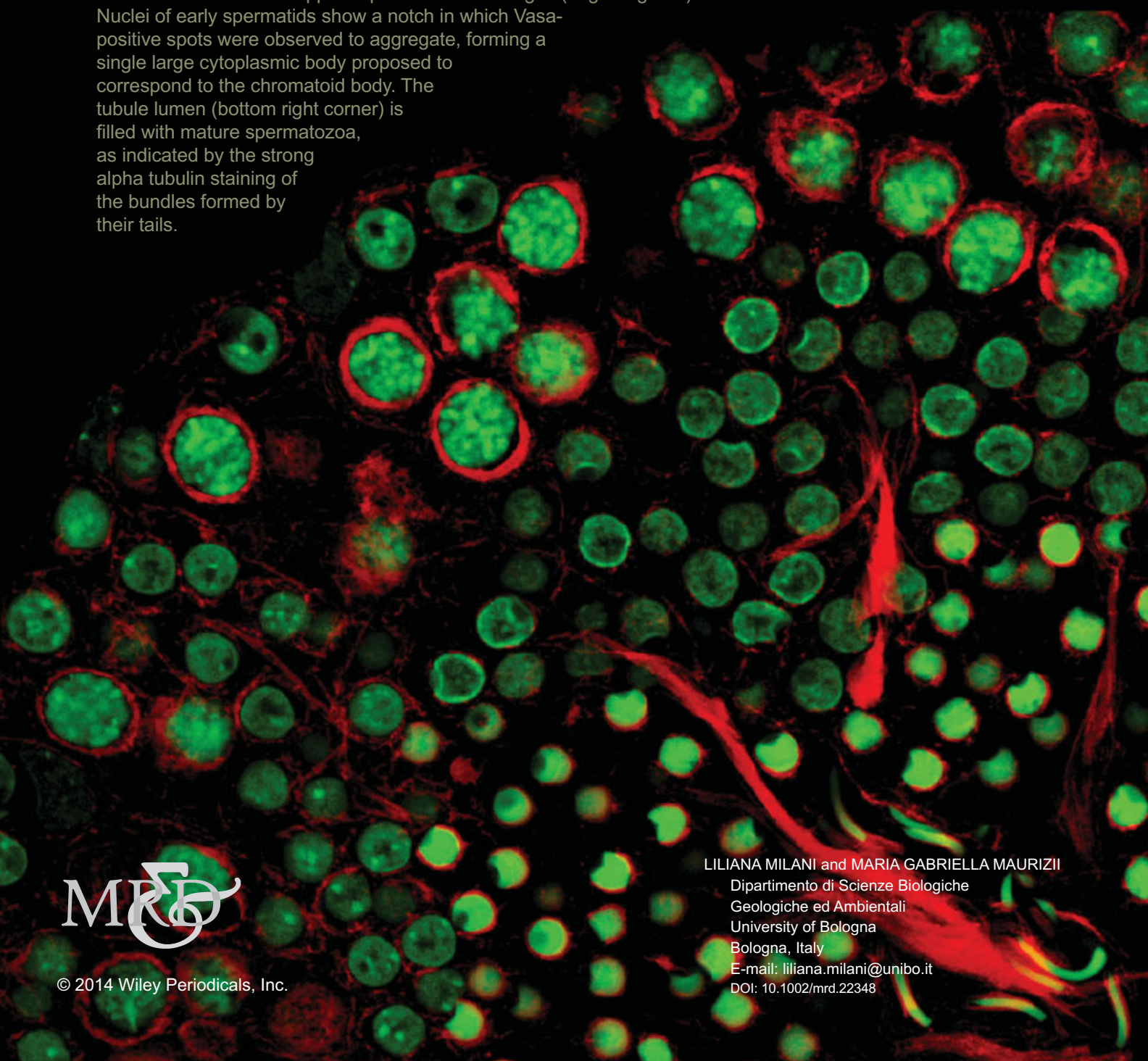
In reptiles, differently from other amniotes, the majority of germ-cell generations progress through the stages of spermatogenesis as a single population, similarly to what happens in amphibians. A novel and detailed description of seminiferous tubule structure in reptiles is useful for the future study of germ-cell types during their differentiation. In the lizard *Podarcis sicula*, we identified a clear series of male germ-cell morphologies, using a nuclear dye (green) and anti-alpha tubulin antibody (red).

This cross section shows a portion of a *P. sicula* tubule in the spring, when gonads are fully active and a single spermiation event takes place. In the external part of the basal compartment (upper left), spermatogonia are arranged in a single-cell layer. Towards the apical region (bottom right), spermatocytes type I (large nuclei) and type II (smaller nuclei) are visible in succession. In the apical region of the tubule, there are many spermatids in different stages of differentiation, showing reduced cytoplasm with a less-extensive microtubule cytoskeleton network. The nuclei of round spermatids in the first stages show diffused chromatin, whereas the chromatin appears packed in later stages (brighter green). Nuclei of early spermatids show a notch in which Vasa-positive spots were observed to aggregate, forming a single large cytoplasmic body proposed to correspond to the chromatoid body. The tubule lumen (bottom right corner) is filled with mature spermatozoa, as indicated by the strong alpha tubulin staining of the bundles formed by their tails.



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