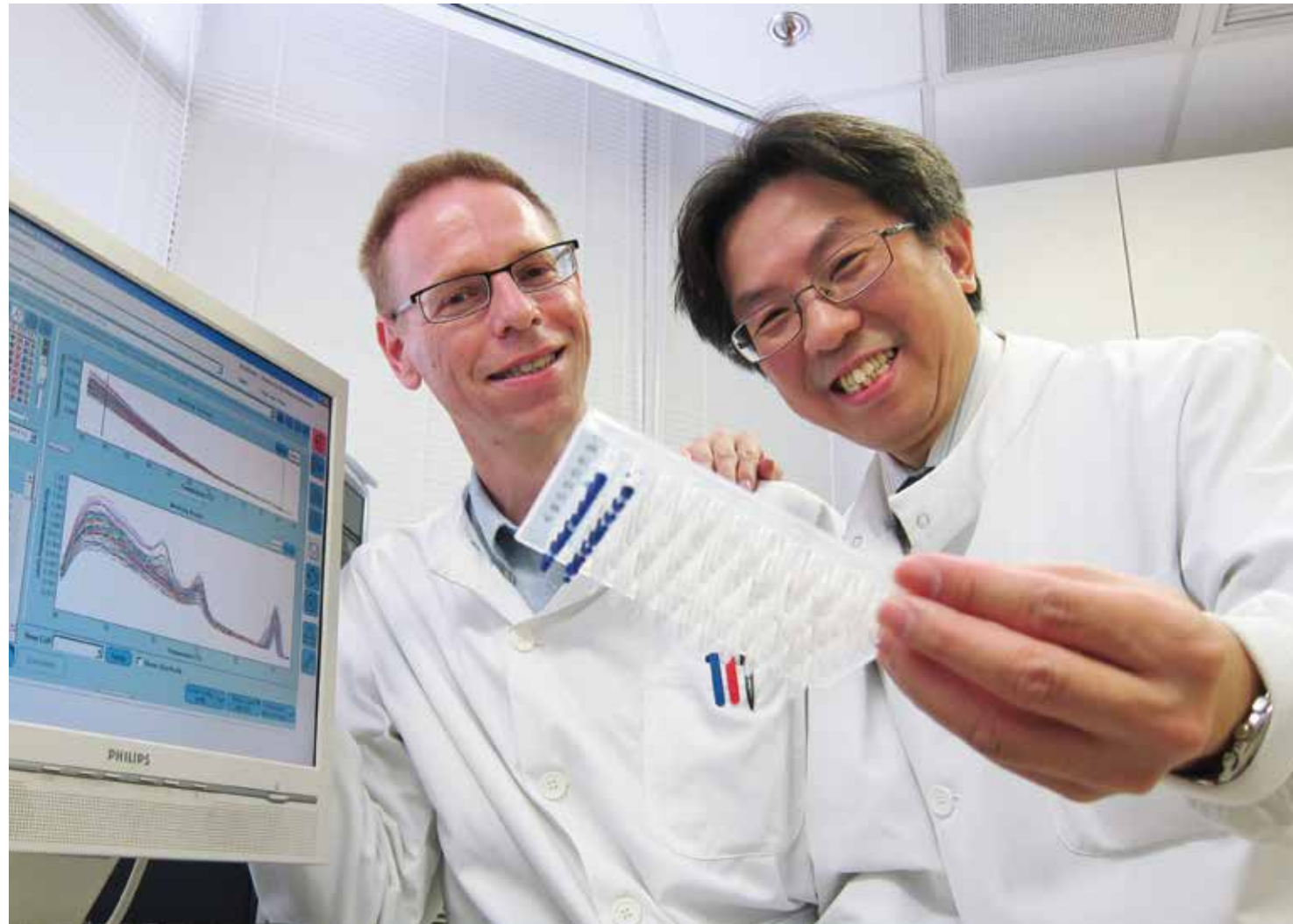


Life Sciences 生命科學

New hope for the short-sighted worldwide

全球近視患者的新希望



Prof. Yip Shea-ping (right) and Dr. Jeremy Guggenheim
葉社平教授 (右) 及古根海博士

A large-scale global study has unlocked the genetic origin of myopia, shedding new light on a condition that an estimated 80% of Hong Kong students will develop by the time they graduate from secondary school.

一項全球性的大型研究成功追溯造成近視的遺傳基因，研究結果可幫助進一步了解香港約有八成學生中學畢業時已患上近視的情況。

Two researchers from PolyU's Centre for Myopia Research — Dr Jeremy Guggenheim, Associate Professor of the School of Optometry, and Prof. Yip Shea-ping, Associate Head (Research) of the Department of Health Technology and Informatics, have played an active role in unlocking the genetic origin of myopia as part of CREAM, the Consortium for Refractive Error and Myopia.

In a study published in *Nature Genetics* in February 2013, the CREAM team reports the identification of 24 genes leading to refractive errors and myopia, some of them shared by individuals of European and Asian descent. Determining the genetic causes of short-sightedness can lead to better options to slow the progress of or even eventually prevent a condition affecting up to 30% of Westerners and 80% of Asians. That would mean more than just discarding your glasses: extreme myopia is a major cause of blindness. Those with all genetic risk factors have a tenfold higher risk of myopia, a highly heritable condition.

The CREAM study constitutes the largest international genome-wide study to date, involving 64 universities and research institutes in 13 countries and based on meta-analysis of 37,382 and 8,376 individuals of European and Asian ancestry, respectively. The results have exciting implications for Hong Kong, which has seen an "alarming increase" in short-sightedness amongst children in the past 30 years, the PolyU researchers said.

大近視研究中心成員、眼科視光學院副教授古根海博士與醫療科技及資訊學系副系主任(研究)葉社平教授，早前透過與專門研究屈光不正及近視的國際研究組織CREAM (Consortium for Refractive Error and Myopia) 合作，協助追溯造成近視的遺傳基因。

該研究確認了二十四種引致屈光不正及近視的基因，部份在歐洲及亞洲人士身上均可發現，是項研究結果已在國際期刊《Nature Genetics》二零一三年二月號刊登。成功確認與近視相關的基因，除可延緩近視加深的過程，最終或可防止這種影響著三成西方人士及八成亞洲人士的眼疾。這不只關乎是否佩戴眼鏡的問題，因為深度近視或會致盲，而具有所有遺傳風險因素的人士，患上近視的機會較其他人遠高出十倍。

此項研究為迄今全球最大規模、針對引致近視的基因組整合分析，合作團隊包括六十四間來自全球十三個國家的大學及研究機構，研究對象包括三萬七千三百八十二名歐洲人士及八千三百七十六名亞洲人士。理大研究人員指出，過去三十年香港學童患上近視的人數急劇飆升，故是次研究結果對香港極具參考價值。