Editorial

Publications in Cell Death: the golden age

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Apoptosis or Programmed Cell Death has been among the fastest growing fields in the last decade. Indeed, the number of publications has increased from fewer than 100 in 1990 to over 13 000 in 2000, see Figure 1.

The total number of publications over this decade to date is 55 074, and a log scale has been used to demonstrate that the current trend seems to be reaching a plateau (Figure 1). The current number of papers per year (13 000) corresponds to about 1.8% of all papers published in life sciences, an extraordinary proportion. Is this plateau real and does it predict a subsequent decrease? More importantly, to what extent does this reflect a true plateau of the importance with which scientists view cell death or does it merely represent an increase in the quality of published manuscripts? In general, 40% of all publications receive no citations in the subsequent literature, and two thirds of them receive less than two citations.¹ Nevertheless, the immense expansion over the last decade is witness to the perceived relevance of the area, and the corresponding spread into the understanding of molecular mechanisms together with its relationships with other relevant areas of biology including practical medical applications.

Figure 1 Number of publications per year on 'apoptosis' or 'cell death'. The value for the year 2000 (13 052) has been predicted based on the first 38 weeks (9538). Data are from Web of Science-ISI, Philadelphia, PA (2000)

Out of 10^{14} cells in the human body, about 10^7 are now known to undergo apoptosis daily. This awareness is reflected in the shift in regard of apoptosis from a curiosity (in the 1980s) to a highly relevant biological event, whose inappropriate regulation leads to an array of pathologies. The 'Golden Age' of the Nineties has left all of us with a detailed knowledge of molecular mechanisms, for example, the families of Bcl-2, caspases, DNA damage pathways, signaling cascades, receptor regulation, cell cycle, mitochondria and regulation of cell clearance. This leap in academic understanding has expanded into more practical areas such as the role of apoptosis in development and in pathologies of the neuronal and immune systems. Further

Figure 2 Performance of *Cell Death and Differentiation* on a 5-year basis. (A) Total number of papers published every 5 years. (B) Total number of citations every 5 years. (C) Average number of citations per paper on a 5-year basis. Data are from ISI, Philadelphia, PA (2000)

detailed description of these aspects is to be found in more specialized reviews (see for reviews²⁻¹¹).

Cell Death and Differentiation (CDD) was started in 1994 to act as a forum for this new field. Figures 2 and 3 show how the journal has gradually but continuously increased its number of papers, total number of citations, and most

Figure 3 Number of papers received (lower columns, in black) and published (upper columns, in grey) in *Cell Death and Differentiation* every year. The figure shows only papers, not added material (e.g. editorial, meeting reports, book reviews, letters). The rejection rate is based on final decision, not on the first evaluation. The rejection rate is also based on the year, even though material received in autumn, and often in summer, ends in the following year. The value for the year 2000 has been predicted based on the first 40 weeks

Table 1 Citation of *Cell Death and Differentiation*

A. Journals cited in CDD

Rank	Journal	Cites	Cites/paper
1.	Cell	1923	3.76
2.	J Biol Chem	1785	1.81
3.	Nature	1341	3.13
4.	Science	1224	2.94
5.	PNAS	1193	1.73
6.	Cancer Res	660	1.80
7.	EMBO J	658	2.33
8.	J Immunol	587	1.75
9.	J Exp Med	495	2.55
10.	CDD	490	2.47

B. Journals (other than CDD) that have cited CDD

Rank	Journal	Papers*
1.	J Biol Chem	117
2.	BBRC	58
3.	Exp Cell Res	51
4.	Oncogene	50
5.	FEBS Lett	46
6.	Cancer Res	42
7.	Blood	32
8.	J Immunol	30
9.	PNAS	30
10.	EMBO J	26

*Each paper contains more than one citation. Data are from ISI, Philadelphia, PA (2000)

importantly its quality over time, reaching 6.19 citations per paper (Figure 2C). The journal is cited by, and cites, all relevant and respected scientific media (Table 1), with some CDD papers achieving impressive numbers of citations/paper (Table 2). Despite some technical difficulties, such as for example a late entry into PubMed (see Table 3), the journal is now a major reference for its field. This has been achieved only through synergistic efforts between all editors and the publisher, to whom CDD is greatly indebted. The plan for the future aims to strengthen further the role of *Cell Death and Differentiation* in the scientific community.

For this coming year the journal will improve its organization. First, the Editorial Board will have new members. We therefore welcome J Abrams (US), S Lipton (US), M Peter (US), D Altieri (US), H Ichijo (J), M Naito (J), M Miura (J), RC Bleackley (CAN) and JC Martinou (CH). Special thanks goes to those editors who have left the journal this year, as part of the normal rotation which allows for the introduction of new blood. As in previous years, collaboration with ex-editors will actively continue but on a less formal level. Second, a new Editorial Office will be opened in Tokyo, and will include both Japanese and Australian Editors. Third, the journal has recently opened a new section for airing discussion and comment of topical issues. Fourth, as every year, the journal will strive to continue the improvement at both the scientific and editorial levels. All three offices will further improve speed and homogeneity of decision, while the publisher will continue to improve marketing and develop new media technologies. Finally, the journal will continue to publish parallel reviews aimed at summarizing the current state of knowledge. Some of the recent areas covered include mitochondria

Table 2 Citation of papers published in *Cell Death and Differentiation*

Rank	Author	Cites	Cites/paper
1.	Reed JC	173	12.36
2.	Kumar S	140	15.56
3.	Orrenius S	121	7.12
4.	Green DR	119	10.82
5.	Lavin MF	115	23.00
6.	Krammer PH	112	11.20
7.	Peter ME	89	14.83
8.	Tilly JL	85	17.00
9.	Helbardt S	78	39.00
10.	Perez	74	18.50
11.	Martin SJ	72	12.00
12.	Sikorska M	72	18.00
13.	Walker PR	72	18.00
14.	Briehl MM	68	22.67
15.	Gougeon ML	66	22.00
16.	Krajewski S	66	13.20
17.	Kroemer G	65	21.67
18.	Cotter TG	63	7.88
19.	McGahon AJ	63	15.75
20.	Kolesnick RN	62	31.00
21.	Lockshin RA	61	12.20
22.	Chinnaiy AM	59	29.50
23.	Dixit VM	59	59.00
24.	Kischekl FC	59	59.00
25.	Nobel I	59	29.50

Data are from ISI, Philadelphia, PA (2000)

Table 3 Most cited papers in *Cell Death and Differentiation*

Rank	Cites		Author	Ref	Title
	Real	Expected			
1.	104	22.5	Kumar S	96. 3:255	The ICE family of cyst
2.	63	16.6	Kroemer G	87. 4:443	Mitochondrial implicat
3.	59	22.5	Peter ME	96. 3:161	CD95 assoc
3.	59	22.5	Slater AFG	96. 3:57	Intracellular redox ch
5.	53	20.6	Walker PR	95. 2:97	Degradation of chromatin
6.	48	20.6	Zakeri Z	95. 2:87	Cell death programme
7.	47	17.6	Polakowska RR	94. 1:19	Apoptosis: the skin
8.	42	22.5	Dowson VL	96. 3:71	Free radicals and neuro
9.	40	17.6	Bobrug SE	95. 2:173	Biochemical and function
9.	40	20.6	Gougeon ML	95. 2:1	Does apoptosis contribute
9.	40	17.6	Martin SJ	95. 2:253	Inhibition of ceramide

Attention: none of these papers is listed in Medline. Data are from ISI, Philadelphia, PA (2000)

(see for example^{12–17}), *Drosophila* apoptosis (see for example^{18–21}), neurodegeneration (see for example^{22–24}), the p53 family (see for example^{25,26}), and caspases (see for example^{27–29}).

At the beginning of this new millennium, *Cell Death and Differentiation* would like to take this opportunity to thank sincerely all readers, contributors, editors, assistants and publishers for their time and effort dedicated to making it a success, and looks forward with pleasant anticipation to continuing to improve our positive interaction in the future.

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