New stem cell research

Scientists from King’s College London have uncovered the first genetic evidence that shows cells found on the surface of blood vessels can act as stem cells to assist in both organ growth and tissue repair.

The study, funded by the Medical Research Council, is published today in the journal, Proceedings of the National Academy of Sciences (PNAS).

Up until now it has not been possible to show that a blood vessel (perivascular) cell can transform into a different cell in vivo (in animals), but this study shows for the first time that they can in fact act as stem cells in this way.

Perivascular cells are scattered throughout the blood vessel walls and are involved in the first response to tissue damage, as an increase in blood supply travels to the site of the damage. Therefore the number of these cells is naturally increased at the site. As these cells are present in most human tissue, they could be utilised to provide an effective natural mechanism for organ and tissue repair.

The researchers carried out experiments in rodent incisor teeth, which continuously sharpen themselves by the shearing action of their tips. As tissue is lost during sharpening, this must be continuously replaced. The experiment showed that perivascular cells act as stem cells and differentiate into specialised cells when needed.

Secretary of State for Health to address British Dental Conference and Exhibition

Secretary of State for Health, Rt Hon Andrew Lansley CBE, (pictured), will address the 2011 British Dental Conference and Exhibition on Thursday 19 May, it has been confirmed this week. Mr Lansley will speak at 11am on the first day of the event, which takes place at Manchester’s Central Convention Complex.

Delegates at the event will have the opportunity to hear first-hand from Mr Lansley about major reforms to dentistry in England. His appearance will come at a pivotal time for dentistry as pilots intended to develop a new dental contract begin. Commissioning arrangements, too, will be in the spotlight, as discussions about the establishment of a new national commissioning board that would be responsible for dental care continue. Mr Lansley is expected to participate in a question and answer session following his address, which replaces the previously-advertised appearance by Parliamentary Under-Secretary of State Lord Howe.

Dr Susse Sanderson, Chair of the British Dental Association’s Executive Board, said: “We are delighted to be welcoming the Secretary of State to Manchester for the 2011 British Dental Conference and Exhibition. Dentistry in England is in a period of transition that we hope will witness the replacement of the flawed 2000 dental contract with a system that works better for patients and dentists alike. Significant changes to commissioning arrangements that will see dentistry commissioned by a national board, rather than primary care trusts, proposed in the Health and Social Care Bill, are also being debated.

‘Dentists from across England attending the event will be keen to learn more about the Government’s proposals.’

Special service award to civil servant

Jerry Read, Head of Oral Health and Dental Education at the Department of Health (DH), was honoured by the Faculty of Dental Surgery and the Faculty of General Dental Practice at their joint Diplomaates Ceremony held on 1 April 2011, receiving a Special Service Award to recognise his outstanding contribution to the faculties and to dentistry as a whole.

In the citation given by Professor Derrick Willmott, the Dean of FDS, it was noted that Jerry has risen rapidly through the ranks at the DH, taking responsibility for many aspects of dental and oral health including the development of mandatory continuing professional development for dentists and dental care professionals. He was appointed Senior Principal Civil Servant in 1999 and is currently leading on oral health promotion and dental education.

Professor Willmott added that: “one of Jerry’s most notable achievements was his tireless and successful work over many years to promote water fluoridation in the UK.”

Bux Ladwa, Dean of the FDS(UK), said: “Jerry Read has played a key role in improving the oral health of the nation during his career at the DH. His help and advice to dental professionals and DH officials over the years has been invaluable and highly regarded.”

The Special Service Award, an inscribed medal bearing the arms of The Royal College of Surgeons of England, is presented only to individuals in recognition of their outstanding service to dentistry and the dental faculties.

Dentist jailed in UK

Vinsha Sharma, 37, who worked as a dentist for the NHS in Britain, has been jailed for three years after lying about her qualifications. Sharma earned almost £250,000 pounds while working on the basis of the false Bachelor of Dental Surgery degree, which she claimed to have completed at the Sri Guru Ram Das Institute for Dental Sciences and Research in Amritsar.

Her deception was eventually uncovered following claims that she had removed the wrong teeth from a patient.

Judge Amjad Nawaz described Sharma’s offences as ‘pre-determined and deliberate’ breaches of the public’s trust.

Reports quoted him saying: “It does seem to me that the level at which this offending took place and the organisation which must have gone behind it in order to obtain the documents, was very pre-determined and, in those circumstänces, highly criminal. Much of what, sadly, she was telling people was a lie - that is the sad truth behind the offending in this particular case.”

The team found that when a tooth is damaged, specific new tooth cells (odontoblasts) are made by these perivascular cells to regenerate the tooth.

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Editorial comment

There is a new scheme conceived by the Government to help them cut red tape and bureaucracy for our poor little folk in the real world. The Red Tape Challenge, launched at the beginning of this month and due to run for two years, aims to look at the 21,000 bits of red tape and regulation across all walks of British life with a view to letting the public have their say on what should stay, what should be amended and what should be consigned to the tape shredder. According to the Telegraph, dentists have already availed themselves of this opportunity to voice their displeasure about the CQC. Dental Ross Hobson is reported as writing: CQC do not understand that dentistry is a small business and does not have large numbers of staff to spend hundreds of hours completing forms, undertaking useless audits to ‘show on paper’ that compliance is met. There is far too much reliance on box ticking exercises, and total lack of understanding that professional staff are professionally regulated and work to the highest standards as their commitment to the profession.

Dental professionals across the country have been calling for an opportunity to our their criticism about the CQC and whether it is relevant to the regulation of dental practice for a long time; here now is a chance to do it. If you feel strongly about the level of regulation and red tape surrounding the dental profession, now is the time to voice it: go to www.redtapechallenge.cabinetoffice.gov.uk/home/index/.

Proposals should go further - BDA

Government plans for dental public health are targeted in the right direction, but do not go far enough, the British Dental Association (BDA) has warned. While supporting both the broad approach of the plans and some of the specific proposals in the Government’s Healthy Lives, Healthy People white papers, the BDA would like to see a more ambitious approach to dental public health.

The creation of a target for improving the oral health of five-year-olds, which reflects the Government’s stated intention to reduce the level of dental decay in children, is a very positive step, the BDA believes. With a generation of British adults with heavily restored dentitions and complex needs now entering later life, the BDA believes that a target for improving the oral health of older patients should also be set.

The targeting of a reduction in the consumption of specific food products is also supported by the BDA but they believe that a stronger approach to reducing sugar intake would be appropriate.

An issue with the size of the dental public health workforce is also raised by the responders, which warn that more consultants in Dental Public Health are needed. The BDA believes the expertise of these individuals must be fully integrated into wider public health structures and utilised in the formulation of the proposed Joint Strategic Needs Assessments and Health and Wellbeing Strategies.

A major concern for the BDA is the Government’s proposal for a health premium, a proposal it believes would see money pour into areas that are able to demonstrate improvements, rather than those that really need funding to meet the challenge of changing behaviour. Furthermore, the BDA’s response challenges Government to ring fence a dental element of the public health budget in order to protect spending on this vital area.

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Celebrating the future of dentistry

On Saturday 2nd April at 9am the 3M ESPE Student Awards, which this year were attended by dental professionals and guests including Dr Hein de Kloet, Professor Trevor Burke and Dr Avijit Banarjee and followed by an insightful debate on the future of dentistry from some of the industry’s most influential figures. This inspiring and eye-opening debate embodied the theme of the event.

The three categories in the 3M ESPE Student Dentistry Awards 2010-11 were the Award for Innovation, the National Award for Innovation, which went to Laura Cove, from Bristol Dental School, and the Award for Intercalated Studies, which went to Charlotte Currie from Newcastle Dental School.

Both the National Award for Innovation and the Award for Intercalated Studies were judged by an independent panel of leading dentistry experts, including Dr Amarjit Gill, President of the British Dental Association, Professor Nairn Wilson, Dean and Head of King’s College London Dental Institute, Professor Trevor Burke and Edward Attenborough, President of the British Dental Trade Association. The judges were highly impressed by the number of entries submitted and the calibre of the students entering across the three categories, which made the judging process both challenging and rewarding.

The winners all received financial support for research projects, electives and intercalated studies.

The awards were open to all third-year students as well as those looking to undertake an intercalated degree in UK and Irish dental schools, through a new dedicated and interactive website, www.3mespe.co.uk/dentalstudents.

Gum disease ‘more harmful than diabetes’

New research suggests that gum disease carries a higher risk of causing a stroke than diabetes, and its impact is nearly the equivalent of diabetes. The data poses to general health and professional research that gum disease carries a higher risk of causing a stroke than diabetes, and its impact is nearly the equivalent of diabetes. The data suggests that people are twice as likely to suffer a non-fatal stroke as a result of gum disease, compared to diabetes. The data also suggests its impact is equivalent to people with high blood pressure.

The research (see below), was presented at the 89th International Association for Dental Research (IADR) General Session and Exhibition in San Diego last month, is another reminder of the serious impact that poor oral health poses to general health and wellbeing.

Although hypertension and diabetes mellitus (DM) have been two major causes of ischemic stroke, the association between periodontitis and ischemic strokes is still equivocal. Hence, the authors evaluated the association between periodontitis and nonfatal ischemic stroke and compared its impacts with those of hypertension and DM. A case-control study was performed with 145 hospitalised nonfatal ischemic stroke cases and 214 non-stroke population controls.

After controlling for potential confounders, periodontitis was strongly associated with ischemic stroke. In conclusion it was stated that periodontitis is an evident independent risk factor for nonfatal ischemic stroke and its impact is almost same as that of hypertension and DM.

Devon dentist cycles for children’s charity

Devon Dentist Andrew Pickering, (pictured), is cycling from Lands End to John O’Groats to raise money for the Butterfly Hospice.

The 100 mile journey, which will begin 14th May 2011, is being organised by Team 900, a team from Devon who hope to raise money and awareness for the Butterfly Hospice in China.

The Butterfly Hospice opens their doors to abandoned children who have less than six months to live, giving loving end of life care to 18 abandoned babies. With the aid of surgeons they have good news for four children who are now well and six who are awaiting adoption.

Andrew has had kind donations and support and wishes to thank all those that have supported him so far. Andrew would like to extend his thanks to Iovcor Vividant, Chris Fleet from Fleet Hypnosis and Derek Brunt for Juice Plus, Torquay for their support for this worthy cause.

“We need a lot of support, we need sponsorship for the charity and also we are looking for corporate support for our team while on their journey so that all the money we raise can be sent to Butterfly Hospice.”

Andrew can be contacted at riverviewdental@aol.com or on his email andrewgdp@hotmail.co.uk

Expert witness dento-legal risks

The longstanding principle that an expert witness is immune from being sued was overturned in the Supreme Court decision of Jones v Kaney. Having lost their immunity, experts are now exposed to the risk of being sued in respect of evidence given in court, says Dental Protection.

Kevin Lewis, Dental Director at DP said: “We will tell members who are involved in expert witness work to keep us fully informed about the type and extent of professional work they are doing, so that they have access to the appropriate indemnity at all times.”
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Widening access to dentistry

H ow many 16-year-old students have set their sights on becoming a dentist? Some youngsters with that ambition face particular difficulties. These include students from low socioeconomic groups and those studying at institutions with below average results in national exams. Yet many such students have the talent and dedication to make excellent dentists. On Tuesday March 15th the Dental Institute at the University of Leeds delivered a new ‘becoming a dentist’ information session to provide some help to 92 West Yorkshire students from groups under-represented in the profession. For example 50 per cent of them had home postcodes within the most deprived areas of the UK according to the index of multiple deprivations. A similar proportion came from families where neither parent had attended university.

The programme the students received included talks designed to incourage their insight into dentistry, as well as information about the admissions process, and advice about meeting selection criteria. Four staff members and six dental students delivered the talks.

Daniel Raabe, a former PhD student in the Queens School of Engineering at the University of Bristol, has also been awarded a prestigious science prize after he designed a ‘chewing robot’ to help understand the wear and tear of human teeth. Daniel has also been awarded the Paul Roell Medal in the area of dental materials testing.

There were 55 entries from 16 countries competing for the prize.

Working in collaboration with the Department of Oral and Dental Science, researchers at the University of Bristol’s Department of Mechanical Engineering created the robot, which mimics the action of a human jaw. Currently, clinical tests of new types of crowns and other dental fittings, are usually tested in human mouths and they are often time consuming and by the time a new material has been evaluated the market has often moved on.

The UK currently spends approximately £2.5 billion each year on dental materials, which either replace or strengthen teeth; however a lack of an adequate method of field testing is hindering dental development.

Reports have stated that Dr Kazem Alemzadeh, senior lecturer in the Department of Mechanical Engineering at the university, came up with the concept after seeing aircraft simulators using similar movements.

The design and development of the chewing robot was carried out by Daniel alongside Dr Andrew Horrox, senior lecturer in the Department of Mechanical Engineering.

Mr Raabe said to reporters: “By reproducing natural bite forces and movements, the chewing robot can help improve and accelerate the process of developing new dental restorative materials that may someday be found in a person’s mouth.”

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Robot ate my molars

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Dr Tony Ireland, a tutor at the Dental School, has also been involved in the development and testing of the robot.

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‘Looks like a Candle’

T ECH-Naissance introduces denturevault™ have produced what has been described as a “revolutionary dental storage and cleaning container that ‘looks like a Candle’”.

After recognising an increasing demand for new hygienic storage solutions for retainers, TMD night guards, snore guards, dentures, and even partial dentures the device, which was revealed at the 2011 International Dental Show in Cologne, Germany, has been designed so people can discreetly clean and store their removable dental appliances.

Until now, there has been little choice for storing and cleaning dental appliances and traditional methods of storage and cleaning have included the typical horseshoe shaped plastic case, conspicuous sonic cleaners, and the unsightly “teeth in a glass” method.

However, denturevault™ (picture) uses an elegant design to create a faux-candle and this discreet method of concealment gives the user complete autonomy in having their appliance always within reach, overcoming the embarrassment and inconvenience of traditional methods.

Patient software launched

D uring a seminar at the Royal College of Physicians in London, Dr Tim Donley helped launch myDentalScore, the new interactive software tool.

Dr Donley told Liz Chapple, Director of Oral Health Innovations Ltd, that he believed myDentalScore would help motivate and inform patients and make them more likely to consult a dentist.

He said: “I have been waiting for something like myDentalScore for some time now. How great it is that the general public has an opportunity to gauge their risk for or use. This can only help motivate the throngs of people with unmet dental needs to seek care.”

MyDentalScore consists of an online questionnaire which asks about dental hygiene and history as well as lifestyle and delivers a score along with encouragement to discuss the findings with a dentist. It is now available for dentists to brand to their practice and add as a link to their website.

For more information, or to invest in myDentalScore for your website, go to www.previser.co.uk/products/mydentalScore.html

Dentist celebrates milestone on top of the world

A fter visiting a charity’s table at a conference, Dr Joseph Pawlik, a Manuta (USA) dentist, decided that for his 60th birthday he would travel to the other side of the world and provide care to children in Katmandu, Nepal.

“I picked the farthest place I could go, the most extraordinary place,” Dr Pawlik said quoted the dentist as saying. “I would go again at the drop of a hat. It was really rewarding and interesting.”

Heading out with Global Dental Relief, Pawlik ventured for the first time outside of North America to the bustling city of Katmandu.

Staying in a Buddhist monastery, the team of dentists treated children from the monastery’s school and orphanage, and also children from the community.

“Most of these kids have never seen a dentist,” he was quoted as saying. “A lot of them are in good dental health. It’s surprising because they don’t have toothbrushes, but then, that’s probably because they don’t eat all that junk food.”

In cases where there were cavities present, Pawlik described how the treatment was to fill them or extract the tooth if it was bad.

“It just breaks your heart when you have to take out their front teeth,” he was quoted as saying. “Over here, you can fix them. There’s crowns. There’s implants.”

The team of dentists spent a week in the city, where Colgate provided free toothbrushes for the children. They then trekked to the mountains for two weeks, intending to treat children in the villages there.

Having been invited to return to Nepal again, Pawlik said he is determined to go back as soon as he has the funds.

“The kids are unlike any other kids in the world,” he was quoted. “This is the first time anyone has poked around in their mouth, and they don’t make a move. They’re very disciplined... they’re the sweetest kids in the world.”