, where each version of an article published during open peer review is independently citable.

The platform opened for article submissions in the end of November 2020, and was formally unveiled in March 2021.

Under current agreements, the GYA's involvement in the ORE consortium will continue at least until the end of 2023.

9

GYA adopts three Focus Areas for 2020/2021

Members concentrate on three priority topics

During the 2020 AGM, GYA members adopted three Focus Areas as priority topics for 2020/21: [Harmonising reason with sensibility](#); [Addressing systemic discrimination](#); and [Enabling access to online education](#). These areas were subsequently taken up by dedicated groups of GYA members and alumni throughout the year.

The Focus Area [Harmonising reason with sensibility](#) aligns with the topic chosen for the 2022 GYA AGM and Conference in Japan, and starts from the observation that the COVID-19 pandemic has led scientists, stakeholders, and citizens to re-think the value of science.

The GYA posits that science need not be a coldly rational, impersonal and utilitarian force. Rather, connecting science to emotional intelligence, common sense and cultural sensibilities will forge new bonds with society and restore trust. An audit of current work by the GYA and its working groups is underway, with a forthcoming GYA Statement also in the works.

Another Focus Area, [Addressing systemic discrimination](#), starts with the recognition that despite fundamental human rights being legally protected all around the world, discrimination in various forms remains pervasive, including in academia. The GYA is committed to working against all systemic bias that results in discrimination, be it due to race, caste, gender, sexuality, culture, age, etc. Members of this Focus Area are also tasked with looking into best practices to combat systemic bias.

The [GYA Anti-discrimination Statement](#) is the first output of the group, and states that the

GYA supports the Black Lives Matter movement and all such movements fighting racism and discrimination around the world.

The [inaugural episode of the GYA podcast](#) "Voices of Young Scientists" explored the members' motivations and backgrounds, and the Statement itself was also read by contributing members in [the second podcast episode](#).

Further activities are under development, and include increasing awareness within the GYA about unconscious bias, and what practices GYA members and the global research community can adopt to reduce its impact. Members also plan to develop guidelines for the GYA to use to eliminate racism and systemic bias through language, as well as to partner with other Young Academies and international organisations working along similar lines.

The Focus Area [Enabling access to online education](#) starts from the observation that education is a fundamental right. However, the shift to online learning during the COVID-19 pandemic has led to large groups of students not being able to attend classes online, either because of lacking internet connectivity or limited access to smartphones or computers. This results in educational underachievement, and severe stress and mental health issues.

In addition to working on a regional status report, the group is examining best practices including television and radio channels for educational purposes, and will examine how these and other solutions relate to the activities of GYA members.





10

Working Group spotlight

Trust in (Young) Scientists and Open Science

Trust in (Young) Scientists

Threats to the public's trust in science abound. Members of the [Trust in \(Young\) Scientists](#) working group are particularly concerned by these issues and therefore see the need to reflect on the role of science in society and contribute to building justified trust in science. However, many scientists – especially those in the natural sciences and engineering – have never received training in the philosophy of science, sociology of science, science ethics, or science communication.

Much of the output of these latter fields would be highly useful for other scientists, but because of science's silo structure and the lack of exchange between different disciplines, such output goes unnoticed. However, if young scientists learn about them at an early stage, they can perhaps develop habits of critical reflection and skills needed for outreach as they make their way into the scientific establishment, contributing to cultural change in academia.

This is where the group's "Science ∞ Society: Video tutorials on science ethics and science communication" project comes in. The Science ∞ Society project aims to create a learning platform with video tutorials – also to be made available as audio podcasts – that are meant to fill these aforementioned gaps. Further aims include helping (young) scientists think about the societal and ethical dimensions of being a scientist, providing them with conceptual tools from other fields, and empowering them to apply these to their own situation, especially with regard to outreach and communication.

The project will be carried out in collaboration with the [German National Institute for Science](#)

[Communication \(NaWik\)](#), and was planned to run for the period 2020-2022. Unfortunately, the pandemic has significantly altered the filming schedule and will delay the project. The video and audio output will be distributed through the GYA and its partner organisations.

Open Science

These are challenging times, but also times full of opportunities. One of them is the future of Open Science (OS). Indeed, the current COVID-19 pandemic underlines the need for OS policies to stop delaying the sharing of scientific information.

To this end, the GYA is coordinating a new global working group on OS, comprising members from 25 National Young Academies (NYAs) from around the globe, as well as members from the GYA's long-standing [Open Science](#) working group. This new working group is the first of its kind to connect NYAs and the GYA.

The group's first output was participation in a group put together by the InterAcademy Partnership to provide input to the "UNESCO Recommendation on Open Science". The GYA nominated Immediate 2019/2020 Co-Chair [Koen Vermeir](#) (CNRS, France), who also co-led the GYA working group on OS until 2018, to be a part of the 10-member IAP ad hoc Open Science Working Group that was formed to provide this input. That report is [available here](#).

Other OS activities included signing the [San Francisco Declaration on Research Assessment](#), conducting a [joint workshop with ALLEA on Research Assessment](#), as well as starting work on the [future of peer review with ALLEA and STM](#).



11

GloSYS Latin America and the Caribbean

Laying the groundwork

The year 2020 was one of transition for the [Global State of Young Scientists](#) (GloSYS) project, as the regional focus shifted and two GYA Office-based staff were added: Alejandro Miranda-Nieto as the Principal Investigator, and Franziska Schreiber as the Research Assistant.

Drawing from previous projects conducted in Africa and Asia, GloSYS began to focus on Latin America and the Caribbean (LAC) to analyse the circumstances of early-career researchers (ECRs) in this region through six focal countries. To map the field and to prepare the empirical study, the GloSYS LAC team, including [Sandra López-Verges](#) (Gorgas Memorial Institute for Health Studies, Panama), [Paulina Carmona-Mora](#) (University of California-Davis, United States), [David Fernández Rivas](#) (University of Twente, the Netherlands), and [Felix Moronta Barrios](#) (International Centre for Genetic Engineering and Biotechnology ICGEB, Italy), conducted a systematic literature review in cooperation with Lynn McAlpine (University of Oxford and McGill University) and former GloSYS Assistant Matt Keane.

The articles that compose this body of literature cover a broad range of subjects that were clustered around five themes. By far, the theme that most studies cover refers to the growth and transformation in research and higher education. The other themes entail academic productivity and efficiency, constraints such as funding and the labour market, as well as international mobility, gender and diversity.

Still, the articles hardly discuss gender and diversity, which bore more relevance in previous GloSYS studies. The articles from LAC that do

tackle these topics indicate persistent problems such as gender and minority discrimination, despite the recent success of integrating a broader range of scholars (in terms of socioeconomic backgrounds) into the research community. More generally, these papers touch upon the current trends in research in the LAC region, such as the increase in the average number of publications per researcher, the increase in student enrolment ratios and the expansion of research programmes. Research on ECRs in the LAC region has been mostly driven by institutional research orientations, and most articles stem only from one-quarter of the countries in the region.

Overall, the literature review reveals a research gap concerning the actual experiences of ECRs and how they relate to socio-structural dynamics that affect their career trajectories. Based on these findings, the GloSYS research team proposes a three-pronged research agenda. First, it is necessary to further develop a working definition of ECRs that can be used both regionally and globally. This would help to develop certain comparisons across and beyond the LAC region. Second, there is a need for empirical data on how structural, institutional and work environments intersect with ECRs' individual agency. Third, comparisons across regions and countries are necessary to connect local and global contexts.

Next steps in the project include the first steps of collecting empirical data. Conducting the GloSYS LAC research project during a global pandemic will of course imply unexpected methodological and practical challenges. Despite the need to adapt to these challenging circumstances, there is much to be discovered about ECRs in LAC.





12

North-South Interdisciplinary Grant funds innovative pilots

Projects explore air pollution and citizen science, and COVID-19 and art

Each year, in a competitive selection process, the GYA selects one of several project proposals put forward by a group of two or more of its members who work in different disciplines and represent countries with both well-established and underfinanced science systems. Awardees of the annual North-South Interdisciplinary Grant receive a 10,000 EUR grant to work together across continents on curiosity-driven, blue-sky ideas. In the past, these intense periods of focused cooperation have often led to long-term network ties, later publications and follow-up research projects. The GYA Working Group for [Biodiversity for Survival via Biomedicine \(Bio2Bio\)](#), for example, was initiated to pursue wider-scale ideas emerging from the 2015/16 Interdisciplinary Grant project [Epigenetics and Natural Resources](#).

2020 was a challenging year for many types of research, especially work involving in-person meetings, workshops or international visits. GYA members collaborating on the 2019/20 project [Citizen Science for Reducing Exposure to Urban Air Pollution](#) were able to meet in 2019, but postponed in-person workshops in 2020 and instead focused on local spin-off projects and joint publication efforts until the conclusion of their grant period. One such project worked to integrate crowdsourced data on cooking technologies and fuels into mobile and web apps (ENERGY TSAPP) for promoting clean cooking in Niger. The team, which included experts from the political sciences, philosophy, and statistics, continued to jointly address practical and ethical questions related to data collection, validation,

and the processing and management of data from citizen science initiatives.

Applicants to the 2020/21 GYA Interdisciplinary Grant in June 2020 had already adapted their projects' scope and activities to existing travel restrictions, with an increased focus on virtual rather than in-person exchange. The grant project selected, [The COVID-19 pandemic and art \(19and.ART\)](#), views the pandemic from a unique lens, collecting data on cartoons and artwork in online media from around the world. By collecting information about different forms of visual and even educational art, the project team aims to analyse related socio-political contexts, both nationally and internationally. In the first half of their grant period, the team – a large group that includes disciplinary expertise from global health, health economics, computer sciences, biomedical sciences, history and anthropology – worked with hired research assistants to gather a dataset of COVID-19-related artworks, and to present them on an openly accessible website. In a next step, the team will undertake an exploratory sociological analysis of the data.

The GYA North-South Interdisciplinary Grant is open to applications from interdisciplinary, international member teams each year approximately six weeks prior to GYA Annual General Meetings.

All current and past GYA North-South Interdisciplinary Grant projects are represented on the GYA website [here](#).

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at the German National Academy of Sciences Leopoldina
Emil-Abderhalden-Str. 37
06108 Halle (Saale), Germany

Contributing Writers:

James Curtiss (Editor)
Kirsten Geithner
Anna-Maria Gramatté
Alejandro Miranda-Nieto
Jennifer Plaul
Franziska Schreiber

Design & Layout: Kevin Bolte, James Curtiss

Media Contact: james.curtiss@globalyoungacademy.net

About the Global Young Academy

The vision of the GYA is *science for all; science for the future*, and its mission is to give a voice to young scientists and researchers around the world. The GYA, founded in 2010, is an independent science academy of 200 outstanding early- to mid-career researchers from six continents who are selected from across disciplines based on their academic excellence and commitment to engage with society. GYA members serve five-year terms, and the GYA presently counts members and alumni from 86 countries. The GYA administrative Office is publicly funded and hosted at the German National Academy of Sciences Leopoldina. The wide array of GYA activities are supported by a range of international public and private funders.

Co-Chairs: Anindita Bhadra
(Indian Institute of Science Education and Research Kolkata, India)
Michael Saliba
(University of Stuttgart,
Forschungszentrum Jülich, Germany)

Managing Director: Beate Wagner (Germany)



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