



## SURAT KEPUTUSAN

Nomor: 264a/SK/CYS/12/2022

Perihal: Hasil Lomba Peneliti Belia Nasional 2022

Mengingat salah satu tujuan dari Lomba Peneliti Belia Nasional 2022 adalah untuk menyeleksi siswa Indonesia untuk mengikuti lomba internasional.

Menimbang hasil Lomba Peneliti Belia Nasional 2022 yang telah dilaksanakan oleh CYS pada tanggal 11 November - 23 Desember 2022.

Memutuskan nama-nama di bawah ini sebagai pemenang Lomba Peneliti Belia Nasional 2022 dan berhak untuk mengikuti seleksi lomba internasional 2023.

| Bidang  | Judul (B.Ingggris)   | Nama lengkap peneliti 1     | Nama lengkap peneliti 2    | Nama sekolah                  | Penghargaan  |
|---------|--|-----------------------------|----------------------------|-------------------------------|--|
| Physics | Jumping Water : Self-starting siphon model with Darcy-Weisbach's Equation                          | Devin Nathaniel             | Hillary Clarence Rosli     | SMA Santo Aloysius 2, Bandung | Juara 1  |
| Physics | Modification of NSTAR Ion Thruster Accelerator Grid Aperture Diameter to Increase Specific Impulse | Edsel Rayendra Putra Arifin | Arian Djuned Pusponegoro   | Santa Laurensia High School   | Juara 2  |
| Physics | Development of U-WATCH: an Ultraviolet Exposure Warning Smartwatch                                 | Malvin Marthen Manaruri     | Adzan Fathier Putra Lukman | SMA GenIUS                    | Juara 3  |

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|---------------|---|--|-------------------------|-------------------------------------|-----------------|
| Physics       | OPTIMAZATION OF SNAIL SHELL ACTIVATED CARBON WITH ACTIVATOR HCL VS H2SO4  | Dean Febrio Denny-Xie                  | Octaviani Harianto      | SMAS Untung Suropati Sidoarjo       | Juara Harapan 1 |
| Physics       | Solenhancer (Solar Cell Performance Enhancer)   | Richie Ng                              | Geraldo Wijaya          | SMA Narada                          | Juara Harapan 2 |
| Life Sciences | Fat-Free: Investigating Apple Peel (Malus sp.) Waste Extract Ability to Suppress Lipids via Absorbance Rate Method  | Nathasya Alyssa Mechtilda Schoenmakers | -                       | SMA Cita Hati West Campus           | Juara 1         |
| Life Sciences | Patch Effectiveness from the Combination of Chitosan and Na-Alginate with Active Ingredients of Neem Leaf Extract (Azadirachta Indica) Against Bacteria Staphylococcus Aureus | Anak Agung Istri Yuri Pratista Savitri | -                       | SMA Negeri 1 Denpasar               | Juara 2         |
| Life Sciences | Formula Development of Wound Dressing Hydrogel with Durian Seed Flour (Durio zibethinus Murr.) as Supplementary Material  | Rustam Effendi                         | -                       | SMA Kolese Loyola Semarang          | Juara 3         |
| Life Sciences | Omega-3 Fortification of Tofu from Patin (Pangasius sp.) Head Waste As an Affordable Omega-3 Source Solution  | Felita Vilonia Christian               | Kezia Rafael Gunawan    | SMAK Untung Suropati Sidoarjo       | Juara Harapan 1 |
| Life Sciences | Characteristics of Organic Leather from SCOBY as Biodegradable Material Innovation  | Lulu NurwahidaTuraya                   | Aisyah Alya Rahma       | SMA Quranic Science Boarding School | Juara Harapan 2 |
| Life Sciences | Revealing the Potential of Flaxseed (Linum usitatissimum) as Hair Treatment Gel   | Victoria Fiona Kurniawan               | Joylie Novalint Pussung | SMAK 1 BPK PENABUR Bandung          | Juara Harapan 3 |

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|-----------------------|--|--------------------------------|-----------------------------|--|-----------------|
| Life Sciences         | Potency of Catnip (Nepeta Cataria) Leaf Extract, Moringa Leaf (Moringa Oleifera), And Orange Purut Leaf (Citrus Hystrix) As Larvicide for Aedes Aegypti Mosquitoes | Kevan Vallerio Anwar           | Brian Alvarico Anwar        | SMA Negeri 3 Semarang, SMP Negeri 2 Semarang | Juara Harapan 4 |
| Computer Science      | Exploration of Evolutionary Algorithm in Design of Four-Bar Linkage Walking Mechanism with Combined Stepping and Partial Rolling Motion                            | Vanessa Natalie Karlina        | Starla Gracelie Karlina     | SMA Santo Aloysius 2 Bandung                 | Juara 1         |
| Computer Science      | "DontDrown": A Device to Increase Surveillance Over Visitors Who Have Potentials of Drowning in the Beach By Detecting Movements Using Artificial Intelligence     | Fiona Lee                      | Veronica Jane Sudjana       | SMA Cita Hati East                           | Juara 2         |
| Computer Science      | MATA AI (The Real Time Monitoring of Student Personal Computer)  | Adelio Fahri Faradish          | -                           | SMP Negeri 8 Yogyakarta                      | Juara 3         |
| Computer Science      | Utilization Of Minecraft Based On IP Public Website Server As A Virtual Learning Garden  | Hieronimus Tetra Wisnu Harjana | Nicolas Acto Rian Rakadamar | SMP Tarakanita Gading Serpong                | Juara Harapan   |
| Environmental Science | The Potential of Mucilage from Malabar Spinach (Basella alba) as a Hydrogel Filter Against Microbeads and Fe <sup>2+</sup> Ions                                    | Dhavina Priskila Tjahjadi      | Gabrielle Rochellin Susanto | SMA Santa Laurensia Alam Sutera              | Juara 1         |
| Environmental Science | Investigation of Justicia gendarussa's Optimal Ratio as Bioplastic   | George Hugo MacCray            | -                           | SMA Cita Hati - West Campus                  | Juara 2         |
| Environmental Science | Potential Use of Eco-Enzyme Enriched with Vetiver (Chrysopogon zizanioides) Root   | Rafael Patrick Suhandinata     | Monique Aurelia             | SMA Santa Laurensia Alam                     | Juara 3         |

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|-----------------------|--|-------------------------------|--------------------------|-----------------------------------|-----------------|
|                       | Extract as Lead Ion (Pb <sup>2+</sup> ) Reducing Agent   |                               |                          | Sutera                            |                 |
| Environmental Science | The Production of Bioethanol from Salacca zalacca Seed Waste and Ananas comosus Peel Waste Combination   | Carlisa Regina Crystal        | -                        | SMA Elyon Christian High School   | Juara Harapan 1 |
| Environmental Science | The Effectiveness Of Chitosan As A Biocoagulant For TSS Removal In The Food Industry Wastewater.   | Abidah Al Mughniyah           | Farrel Aryo Wahyudi      | MAN Kota Surabaya                 | Juara Harapan 2 |
| Environmental Science | The Use of Bilimbi (Averrhoa bilimbi L.) Extract and Eco-enzyme as the Raw Material in Making Liquid Detergent   | Joanna Faleshia               | Patrisia Tanwijaya       | SMA Tarakanita Citra Raya         | Juara Harapan 3 |
| Environmental Science | Biodegradation of Styrofoam by Superworm (Zophobas sp. Larvae)   | Teresa Azarel Gayatri Lamiang | -                        | SMP Montessori Yogyakarta         | Juara Harapan 4 |
| Mathematics           | Fractal Geometry and Geometry Transformations as a Basis for Re-Design Motifs on Palembang Songket Fabrics   | Sadrina Alyani                | Nyayu Nur Amalia Yahya   | SMA Negeri 1 Palembang            | Juara 1         |
| Mathematics           | The Potential of Kotlin Based Program in Optimizing Micro Small and Medium Enterprises (MSMEs) Profit and The Speed of Calculating Profit Using Linear Program | Jason Mikael Dihardja         | Nathanael Tristan Alfian | SMA Tarakanita Gading Serpong     | Juara 2         |
| Mathematics           | Generalization of Simple Mathematical Patterns in Spot It Games  | Moch. Taufiq                  | Ali Sabatan Kano         | SMA Negeri 23 Kabupaten Tangerang | Juara 3         |

| Bidang      | Judul (B.Ingggris)                               | Nama lengkap peneliti 1 | Nama lengkap peneliti 2 | Nama sekolah           | Penghargaan   |
|-------------|--|-------------------------|-------------------------|------------------------|---------------|
| Mathematics | The Pattern of Number Sequences in Making Klakat | Kadek Wikayla Prabawati | -                       | SMP Negeri 1 Singaraja | Juara Harapan |

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|-----------|--|-------------------------------------|--------------------------------|---|-----------------|
| Economics | The Literacy Level of Gen-Z about NFT (Non-Fungible Token) in Jabodetabek  | Emily Kristiawan                    | Regina Carla Neola Setiadi Nio | SMA Santa Laurensia                             | Juara 1         |
| Economics | Effectiveness of Traditional Advertising and Digital Advertising at the Spartan Barbershop Company   | Nicholas Chang                      | -                              | SMP Swasta Santo Nicholas                       | Juara 2         |
| Economics | Externality Analysis of Green Clams Peeling Center on Environmental and Economic Conditions of the Community in Kampung Nelayan Cilincing                            | Cathleen Natasia Setiadi            | Katarina Kezia                 | SMA Santa Laurensia Alam Sutera                 | Juara 3         |
| Economics | Plastic Waste as a Form of Market Failure: The Effect of Knowledge and Attitude towards Plastic on the Intention to Reduce Negative Externalities of Online Shopping | Edward Darin Cahyono                | Valen Louis Luciano Lim        | Cita Hati Christian School East Campus Surabaya | Juara Harapan 1 |
| Economics | SAKELES Local Wisdom Innovation  | Vidya Putri Nuridzati               | Aliyya Putri Hasnaningtyas     | SMP Negeri 1 Wonosobo                           | Juara Harapan 2 |
| Economics | The Effect of The Covid-19 Pandemic On Krebet Wood Batik Business, Bantul Regency, DIY   | Eugenius Dominus Tecum Roso Mudayen | Daniel Edhi Wicaksono          | SMP Pangudi Luhur 1 Yogyakarta                  | Juara Harapan 3 |

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|-----------|---|--|-------------------------------|---|-----------------|
| Geography | Close Range Photogrammetry Method for Conservation and Reconstruction of Banyunibo Temple Complex   | Muhammad Jaris Almazani                | Tri Bayu Aji                  | SMA Kolese De Britto Yogyakarta                 | Juara 1         |
| Geography | THE MAPPING OF GEOMAGNETIC QUANTITIES IN BALI BASED ON PURA PADMA BHUANA CONCEPT  | I Gusti Ayu Agung Shanti Wahyu Dewanty | Ida Bagus Made Raditya B.R.M  | SMA Negeri 3 Denpasar                           | Juara 2         |
| Geography | Analysis of the Geotourism Potential of Mencar Jaya Baths in Mencar Jaya Village, Jayapura District, East Ogan Koming Ulu Regency in Efforts to Recovery the Community's Economy After the Covid-19 Pandemics | Muhammad Farhan                        | Eni Qomsiati                  | SMAN 1 Belitang                                 | Juara 3         |
| Geography | Feasibility Analysis of SMAIA 24's Natural Environment as Potential Land for the Timor Deer Preservation Site   | Fathur Rachman Al-Gazali               | Fabyan Ismail Zufar           | SMA Islam Al-Azhar 24 Boarding School Cigombong | Juara Harapan 1 |
| History   | Historical Traces of the Down Town Structure (Beneden Stad) on the Polarization of Arab and Chinese Ethnic Trading Activities in the Pabean Cantian Area of Surabaya  | Achmad Hilmy Syarifudin                | Nadilla Dwi Pramesti Sidharta | SMA Negeri 19 Surabaya                          | Juara 1         |
| History   | Economic Jealousy to the Vandalism and Looting of Chinese Ethnic's Homes and Shops in the May 1998 Riots  | Zyreen Putri Darmawan                  | -                             | SMP Cita Hati West Campus Surabaya              | Juara 2         |
| History   | The Forgotten Tragedy : Re-evaluating "Masa Bersiap" Horror and Its Connection to Post-Independence Spirit of Indonesia People  | Anggita Putri Rulinny                  | -                             | SMA Pradita Dirgantara                          | Juara 3         |
| History   | Hj. Noerijah: A Portrait of the Generosity of   | Rahadhathul Azelia                     | Mikhailova Ken                | MAN 1   | Juara Harapan   |



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|------------|--|------------------------------|----------------------------|-------------------------------------|-----------------|
|            | Wong Kalang in Physical Revolution Struggle 1945-1949  | Setyanto                     | Paramitha                  | Yogyakarta                          | 1               |
| History    | Museum and Teenagers: Building Teenagers' Awareness and Enjoyment of Visit Museums                 | Dietrich Mahendraly          | -                          | SMP Cita Hati East Campus           | Juara Harapan 2 |
| Psychology | conscious vs unconscious: the psychology behind littering behavior                                 | Yeonsoo Yang                 | -                          | SMA Cita Hati Christian School West | Juara 1         |
| Psychology | The use of Tangrams in improving the Spatial Reasoning of 7th grade students from Papua            | Mischaelia Vanessa Madiowi   | Tri Wahyuni Kesumawati     | SMA GenIUS                          | Juara 2         |
| Psychology | The Relationship Between Student's Stress Level and Cognitive Flexibility                          | Emmanuella Anandita Kurniadi | Stephanie Angela Chandra   | Sekolah Victory Plus                | Juara 3         |
| Psychology | It's Too Scary: The Effects of Self-Confidence on Cita Hati Teen's Social Abilities                | Clarín Yuwanto               | Vanessa Valencia Tanoyo    | Cita Hati West Campus               | Juara Harapan 1 |
| Psychology | Improving Post-Pandemic Students Learning Enthusiasm by Using Stretsufr Technique at MTsN 3 Malang | Assalwa Shofarina Zuhro      | Callysta Lina Khalida      | MTsN 3 Malang                       | Juara Harapan 2 |
| Psychology | Generation Z's Understanding of Bipolar Disorder and Obsessive Compulsive Disorder (OCD)           | Meygita Rahma Shindiyanie    | -                          | SMA Kartika XIX-1 Bandung           | Juara Harapan 3 |
| Sociology  | The Effect of Social Media Validation on Adolescents' Stress and Anxiety Level in South Tangerang  | Nadine Angelina Arianto      | Melody Annabelle Chaidrata | SMA Santa Laurensia                 | Juara 1         |



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|-----------|--|---------------------------|-----------------------------|---------------------------------------|-----------------|
| Sociology | GEMAS (Game Monopoli Sadar Keselamatan) Interactive Educational Games to Provide Understanding of Occupational Safety and Health in the School (Case Study: SMA Negeri 3 Yogyakarta)           | Faruq Fairuzabadi Aribowo | Katara Nashrulloh           | SMA Negeri 3 Yogyakarta               | Juara 2         |
| Sociology | The Effectiveness of The Implementation of Palembang Jero Ketut as an Effort to Control Rice Field Rat Pests (Rattus Argentiventer) Based on Local Wisdom in Ababi Village, Karangasem Regency | Ni Made Ananda Radha Rani | Ni Putu Regina Mertayani    | SMK Negeri 1 Amlapura                 | Juara 3         |
| Sociology | Ethnomathematical Exploration of Magelang Batik with Local Wisdom Values   | Tsabita Rahma Faradisa    | Asna Atiyya                 | SMP Negeri 2 Magelang                 | Juara Harapan 1 |
| Sociology | K-Pop, Korean Wave, and Cultural Imperialism in Indonesia  | Aizza Fardah Raharwya     | Nyimas Dyah Chalisaffia     | SMA Mutiara Persada Yogyakarta        | Juara Harapan 2 |
| Sociology | The Impact of Gadgets and Internet Restriction on Students' Social Interaction at Al Azhar 24 Senior High Boarding School  | Divi Arravi Muckson       | Abdurrahman Firdaus Nugraha | SMA Islam Al Azhar 24 Boarding School | Juara Harapan 3 |

Denpasar, 24 Desember 2022




Monika Raharti, PhD