

CORRECTION

Correction: Diffusion Magnetic Resonance Imaging: What Water Tells Us about Biological Tissues

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Some errors were introduced in the ordering of the references in the published paper. References 1–5 were listed out of order and therefore also caused errors within the in-text citations, as detailed below:

1. In the first paragraph of the section titled ‘Principles of Diffusion MRI and Key Concepts’, the third sentence should have cited reference 2, instead of 1. The correct sentence should read:

Unexpectedly, diffusion (a visible phenomenon) was linked by Einstein to Brownian motion in the context of the theory of heat to prove the existence of (invisible) atoms and molecules [2].

2. In the second paragraph, titled ‘Principles of Diffusion MRI and Key Concepts’, the third to last sentence should have cited reference 3, instead of 2. The correct sentence should read:

Diffusion-driven displacements of water molecules are encoded in the MRI signal by spatial and temporal variation of the magnetic field (see [3] for a review of the history and the principles of diffusion MRI) generated by magnetic field gradient pulses.

3. In the second paragraph of the section titled ‘Principles of Diffusion MRI and Key Concepts’, the last sentence should have cited references 4 and 5 respectively, rather than 3 and 4. The correct sentence should read:

The observation of non-Gaussian diffusion and the related modeling of diffusion effects was investigated by pioneers such as Stejskal and Tanner (see [4] for a review), well before the advent of MRI, but this issue remains a complex and hot topic of investigation today for diffusion MRI [5].

4. In the third paragraph of the section titles ‘Principles of Diffusion MRI and Key Concepts’, the first sentence should have cited reference 1 rather than 5. The correct sentence should read:

The “apparent diffusion coefficient” (ADC) concept was introduced along with the diffusion MRI concept [1] to avoid the difficulties of non-Gaussian diffusion and facilitate clinical application of the technique.

5. In the first paragraph of the section titled ‘Applications of Diffusion MRI; Acute Brain Ischemia’ the last sentence cited reference 3 rather than 4. The correct sentence should read:

Several hypotheses have been proposed to explain this sharp, counterintuitive decrease in water diffusion, but the exact mechanisms linking the ADC decrease with cell swelling still remain today to be clarified [4].



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6. In the section titled 'Wiring of the Brain', the third from last sentence cited reference 2 rather than 3. The correct sentence should read:

The potential of diffusion MRI to probe human brain connectivity has attracted worldwide interest and is now widely used in clinical practice. Recent results from the European FP7 CONNECT project [42] and the Human Connectome Project [43] have clearly underlined the enormous potential of this approach, yielding insight into how brain connections underlie function and opening up new lines of inquiry for human neuroscience and brain dysfunction in aging, mental health disorders, addiction, and neurological disease [3].

The full corrected list of references is also provided here:

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