



Publication Analysis 1996-2006



Gastroenterology and Hepatology

Germany dominated European research on the digestive system. The highest citation-per-article ratios, however, were achieved by the Scandinavian nations. “Hottest” topics were hepatitis C and Morbus Crohn.

Gastroenterology and hepatology are clinical disciplines, that’s for sure. This, however, doesn’t necessarily mean that only researchers from clinical institutes are interested in topics to do with the liver, stomach, intestine and pancreas.

Take the liver, for example. It’s not exactly news that the largest organ in the human body is the prime target for hepatitis viruses. Does this mean we would also have to include virology specialists in our publication analysis on gastroenterology and hepatology? A difficult question. However, our response elegantly skirted around the answer. None of the researchers from our earlier analysis on “virus research” (*Lab Times* 1/2006, pp. 34-36) collected a high enough citation number with their publications 1996-2006 to make it into the top 30 list of Europe’s most-cited researchers in gastroenterology and hepatology (see table p. 42).

Successful “cross-invaders”

Somewhat more success was achieved by human geneticists primarily working on susceptibility genes for diseases of the digestive system. Two of them actually leaped into the Top 30: Gilles Thomas (27th), a specialist geneticist for Morbus Crohn of the Foundation Jean Dausset, Human Polymorphism Study Center in Paris, and Stefan Schreiber (22nd) from the Institute for Clinical Molecular Biology in the University of Kiel, who is working on genetic polymorphisms associated with inflammatory bowel disease and other diseases of the digestive organs.

Three more “cross invaders” from other disciplines remained: Bile salt transport expert Peter Meier (17th), who left his chair of Clinical Pharmacology and Toxicology at the University Hospital Zurich on 1st April 2005 to become Vice-Rector at the University of Basel; biochemist Dietrich Keppler (26th) from the German Cancer Research Center in

Heidelberg who studies multidrug resistance proteins in the liver; and German pathologist Manfred Stolte (9th) from Bayreuth hospital who published his most-cited papers about *Helicobacter* infection and gastric ulcers.

The remaining 25 positions in the Top 30 are occupied by clinicians, working almost exclusively in departments of internal medicine (gastroenterology and hepatology) or departments of surgery.

Dominated by clinical researchers

No wonder, therefore, that clinical researchers dominated even more clearly the particular gastroenterology and hepatology journals which we recruited to analyse the publication performances of individual countries in research on structure, function and diseases of the digestive system (see tables on p. 41).

The basis for this analysis were the 50 journals listed under the gastroenterology and hepatology category of the *Journal Citation Report* by bibliometric database provider Thomson Scientific. Regrettably, we had to exclude multidisciplinary journals such as *Nature* and *The Lancet* from this part of the analysis since Thomson Scientific’s “Web of Science” citation database provides no tools to reliably extract articles pertaining only to gastroenterology and hepatology. Indeed, the most prominent papers in the field might thus have been omitted from this part of the analysis. However, we believe that the countries’ performances in expert journals alone suffice to provide valid indicators for their overall productivity in gastroenterology and hepatology research between 1996 and 2006.

When applying this approach, it surely comes as a little surprise that Germany emerged as Europe’s number one in gastroenterology and hepatology research, partic-



ularly since the country's system of clinical research has constantly been under fire for its presumed inefficiency and lack of quality. Our analysis doesn't support this view – at least for the gastroenterology and hepatology side of clinical research. Articles in specialist journals with at least one co-author from Germany collected the highest total number of citations to date. Furthermore, Germany didn't simply achieve this top rank just because it "co-authored" the most articles. In fact, their English colleagues published slightly more articles in specialist journals between 1996 and 2006, which, in turn, have been cited less frequently on average than those co-authored by researchers from Germany.

Strong Italians ... and even stronger Japanese

A very strong third place was achieved by Italy leaving France a considerable distance behind, in fourth place.

When taking a look at the average citation rate per article for each country, as in many previous analyses, Scandinavia steps into the limelight. The clear race leader is Finland with 14.7 citations per article in the gastroenterology and hepatology journals, followed by Sweden (13.8), Denmark (13.6) and Norway (12.5). The best non-Scandinavian country is Switzerland with 11.7 citations per article.

Extending the analysis beyond Europe, another surprise might be that European researchers clearly outran their US colleagues by number of citations and, in particular, by number of articles. As in almost all preceding analyses, however, US authors performed better by average citation rate per article.

A particularly strong result, when compared to the analyses of other life science disciplines in former *Lab Times* issues, was achieved by Japan, which even outperformed Europe's number one, Germany.

However, let's go back to the Top 30 list of Europe's most highly cited gastroenterology and hepatology researchers. Given the country's strong performance in the international analysis it isn't unexpected that exactly half of the Top 30 researchers was working in Germany during 1996 and 2006. Among them is the clear-cut leader of the list, Michael P. Manns, from Hannover Medical School.

It is somewhat surprising, however, that the two next best countries brought only three researchers into the list: England two and Italy one. On the other hand, six researchers from France achieved ranks among the Top 30 and three from the Netherlands (at places 3, 5 and 7).

And cancer?

What do the top authors and top papers (see table p. 42) finally tell us about the "hot" research topics of gastroenterology and hepatology? Well, apparently it is not colon cancer, hepatocarcinoma or another tumour disease of the digestive organs. According to our publication analysis, the five most-cited "heads" place their main research focus on hepatitis C or Morbus Crohn, an autoimmune disease of the gastrointestinal tract. The four most-cited papers also present two studies each on hepatitis C and Morbus Crohn.

That doesn't necessarily mean that cancers of the digestive tract are of lower interest to gastroenterology and hepatology researchers. It seems likely, however, that the specialists from definite tumour research dominate those projects.

We will be checking this in a future issue, when analysing the publication output of European cancer research.

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Europe...

Country	Citations	Articles	Cit./Art.
1. Germany	137,842	15,274	9.0
2. England	127,801	15,324	8.3
3. Italy	113,430	12,285	9.2
4. France	96,842	10,615	9.1
5. Netherlands	57,207	5,027	11.4
6. Spain	56,609	6,530	8.7
7. Sweden	40,291	2,928	13.8
8. Belgium	35,804	3,128	11.5
9. Switzerland	30,584	2,614	11.7
10. Denmark	24,830	1,830	13.6
11. Scotland	17,240	2,085	8.3
12. Finland	15,592	1,059	14.7
13. Austria	14,747	1,534	9.6
14. Ireland	14,516	1,606	9.0
15. Israel	12,678	1,673	7.6
16. Greece	11,593	1,755	6.6
17. Norway	11,547	921	12.5
18. Turkey	6,911	1,810	3.8
19. Poland	5,895	1,099	5.4
20. Portugal	4,666	567	8.2

Articles appearing between 1996 and 2006 in gastroenterology and hepatology journals as listed by Thomson Scientific. Their citation numbers were recorded up until July 2008. A country's figures are derived from articles where at least one author working in the respective European nation is included in the author's list. Israel is included because it is a member of many European research organisations (EMBO, FEBS etc.), and also participates in the EU Research Framework Programmes.

... and the World

	Citations	Articles	Cit./Art.
Europe	678,999	82,623	8.2
USA	533,840	57,732	9.2
Japan	154,773	22,667	6.8
Canada	70,636	6,288	11.2
Australia	51,756	4,037	12.8
China	17,230	2,019	8.5
South Korea	12,095	2,607	4.6



Publication Analysis 1996-2006 – Gastroenterology and Hepatology

Most Cited Authors...

	Cit-ations	Art-icles		
1. Michael P. Manns , Gastroenterol. & Hepatol., Hannover Med. Sch.	15,700	668		
2. Thierry Poynard , Hepato-Gastroenterol., Univ. Hosp. Paris	13,738	235		
3. Paul J. Rutgeerts , Gastroenterol., Univ. Hosp. Leuven	13,080	286		
4. Markus W. Büchler , Visceral & Transplantat. Surg., Univ. Heidelberg	12,804	682		
5. Sander J.H. van Deventer , Exp. Med., Med. Ctr. Univ. Amsterdam	11,672	245		
6. Joan Rodés , Liver Unit, IDIBAPS, Univ. Hosp. Barcelona	10,643	277		
7. Guido N. Tytgat , Gastroenterol. & Hepatol., Univ. Amsterdam	9,782	342		
8. Dieter Häussinger , Gastroenterol. & Hepatol., Univ. Hosp. Düsseldorf	9,709	352		
9. Manfred Stolte , Pathol., Bayreuth Hosp. (Ger)	9,432	354		
10. Jean-Frédéric Colombel , Hepatogastroenterol., Univ. Hosp. Lille	9,377	216		
11. Christian Trepo , Hepato-Gastroenterol., Hosp. Hôtel-Dieu Lyon	9,305	291		
12. Helmut Friess , Gen. Surg., Tech. Univ. Munich	9,214	403		
13. Stefan Zeuzem , Internal Med., Univ. Frankfurt	9,010	241		
14. Giovanni Gasbarrini , Internal Med., Univ. Sacred Heart Rome	8,825	519		
15. Christopher J. Hawkey , Wolfson Digest. Dis. Ctr., Univ. Nottingham	8,664	167		
16. Jürgen Schölmerich , Internal Med., Univ. Regensburg	8,303	532		
17. Peter J. Meier , Clin. Pharmacol. Toxicol., Univ. Hosp. Zurich (now Basel)	8,011	154		
18. Roger Williams , Hepatol., Univ. Coll. London	7,918	286		
19. Patrick Marcellin , Hepatol., Hosp. Beaujon Clichy Univ. Paris	7,696	160		
20. Peter Neuhaus , Surg., Hosp. Charité Humboldt Univ. Berlin	7,511	584		
21. Paule Opolon , Inst. Gustave Roussy Villejuif	7,476	139		
22. Stefan Schreiber , Clin. Mol. Biol., Dept. Med. Univ. Kiel	7,282	207		
23. Peter R. Galle , Internal Med., Univ. Hosp. Mainz	7,107	216		
24. Guido Adler , Gastroenterol., Internal Med. Univ. Ulm	6,988	289		
25. Gilles Thomas , Med. Genet., Found. J. Dausset INSERM Univ. Paris	6,903	100		
26. Dietrich Keppler , German Canc. Res. Ctr. Heidelberg	6,644	84		
27. Penti Sipponen , Pathol., Univ. Hosp. Helsinki	6,627	114		
28. Eckhart G. Hahn , Dept Med 1, Univ Erlangen Nurnberg	6,612	457		
29. Hans G. Beger , Gen. Surg. Univ. Hosp. Ulm	6,414	311		
30. Wolfgang Stremmel , Gastroenterol. & Hepatol. Univ. Heidelberg	6,311	220		

Citations of articles published between 1996 and 2006 were recorded until May 2008 using the database *Web of Science* from Thomson Scientific. The "most cited papers" had correspondence addresses in Europe or Israel.

... and Papers

	Citations
1. Manns, MP; McHutchison, JG; Gordon, SC; ...; Albrecht, JK Peginterferon alpha-2b plus ribavirin compared with interferon alpha-2b plus ribavirin for initial treatment of chronic hepatitis C: a randomised trial. <i>LANCET</i> , 358 (9286): 958-965 SEP 22 2001	1,939
2. Hugot, JP; Chamaillard, M; Zouali, H; ...; Colombel, JF; Sahbatou, M; Thomas, G Association of NOD2 leucine-rich repeat variants with susceptibility to Crohn's disease. <i>NATURE</i> , 411 (6837): 599-603 MAY 31 2001	1,777
3. Poynard, T; Marcellin, P; Lee, SS; Niederau, C; ...; Zeuzem, S; Trepo, C; Albrecht, J Randomised trial of interferon alpha2b plus ribavirin for 48 weeks or for 24 weeks versus interferon alpha2b plus placebo for 48 weeks for treatment of chronic infection with hepatitis C virus. <i>LANCET</i> , 352 (9138): 1426-1432 OCT 31 1998	1,506
4. Poynard, T; Bedossa, P; Opolon, P Natural history of liver fibrosis progression in patients with chronic hepatitis C. <i>LANCET</i> , 349 (9055): 825-832 MAR 22 1997	1,208
5. Dieterich, W; Ehnis, T; Bauer, M; Donner, P; Volta, U; Riecken, EO; Schuppan, D Identification of tissue transglutaminase as the autoantigen of celiac disease. <i>NATURE MEDICINE</i> , 3 (7): 797-801 JUL 1997	764