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(71) Applicant: AMPIO PHARMACEUTICALS, INC.
[US/US]; 5445 DTC Parkway, Suite 925, Greenwood Vil-
lage, CO 80111 (US).

(72) Inventor: BAR-OR, David; 900 E. Oxford Lane, Engle-
wood, CO 80110 (US).

(74) Agent: CONNELL, Gary, J.; SHERIDAN ROSS P.C.,
1560 Broadway, Suite 1200, Denver, CO 80202 (US).

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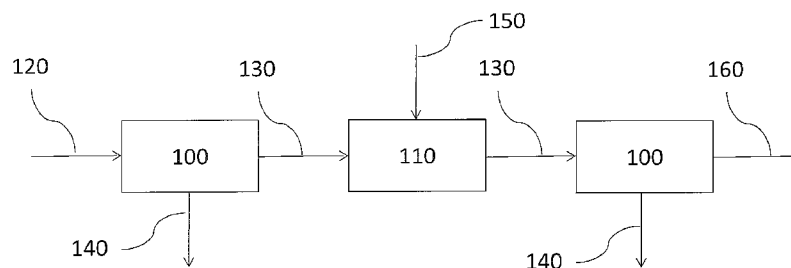


FIG. 5

(57) Abstract: Methods of making increased amounts of diketopiperazines (DKP) such as DA- DKP in pharmaceutical composi-
tions of proteins and peptides are disclosed. The disclosure further provides methods of making a DKP, including (1) contacting al-
bumin with an enzyme (such as a dipeptidyl peptidase IV (DPP-IV)) that cleaves a pair of N- terminal amino acids from the albu-
min, and (2) heating the albumin under conditions effective to cause the formation of the DKP. Further, treatment of DKP- and albu-
min- containing streams to produce improved, higher value, DKP compositions and purified albumin compositions for therapeutic
uses is also disclosed. In addition to a first therapeutic DKP composition comprising a low albumin content, a second valuable thera-
peutic composition is also produced characterized by a high albumin concentration.