

Youth

Research

Program

YRPP

INSTITUTE OF BIOENGINEERING AND NANOTECHNOLOGY

YOUTH RESEARCH PROGRAM

The Youth Research Program (YRP) has been established and chaired by Noreena AbuBakar, Director, Institute of Bioengineering and Nanotechnology (IBN) since October 2003 with the objective of promoting an active research culture among students.

The Program aims to give students a first-hand experience in research and to help teachers introduce biomedical applications into their school curriculum through activities such as career fairs and talks, open houses, workshops, as well as research attachments.

Since the launch of the Program, IBN has reached out to over 20,700 students and teachers from 178 primary and secondary schools, junior colleges, polytechnics, as well as the universities. This figure includes over 800 students and teachers who have taken part in a research attachment for at least a month at IBN.



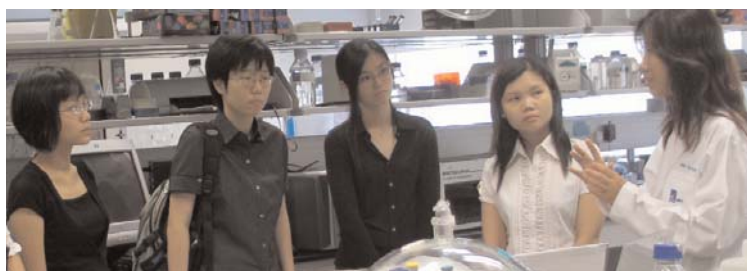
Students at an IBN Nano-Bio Kit demo at St Nicholas Girls' School.



IBN scientist sharing about research at Bendemeer Secondary School.

RESEARCH ATTACHMENTS

Students from upper secondary to tertiary institutions, as well as teachers from all schools in Singapore may apply for research attachments at IBN throughout the year. Successful candidates are assigned to IBN scientists, who will be their mentors for the duration of their attachment. Participants can gain deeper insight into the research process by being involved in specific research projects. Candidates need to commit at least one month of full-time attachment at IBN. Interested students and teachers should fill up the YRP application form found at yrp.ibn.a-star.edu.sg or email their CVs with a cover letter to yrp@ibn.a-star.edu.sg.



IBN scientist presenting her research with teachers at an IBN Open House.

LET'S HEAR FROM THE PARTICIPANTS

"This attachment is an eye-opener to me - it exposed me to a totally new area of research. I am very interested in being a research scientist and am encouraged to pursue a career in scientific research. I really enjoyed this Youth Research Program and hope to come back for another attachment."

Jonathan Koh, 14, Raffles Institution

"My mentor is very patient and caring, despite his busy schedule. I really enjoyed working under his guidance, and I will certainly recommend this program to my friends. In the future, I am certainly considering research at IBN as one of my options."

Teo Ruijie Darius, 17, Raffles Junior College

"This program has given me a glimpse into how a research institute works. The researchers here work very hard to achieve their goals and I admire them for that. This program definitely helps to encourage more interest in research among the youth."

Mohamad Fairoz bin Mohamed, NUS undergrad

"I am very impressed with my mentor's dedication and attention to details, and I'd like to thank IBN's scientists for all their help. There are many friendly scientists who always ask how I am doing and offer innovative solutions to my problems. Thank you!"

Resma Bte Gulzar Mohd,
Biology Teacher from Anderson Junior College

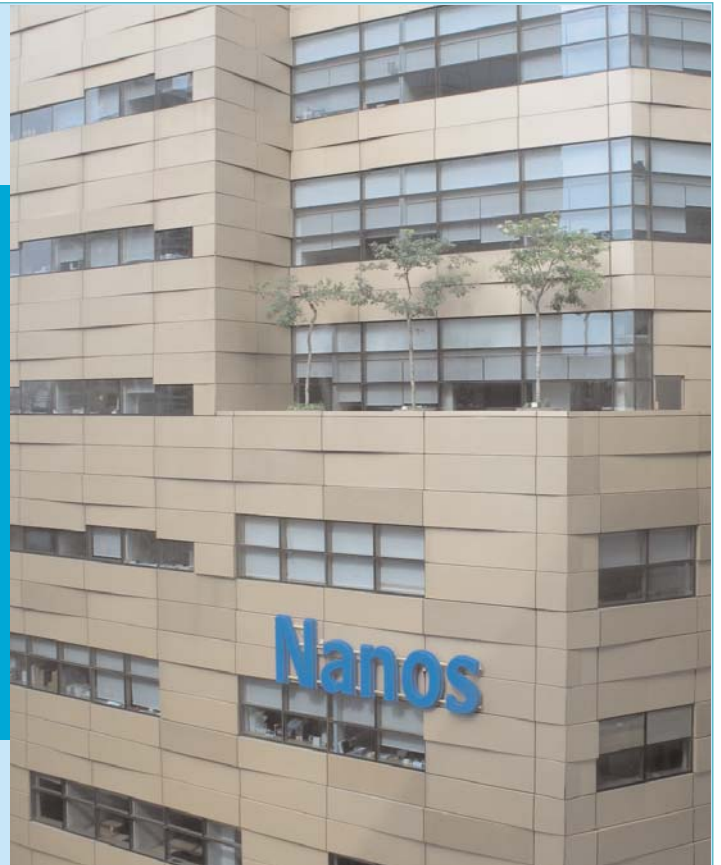
YRP COMMITTEE

- Chair: Ms Noreena AbuBakar
- Co-Chair: Ms Nidyah Sani
- Advisor: Prof. Jackie Y. Ying
- Committee Members: Dr Andrew Wan, Dr Edwin Chow and Dr Motoichi Kurisawa
- Outreach Coordinator: Ms Joy Ng and Ms Chen Wanying

Visit yrp.ibn.a-star.edu.sg or email yrp@ibn.a-star.edu.sg for information on YRP events and research attachments.

ABOUT IBN

The Institute of Bioengineering and Nanotechnology (IBN) is a member of the Agency for Science, Technology and Research (A*STAR), Singapore. Established in 2003, the Institute's mission is to establish a broad knowledge base and conduct innovative research at the interface of bioengineering and nanotechnology. Positioned at the frontiers of engineering, IBN is focused on creating knowledge and cultivating talent to develop technology platforms that will spur the growth of new industries. IBN also fosters an exciting, multidisciplinary research environment for the training of students and young researchers to spearhead biomedical advancement in Singapore. For more information, visit www.ibn.a-star.edu.sg.



IBN'S RESEARCH AREAS

Dedicated to advancing biomedical research, IBN focuses on developing scientific breakthroughs with applications in the following 4 areas:

DRUG AND GENE DELIVERY

where the controlled release of various therapeutics involve the use of functionalized polymers and hydrogels for targeting diseased cells and organs, or for responding to specific biological stimuli.



Drug-loaded contact lenses

CELL AND TISSUE ENGINEERING

where biomimicking materials, stem cell technology and bioimaging are combined to develop novel approaches to regenerative medicine and artificial organs.



Artificial fibers for tissue engineering

PHARMACEUTICALS SYNTHESIS AND NANOBIO TECHNOLOGY

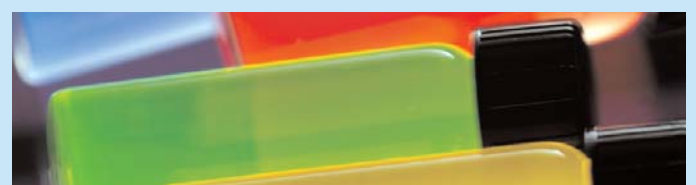
which encompasses the efficient catalytic synthesis of chiral pharmaceuticals, and new materials for sustainable technology and alternative energy generation.



Nanoporous nanoparticles for pharmaceutical synthesis

BIOSENSORS AND BIODEVICES

which involve nanotechnology and microfabricated platforms for the detection and treatment of diseases, and the synthesis and screening of biologics.



Quantum dots for bioimaging applications



For more information about our Youth Research Program visit yrp.ibn.a-star.edu.sg or contact yrp@ibn.a-star.edu.sg