

January 20, 2011

This free writing prospectus should be read together with the preliminary prospectus, dated January 13, 2011, relating to the offering of common stock by Pacira Pharmaceuticals, Inc. (the "Preliminary Prospectus"), included in Amendment No. 3 to the Registration Statement on Form S-1 (File No. 333-168721). The Preliminary Prospectus has been updated by Amendment No. 4 to the Registration Statement, which can be accessed through the following link: http://www.sec.gov/Archives/edgar/data/1396814/000119312511011039/ds1a.htm

The following information supplements and updates the information in the Preliminary Prospectus, and primarily relates to the development and license agreement that Pacira Pharmaceuticals, Inc. (the "Company") entered into with Novo Nordisk AS on January 14, 2011.

PROSPECTUS SUMMARY

Under the section entitled "Prospectus Summary – Recent Developments" on page 5 of the preliminary prospectus included in Amendment No. 4 to the Registration Statement, we added the following subsection:

Novo Nordisk Development and License Agreement

In January 2011, we entered into an agreement with Novo Nordisk A/S., or Novo, pursuant to which we granted non-exclusive rights to Novo under certain of our patents and know-how to develop, manufacture and commercialize formulations of a Novo proprietary drug using our DepoFoam drug delivery technology. See "Business—Commercial Partners and Agreements—Novo Nordisk" for more information.

BUSINESS

Under the section entitled "Business—Commercial Partners and Agreements" on page 91 of the preliminary prospectus included in Amendment No. 4 to the Registration Statement, we added the following subsection:

Novo Nordisk

In January 2011, we entered into an agreement with Novo Nordisk A/S., or Novo, pursuant to which we granted non-exclusive rights to Novo under certain of our patents and know-how to develop, manufacture and commercialize formulations of a Novo proprietary drug using our DepoFoam drug delivery technology. Under this agreement, we agreed to undertake specified development and technology transfer activities and to manufacture pre-clinical and certain clinical supplies of such DepoFoam formulated Novo product until the completion of such technology transfer activities. Novo is obligated to pay for all costs incurred by us in conducting such development, manufacturing and technology transfer activities. We received a one-time upfront payment of \$1.5 million from Novo. We are also entitled to receive single-digit royalties on sales of such Novo product for up to twelve years following the first commercial sale of such Novo product. In addition, we are entitled to receive up to \$24 million in milestone payments based on achievement of specified development events, and up to an additional \$20 million in

milestone payments based on sales of such Novo product exceeding specified amounts. Each party has the right to terminate the agreement for an uncured material breach by the other party or in connection with the other party's bankruptcy or similar event. In addition, Novo has the right to terminate the agreement for convenience at any time upon sixty (60) days notice prior to commercialization of such Novo product and upon ninety (90) days notice thereafter, subject to Novo's payment of a specified termination fee if, after initiation of the technology transfer but prior to commercialization, Novo terminates the agreement other than for certain specified reasons. We also have the right to terminate the agreement if (1) Novo decides to discontinue or terminate the development or commercialization of such Novo product, (2) such Novo product no longer has regulatory approval in any market, or (3) Novo or any of its affiliates or sublicensees of such Novo product challenges the validity or enforceability of any of the licensed patents.

CONSOLIDATED FINANCIAL STATEMENTS

We updated the consolidated financial statements for the nine months ended September 30, 2010 to include corresponding disclosure in the subsequent events footnote.

The issuer has filed a registration statement (including a prospectus) with the SEC for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement and other documents the issuer has filed with the SEC for more complete information about the issuer and this offering. You may get these documents for free by visiting EDGAR on the SEC web site at www.sec.gov. Alternatively, the issuer, any underwriter or any dealer participating in the offering will arrange to send you the prospectus if you request it by calling toll free 1-800-603-5847 or 1-800-747-3924.