

PROSPECTUS SUPPLEMENT NO. 21 TO PROSPECTUS DATED JANUARY 15, 2002

LABORATORY CORPORATION OF AMERICA HOLDINGS

\$744,000,000

Aggregate Principal Amount at Maturity of Liquid Yield Option(TM) Notes due 2021  
(Zero Coupon - Subordinated)  
and  
Common Stock issuable upon Conversion or Purchase of the LYONs

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This prospectus supplement will be used by the holders of LYONs listed below to resell their LYONs or the shares of our common stock, par value \$0.10 per share, issuable upon conversion or purchase of the LYONs.

You should read this prospectus supplement together with the prospectus dated January 15, 2002, which is to be delivered with this prospectus supplement.

The table below sets forth additional and updated information concerning beneficial ownership of the LYONs, and supplements and, to the extent inconsistent with, amends the table appearing under the caption "Selling Securityholders" beginning on page 37 of the prospectus. To the extent that a selling securityholder is listed both in the table below and in the table appearing in the prospectus, the information set forth below regarding that selling securityholder supersedes the information set forth in the prospectus. We have prepared this table based on information given to us by the selling securityholders listed below prior to the date hereof.

Name	Aggregate Principal Amount at Maturity of LYONs Owned and that May be Sold	Percentage of LYONs Outstanding Prior to the Offering	Number of Shares of Common Stock Owned and that May be Sold(1)	Percentage of Common Stock Outstanding Prior to the Offering(2)
Saranac Capital Management L.P., FBO Citigroup Alternative Investments Diversified Arbitrage Strategies Fund Ltd. (3)	\$3,144,000	*	42,163	*
Saranac Capital Management L.P., FBO GM Welfare Benefits Trust (3)	73,000	*	978	*
Saranac Capital Management L.P., FBO Citigroup Alternative Investments QIP Multi Strategy Arbitrage Portfolio (3)	17,454,000	2.35%	234,072	*

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\* Less than 1%.

(1) Assumes conversion of all of the holder's LYONs at a conversion rate of 13.4108 shares of common stock per \$1,000 principal amount at maturity of the LYONs as a result of a 2-for-1 forward split on May 10, 2002. This conversion rate is subject to adjustment, however, as described under "Description of LYONs-Conversion Rights-Conversion Adjustments and Delivery of Common Stock" beginning on page 16 of the prospectus. As a result, the number of shares of common stock issuable upon conversion of the LYONs may increase or decrease in the future.

(2) Calculated based on Rule 13d-3(d)(1)(i) of the Exchange Act using 136,394,820 shares of common stock outstanding as of December 28, 2004. In calculating this amount for each holder, we treated as outstanding the number of shares of common stock issuable upon conversion of all of that holder's LYONs, but we did not assume conversion of any other holder's LYONs.

(3) Previously registered as a selling securityholder under the name of Salomon Smith Barney. The Aggregate Principal Amount represents the remaining assets in this account that were transferred to Saranac Capital Management L.P. as a result of a spin-off. Saranac Capital Management L.P. acts as a discretionary investment advisor and may be deemed to act on the behalf of the beneficial owner of such debentures.

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Investing in the LYONs involves risks that are described in "Risk Factors Relating to the LYONs" beginning on page 8 of the prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is December 30, 2004

(TM) Trademark of Merrill Lynch & Co., Inc.