

Plants are alive: with all behavioural and cognitive consequences

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Reply to: **DG Robinson *et al*** (May 2020)

Over the years, we have become fond readers of the criticisms that Robinson *et al* [1] reserve with commendable regularity to any of our articles. Nonetheless, Robinson *et al* attribute statements to us that we have never made and they counteract results published in peer-reviewed journals with doctrinaire comments that are not based on experimental data but rather on terminological “prohibitions”. We never claimed that plants have actual neurons—this is clearly insane even if plants are intelligent—yet, Robinson *et al* continue to attribute such claims to us. Second,

although we have proven that plants have memory [2], they exclude *a priori*, without any experimental support that plants can memorize. Finally, although we have proven that plants produce spontaneous action potentials in the root apex [3], they claim in a non-peer-reviewed journal that we measured artefacts [4].

We have always been well disposed towards criticisms—by studying cognition in plants we expect it—but we do not believe that dogmatic attitudes can be helpful for science to progress. If Robinson *et al* want to continue their claim that 85% of Earth biomass (plants) is made up of organic semi-living machines and that intelligence is a gift belonging only to 0.3% of life (animals), they are obviously free to believe it, but they should support their claims with scientific evidence.

References

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4. Rehm H, Gradmann D (2010) *Lab J* 1–2: 20–23



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