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International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : A61K 51/04	A1	(11) International Publication Number: WO 99/62564
		(43) International Publication Date: 9 December 1999 (09.12.99)

(21) International Application Number: PCT/US99/12161

(22) International Filing Date: 1 June 1999 (01.06.99)

(30) Priority Data:
60/087,769 2 June 1998 (02.06.98) US

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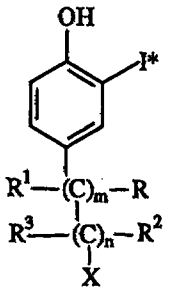
(81) Designated States: AT, AU, BR, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HR, HU, IL, IN, JP, KR, LU, MX, NO, NZ, PT, RU, SE, SG, TR, ZA, Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: RADIOIODINATED PHENOLS FOR BRACHYTHERAPY



(II)

(57) Abstract

The present invention concerns the use of a radioiodinated phenolic compound of formula (II) wherein: m and n are independently 0, 1, 2 or 3 X is a group that is negatively or positively charged at physiological pH, R, R^1, R^2 and R^3 are independently hydrogen, C_1–C_4 alkyl, or a carboxyl group, and I* is ^{123}I, ^{131}I or ^{125}I, and its pharmaceutically–acceptable salts. The compound is formulated and used *in vivo* in an animal in brachytherapy in an implantable catheter. In addition, due to the rapid renal clearance of these compounds, they may be used to study renal function. A process to prepare these compounds is also disclosed.