

Royalty Rates  
for  
Medical Devices &  
Diagnostics

IPRA, INC.

## Royalty Rates for Medical Devices & Diagnostics – 2016 Edition

Copyright © 2016 by IPRA, Inc. All rights reserved.

Published by IPRA, Inc.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as permitted under Section 107 or 108 of the 1976 United States Copyright Act, without wither the prior written permission of the Publisher. Requests for permission should be addressed to Permission Department, IPRA, Inc., 1004 Buckingham Way, Yardley, Pennsylvania 19067

Limit of Liability/Disclaimer of Warranty: While the publisher and the authors and editors have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives or written sales materials. The advice and/or strategies contained herein may not be suitable for your situation. You should consult with a professional where appropriate. The publisher, authors and editors shall not be liable for any loss of profit or any other commercial damages.

For more information about IPRA, Inc. and our books and consulting services visit [www.ipresearch.com](http://www.ipresearch.com).

## About the Author

**Russell L. Parr, CFA, ASA, CLP** is president of IPRA, Inc. He is a consultant, author, publisher and lecturer focused on the valuation, pricing and strategic management of intellectual property. For over 30 years, he has advised his clients about the value and pricing of patents, trademarks, copyrights, and trade secrets. His books are published in Japanese, Korean, Italian, Chinese and Russian. Mr. Parr's opinions are used to accomplish licensing transactions, mergers and acquisitions, transfer pricing, infringement damages litigation support and joint venture equity splits. His clients include multinational corporations, universities and private inventors.

Mr. Parr has also conducted valuations and royalty rate studies for technology and trademarks related to pharmaceuticals, semiconductor processes and products, agricultural formulations, automotive, biotechnology, photography, chemical formulations, communications, computer software, computer hardware, drug delivery systems, flowers, incinerator feed systems, lasers, medical instruments, and motivational book copyrights. Past assignments have included the valuation of the Dr. Seuss copyrights and the patent portfolio of AT&T.

In addition to consulting, Mr. Parr publishes three royalty rate resource books, which are sold all over the world. These books are titled *Royalty Rates for Pharmaceuticals & Biotechnology, 8<sup>th</sup> edition*, *Royalty Rates for Trademarks & Copyrights, 5<sup>rd</sup> edition* and *Royalty Rates for Technology, 6<sup>th</sup> edition*. These books are dedicated to reporting detailed information about the financial aspects of intellectual property transactions licenses.

Mr. Parr is a graduate of Rutgers University having received a Bachelor's in Electrical Engineering (BSEE) and a Masters in Business Administration (MBA). He has also been awarded the professional designations of Chartered Financial Analyst (CFA) from the CFA Institute, Accredited Senior Appraiser (ASA) from the American Society of Appraisers and Certified Licensing Professional (CLP) from the Licensing Executives Society. He is a member of the Licensing Executives Society and on the advisory board of three professional publications, *Licensing Economics Review*, *IP Litigator* and *The Licensing Journal*. Mr. Parr is also on the Advisory Board Member of Innovation Asset Group, a company developing enterprise software for intellectual property management. He also served on the Intangible Asset Valuation Standards Committee of the American Society of Appraisers - Member

As an author and co-author Mr. Parr has created seven books published by John Wiley & Sons about the valuation, management and pricing of intellectual property including *Intellectual Property: Valuation, Exploitation and Infringement Damages*. He has made 43 seminar presentations for organizations including The Licensing Executives Society, American Intellectual Property Law Association and The World Intellectual Property Organization. He has also testified at deposition or trial 55 times regarding intellectual property infringement matters. More information about Mr. Parr, his firm and its publications can be found at [www.ipresearch.com](http://www.ipresearch.com).

## PREFACE

This new edition of Royalty Rates for Medical Devices & Diagnostics is greatly enhanced. It provides more royalty rates from real world events, an expanded section about general royalty rate guidance and an article providing information about royalty audits.

### Royalty Rate Data

The amount of royalty rate data from real world transactions and jury awards is 25% greater than the previous edition. The data was discovered from license agreements between independent third parties and from jury awards in patent infringement litigation. Over 90% of the royalty rates were based on a percentage of sales. Only reputable sources of information have been used. These include filings with the Security & Exchange Commission., company press releases and court opinions. Some of the information comes from highly respected newspapers.

### General Royalty Rate Guidance

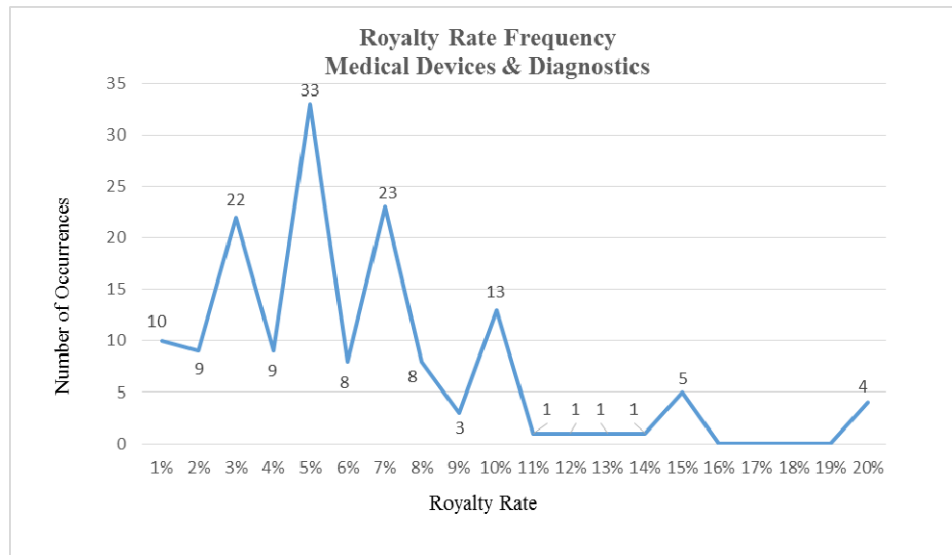
General guidance about how royalty rates are determined is also greatly expanded. Data is presented from a variety of surveys and experts. This section addresses topics affecting royalty rates such as exclusivity, naked patents, licenses that include know-how and upfront payments. This section of the report also presents an updated discussion about how to use a discounted cash flow analysis to determine a royalty rate. It also addresses what not to do when determining a royalty rate.

### Royalty Audits

At the end of this report, an article by Debora R. Stewart, CPA and Judy A. Byrd, CPA of Invotex, The Magnitude and Meaning of Royalty Misreporting discusses the reasons that royalty payments are misreported. The article explains that misreported royalties are not always malicious and are caused by communication failures between the licensing and accounting departments, as well as other honest mistakes as simple as math errors.

### Royalty Rate Frequency

The chart below summarizes royalty rates in this book. The royalties range from 0.50% to 20% of sales. The data is grouped by rates and then graphed by the frequency of their appearance. Excluded from this chart are instances where royalty rates are specified on a per unit basis.



The chart shows the most common royalty rate is 5% of sales. This royalty rate is common across all industries and will be discussed in the General Guidance to Royalty Rates section of this book.

## Royalty Rates for Medical Devices & Diagnostics – 2016 Edition

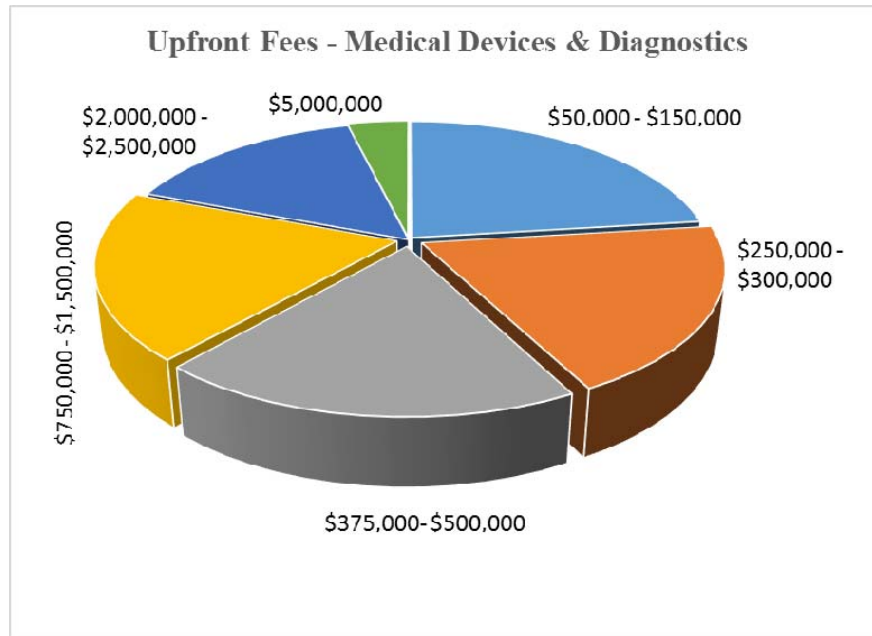
While royalty rates above 15% exist, they are rare and usually associated with extraordinarily profitable technologies. A cumulative analysis of the charted information provides the following insight:

- 27% of royalty rates are 3% or less,
- 55% of royalty rates are 5% or less,
- 75% of royalty rates are 7% or less,
- 91% of royalty rates are 10% or less,

### License Fees

In the 151 transactions using a running royalty rate as compensation for the rights granted in license agreements, only 26 (17%) included an upfront license fee.

The pie chart below shows a distribution of up-front license fees. One-time lump sum payments were rare and not included in the chart.



**This publication is designed to provide accurate and authoritative information about the subject matter covered. All of the information in this report has been obtained from reputable and reliable sources and is therefore believed to be accurate. The publisher accepts no responsibility for any damages that any party may experience from relying on the information presented herein.**

## Contents

<b>PREFACE</b> .....	<b>2</b>
<b>GENERAL ROYALTY RATE GUIDANCE</b> .....	<b>7</b>
<b>MEDICAL DEVICE &amp; DIAGNOSTICS ROYALTY RATES</b> .....	<b>30</b>
ALLERGY TESTING SYSTEM .....	30
AMBULATORY INFUSION PRODUCTS .....	30
ANTIMICROBIAL TECHNOLOGY .....	30
BIRTH CONTROL .....	31
BIO-CLEANSE SOLUTION .....	31
BIOPSY SYSTEM .....	32
BIOPTRON LAMP .....	32
BLOOD/ARTIFICIAL .....	32
BLOOD CLOT DETECTION.....	33
BLOOD FREEZING.....	34
BLOOD GLUCOSE TEST .....	34
BLOOD COAGULATION MONITORING .....	34
BLOOD COLLECTION .....	35
BLOOD OXYGEN SATURATION .....	36
BLOOD PROTEIN HARVESTING .....	36
BLOOD PURIFICATION .....	37
BLOOD SAFETY .....	38
BLOOD VESSELS - ARTIFICIAL .....	38
BLOOD SAMPLING SYSTEM .....	39
BREAST CANCER DIAGNOSIS .....	40
BREAST CANCER DIAGNOSIS .....	40
BURN TREATMENT .....	41
CANCER DETECTION .....	42
CANCER DETECTION .....	42
CANCER DETECTION - CERVICAL .....	44
CANCER DETECTION - CERVICAL .....	44
CANCER TREATMENT.....	45
CARDIAC .....	46
CARDIOVASCULAR .....	47
CARDIOVASCULAR .....	48
CARDIOVASCULAR .....	50
CARDIOVASCULAR .....	52
CARDIAC STENTS .....	52
CARDIAC SEPTAL REPAIR IMPLANT .....	53
CARDIAC SURGICAL INSTRUMENTS.....	54
CARDIOVASCULAR – VALVE REPLACEMENT .....	55
CARDIOVASCULAR – HEART VALVE .....	56
CASTS/FIBERGLASS.....	56
CATHETER.....	56
CATHETER.....	57
COATING - CATHETERS .....	57
CELL PROCESSING.....	57
CONTACT LENSES .....	58
CYTOLOGY DEVICE.....	59
DENTAL.....	59
DENTAL.....	60
DENTAL.....	60
DENTAL.....	60
DENTAL MATERIAL.....	61

**Royalty Rates for Medical Devices & Diagnostics – 2016 Edition**

DENTAL -TOOTH DECAY PREVENTION ADDITIVE .....	62
DENTURES.....	62
DENTAL IMPLANTS.....	63
DENTAL LIGHTING WAND.....	63
DERMAL .....	63
DERMAL.....	64
DIABETES MONITORING .....	64
DIAGNOSTIC - BACTERIA.....	65
DIAGNOSTIC - CARDIOVASCULAR .....	66
DIAGNOSTIC- CARDIOVASCULAR.....	67
DIAGNOSTIC - CARDIOVASCULAR.....	68
DIAGNOSTIC.....	69
DIAGNOSTIC TEST .....	69
DIALYSIS.....	70
DIET .....	71
DIGITAL SCANNER .....	71
DISINFECTANT - IODINE .....	71
DRUG ABUSE DETECTION .....	73
DRUG DELIVERY .....	74
DRUG DELIVERY .....	74
DRUG DELIVERY .....	75
DRUG DELIVERY .....	76
DRUG DELIVERY STENT.....	78
DRUG DELIVERY TRANSDERMAL.....	79
DRUG DELIVERY TRANSDERMAL.....	79
ELECTRONIC IMAGING .....	80
HEARING AID.....	80
HEARING AID.....	81
HEARING AID.....	81
HEMODIALYSIS MACHINE TOUCHSCREEN INTERFACE .....	83
HIV DETECTION.....	83
HIV TEST.....	84
LASERS FOR COSMETIC SURGERY .....	85
LASER FOR CARPAL TUNNEL SYNDROME .....	86
LASER FOR DERMATOLOGY AND OPHTHALMOLOGY.....	87
LASER FINGER PERFORATOR TECHNOLOGY .....	87
LASER HAIR REMOVAL .....	88
LASER SURGERY FOR VISION .....	89
LIPOSUCTION.....	92
MAGNETIC RESONANCE IMAGING.....	93
MAGNETIC RESONANCE IMAGING SYSTEMS CONTRAST AGENT .....	93
MATTRESS.....	94
MICROGRAVITY INSTRUMENTS .....	95
MONITORING.....	95
MRI .....	96
NEUROMODULATION.....	98
NITRIC OXIDE THERAPY.....	99
NUTRITIONAL FORMULATION .....	100
NUTRITIONAL SUPPLEMENTS .....	101
OPHTHALMIC WATER JET SURGERY .....	101
PETSCAN.....	104
PERSONAL CARE PRODUCTS .....	105
OBESITY THERAPY .....	107
OPHTHALMIC THERAPY.....	107
OPHTHALMIC THERAPY.....	109
PACEMAKER SETTLEMENT OF \$300 MILLION.....	110

Royalty Rates for Medical Devices & Diagnostics – 2016 Edition

POLYMER - BIOMEDICAL.....110  
PROSTATE TREATMENT.....110  
RADIATION THERAPY.....111  
RADIATION THERAPY BREATHING MOTION MANAGEMENT .....112  
SKIN BARRIER REPAIR .....112  
SKIN CARE .....113  
SKIN CARE .....113  
SKIN TREATMENT .....113  
SPINAL IMPLANTS .....113  
SPINAL IMPLANTS .....114  
SPINAL IMPLANTS .....114  
SYRINGE DISPOSAL .....115  
SYRINGE.....115  
SYRINGE.....115  
SAFETY SYRINGE .....116  
SURGICAL DEVICE .....116  
SURGICAL DEVICE .....117  
SURGICAL DEVICE .....117  
SURGICAL PROCEDURE .....118  
TISSUE GROWTH AND REPAIR .....119  
TRANSCATHETER VALVE TECHNOLOGY .....120  
VASCULAR CLOSURE DEVICE .....120  
VASCULAR CLOSURE DEVICE .....121  
VASCULAR CLOSURE DEVICE .....121  
VOIDING DYSFUNCTION THERAPY .....122  
WOUND CLOSURE .....123  
X-RAY PRODUCT .....124

**THE MAGNITUDE AND MEANING OF ROYALTY MISREPORTING .....125**  
**COMPANY INDEX .....130**