

Erratum

Erratum: Wally, Z.J.; van Grunsven, W.; Claeysens, F.; Goodall, R.; Reilly, G.C. Porous Titanium for Dental Implant Applications. *Metals* 2015, 5, 1902–1920.

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The authors wish to make the following corrections to the citations in the published paper [1].
Page 1903:

- Line 4 “They are completely placed into the jaw bone and give support to a dental prosthesis [3].” Replacing “[3]” with “[1]”.
- Line 8 “Over the last decade, there has been a universal growing interest in dental implants, which are used to treat about one million people per year around the world [4].” Replacing “[4]” with “[3]”.
- Line 11 “the higher number of elderly people in the population and higher public awareness [4].” Replacing “[4]” with “[1]”.
- Line 15 “Thus, using endosseous titanium implants is more convenient with better functionality than conventional dentures [5].” Replacing “[5]” with “[4]”.
- Line 18 “such as a lack of biological interaction and interfacial stability with bone tissue [3,6].” Replacing “[3,6]” with “[5]”.
- Line 21 “Titanium and its alloys have been reported as the materials of choice for most orthopedic and dental implants due to their outstanding mechanical properties and biocompatibility [7].” Replacing “[7]” with “[6]”.
- Line 25 “this dense structure of implants can cause a mismatch between the Young’s modulus of the titanium implant (110 GPa) and natural cortical (17–20 GPa) and cancellous bone (around 4 GPa) [8,9].” Replacing “[8,9]” with “[7–9]”.

Page 1904:

- Line 21 “Sand blasting with stiff particles such as alumina, TiO₂ and ceramic has also been suggested to roughen the dental implant surface [4].” Replacing “[4]” with “[3]”.

Page 1905:

- Line 25 “at room temperature it tends to be categorized as α phase and transfer to β phase as the temperature exceeds 883 °C [23].” Replacing “[23]” with “[8]”.
- Line 35 “Through the years, several types of titanium alloys have been developed as implant biomaterials such as Ti–6Al–4V, Ti–Nb–Ta–Zr [24], Ti–Ni–Ta [25], Ti–15Mo–5Zr–3Al [8].” Replacing “[24]”, “[25]” and “[8]” with “[23]”, “[24]” and “[25]” respectively.

Page 1906:

- Line 15 “Attempts have also been made to produce porous Ti alloy compacts (Ti–15Mo–5Zr–3Al) using a hot-pressing technique, which could reduce the Young’s modulus to within the range of cortical bone [8].” Replacing “[8]” with “[25]”.

Page 1907:

- Line 28 “By increasing the porosity, a structure was created which closely mimics that of trabecular bone [3].” Replacing “[3]” with “[5]”.

Page 1908:

- Line 30 “With the casting method, in particular, machining and other finishing steps are required with a large amount of waste material [23].” Replacing “[23]” with “[8]”.
- Line 35 “It is less expensive and has reduced amounts of waste compared to the other production methods available [23].” Replacing “[23]” with “[8]”.

Page 1909:

- Line 37 “Additive processes are in general less time consuming overall [72] and allow the creation of porous structures with different unit cells [40] and high resolution (*i.e.*, small cell sizes) [3].” Replacing “[3]” with “[75]”.
- Line 40 “such as dental, craniofacial, maxillofacial and orthopedic implants [75].” Replacing “[75]” with “[59]”.
- Line 42 “comprising a compact core and irregular porous shell by incorporating (SLS) for the porous surface and (SLM) for the solid core (Figure 2).” “(Figure 2)” should be removed.

Page 1911:

- Line 3 “a post-sintering heat treatment has been suggested by Clook and co-workers.” Replacing “Clook” with “Cook”.
- In Table 1 row 3 Reference [4]. Replacing “[4]” with “[3]”.

Page 1912:

- Line 42 “Thus, the trabecular structure has the potential to produce devices well-suited for dental and orthopedic implants [3].” Replacing “[3]” with “[5]”.
- “The anodization of the titanium can produce a nanoporous surface that can increase osteoblast cell (MC3T3-E1) proliferation and attachment on implant surfaces [10].” Replacing “[10]” with “[88]”.

Page 1913:

- Line 1 “Pore geometry is likely to have a strong effect on cell attachment and matrix formation [88].” Replacing “[88]” with “[89]”.
- Line 8 “but cell activity and migration were best in the pyramidal design with a 400–620 µm pore size and 75% porosity [89].” Replacing “[89]” with “[90]”.
- Line 26 “which enhanced the osseointegration process [90].” Replacing “[90]” with “[91]”.

Reference Section:

- Reference 3 should be numbered 5;
- References 4 and 5 should be numbered 3 and 4, respectively;
- Reference 8 should be numbered 25;

- Reference 23 should be numbered 8;
- References 24 and 25 should be numbered 23 and 24, respectively.
- Reference 75 should be deleted;
- A reference should be inserted [2] below and should be numbered 75.
- Reference 86 should be deleted;
- A new reference should be inserted [3] below and should be numbered 86.
- A new reference should be inserted [4] below and be numbered 88;
- References 88, 89 and 90 should be numbered 89, 90 and 91, respectively.

The authors apologize for any inconvenience caused by these changes. The manuscript will be updated online and the previous version will remain available from the article webpage.

References

1. Wally, Z.J.; van Grunsven, W.; Claeysens, F.; Goodall, R.; Reilly, G.C. Porous Titanium for Dental Implant Applications. *Metals* **2015**, *5*, 1902–1920. [[CrossRef](#)]
2. Murr, L.E.; Gaytan, S.M.; Medina, F.; Martinez, E.; Martinez, J.L.; Hernandez, D.H.; Machado, B.I.; Ramirez, D.A.; Wicker, R.B. Characterization of Ti–6Al–4V open cellular foams fabricated by additive manufacturing using electron beam melting. *Mater. Sci. Eng. A* **2010**, *527*, 1861–1868. [[CrossRef](#)]
3. Mangano, C.; de Rosa, A.; Desiderio, V.; d’Aquino, R.; Piattelli, A.; de Francesco, F.; Tirino, V.; Mangano, F.; Papaccio, G. The osteoblastic differentiation of dental pulp stem cells and bone formation on different titanium surface textures. *Biomaterials* **2010**, *31*, 3543–3551. [[CrossRef](#)] [[PubMed](#)]
4. Lee, J.-H.; Kim, H.-E.; Shin, K.-H.; Koh, Y.-H. Improving the strength and biocompatibility of porous titanium scaffolds by creating elongated pores coated with a bioactive, nanoporous TiO₂ layer. *Mater. Lett.* **2010**, *64*, 2526–2529. [[CrossRef](#)]



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