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Prague, Czech Republic**Effects of chain branching and lateral fluorine substitution on mesomorphism of cholesteryl benzoates****Maheshkumar C**

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The liquid crystalline Blue Phase has prime importance in materials sciences. It is very difficult to find in a single component system of having Blue Phase mesomorphism. The huge varieties of cholesterol based different chemical derivatives studied for various purposes. The mesogenic cholesteryl 4'-alkoxyphenyl-4-carboxylates possessing terminal normal/branched/saturated/unsaturated alkyl chains with laterally ortho/meta substituted electronegative fluorine atom are described. All the homologues exhibited enantiotropic mesomorphism. Smectic A phase, chiral

nematic, blue phase (BP) and TGBA phases were observed in different homologues. All the novel compounds were characterised by spectroscopic and elemental analysis. Thermal investigations and mesophase characterisations for all the compounds were carried out by the combination of DSC, POM and X-ray analysis. The effects of the various terminal normal/branched/saturated/unsaturated alkyl chains and the position of the substituted fluorine atom with its structurally related compounds have been discussed.

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