

The biology of **platelet-rich plasma** and its application in trauma and orthopaedic surgery A REVIEW OF THE LITERATURE

J Alsousou, M Thompson, P Hulley... - Journal of Bone & ... , 2009 - bjj.boneandjoint.org.uk

... are captured on the filter and are then harvested to provide a **platelet-rich** concentrate (PRC ... 59
Thus, **platelet**-related activity may not be restricted to intact **platelets**, because micro-particles
of ... conflict with the studies of Marx, 16 , 17 who considered that **platelets** damaged or ...

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Platelet rich plasma injection grafts for musculoskeletal injuries: a review

S Sampson, M Gerhardt, B Mandelbaum - Current reviews in ... , 2008 - Springer

... Fig. 2 Active **platelets** Fig. ... Fig. 5 GPS III withdrawing of **platelet rich plasma** for injection/graft
Fig. ... The main criticism of this study is related to the PRP treatment protocol. Conven- tional
PRP processing kits yield a 6-fold increase in **platelet** concentration. ...

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Application of rhBMP-7 and **platelet-rich plasma** in the treatment of long bone **non-unions**: a prospective randomised clinical study on 120 patients

GM Calori, L Tagliabue, L Gala, M d'Imporzano... - Injury, 2008 - Elsevier

... unions, (iii) insufficient skin to cover the fracture site and insufficient vascularisation at the
non-union site, (iv ... **Platelet-rich plasma** was prepared according to a previously described method ...
after being drawn for 14 min, to separate red blood cells (RBCs) from **platelets** and **plasma** ...

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The effects of local **platelet rich plasma** delivery on diabetic fracture healing

A Gandhi, C Doumas, JP O'Connor, JR Parsons... - Bone, 2006 - Elsevier

... in the early callus, and reduced collagen synthesis and content compared to **non**-diabetic control ...
clot forms consisting of red blood cells, white blood cells, and **platelets** entrapped within ... **Platelet**
rich plasma (PRP) is derived from autologous blood and is defined as a volume of ...

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Platelet rich plasma: **biology and new technology**

WS Pietrzak, BL Eppley - Journal of Craniofacial Surgery, 2005 - journals.lww.com

... β (TGF- β), two of the key proteins secreted from activated **platelets**, in the ... Autologous **platelet**
rich plasma (PRP) from the **nonunion** cohort was prepared with high, measured levels of ... The
PRP was applied to the **nonunion** during revision surgery, which resulted in radiographic ...

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The clinical use of **platelet-rich plasma** in the promotion of bone healing: a systematic review

XL Griffin, CM Smith, ML Costa - Injury, 2009 - Elsevier

... 9 However, the concentration and activity of the **platelets** in the gel can be highly variable.

24. ... 4. The following studies were excluded: • periodontal and maxillofacial applications of **platelet-rich plasma**. • non-clinical or animal studies. ...

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Autologous iliac crest bone graft: should it still be the gold standard for treating nonunions?

[MK Sen, T Miclau - Injury, 2007 - Elsevier](#)

... Effects of **platelet-rich plasma** on the healing of autologous bone grafted mandibular defects in dogs. ... Percutaneous bone marrow grafting for the treatment of tibial **non-union**. ... Percutaneous bone marrow grafting of delayed **union** and **nonunion** in cancer patients. ...

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Combination of **platelet rich plasma** with polycaprolactone tricalcium phosphate scaffolds for segmental bone defect repair

[B Rai, ME Oest, KM Dupont, KH Ho... - ... Research Part A, 2007 - Wiley Online Library](#)

... Preparation of **platelet-rich plasma**. ... blood was first centrifuged at 2400 rpm for 10 min under sterile conditions to separate PRP and **platelet-poor plasma** (PPP ... This mixture contained approximately 600×10^3 **platelets**/μl as determined by manual counts using a hemocytometer. ...

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Benefit of percutaneous injection of autologous platelet-leukocyte-rich gel in patients with delayed union and nonunion

[T Bielecki, TS Gazdzik, T Szczepanski - European Surgical Research, 2008 - karger.com](#)

... of **platelet** concentration in **platelet-rich plasma** on peri-implant bone regeneration. Bone 2004;34:665–671. ... I, Gagnon G: **Platelet-rich** plasmas: growth factor content and roles in wound healing. J Dent Res 2005;84:434–439. ... George JN: **Platelets**. Lancet 2000;355:1531–1539. ...

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Platelet-rich plasma (PRP) enhances bone healing in non-united critical-sized defects: a preliminary study involving rabbit models

[SR Kanthan, G Kavitha, S Addi, DSK Choon, T Kamarul - Injury, 2011 - Elsevier](#)

... 1. A showing the centrifuged **plasma** which has separated into a lower layer of **platelet rich plasma** and a ... It is, therefore, important to ensure that the activation of **platelet** happens at the right time. Because **platelets** have a life span of between 5 and 7 days, they will continue to ...

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The role of **platelet-rich plasma** in foot and ankle surgery

[A Gandhi, C Bibbo, M Pinzur, SS Lin - Foot and ankle clinics, 2005 - Elsevier](#)

... **Platelet-rich plasma** preparation. ... centrifugation protocol (1500 rpm for 10 minutes; 3000 rpm for 10 minutes) that concentrated **platelets** by 913 ... low, medium, high **platelet** concentration, Rabbit distal femur – self-tapping titanium screw, Medium **platelet** concentration ($\square 1,000,000$...

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Collagen-platelet rich plasma **hydrogel** enhances primary repair of the porcine anterior cruciate ligament

MM Murray, KP Spindler, E Abreu... - Journal of ..., 2007 - regenmedicalohio.com

... J Orthop Res 25:81–91, 2007 Keywords: collagen-**platelet rich plasma**; hydrogel anterior cruciate ligament ... healing of the ACL is this premature loss of the fibrin-**platelet** provisional scaffold ... 1).

The substitute scaffold was designed to deliver **platelets** and **plasma** proteins (key ...

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Alveolar ridge and sinus augmentation utilizing platelet-rich plasma in combination with freeze-dried bone allograft: case series

JD Kassolis, PS Rosen... - Journal of ..., 2000 - Am Acad Periodontology

... A. Memeo, F. Verdoni, O. De Bartolomeo, W. Albisetti and L. Pedretti. (2013) A new way to treat forearm post-traumatic **non-union** in young patients with intramedullary nailing and **platelet-rich plasma**. Injury. Online publication date: 1-Sep-2013. Henning Schliephake. ...

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The effect of **platelet-rich plasma** on healing in critical-size long-bone defects

P Kasten, J Vogel, F Geiger, P Niemeyer, R Luginbühl... - Biomaterials, 2008 - Elsevier

... **Platelet-rich plasma** (PRP) contains a number of these growth factors [PDGF, TGF- β 1, TGF- β 2, IGF, epidermal growth ... The blood was collected in tubes that were rinsed with heparin and the **platelets** were counted ... The average **platelet** number was 1.9×10^8 (SD 0.39×10^8)/ml ...

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Expandable intramedullary nailing and **platelet rich plasma** to treat long bone **non-unions**

O Galasso, M Mariconda, G Romano... - Journal of Orthopaedics ..., 2008 - Springer

... Indeed, the alpha granules of **platelets**, releasing several growth factors in the fracture rim ... report the combined use of expandable intramedullary nailing and autologous **platelet rich plasma** (PRP) in ... All patients with atrophic **non-union** of long bones admitted at our institutions in ...

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Classification of **platelet** concentrates: from pure **platelet-rich plasma** (P-PRP) to leucocyte- and **platelet-rich fibrin** (L-PRF)

DMD Ehrenfest, L Rasmusson, T Albrektsson - Trends in biotechnology, 2009 - Elsevier

... aplasia, acute leukaemia or significant blood loss during long-lasting surgery. The standard **platelet** concentrate for transfusion has been named **platelet-rich plasma** (PRP) and classically contains 0.5×10^{11} **platelets** per unit. ...

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[PDF] from regenmedicalohio.com

Use of a collagen-platelet rich plasma scaffold to stimulate healing of a central defect in the canine ACL

MM Murray, KP Spindler, C Devin... - Journal of ..., 2006 - regenmedicalohio.com

... In this study, no cells (except the **platelets** and white blood cells contained in the **platelet-rich plasma**) were transplanted, yet a highly cellular repair tissue was seen within the defect by 3 weeks. ... 2006. The canine central ACL defect model for intra-articular **non-union**. ...

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Antibacterial effect of autologous platelet gel enriched with growth factors and other active substances AN IN VITRO STUDY

TM Bielecki, TS Gazdzik, J Arendt... - Journal of Bone & ..., 2007 - bjj.boneandjoint.org.uk

... et al 26 reported the isolation and tentative identification of seven antimicrobial peptides from human **platelets** after stimulation ... **Platelet-rich plasma** is also a concentration of leucocytes. ... In the treatment of an infected **nonunion**, the goal is to eradicate the infection and to obtain ...

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Platelet rich plasma therapy: inflammatory molecules involved in tissue healing.

E Galliera, MM Corsi, G Banfi - Journal of biological regulators and ..., 2011 - europepmc.org

... For this biological properties of **platelets**, **platelet rich plasma** therapy (PRP) is considered an innovative and promising approach that has been extended to many field of medicine, ranging from **non-union** defects, bone fractures, spinal fusion, bone implant and osteointegration ...

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An ongoing research for evaluation of treatment with BMPs or AGFs in long bone non-union: protocol description and preliminary results

GM Calori, M D'Avino, L Tagliabue, W Albisetti... - Injury, 2006 - Elsevier

... 13; RE Marx; **Platelet Rich Plasma**: evidence to support its use. ... The use of Osteogenic protein 1(BMP 7) in the treatment of recalcitrant long bone **non-union**. J Bone Joint Surg Br Proc, 84-B (Suppl. 2) (2002). ... Involvement of **platelets** in stimulating osteogenic activity. ...

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