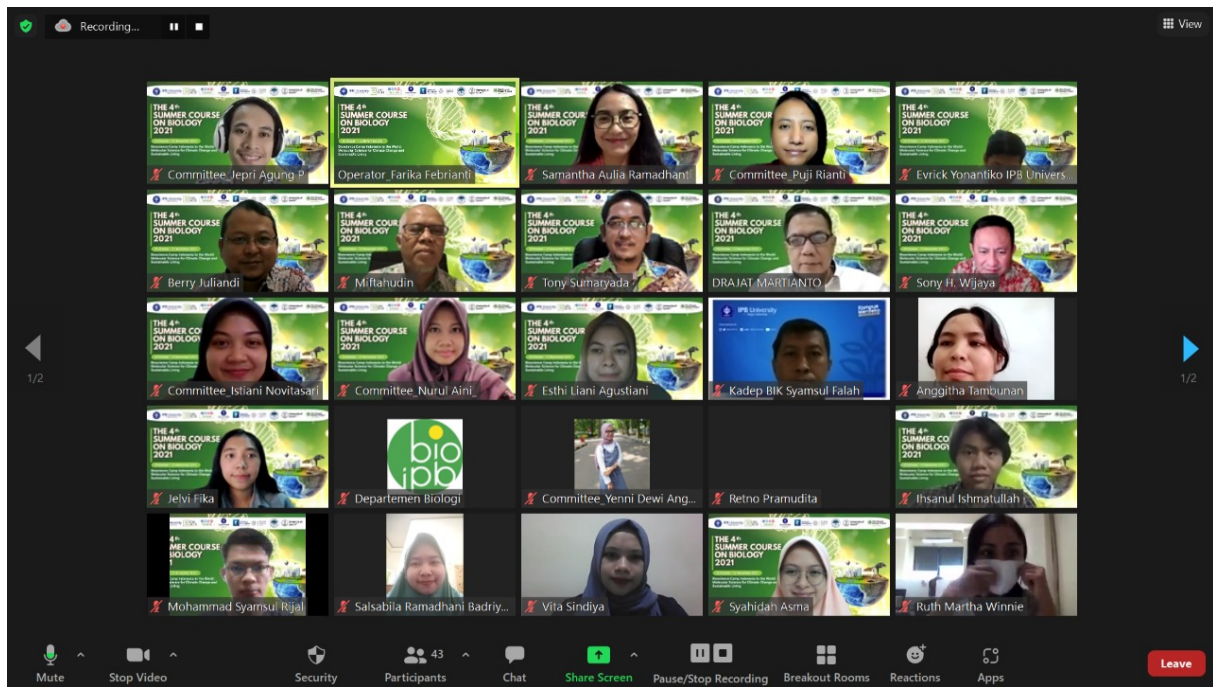


The 4th Summer Course on Biology 2021



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Bioscience Camp Indonesia to the World: Molecular Science for Climate Change and Sustainable Living

We have faced the pandemic for two years. Today, the challenge to learn advanced science, particularly in molecular technology, became fundamental knowledge for the future of humanity. Although this molecular science still needs the basic science in Biology. It is important to understand the tropical biodiversity richness and its prospect to comprehend the blueprint of innovation achieving the sustainable development goals (SDGs) in Indonesia and the world. To achieve this goal of knowledge, the Department of Biology, IPB University, held the 4th Summer Course on Biology 2021. This year theme is “Bioscience Camp Indonesia to the World: Molecular Science for Climate Change and Sustainable Living”. The Summer Course was held online from 18th October to 12th November 2021 with 55 participants from universities and research institutions in Indonesia, Malaysia, Thailand, The Philippines, Taiwan, Japan, Pakistan, Bangladesh, Netherland, Egypt, Lebanon, Russia, dan Australia.

We combined the experiences of an international study’s atmosphere, student centre learning, online collaboration project, hands-on workshop, virtual tour and interactive dialogue with experts. Through the 4th Summer course on Biology 2021, participants experienced exploring, observing, and discussing the following topics with notable experts. These topics were on genetic adaptation to genomic ecosystem resilience for evolutionary potential and land ecosystem restoration, conservation genomics for natural selection & its potential use in future food, medicine, green industry and technology (biomimicry). We selected the best lecturers from Indonesia and abroad to share their science knowledge, such as Dr Nampiah, Dr miftahudin, Dr Nisa Rachmania, Dr Rika Raffiudin, Prof Dr

Antonius Sueanto, and Prof Dr Dyah Iswantini from IPB University. Prof Dr Michael kruetzen from the University of Zurich, Switzerland; Prof Dr Hiroo Imai from Kyoto University, Japan; Dr Christina Yong from Universiti Putra Malaysia, Malaysia; and Dr Bagus Mulyadi from University of Nottingham, UK. Besides the online course, We also held the international online guest lecture seminar for international and reputable practitioners from the government (Dr Neil S Lopez from UNEP, Mr Budiyanto Sidiki, MSi from Bappeda Gorontalo and Mr Tri Wibowo from Geopark Belitong), community (Dr AmandaKatili from The Climate Reality Project(TCRP) Indonesia, Dr Ciaran McCormack from TCRP Australia aPacificfic, Dr Aditya Pundir from TCRP India, Mrs Nazrin CD Castro from TCRP The Philippines) and Industry (Mrs Nelda Hermawan from PT Austindo Nusantara Jaya, Tbk). We also held an international scientific presentation competition for participants to present their design idea thinking on two topics on molecular science and SDGs through 1) biotechnology and 2) ecosystem and local adaptation. Winners of this competition and the best participants of the events come from Indonesia, Pakistan, Lebanon, and The Philippines.

It is not only science lessons but also the uniqueness of Indonesian history and culture was exposed to all Summer course participants. They learn about design thinking and creativity that can develop from using natural biodiversity and molecular technology to achieve SDGs challenge in Indonesia or their home country. The 4th Summer Course on Biology 2021 left a warm online experience, new knowledge, and international networking experience to all the participants. It would not have successfully happened without great collaboration between the Department of Biology IPB University, the Department of Chemistry IPB University, and The Climate Reality Project Indonesia supporting this event. Shall knowledge spread through time and obstacles that could appear. Everybody can hold the same knowledge and great experience that they deserve.