樱花译语 | 全球艾滋病流行史的里程碑——第二个H.I.V.治愈病例

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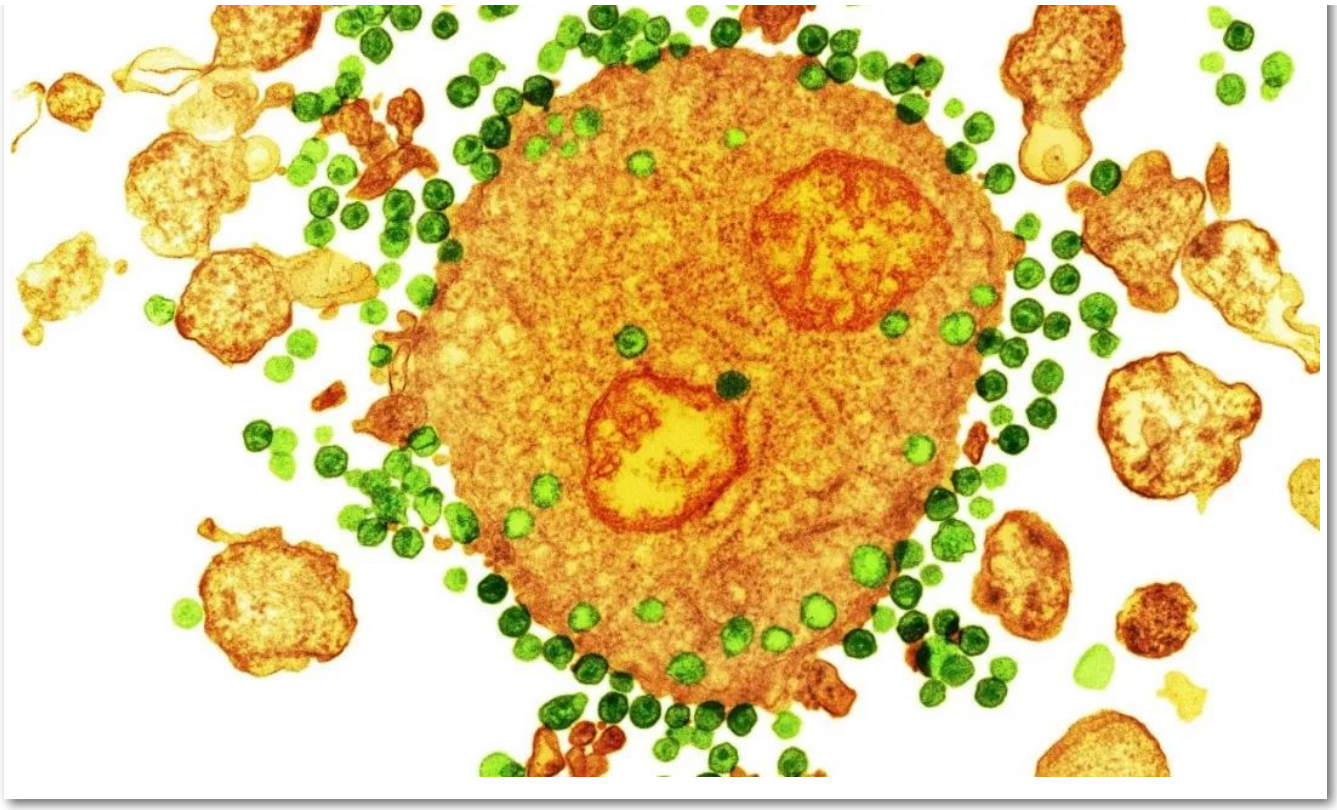
Scientists have long tried to duplicate the procedure that led to the first long-term remission 12 years ago. With the so-called London patient, they seem to have succeeded.

科学家们一直致力于再现12年前第一例长期缓解的病例。而在被这位被称为"伦敦病人"的病患身上，他们似乎成功了。



For just the second time since the global epidemic began, a patient appears to have been cured of infection with H.I.V., the virus that causes AIDS.

这是自全球艾滋病流行开始以来的第二起病例，一名感染HIV的病人似乎已经被治愈了。

The news comes nearly 12 years to the day after the first patient known to be cured, a feat that researchers have long tried, and failed, to duplicate. The surprise success now confirms that a cure for H.I.V. infection is possible, if difficult, researchers said.

这个消息距离第一位病人宣布被治愈已经过去了近12年，研究人员曾一直在尝试，但未能复制这一病例，而现在，他们认为这一惊人的成功证实了治疗HIV。感染是可能的，尽管这会很困难。

The investigators are to publish their report on Tuesday in the journal Nature and to present some of the details at the Conference on Retroviruses and Opportunistic Infections in Seattle.

研究人员将于本周二在《自然》杂志上发表他们的报告，并在西雅图的逆转录病毒和机会性感染会议上介绍一些细节。

Publicly, the scientists are describing the case as a long-term remission. In interviews, most experts are calling it a cure, with the caveat that it is hard to know how to define the word when there are only two known instances.

在公开场合，科学家们将此案描述为长期缓解。而在采访中，大多数专家都称之为治愈，但需要注意的是，当只有两个已知实例时，我们很难去了解如何定义"治愈"。

Both milestones resulted from bone-marrow transplants given to infected patients. But the transplants were intended to treat cancer in the patients, not H.I.V.

这两个里程碑都来自于感染患者接受骨髓移植。但是移植手术旨在治疗患者的癌症，而不是HIV。

Bone-marrow transplantation is unlikely to be a realistic treatment option in the near future. Powerful drugs are now available to control H.I.V. infection, while the transplants are risky, with harsh side effects that can last for years.

在不久的将来，骨髓移植不太可能成为现实性的治疗选择。现在可以使用药效强力的药物来控制HIV感染，并且移植是有风险的，具有可持续多年的严重副作用。

But rearming the body with immune cells similarly modified to resist H.I.V. might well succeed as a practical treatment, experts said.

但是专家们认为，利用经过类似修饰以抵抗HIV的免疫细胞来重塑身体，可能会成为一种现实的治疗方法。

"This will inspire people that cure is not a dream," said Dr. Annemarie Wensing, a virologist at the University Medical Center Utrecht in the Netherlands. "It's reachable."

"这将激励人们艾滋病治愈不是痴人说梦。" 荷兰乌得勒支大学医学中心的病毒学家Annemarie Wensing博士说，"它是可以达成的。"

Dr. Wensing is co leader of IciStem, a consortium of European scientists studying stem cell transplants to treat H.I.V. infection. The consortium is supported by AMFAR, the American AIDS research organization.

Wensing博士也是IciStem的联合负责人，IciStem是欧洲科学家研究干细胞移植治疗HIV感染的联盟。该联盟受美国艾滋病研究组织AMFAR的资助。

The new patient has chosen to remain anonymous, and the scientists referred to him only as the "London patient."

这名新病人选择保持匿名，科学家因此称他为"伦敦病人"。

"I feel a sense of responsibility to help the doctors understand how it happened so they can develop the science," he told The New York Times in an email.

"我觉得有责任帮助医生了解它是如何发生的，这样他们才能发展科学，"他在一封电子邮件中对《纽约时报》说。

Learning that he could be cured of both cancer and H.I.V. infection was "surreal" and "overwhelming," he added. "I never thought that there would be a cure during my lifetime."

在得知他有可能同时被治愈癌症和HIV 感染是"超现实的"和"令人吃惊的"时，他补充说，"我从没想过在我的一生中会找到治愈

的方法。

At the same conference in 2007, a German doctor described the first such cure in the "Berlin patient," later identified as Timothy Ray Brown, 52, who now lives in Palm Springs, Calif.

而在2007年的同一次会议上，一位德国医生描述了用于"柏林病人"的第一例的这样的治疗方法，患者后来被确定为52岁的蒂莫西·雷·布朗，现居住在加利福尼亚州的棕榈泉市。

That news, displayed on a poster at the back of a conference room, initially gained little attention. Once it became clear that Mr. Brown was cured, scientists set out to duplicate his result with other cancer patients infected with H.I.V.

尽管这条新闻一直展示在会议室后面的海报上，但其最初受到关注少之又少。而一确定布朗先生被治愈，科学家就开始在感染HIV的其他癌症患者身上尝试复制他的成果。

In case after case, the virus came roaring back, often around nine months after the patients stopped taking antiretroviral drugs, or else the patients died of cancer. The failures left scientists wondering whether Mr. Brown's cure would remain a fluke.

然而在一个又一个的案例里，要么病毒会在患者停止服用抗逆转录病毒药物后大约9个月后再度出现，要么患者死于癌症。这些失败让科学家们怀疑布朗先生的治疗方法是否只是一场侥幸。

Mr. Brown had had leukemia, and after chemotherapy failed to stop it, needed two bonemarrow transplants.

"柏林病人"布朗先生患有白血病，由于化疗未能阻止疾病，需要进行两次骨髓移植。

The transplants were from a donor with a mutation in a protein called CCR5, which rests on the surface of certain immune cells. H.I.V. uses the protein to enter those cells but cannot latch on to the mutated version.

移植物来自一位携带名为CCR5的蛋白质突变的供体，该蛋白质位于某些免疫细胞的表面。 HIV病毒利用这种蛋白质进入这些免疫细胞，但无法附着在有蛋白质突变的细胞上。

Mr. Brown was given harsh immunosuppressive drugs of a kind that are no longer used, and suffered intense complications for months after the transplant. He was placed in an induced coma at one point and nearly died.

布朗先生接受了一种不再使用的效果强烈的免疫抑制药物，并在移植后数月内出现了严重的并发症。他被诱导昏迷，几乎死亡。

Timothy Ray Brown, the first person to be cured of H.I.V., almost died during the treatment.

Timothy Ray Brown，第一位被治愈的艾滋患者，在治疗过程中几近死亡。（摄影：Grant Hindsley）

"He was really beaten up by the whole procedure," said Dr. Steven Deeks, an AIDS expert at the University of California, San Francisco, who has treated Mr. Brown. "And so we've always wondered whether all that conditioning, a massive amount of destruction to his immune system, explained why Timothy was cured but no one else."

"他是真的被整个过程给击垮。"布朗先生的治疗者，加州大学旧金山分校的艾滋病专家Steven Deeks博士说："所以我们总是想知道所有这些，对他的免疫系统造成大量破坏的调节，能否解释为何蒂莫西被治愈了，而其他人没有。"

The London patient has answered that question: A near death experience is not required for the procedure to work.

伦敦病人回答了这个问题：这种治疗过程生效并不需要一场濒临死亡的经历。

He had Hodgkin's lymphoma and received a bone marrow transplant from a donor with the CCR5 mutation in May 2016. He, too, received immunosuppressive drugs, but the treatment was much less intense, in line with current standards for transplant patients.

2016年5月，他因患有霍奇金淋巴瘤而接受了CCR5突变供体的骨髓移植。同时他也接受了免疫抑制药物治疗，但治疗方式不那么激烈，符合目前移植患者的标准。

He quit taking anti H.I.V. drugs in September 2017, making him the first patient since Mr. Brown known to remain virus free for more than a year after stopping.

他于2017年9月停止服用抗HIV药物，这使他成为自布朗先生以来停止服用药物一年以上无病毒的首位患者。

"I think this does change the game a little bit," said Dr. Ravindra Gupta, a virologist at University College London who presented the findings at the Seattle meeting. "Everybody believed after the Berlin patient that you needed to nearly die basically to cure H.I.V., but now maybe you don't."

"我认为这确实会有些改变这场运动，"伦敦大学学院的病毒学家Ravindra Gupta博士在西雅图会议上介绍了这些发现。"在柏林病人之后，每个人都相信你需要接近死亡才能治愈HIV，但现在也许你不需要这样了。"

Although the London patient was not as ill as Mr. Brown had been after the transplant, the procedure worked about as well: The transplant destroyed the cancer without harmful side effects. The transplanted immune cells, now resistant to H.I.V., seem to have fully replaced his vulnerable cells.

尽管伦敦患者并没有像布朗先生那样在移植后患病，但手术也很有效：移植手术摧毁了癌症而没有产生有害的副作用。现在对HIV具有抗性的移植免疫细胞似乎完全取代了他之前的脆弱细胞。

Most people with the H.I.V.-resistant mutation, called delta 32, are of Northern European descent. IciStem maintains a database of about 22,000 such donors.

大多数具有delta 32 HIV抗性突变的人属于北欧血统。IciStem维护着一个大约22,000个这样的捐赠者的数据库。

So far, its scientists are tracking 38 H.I.V. infected people who have received bone marrow transplants, including six from donors without the mutation.

到目前为止，IciStem的科学家们正在追踪38名接受过骨髓移植的感染HIV的人，其中6人来自没有突变的捐赠者。

The London patient is 36 on this list. Another one, number 19 on the list and referred to as the "Düsseldorf patient," has been off anti H.I.V. drugs for four months. Details of that case will be presented at the Seattle conference later this week.

伦敦病人在这份名单上排名第36位。另一个名单上的第19位被称为"杜塞尔多夫病人"，已停止服用抗H.I.V.药物四个月。该病例的细节将在本周晚些时候的西雅图会议上公布。

The consortium's scientists have repeatedly analyzed the London patient's blood for signs of the virus. They saw a weak indication of continued infection in one of 24 tests, but say this may be the result of contamination in the sample.

该联盟的科学家们一再监测分析伦敦病人的血液中是否有病毒迹象。在24次测试中的某次中，他们看到了微弱的持续感染迹象，但是这可能是样本污染的结果。

The most sensitive test did not find any circulating virus. Antibodies to H.I.V. were still present in his blood, but their levels declined over time, in a trajectory similar to that seen in Mr. Brown.

最敏感的测试中没有发现任何循环病毒。 H.I.V.的抗体仍然存在于他的血液中，但他们的水平随着时间的推移而下降，其轨迹与布朗先生的情况类似。

None of this guarantees that the London patient is forever out of the woods, but the similarities to Mr. Brown's recovery offer reason for optimism, Dr. Gupta said.

古普塔博士说，这些都不能保证伦敦病人永远摆脱困境，但与布朗痊愈的相似之处又提供了对其乐观看待的理由。

"In a way, the only person to compare with directly is the Berlin patient," he said. "That's kind of the only standard we have at the moment."

"在某种程度上，柏林患者是唯一可以拿来直接比较的了，"他说。"这是我们目前唯一的标准。"

Most experts who know the details agree that the new case seems like a legitimate cure, but some are uncertain of its relevance for AIDS treatment overall.

大多数了解细节的专家都认为新病例似乎是一种合法的治疗方法，但有些专家不确定其是否与整体的艾滋病治疗相关。

"I'm not sure what this tells us," said Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases. "It was done with Timothy Ray Brown, and now here's another case — ok, so now what? Now where do we go with it?"

"我不确定这个案例告诉了我们什么，"国家过敏和传染病研究所所长Anthony Fauci博士说，"'柏林病人'是由Timothy Ray Brown完成的，现在又是另一个案例——好的，那么现在怎么样了？我们又何去何从呢？"

One possibility, said Dr. Deeks and others, is to develop gene-therapy approaches to knock out CCR5 on immune cells or their predecessor stem cells. Resistant to H.I.V. infection, these modified cells should eventually clear the body of the virus.

以Deeks博士为代表的群体认为，其中一种可能性就是开发基因治疗方法，以便在免疫细胞或其前身干细胞上敲除CCR5。获得HIV感染抗性后，这些经过修饰的细胞最终应该能清除体内的病毒。

(CCR5 is the protein that He Jiankui, a scientist in China, claimed to have modified with gene editing in at least two children, in an attempt to make them resistant to H.I.V. — an experiment that set off international condemnation.)

(CCR5便是中国科学家贺建奎声称已在至少两名儿童中进行基因编辑修饰的蛋白质，他试图使他们对HIV产生抗性——这一实验引起国际谴责。)

Several companies are pursuing gene therapies but have not yet been successful. The modification must target the right number of cells, in the right place — only the bone marrow, for example, and not the brain — and tweak only the genes directing production of CCR5.

有几家公司正在寻求基因治疗，但尚未成功。修改必须在正确的位置针对正确数量的细胞——例如，只在骨髓，而不在大脑——并且仅调节控制CCR5产生的基因。

“There are a number of levels of precision that must be reached,” said Dr. Mike McCune, a senior adviser on global health to the Bill and Melinda Gates Foundation. “There are also concerns that you might do something untoward, and if so you might wish to have a kill switch.”

“必须达到一定程度的精确度，”比尔和梅林达盖茨基金会全球健康高级顾问Mike McCune博士说。“还有人担心你可能会做一些不良的事情，如果是这样，你可能希望有一个杀手开关。”

Several teams are working on all of these obstacles, Dr. McCune said. Eventually, they may be able to develop a viral delivery system that, when injected into the body, seeks out all CCR5 receptors and deletes them, or even a donor stem cell that is resistant to H.I.V. but could be given to any patient.

McCune博士说，有几个团队正在试图突破所有这些障碍。最终，他们可能能够开发出一种病毒传递系统，当注射到体内时，它会寻找所有CCR5受体并将其删除，甚至是对H.I.V有抗性的供体干细胞。但这种系统适用任何病人。

“These are dreams, right? Things on the drawing table,” Dr. McCune said. “These dreams are motivated by cases like this — it helps us to imagine what might be done in the future.”

“这些都只是做梦吧，对吗？纸上谈兵，”McCune博士说。“但这些梦想就是由这样的案例推动的——它有助于我们想象未来能够做些什么。”

One important caveat to any such approach is that the patient would still be vulnerable to a form of H.I.V. called X4, which employs a different protein, CXCR4, to enter cells.

但这种方法带来的一个重要警示是患者仍然易感某种称为X4的HIV，这种病毒利用另一种不同的蛋白质CXCR4进入细胞。

"This is only going to work if someone has a virus that really only uses CCR5 for entry — and that's actually probably about 50 percent of the people who are living with H.I.V., if not less," said Dr. Timothy J. Henrich, an AIDS specialist at the University of California, San Francisco.

"如果某人感染利用且只利用CCR5进入细胞的病毒，这种情况才适用——如果不是更少，实际上可能只有约50%的艾滋病病毒感染者属于这种情况。" 加利福尼亚大学旧金山分校的艾滋病专家，Timothy J. Henrich博士说道。

Even if a person harbors only a small number of X4 viruses, they may multiply in the absence of competition from their viral cousins. There is at least one reported case of an individual who got a transplant from a delta 32 donor but later rebounded with the X4 virus. (As a precaution against X4, Mr. Brown is taking a daily pill to prevent H.I.V. infection.)

即使一个人只携带少量的X4病毒，它们也可能在没有来自其病毒表亲的竞争的情况下繁殖。据报道，至少有一例个体接受CCR5-Δ32供体移植但后来又被X4病毒感染。（作为针对X4的预防措施，布朗先生每天服用药物以防止H.I.V.感染。）

Mr. Brown says he is hopeful that the London patient's cure proves as durable as his own. "If something has happened once in medical science, it can happen again," Mr. Brown said. "I've been waiting for company for a long time."

布朗先生说，他希望伦敦病人的治疗方法能够像他的一样持久有效。"如果在医学科学中曾经发生过一次这样的事情，那么它能够再次发生，"布朗先生说。"我已经等这样一个'同伴'很长时间了。"

A cake presented to Mr. Brown marking 12 years since he was cured, at a workshop at the Seattle Public Library on Sunday.

周日位于西雅图公共图书馆的研讨会上，纪念布朗先生治愈12周年的蛋糕。（摄影：Grant Hindsley）

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原创：性平会 WHU性别性向平等研究会
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什么是心理健康状态？

心理健康状态，即人对内部环境具有安定感，对外部环境能以社会上的任何形式去适应，遇到任何障碍和困难，心理都不会失调，能以适当的行为予以克服，这种安定、适应的状态就是心理健康的状态。衡量心理是否绝对健康是非常困难的，健康是相对的，没有绝对的分界线。一般判断心理是否正常，具有以下三项原则：

1．心理与环境的统一性：正常的心理活动，在内容和形式上与客观环境具有一致性；

2. 心理与行为的统一性：这是指个体的心理与其行为是一个完整、统一和协调一致的过程；

3. 人格的稳定性：人格是个体在长期生活经历过程中形成的独特个性心理特征的具体体现。

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