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IL-1 family nomenclature

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To the Editor:

Newly cloned interleukin 1 (IL-1) family members^{1–3} were originally given an IL-1 family (IL-1F) designation⁴, but as functions have now been elucidated for several of these^{5,6}, we propose that each now be assigned an individual interleukin designation. IL-1F6, IL-1F8 and IL-1F9 are encoded by distinct genes but use the same receptor complex (IL-1Rrp2 and AcP), are proinflammatory and deliver nearly identical signals^{7–12}. We propose these be designated IL-36 α , IL-36 β and IL-36 γ , respectively. IL-1F5 also binds to IL-1Rrp2 but antagonizes those cytokines in a manner analogous to that used by IL-1Ra to antagonize IL-1 α and IL-1 β ^{7–9}. We propose that IL-1F5 be renamed IL-36Ra (for ‘receptor antagonist’). In the IL-1 nomenclature, IL-1Ra is used for the natural product, whereas IL-1ra is used for the recombinant product; therefore, IL-36Ra is appropriate for natural IL-1F5.

IL-1F7 produces anti-inflammatory effects by suppressing innate immune responses; it does this by decreasing the production of inflammatory cytokines induced by Toll-like receptor agonists as well as that of IL-1 and tumor necrosis factor^{13,14}. We propose this IL-1 family member be renamed IL-37. IL-1F7 has various splice forms^{1,2,15,16}, of which IL-1F7b is the most studied. We propose that IL-1F7a, IL-1F7b and so on be renamed IL-37a, IL-37b and so on. The one remaining IL-1 family member, for which no function has yet been demonstrated, is IL-1F10; however, as evidence of its properties remains limited, we suggest that it retain its IL-1F designation until a function is clearly identified, although it might be prudent to reserve the designation IL-38 for this eventuality.

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