



Contacts:

Avalon Pharmaceuticals

Gary Lessing
Chief Financial Officer
Tel: (301) 556-9828
Fax: (301) 556-9910
Email: info@avalonrx.com

Emily Poe
Vice President
Noonan Russo
Tel: (212) 845-4266
Email: Emily.Poe@eurorscg.com

For Immediate Release

Avalon Pharmaceuticals Files Registration Statement for Proposed Initial Public Offering

Germantown, MD - May 4, 2005 - Avalon Pharmaceuticals, Inc. today announced that it has filed a registration statement with the U.S. Securities and Exchange Commission relating to the proposed initial public offering of its common stock. All shares of the common stock to be sold in the offering will be offered by the Company.

Legg Mason Wood Walker, Incorporated is acting as sole book-running manager for the offering, with Jefferies & Company, Inc. acting as co-manager.

A registration statement relating to these securities has been filed with the Securities and Exchange Commission but has not yet become effective. These securities may not be sold nor may offers to buy be accepted prior to the time the registration statement becomes effective. This press release shall not constitute an offer to sell or a solicitation of an offer to buy, nor will there be any sale of these securities in any state or jurisdiction in which such an offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

When available, copies of the preliminary prospectus relating to the offering may be obtained from the offices of Legg Mason Wood Walker, Incorporated, 100 Light Street, Baltimore, MD 21202.

About Avalon Pharmaceuticals

Avalon Pharmaceuticals is a clinical stage biopharmaceutical company focused on the discovery and development of small molecule therapeutics for the treatment of cancer. Avalon seeks to discover and develop novel therapeutics through the use of a comprehensive, innovative and proprietary suite of technologies based upon large-scale gene expression analysis which it calls AvalonRx™. Avalon Pharmaceuticals was established in 1999 and is headquartered in Germantown, Maryland.