

CLAIMS

1. A device comprising:

a stent; and

a coating comprising a plurality of layers forming a laminate coating on said stent, at least one of said plurality of layers comprising a pharmaceutical agent selected from rapamycin, a prodrug, a derivative, ester and a salt thereof, at least a portion of said rapamycin being in crystalline form and at least two other of said plurality of layers comprising a bioabsorbable polymer wherein the coating has an initial pharmaceutical agent amount; wherein when said device is to be delivered in a body lumen of a subject, the pharmaceutical agent is to be delivered in the vessel wall tissue of the subject.

2. A device comprising:

a stent; and

a coating comprising a plurality of layers forming a laminate coating on said stent, at least one of said plurality of layers comprising a pharmaceutical agent selected from rapamycin, a prodrug, a derivative, an analog, a hydrate, an ester, and a salt thereof and at least two of said plurality of layers comprising a bioabsorbable polymer wherein the coating has an initial pharmaceutical agent content of about 1 $\mu\text{g}/\text{mm}$ to about 15 $\mu\text{g}/\text{mm}$; wherein said device provides an area under a curve (AUC) for content of pharmaceutical agent to be delivered in the vessel wall tissue of a subject over time as follows:

i. from about 0.05 ($\mu\text{g}/\text{mm}$)*day to about 1 ($\mu\text{g}/\text{mm}$)*day when AUC is calculated from the time the device is delivered in a subject's body to one day after the device is delivered in the subject's body;

ii. from about 5 ($\mu\text{g}/\text{mm}$)*day to about 10 ($\mu\text{g}/\text{mm}$)*day when AUC is calculated starting after the first week the device is delivered in the subject's body through the second week after the device is delivered in the subject's body;

iii. from about 10 ($\mu\text{g}/\text{mm}$)*day to about 20 ($\mu\text{g}/\text{mm}$)*day when AUC is calculated starting after the second week the device is delivered in the subject's body through the fourth week after the device is delivered in the subject's body; and

iv an AUC_{last} of from about 40 ($\mu\text{g}/\text{mm}$)*day to about 60 ($\mu\text{g}/\text{mm}$)*day.

3. The device of one of Claims 1-2 wherein at least one of said layers comprises a PLGA bioabsorbable polymer.
4. The device of one of Claims 1-2 wherein about 50% of said polymer is resorbed within 45-90 days after an angioplasty procedure wherein said device is delivered in a subject's body.
5. The device of one of Claims 1-2 wherein about 75% of said polymer is resorbed within 45-90 days after an angioplasty procedure wherein said device is delivered in a subject's body.
6. The device of one of Claims 1-2 wherein about 95% of said polymer is resorbed within 45-90 days after an angioplasty procedure wherein said device is delivered in a subject's body.
7. The device of one of Claims 1-2 wherein 99% of said polymer is resorbed within 45-90 days after an angioplasty procedure wherein said device is delivered in a subject's body.
8. The device of one of Claims 1-2 wherein said device provides reduced inflammation over the course of polymer resorption compared to a conventional stent.
9. The device of Claim 1, wherein the presence of crystallinity is shown by at least one of XRD, Raman Spectroscopy, Infrared analytical methods, and DSC.
10. The device of Claim 1, wherein coating on an abluminal surface of said stent has a greater thickness than coating on a luminal surface of said stent.
11. The device of Claim 10, wherein a ratio of coating on the abluminal surface to coating on the luminal surface of the device is 80:20.

12. The device of Claim 10, wherein a ratio of coating on the abluminal surface to coating on the luminal surface of the device is 75:25.
13. The device of Claim 10, wherein a ratio of coating on the abluminal surface to coating on the luminal surface of the device is 70:30.
14. The device of Claim 10, wherein a ratio of coating on the abluminal surface to coating on the luminal surface of the device is 60:40.
15. The device of Claim 1, wherein said stent is a coronary stent, a vascular stent, a peripheral stent, billiarty stent, and intercranial stent.