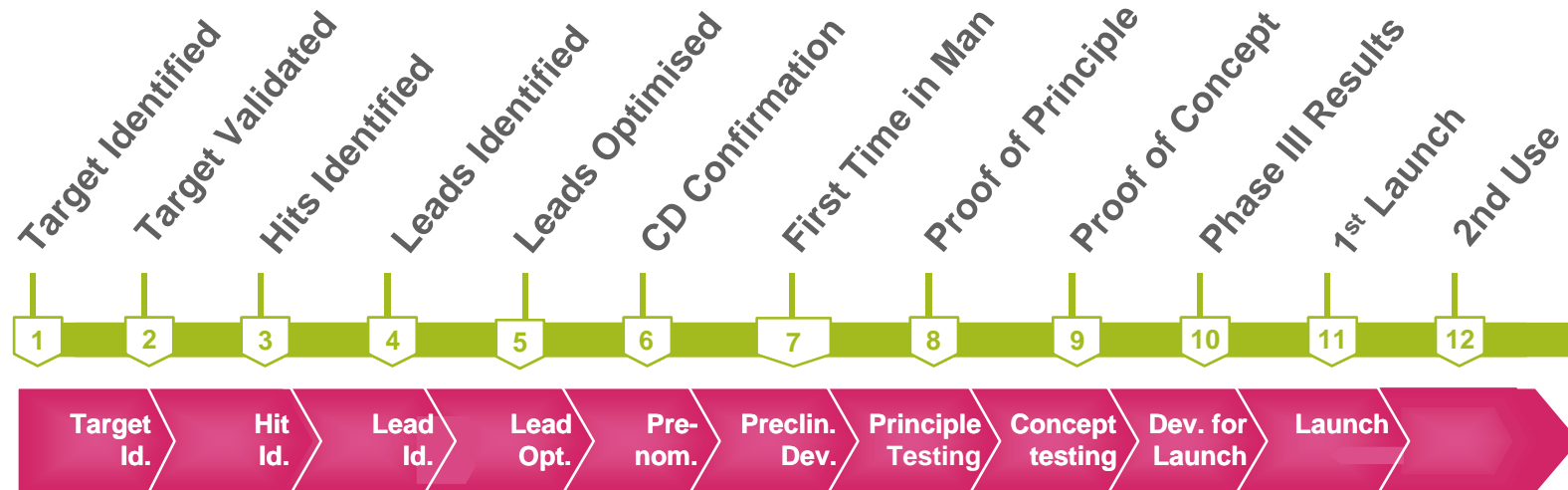


THE INNOVATION PROCESS AND PATENTING

Dr PAUL DENERLEY

INNOVATION PROCESS



(illustration)

TYPICAL PATENT PORTFOLIO

- ▶ **Compound (class; specific)**
- ▶ **Salt**
- ▶ **Physical form**
- ▶ **Chemical process**
- ▶ **Medicinal Use**
- ▶ **Combination with other compounds**
- ▶ **Dosage regimes**
- ▶ **Formulations**
- ▶ **Device**

LIST OF THE TOP 20 PCT APPLICANTS IN 2007

2007 RANKING	POSITION CHANGED	APPLICANT'S NAME	COUNTRY OF ORIGIN	PCT APPLICATIONS PUBLISHED IN 2007	INCREASED OVER 2006
1	1	MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD	JP	2100	-244
2	-1	KONINKLIJKE PHILIPS ELECTRONICS N.V.	NL	2041	-454
3	0	SIEMANS AKTIENGESELLSCHAFT	DE	1644	164
4	9	HUAWEI TECHNOLOGIES CO., LTD	CN	1365	790
5	0	ROBERT BOSCH GMBH	DE	1146	184
6	2	TOYOTA JIDOSHA KABUSHIKI KAISHA	JP	997	293
7	5	QUALCOMM INCORPORATED	US	974	366
8	38	MICROSOFT CORPORATION	US	845	603
9	1	MOTOROLA INC.	US	824	187
10	-6	NOKIA CORPORATION	FI	822	-214
11	-4	BASF AKTIENGESELLSCHAFT	DE	810	94
12	-6	3M INNOVATIVE PROPERTIES COMPANY	US	769	42
13	3	LG ELECTRONICS INC.	KR	719	152
14	1	FUJITSU LIMITED	JP	708	137
15	6	SHARP KABUSHIKI KAISHA	JP	702	206
16	12	NEC CORPORATION	JP	626	253
17	-8	INTEL CORPORATION	US	623	-67
18	4	PIONEER CORPORATION	JP	611	117
19	10	INTERNATIONAL BUSINESS MACHINES CORPORATION	US	606	241
20	0	SAMSUNG ELECTRONICS CO., LTD	KR	598	93

LIST OF THE TOP 20 PCT APPLICANTS IN 2007 (PHARMACEUTICALS)

2007 RANKING	POSITION CHANGED	APPLICANT'S NAME	COUNTRY OF ORIGIN	PCT APPLICATIONS PUBLISHED IN 2007	INCREASED OVER 2006
34	16	NOVARTIS AG	CH	342	115
38	9	ASTRAZENECA AB	SE	299	59
55	3	F. HOFFMANN-LA ROCHE AG	CH	232	33
65	-9	MERCK & CO., INC	US	205	2
68	-9	WYETH	US	188	-8
92	-21	MERCK PATENT GMBH	DE	155	-16
93	-7	GLAXO GROUP LIMITED	GB	153	9
109	-21	BRISTOL-MYERS SQUIBB COMPANY	US	137	-2
121	28	ABBOTT LABORATORIES	US	118	28
127	61	SMITHKLINE BEECHAM CORPORATION	US	115	40
133	19	TEVA PHARMACEUTICALS INDUSTRIES LTD	IL	111	22
140	-47	NOVO NORDISK A/S	DK	106	-28
143	-14	PFIZER PRODUCTS INC.	US	105	6
155	1	SCHERING CORPORATION	US	94	8
158	-58	BAYER HEALTHCARE AG	DE	91	-37
179	-22	ALLERGAN, INC.	US	83	-2
199	41	AMGEN INC.	US	75	15
214	171	EISAI R&D MANAGEMENT CO., LTD	JP	70	31
232	-48	TAKEDA PHARMACEUTICALS COMPANY LIMITED	JP	67	-9
237	113	SANOFI-AVENTIS	FR	66	23

SUMMARY

- ▶ **Strong patent system underpins investment in pharmaceutical R&D**
- ▶ **Over 20 years effort in a high tech arena**
- ▶ **100s/1000s skilled scientists**
- ▶ **Science does not stand still**
- ▶ **\$1.2 billion to bring drug to market**
- ▶ **Typically more than one ‘product’**
- ▶ **Patenting innovation is legitimate and necessary for a competitive pharmaceutical sector**