

# 科創中心總監的話 Message from the Centre Director



二零一四年，香港新一代文化協會創立四十週年，適逢本會帶領的香港代表在多個全國及國際科學賽事中均獲得優秀成績，可算是給予我們一份生日大禮。

於全球最大型的科學比賽—第65屆英特爾國際科學與工程大獎賽中，我們帶領的香港代表隊取得歷來最好的成績，為香港再誕生兩名「星之子」及一名「星之女」！瑪利諾神父教會學校的簡泳怡同學發明可供皮膚過敏人士使用的「天然膠布」獲頒環境管理組別二等獎；而英皇書院的陳帝羲和方爾海，究「利用傳統中醫染銀診斷法作慢性腎衰竭新穎的快速測試法」，有助醫療人員及早診斷病人的問題並作出適當的治療，不但奪得化學科學組別一等獎和最優秀項目大獎，更獲頒菲利浦斯瑞奇紀念獎，揚威海外！

於第14屆「明天小小科學家」獎勵活動中，我們帶領的香港代表聖保祿學校的胡仕琦同學憑個人的優秀素質及出色的科學研究「金屬彩虹」擊敗來自全國六百多名參賽者，奪得全國僅三名的「明天小小科學家」稱號，更是本港首位女「明天小小科學家」，可謂巾幗不讓鬚眉，打破科學一直給人「男生專利」的印象。



雖然我們的學生代表發明了不少具創意及實用性的優秀作品，更獲全國及國際的認可，然而本港仍未形成產、學、研相結合的產業人才培育體系，令大部分的優秀作品未能成為可以實際應用的產品，只能擺放於本會科學創意中心的展覽室供人參觀，窒礙科

To celebrate the 40th Anniversary of Hong Kong New Generation Cultural Association in 2014, our teams from Hong Kong brought back many huge presents for our organisation from various national and international science competitions!

In the largest international science competition – “The 65th Intel International Science and Engineering Fair”, Team Hong Kong led by us, achieved our best ever results, with 3 students winning the honour to have minor planets named after them! Kan Wing-yi from Maryknoll Fathers’ School whose invention “Biodegradable Dressing: Breathable and non-Allergic” for people who have skin allergy captured the Second Place Grand Award in the Category of Environmental Management. Fang Er-hai and Chan Tai-hei whose research on “Traditional Chinese Silver Staining Diagnosis and its potential use as a novel preliminary test for Chronic Renal Failure” helps to diagnose patient kidney problem at an early stage and hence make proper treatment, not only won them the First Place Grand Award in the Category of Chemistry and Intel ISEF Best of Category Award (Chemistry), but was also honoured with the much coveted “Philip V. Streich Memorial Award”!

In “The 14th Awarding Program for Future Scientists”, Wu Shi-kei from St. Paul’s Convent School won the title of “Future Scientists” by beating 669 participants from 26 provinces and cities. Her outstanding personal qualities together with her high quality research on water pollution testing won her this top national title. She is also the first female winner from Hong Kong to be crowned with this honour, which dispels the misconception that girls are not as good as boys when it comes to science!



Although our Hong Kong students have come up with many creative and practical inventions and have won accolades both nationally and internationally, however we still fail to make connections between these academic and research works and the actual manufacturing industry. Most of our students’ top inventions end up just being exhibits at our Science Innovation Centre rather than becoming practical products, which hinder the nurturing of innovative talents and to help them realise their full potential. Complex manufacturing and legal procedures such as patent application and sourcing manufacturing partners are needed for the commercialisation of inventions. These specialised and complicated work are often very challenging to teachers, students and parents, therefore, in recent years, our association have committed to assist and guide many students to achieve their goals by successfully helping them to apply patents for their inventions, which include “Biodegradable Dressing” invented by Kan Wing-yi (see above) and “The easy learning kits for dyslexic children” developed by Matthew Kwan Ho-Kwong. Matthew is a junior secondary student who has already transformed his invention into products himself and have sold several hundreds kits to learning centres and kindergartens to improve characters learning and writing abilities of children who suffer from dyslexia.

技創新人才的成長及作品的發展潛力。現時發明品的產業化需要多重複雜的生產及法律程序，例如申請發明品的專利、尋找生產商等，對於學生、老師及家長來說均難度極大、無從入手。故此，本會於最近一兩年間，致力協助和指導多位學生將夢想化為現實，讓多件優秀作品能夠成功申請專利，包括「星之女」簡泳怡發明的「天然膠布」、關昊罡發明的「無障礙觸感文字認知器」等；而就讀初中的關昊罡更自行把發明品製成產品，並售出數百件產品予學習中心及幼稚園，以提升讀寫障礙學童的學習認字及寫字的能力。

最令人鼓舞的是，於本會舉辦的香港青少年科技創新大賽2013-14獲小學組發明品一等的作品「聰明鑰匙扣」，不但已獲批全國專利，更獲得電子產品廠家的垂青，將於今年大量生產，讓大家在不久的將來可以共享這項作品的成果。發這項作品的小發明家是就讀小學六年級的姚心怡。她曾見家人回家後遺留鎖匙於大門的鎖匙孔上，便發明了這項優秀的發明品，以鳴聲提醒使用者取回鎖匙。以上所述青少年發明家的故事，印證了我常提及的一句話：「知識可以改變命運，創意可以改變人類」。然而只靠民間機構及發明家的努力，欠缺政府資源和政策的配合，實在難以令更多有潛質的發明品得以產業化，造福人類。



一直以來，本會帶領的香港學生代表在不同的全國及國際科學比賽中屢奪殊榮，足以證明香港學生在創新科技方面有極佳的能力。若香港政府能支持這些年輕的科技人才從事科技創新產業甚至自行創業，讓他們成就創新夢，並與民間機構緊密合作，實現「產、學、研」的有機結合，香港的競爭力必定可以大大提升。可惜，現時香港整體投放在創新科技研發方面的開支，只佔本地生產總值不足0.8%，相對於鄰國韓國的4.3%、鄰近地區深圳的4%，差距甚遠；而專注統籌和策劃本地科技發展的創新及科技局卻因為未能成功通過立法會財委會的審議而被「拉倒」，令香港的科技創新產業發展停滯不前。

香港目前的科研發展形勢已遠遠落後於其它地方和國家，若香港依舊「吃老本」，不重視發展創新科技產業及培育這方面人才的話，本港的競爭力只會持續下降，亦未能解決過度倚賴金融及地產業所衍生的問題。故此，我們期望創新及科技局能夠盡快成立，大力支援香港的科技創新產業發展；本會科學創意中心亦必定會更加努力，培育更多青少年科研人才，引領香港邁向創新的未來。

科創中心總監 黃金耀博士  
二零一五年二月

The most inspiring case that I would like to share is from the winner of the Best Project Award in primary school section of our Hong Kong Youth Science and Technology Innovation Competition 2013-2014", who invented the "Smart Key Chain" which has successfully been granted national patent and is now being manufactured by electronic company. This invention will soon be put into the market and we can all share success of this clever invention. The inventor Sammie Iu Sum-yi who was a primary 6 student, once saw her parent leaving their keys in front door after getting home, this triggered her to invent this key-chain to remind key owners to remove their keys after opening the door. The story of our young inventor once again reminds us our motto which I often mention in my talks: "knowledge can change one's fate, but innovation can change the human race"! However, without the support from our government and with just the work from non-profit organisations, it is very difficult for these young innovators to achieve commercialisation of their inventions which they hope can benefit society.

Our success in national and international science competitions proves that Hong Kong students have excellent creative and innovative potentials. If the government can support these young talents to work in the science and innovation areas and even help them in starting up their own business, it will not only help achieve their science dream, but also improve the competitiveness of Hong Kong through establishing the system of production, studying and research by cooperating with non-governmental organizations. Currently, the overall innovation, research and development spending of Hong Kong only accounts for 0.8% of GDP, which is much lower compared to our neighbors such as 4.3% in South Korea and 4% in Shenzhen. The establishment of the Innovation and Technology Bureau whose main function is to coordinate and to draw out policies for Hong Kong's innovation and technology industries has once again failed to be passed through the Finance Committee of the Legislative Council, leading the development of science and technology in Hong Kong remain stagnant.

The current scientific and technological development of Hong Kong has fell further behind among other regions and nations. If we keep basking in our past glory and attach no importance on developing our innovation and technology industry and cultivating science and innovative talents, the competitiveness of Hong Kong will continue to decline and unable to resolve problems derived by over dependence on the financial and properties industries. We hope the Innovation and Technology Bureau to be established as soon as possible as to provide full support for the development of the industry. The Science Innovation Center will also make more efforts, to cultivate more young science talents, leading Hong Kong to a bright future of innovation



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