Janjic Nebojsa Form 4 March 09, 2007

FORM 4

OMB APPROVAL

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

OMB 3235-0287 Number:

Check this box if no longer subject to Section 16.

January 31, Expires: 2005

0.5

Form 4 or Form 5 obligations STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF **SECURITIES**

Estimated average burden hours per response...

may continue. See Instruction

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person *

2. Issuer Name and Ticker or Trading

5. Relationship of Reporting Person(s) to Issuer

Janjic Nebojsa

Symbol REPLIDYNE INC [RDYN]

(Check all applicable)

(Last)

(First) (Middle) 3. Date of Earliest Transaction

Director 10% Owner

1450 INFINITE DRIVE

(Month/Day/Year)

X_ Officer (give title Other (specify below)

03/08/2007

Chief Scientific Officer, Sec.

(Street) 4. If Amendment, Date Original

Applicable Line)

Filed(Month/Day/Year)

(Instr. 8)

X Form filed by One Reporting Person Form filed by More than One Reporting

6. Individual or Joint/Group Filing(Check

Person

LOUISVILLE, CO 80027

(City) (State) (Zip)

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)

(Month/Day/Year)

2. Transaction Date 2A. Deemed Execution Date, if

(Month/Day/Year)

3. 4. Securities TransactionAcquired (A) or Code Disposed of (D)

(Instr. 3, 4 and 5)

5. Amount of Securities Beneficially Owned (T) (Instr. 4)

6. Ownership 7. Nature of Form: Direct Indirect (D) or Indirect Beneficial Ownership (Instr. 4)

(9-02)

(A)

Code V Amount (D) Price

Following Reported Transaction(s)

(Instr. 3 and 4)

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

Persons who respond to the collection of SEC 1474 information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Conversion Security or Exercise

3. Transaction Date 3A. Deemed (Month/Day/Year)

Execution Date, if any

4. 5. Number of TransactionDerivative Code Securities

6. Date Exercisable and **Expiration Date** (Month/Day/Year)

7. Title and Amount of **Underlying Securities** (Instr. 3 and 4)

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(Instr. 3) Price of (Month/Day/Year) (Instr. 8) Acquired (A) Derivative or Disposed of Security (D) (Instr. 3, 4, and 5) Code V (A) (D) Date Exercisable Expiration Title Amount Date or Number of Share Stock Option Common 03/08/2008(1) 03/08/2017 \$ 5.35 90,000 90,000 03/08/2007 03/08/2007 Stock (right to

Reporting Owners

Reporting Owner Name / Address Relationships

Director 10% Owner Officer Other

Janjic Nebojsa

buy)

1450 INFINITE DRIVE Chief Scientific Officer, Sec.

LOUISVILLE, CO 80027

Signatures

/s/ Laura M. Medina, Attorney-in-Fact 03/09/2007

**Signature of Reporting Person Date

Explanation of Responses:

- * If the form is filed by more than one reporting person, see Instruction 4(b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Grant to Reporting Person of a stock option under the Issuer's 2006 Equity Incentive Plan. The option vests over a four year period, with (1) 25% of such option vesting on the one year anniversary of the Vesting Commencement Date and the remaining 75% of such option vesting in equal monthly installments over the next 36 months. The option expires ten years after the date of grant.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

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