



MyBio Carnival

Where Passion Meets Fashion





Countries all over the world have their own unique versions of a carnival. Religious beliefs or cultural rituals dictate days of celebration marked by festivity, public participation, and merriment. In Rio de Janeiro, Brazil, a frenzy of non-stop music and street dancing attract millions of participants to the yearly event dubbed 'the greatest show on earth'. The Patras Carnival in Greece is a three-day spectacle featuring concerts, parades, a masquerade ball, floats, and a treasure hunt. Intruz in Goa, India includes days of music and dancing culminating in a public mass, a parade of religious artifacts, and a buffet dinner for the crowds. While each carnival is as festive and elaborate as the organizers dictate so, the common objective is to invite the public to organized events that encourage interaction and enjoyment amidst religious or cultural ferment.

The concept of the carnival inspired MyBio Carnival in Malaysia, a week-long event for students and parents, as well as the general public. It aimed to introduce the wonders of science in a playful, relaxing, and participative mode. MyBio Carnival involved a series of activities - debates, quizzes, spelling competition, poster drawing, essay writing, seminars, exhibits, and a fashion show. Public education was fostered through play, hands-on experience, and interaction with peers and experts without the formality of the classroom and rigidity of a structured learning process. Biotechnology was thus forwarded as a 'fun' and pragmatic science rather than a field difficult to understand.

"MyBio Carnival was a platform to provoke interest on the part of youngsters to study biotechnology and take a keen interest in this field. It exposed them to the various fields in biotechnology, their potentials, career opportunities, and issues involved in this industry. The Carnival was also an ideal venue for family outings. It created opportunities for parents to be involved with their children, thus 'forcing' parents to take interest in this subject."

-Malaysian Biotechnology Information Centre

Biotech Debate



“We learned a lot (about biotechnology) and had a new topic to talk about. We had to devote a week of preparation by doing research on the Internet prior to the debate. There’s so much information available but we have to make sure it is accurate.”

Biotechnology as a topic of debate was a first for both secondary and college levels. Using the British Parliamentary style, four teams with two members in a team competed against each other in preliminary and final rounds. One team formed the opposition party while the other group represented the government party.

The First National Interschool Biotechnology Debate Competition

attracted high school level students to argue for or against certain issues. Sample debate topics were: genetically modified (GM) food can feed the world; allow the patenting of biotechnology discoveries; and GM crops should be used to boost agriculture.

The First National Interschool Biotech Debate had university students from different backgrounds such as law

and engineering. Some of the debate topics were: develop biofuel rather than nuclear technology as alternative energy in Malaysia; resources spent on biotechnology are essential; deregulate all GM crops and food; and remove tax breaks and fund for bionexus companies.

Three teams were given awards in three categories while individuals vied for the best speaker prize.

BioQuiz Competition

“Now we know what biotechnology is and how interesting it is as a field of study. Initially we were concerned only about concepts and technical information. But reading about the topic enabled us to appreciate what scientists are doing and what we can expect from their research. We learned about what the technology can do to improve the quality of living.”

The National BioQuiz Competition aimed to enhance the understanding of biotechnology among high school students, particularly those in the higher years. Questions ranged from subjects covered in the school curriculum to current events on biotechnology both at the international and domestic levels. Science teachers designed and moderated the quiz contest.

The first competition was conducted among 17 schools. Each team with four students took an individual written exam whose combined scores determined the total standing of the teams. The top teams then qualified for the final round. Winning teams competed in several challenging rounds with increasing level of difficulty. Students then answered the questions as a group.

Awards were given to the top three winning teams.



BioSpell Competition

Spelling involves the correct placement of letters and gives meanings to words. This enables words to be transformed into sentences and puts structure to thought processes.

“ We learned to spell words associated with biotechnology. In addition, we got new terms needed for a better understanding of what the science is all about.”

Another first in Malaysia, the National BioSpell Competition hoped to enhance the word power of high school students in biotechnology-related terms. Students in the first three years of secondary school competed for the top three awards.

In the preliminary round, students took a written test. Top scoring participants qualified for the final round where they spelled out words after listening to how the word is pronounced and defined. Definitions are provided to ensure that students learn not only the spelling of certain words but also their meaning.

Some 25 participants from eight different schools joined the first contest. The Ministry of Education supported and endorsed this spelling competition.



Biotech Poster Drawing Competition



“I can express my thoughts through the use of colors. I can show how biotechnology helps people.”

Young children do not always have the words to express what they think or feel about things or events. But given a blank canvass or piece of paper, they can interpret concepts and feelings through shapes, figures, and color.

The Biotechnology Poster Drawing Competition encouraged both secondary and primary school students to use the visual medium to define or interpret their understanding of the scientific field. The creative and artistic skills of participants merged with knowledge learned in school and from books, what they watch from television, hear from peers, and understand from the environment where they belong.

Announcement of the competition was made two months ahead to give students enough time to explore information sources, do research, and conceptualize designs for their respective posters. Teachers supervised the poster drawing competition.

Contestants were categorized based on school level. For the first competition, themes for the different levels were the following:

Year 1-3: I am a junior scientist.

Year 4-6: Biotechnology world

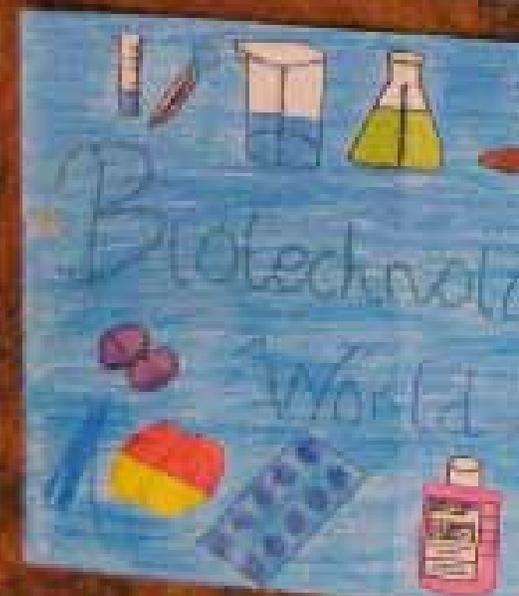
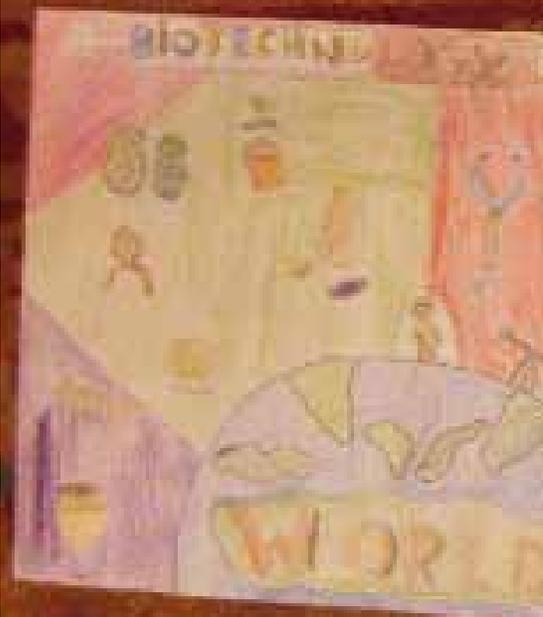
Form 1-3: Food products of biotechnology

Form 4-5: Biotechnology and its application in our daily lives

Form 6: Biotechnology as the engine of economic growth

Three winners were chosen in each category. Posters were evaluated by judges from different fields in several rounds of evaluation. Criteria for selection included concept, artistic rendition, and overall impact.

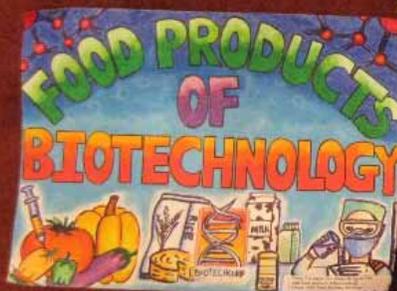
Posters were displayed in a common area during the carnival.





“As judges, we were overwhelmed by the number of students who joined the contest. They ranged from very young primary pupils to secondary school students. We were impressed by how students managed to interpret biotechnology according to the theme given.”

The diverse quality and quantity of the posters reflect the interest and level of awareness among the students. Effort was exerted to focus on a main message amidst competing ideas and design possibilities. Popularizing biotechnology through posters is not an easy task for people with basic or little knowledge.



Biorunway

Fashion Show and Fashion Design Competition



“Fashion and science are seen as two extremes with no meeting points. Never in my mind have I ever thought that the two could merge.”

A radical way to popularize biotechnology was done through a fashion show. Both professional and student designers transformed their ideas of what biotechnology is through haute couture and casual clothes. Rich fabrics, batik designs, intricate embroidery, accessories, and colorful yarns adorned gowns and dresses. Ramp models sashayed on an elevated runway and designers received applause for their creations. Much to the audience's surprise, the event was innovative and different, and designers took the front seat to define biotech.

BioRunway featured creations by senior designers. DNA (deoxyribonucleic acid), cells, and biodiversity were favorite concepts that inspired colorful prints and designs. The senior designers acted as judges for the fashion design competition among students from fashion schools. Students went wild with their interpretation of the DNA structure, Dolly the sheep, cloning, plasmids, GM corn, oil palm, virus, bacteria, and yeast. Weeks before the competition, fashion schools required students to join the competition as a project requirement in a design class. In addition to designing, students were encouraged to understand the science behind their work. For example, they created bio-friendly dyes for printing cloth and used certain unique textiles.

The designers had the opportunity to explain the inspiration behind the clothes they designed. With minimal science background, the contestants had earlier devoted time to research on the topic, and choose an area to highlight. The Internet and biology books were the main sources of information while teachers served as design coaches.

In like manner, the models who paraded the designers' creation also appreciated the concept and execution of the clothing line. In particular, they had a better understanding of the shapes and symbols on the clothes they modeled.

Winners in four categories were announced: Best Evening Wear, Most Promising Biotechnology Design, Best Casual



“ In fashion, we transform shapes into meaningful concepts. ...even an abstract idea like biotechnology.”



Wear, and Most Creative Biotechnology Design. Criteria for selection included concept and design, clothing construction, and overall impact.

The event received media attention and articles landed in both the front page, leisure, and fashion sections of newspapers. This moved biotech news from being relegated to the science section to other pages where consumers or the general public take time to read.

“In fashion, we translate shapes and colors into meaningful designs. It’s something beyond our imagination to have biotechnology as an inspiration to create fashion design. But we did it and learned a lot.”

Biotech Essay Writing Competition



Secondary school students were invited to send essays to determine their understanding of biotechnology. Brochures were sent to different high schools informing them about the mechanics of the contest. Topics for the essay were based on the following grade levels:

Form 1-3: Biotechnology and its benefits

Form 4-5: Importance of biotechnology to a nation

Form 6: Overcoming global food security through biotechnology

Secondary school teachers selected by the State Education Department of Kuala Lumpur evaluated the entries. Each category had three winners, the top winner getting a trophy, and the other two receiving certificates of achievement.

The Ministry of Education endorsed this competition.

BioTalk / Career Talk / Science Communication Seminar



A series of public fora on various topics of interest were presented by practitioners and experts. These allowed students, faculty, and the general public to be updated and made aware of biotechnology, and the communication environment necessary to foster its understanding.

“Bringing Biotechnology to the Public through Effective Science Communication” was the theme of a public seminar. Practitioners shared experiences on how best to communicate a technical field to the public using communication tools. Two scientists discussed their science communication work and the importance of public engagement. One spoke on the role of a scientist as a science communicator, and the other on bridging science and society. A communication specialist highlighted the role of the print media in defining and influencing public opinion on biotechnology. A mainstream journalist shared experiences in working with scientists and the approach needed to get media attention.

A Career Talk by a healthcare expert discussed opportunities in the healthcare biotech industry. The field of biomedicine was discussed as well as career options available in research, teaching, sales and marketing, technical writing, patents and intellectual property, administration, and regulatory affairs. Students were made to realize that research is not the only career option.

Biotalk or short interactive sessions were given by mushroom researchers and cultivators. Topics included research on composting using fungi, mushroom cultivation, opportunities for biobusiness, and medicinal properties of mushroom.



BioWonders

A session dubbed BioWonders provided visitors with opportunities to be little scientists. Hands-on experience in extracting DNA, the building blocks of life, proved to be an interesting activity. DNA was extracted from onions using household materials such as rubbing alcohol, detergent, meat tenderizer, and baking soda. Experts explained the DNA structure, and its applications in various disciplines, i.e., agriculture, industry, forensics, and medicine.

Visitors also built DNA models from straw and foldable plastic. Students and their parents shared the excitement of these 'fun by doing' activities.



“I saw DNA for the first time. I felt like a real scientist.”



Biotech Exhibits



Informative institutional display panels adorned the venue hallways. Exhibits showcased the rationale, objectives, activities, accomplishments, and contact details of participating organizations.

Photos, flow charts, displays, printed materials, and sample products provided both learning opportunities and entertainment value to a captive audience. Experts gave briefings and answered questions. The array of information proved to be a magnet to attract public interest.

The Mushroom Research Center of the University of Malaya showcased different varieties of cultivated mushrooms, and research activities. Products such as fried mushroom, juice, and other food products from the fungi were displayed and sold.

StemLife Sdn Bhd focused on the potential of stem cell research and its application in medicine. The Malaysian-based company is involved in stem cell therapy, and stem consultancy services, and collection and preservation of umbilical cord and peripheral blood stem cells. Visitors were invited to participate in a 'dart-like' game where they had to answer questions related to stem cells and its application. They had to aim at the proper answer on a white board. Goodie bags were given to lucky participants.

The School of Biosciences at Taylor's University, one of the private educational institutions in Malaysia, exhibited posters on its biotechnology-related courses and research activities. The Malaysian Biotechnology Information Centre gave an overview of its knowledge sharing initiatives not only in the country but in the region as well.



Feedback



To many people, science is an abstract and difficult subject to comprehend. Often, technical terms or jargon discourage discussion. This scenario results in low appreciation of the benefits and applications that science can provide mankind.

The Carnival is an activity to attract people, particularly students, to get interested in biotechnology. It serves as a venue where the public and experts can interact. In addition, it encourages participation in the learning process through different hands-on and visually stimulating activities.

The public can do their own research and inquiry to better understand the topic. Through poster making, essay writing, debate, fashion design, and similar competitions, participants are able to collect information and transform it into new knowledge.

The Carnival is able to reach a wider group that is not directly involved in biotechnology. It is a milestone in the Public Understanding of Biotechnology not only in Malaysia, but for other countries as well.

“As a scientist, I find the Carnival a new experience. But it is an appealing idea and an attractive learning experience for unbiased minds.”

“I never liked science. But now my perspective changed. I see how biotech can improve productivity.”

“The Carnival promotes critical thinking, boosts self confidence, and encourages learning.”

“We are now more observant and aware of how biotech can change and benefit people.”

“My interest in biotech increased drastically especially for someone who knew little about it before.”

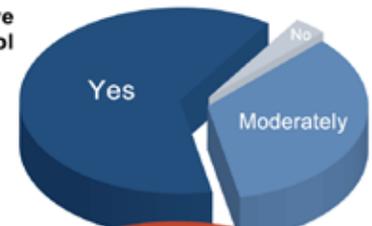
“The event made me do further research on biotech. I did not know anything about it but now I can talk about it a little, about its benefits.”

“Media should take an interest in this activity. They have a role in creating greater awareness.”

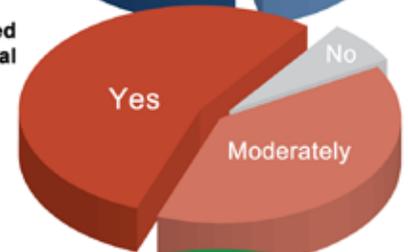
“I realized that biotech is more than just about plants. It has many applications.”

“We expect more schools to participate next time. It is a good learning experience.”

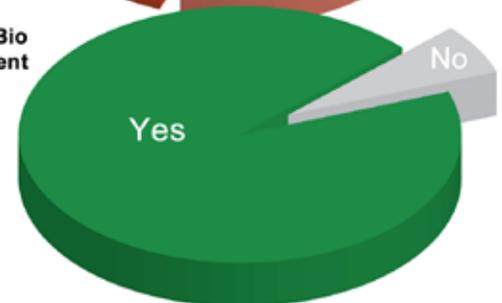
MyBio Carnival is an effective public awareness tool



Knowledge improved after carnival



Would recommend MyBio Carnival as an annual event



(Survey Results, 2010)

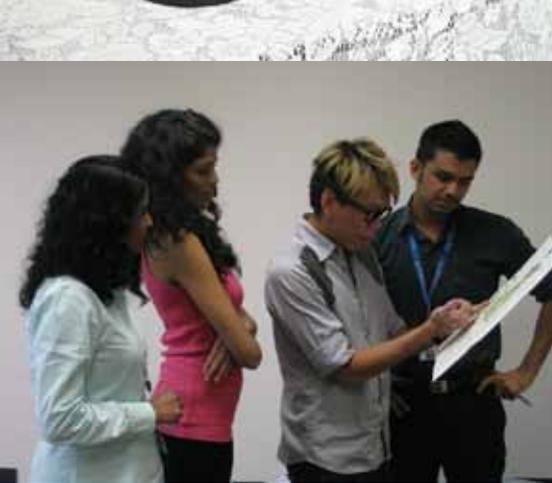
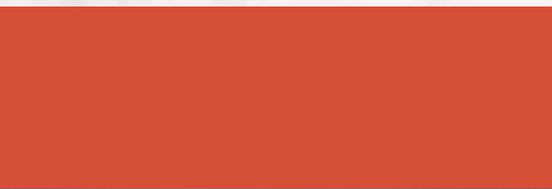


Designer Raith Kee took his cue from biodiversity to create a flower-inspired two-toned evening gown using French silk chiffon.

The colorful, striking prints on Rahner's white, mesh dress are unique and eye-catching.

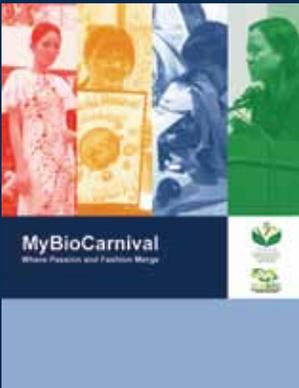
Science meets fashion

Drawing inspiration from patterns and motifs in biotechnology, designers showcased their interpretations at the recent BioRunway fashion show, writes MEERA MURUGESAN



Text: Mariechel J. Navarro and Mahaletchumy Arujanan
Layout: Eric John Azucena
Photos: Thinakaran Chandran and Nicholas Boo Tzyy Guang





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MyBio Carnival in Malaysia is a week-long event for students and parents, as well as the general public. It aims to introduce the wonders of science in a playful, relaxing, and participative mode.

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