

**ABSTRACT.** We consider non-contracting  $p$ -adic Lie groups and we establish equivalence relations and connections among the following classes of  $p$ -adic Lie groups: (1) non-contracting; (2) type  $R$ ; (3) distal and (4) Tortrat. We also deduce that non-contracting  $p$ -adic Lie groups are unimodular and IN  $p$ -adic Lie groups are non-contracting.