CureVac’s RNActive® technology represents an unparalleled approach for next generation cancer immunotherapy. For the first time it is possible to successfully stabilize and optimize messenger RNA (mRNA) for its utilization in medicine. Our mRNA-based cancer vaccines are designed to specifically mobilize the patient’s immune system to fight an existing tumor. The promising principle of cancer immunotherapy was named Science Magazine’s ‘Breakthrough of the Year 2013’.

CureVac’s mRNA-based cancer immunotherapies, which belong to the RNActive® technology platform, are already in clinical development for some years. The German biotechnology company is conducting, amongst others, a large, randomized, phase IIb clinical trial in castration-resistant prostate cancer.

CureVac collaborates with international pharma companies and NGOs to further develop the RNActive® cancer immunotherapies. In September 2014 CureVac out-licensed CV9202, the therapeutic cancer vaccine against non-small cell lung cancer (NSCLC), to Boehringer Ingelheim (see box).

mRNA – Promising Basis for Therapeutic Cancer Immunotherapy
mRNA is a novel and promising basis for therapeutic cancer immunotherapy. The physiological role of this molecule is to transfer genetic, protein-building information from the nucleus to the cytoplasm, where this information is translated by the cellular ribosomal machinery into the corresponding protein.

CureVac has developed a unique mRNA platform technology in RNActive® that generates a minimal vaccine: the ‘naked’ mRNA molecules which encode the desired tumor antigens are delivered intradermally. RNActive® products express and thereby target antigens that are selectively expressed or over-expressed by cancer cells versus healthy cells.
First Clinical Results Show Favorable Safety Profile and Balanced Immune Responses
CureVac has successfully completed phase I/IIa clinical studies with its RNActive® cancer vaccines in prostate cancer and non-small cell lung cancer (NSCLC). Results so far have shown that mRNA-based products showed a favorable safety profile, and induced immune responses including: humoral and cellular, helper (both Th1 and Th2) and effector and memory responses. CureVac is currently conducting a number of clinical trials with its RNActive® vaccines. Since December 2013 a large, randomized, double-blind and placebo-controlled phase IIb clinical trial in castrate-resistant prostate cancer with CV9104 is running. It comprises nearly 200 patients in eight European countries.

For more information about our company and our RNA technology, please visit our website at www.curevac.com or contact us: