



A. Hepatica

THE LIVER GROUP
ANNUAL REPORT AND ACCOUNTS
FOR THE YEAR ENDED 31 DECEMBER 2002

Charity Registration Number 1024533

BEEVER AND STRUTHERS
Registered Auditors

THE LIVER GROUP
TRUSTEES REPORT
IN RESPECT OF THE ACCOUNTS
FOR THE YEAR ENDING 31 DECEMBER 2002

Legal and administrative information

Patron:	The Rt Hon Lord Bingham of Cornhill, Senior Law Lord
Trustees:	Jeff Faulkner FCCA Kay Glendinning MBE Prof Humphrey Hodgson FRCP, F Med Sci Prof David Kerr CBE Prof Sir Roger Penrose OM FRS Clare Selden PhD
Principal office:	The Liver Group Centre for Hepatology Department of Medicine Royal Free Campus Royal Free and University College Medical School Rowland Hill Street Hampstead London NW3 2PF
Charity registration number:	1024533
Bankers:	HSBC Oxford Circus Branch 196 Oxford Street London W1A 1EZ
Auditors:	Beever and Struthers Chartered Accountants Alperton House Bridgewater Road Wembley Middlesex HA0 1EH

Generally, the charity is established for the relief of patients suffering from disease of, and genetic defects affecting, the liver and the promotion of research into the causes and treatment of diseases of the liver.

THE LIVER GROUP

CHAIRMAN'S REPORT IN RESPECT OF THE ACCOUNTS FOR THE YEAR ENDING 31 DECEMBER 2002

This has been a year of steady progress toward our aim to improve the treatment of liver disease through understanding and harnessing the natural biology of liver cells.

Our supporters know that the major aim is to create an artificial liver – a system outside the body which would serve to replace the function of a diseased and failing liver, buying time to allow natural healing to occur. For the last few years we have concentrated on the essential component of that artificial liver cell – a compact collection of living cells, the hepatocytes, the factory cells of the liver, growing in a tiny spherical capsule. This system, which we have developed, provides important advances over previous approaches to providing the living cell component of an artificial liver.



The capsules are convenient, and can be grown in one laboratory and readily moved to where they would be needed at the bedside. They can be frozen and thawed with recovery of the function of the cells, and in many ways the function of each cell is as good in this artificial environment as in the body. We have shown in the laboratory that these cells will provide useful function when used in a chamber perfused with liver-failure blood, mimicking the role they will have to play in a bio-artificial liver at the bedside. Analysing the requirements of these cells in these artificial capsules, understanding the changes in their metabolism as they adapt to growth in this artificial milieu, and perfecting the

environment so that the milieu in which they grow is as natural as possible, is an area of steady progress in the unit. We have invested in new equipment and can now culture billions and billions of these cells in sterile bioreactors.

At the same time, scientific progress has highlighted an allied area of enormous potential – the availability and utility of stem cells that exist in a simple primitive form, but in the right environment can be grown in huge numbers and then matured into – in the case of the interests of our group – hepatocytes. We now have an active research programme in this area – working specifically on adult stem cells. We see enormous advantages in our approach. One is that studying stem cells from adult tissues (we only study human tissues that have been taken at operations as an essential part of treatment) avoids the difficult controversies that arise in the study of embryonic stem cells. Another – and very exciting advantage – is that we are beginning to have considerable success in growing and maturing liver cells from these adult tissues. The potential advantages of a reliable source of stem cells, to provide the cells for a bio-artificial liver, as well as their use for treating genetic disorders, are immense.

As always we are immensely grateful to our supporters. The funds provided from the Liver Group are all devoted to our aim of improving the treatment of liver disease. At a time when the core funding in Universities and government agencies is under increasing strain, it is our supporters who make scientific progress possible.

Humphrey Hodgson *FRCP, F Med Sci.*
Chairman

THE LIVER GROUP
TRUSTEES REPORT
IN RESPECT OF THE ACCOUNTS
FOR THE YEAR ENDING 31 DECEMBER 2002

The Trustees present their report, together with the audited accounts, for The Liver Group for the year ended 31 December 2002.

Constitution

The Liver Group is a registered charity constituted under a Trust Deed dated 28 May 1993.

Principal aims and activities

The principal activity of the charity is the project being conducted to develop an artificial liver. The artificial liver project is being carried out with the funds raised for the continuing “Liver for Life” Appeal.

Reserves policy

Except for such funds as the trustees consider prudent to maintain for the purposes of management and administration of the charity for the foreseeable future, all unrestricted funds are designated for the purposes of the “Liver for Life” project and the general charitable objects of the charity.

Trustees’ responsibilities statement

Charity legislation requires the trustees to prepare accounts of the charity for each financial year. In accordance with the Trust Deed, such accounts are required to be subject to audit. In so doing, the trustees are required to prepare accounts which show a true and fair view of the state of affairs of the charity and of the application of its resources for the financial period. In preparing those accounts, the trustees:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- follow applicable Accounting Standards;
- prepare the accounts on the going concern basis unless it is inappropriate to presume that the charity will continue in operation.

In accordance with charity legislation, the trustees are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time, the financial position of the charity. They are also responsible for safeguarding the assets of the charity and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Signed on behalf of the trustees:

Humphrey Hodgson
Trustee

**REPORT OF THE INDEPENDENT AUDITORS
TO THE TRUSTEES OF
THE LIVER GROUP**

We have audited the financial statements on pages 5 to 8. These financial statements have been prepared under the historical cost convention and the accounting policies set out therein. We have been appointed as Auditors under Section 43 of the Charities Act 1993 and report in accordance with Regulations made under Section 44 of that Act.

Respective Responsibilities of the Trustees and Auditors

The Trustees responsibilities for preparing the Annual report and the financial statements in accordance with applicable law and United Kingdom Accounting Standards are set out in the Statement of the Trustees Responsibilities.

Our responsibility is to audit the financial statements in accordance with relevant legal and regulatory requirements and United Kingdom Auditing Standards. This report is made solely to the Trustees, as a body, in accordance with Section 43 of the Charities Act 1993. Our audit work has been undertaken so that we might state to the Trustees those matters we are required to state to them in an auditors report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Trustees as a body, for our audit work, for this report or for the opinions we have formed.

We report to you our opinion as to whether the financial statements give a true and fair view, of the state of affairs as at the year end, and of the incoming resources and application of resources of the charity in that year, and comply with Regulation 3 of the Charities (Accounts and Reports) Regulations 2000. We also report to you if, in our opinion, the accounting records have not been kept in respect of the charity in accordance with Section 41 of the 1993 Charities Act, if the statement of accounts do not accord with the records of the charity, if any information contained in the statement of accounts is inconsistent in any material respect with any report of the charity Trustees prepared under Section 45 of the Charities Act 1993, and if any information or explanations to which we are entitled have not been given to us. We will also report to you if the accounts do not comply with the Trust Deed of the Charity.

We will communicate to the Charity Commissioners any matter of which we come aware which relates to the activities or affairs of the charity which is likely to be of material significance to the Charity Commissioners.

We read information contained in the Annual Report, and consider whether it is consistent with the audited financial statements. This information comprises only the Trustees Report. We consider the implications for our report if we become aware of any apparent misstatements or material inconsistencies with the financial statements. Our responsibilities do not extend to any other information.

Basis of Opinion

We conducted our audit in accordance with United Kingdom Auditing Standards issued by the Auditing Practices Board. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures in the financial statements. It also includes an assessment of significant estimates and judgements made by the Trustees in the preparation of the financial statements, and of whether the accounting policies are appropriate to the charity's circumstances, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other irregularities or error. In forming our opinion we also evaluated the overall adequacy of the presentation of the information in the financial statements.

Opinion

In our opinion the financial statements give a true and fair view of the state of affairs as at 31 December 2002 and of the incoming resources and the application of resources of the charity for that year, have been properly prepared in accordance with the Charities Act 1993 and comply with Regulation 3 of the Charities (Accounts and Report) Regulations 2000.

Alperton House
Bridgewater Road
Wembley
Middlesex HA0 1EH

Beever and Struthers
Chartered Accountants
Registered Auditors
An auditor under S43(2)(a) of the Charities Act 1993

Date

THE LIVER GROUP
STATEMENT OF FINANCIAL ACTIVITIES
FOR THE YEAR ENDED 31 DECEMBER 2002

	Notes	Unrestricted funds £	Restricted funds £	Total 2002 £	Total 2001 £
Incoming resources					
Donations		260,448	36,500	296,948	36,525
Bank interest receivable		49,382	-	49,382	65,210
Incoming resources for year		<u>309,830</u>	<u>36,500</u>	<u>346,330</u>	<u>101,735</u>
Resources expended					
	1				
Direct charitable expenditure					
Research expenditure - UCL		180,145	36,493	216,638	140,596
Management and administration of the charity		2,369	-	2,369	2,540
Resources expended		<u>182,514</u>	<u>36,493</u>	<u>219,007</u>	<u>143,136</u>
Net incoming (outgoing) resources for the year		127,316	7	127,323	(41,401)
Fund balances at 1 January 2002		1,258,969	32,742	1,291,711	1,291,711
Fund balances at 31 December 2002		<u>1,386,285</u>	<u>32,749</u>	<u>1,419,034</u>	<u>1,291,711</u>

**THE LIVER GROUP
BALANCE SHEET
AS AT 31 DECEMBER 2002**

	Notes	2002 £	2001 £
Current assets			
Interest receivable		20,943	65,137
Other debtors		783	783
Cash at bank			
- Current account		2,715	2,181
- On short-term deposit		1,445,628	1,319,399
		1,470,069	1,387,500
Less: Creditors			
Amounts falling due within one year			
Amount due to UCL		49,135	93,968
Other		1,900	1,821
		51,035	95,789
Net current assets		1,419,034	1,291,711
Financed by			
Unrestricted funds			
- General		186,285	58,969
- Designated	2	1,200,000	1,200,000
Restricted funds	3	32,749	32,742
Total funds		£1,419,034	£1,291,711

These Accounts were approved by the Trustees on 26 June 2003 and signed on their behalf by:-

Clare Selden
Trustee:

'Liver for Life' Appeal – Five Year Projections (2003-2007)

Research salaries	1,000,000
Consumables	900,000
Equipment budget	500,000
Research presentations	25,000
Administration of charity	35,000
	£2,460,000
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These projections do not form part of the audited accounts of the charity.

THE LIVER GROUP
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR TO 31 DECEMBER 2002

PRINCIPAL ACCOUNTING POLICIES

Basis of accounting

The accounts have been prepared under the historical cost convention and in accordance with applicable Accounting Standards and the Statement of Recommended Practice, Accounting and Reporting by Charities issued by the Charity Commission.

Voluntary income

Donations represent voluntary amounts received during the period and arise within the United Kingdom. Covenant and Gift-Aid income is included gross of attributable tax recoverable.

Investment income

Interest receivable is credited to income in the period in which it is earned and is included gross of attributable tax recoverable.

Expenditure

Research expenditure, incurred on behalf of the charity and recharged to The Liver Group by University College London (UCL), is charged to the statement of financial activities (SOFA) on an accruals basis. The accounts include expenditure from the charity's funds on capital equipment and laboratory infrastructure, treated as resources expended in these accounts.

Fund accounting

Total funds comprise the accumulated surplus or deficit on the statement of financial activities. Unrestricted funds are available for use at the discretion of the Trustees in furtherance of the general objectives of the charity. Restricted funds are funds subject to specific restricted conditions imposed by donors. The purpose and use of the designated funds are set out in the notes to the accounts.

Taxation

The charity is not liable to income tax on income derived from its charitable activities as it falls within the various exemptions available to registered charities.

The charity is not registered for value added tax (VAT) and is therefore unable to reclaim the input tax it suffers on its purchases. Expenditure in the accounts is therefore shown inclusive of VAT where appropriate.

THE LIVER GROUP
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2002

1. Resources expended		2002	2001
	Resources expended include:		
	Staff costs	£151,668	£74,565
	Research consumables and laboratory	£64,970	£66,031
	Auditors' remuneration (including VAT)		
	- audit	£1,900	£1,821
		<u> </u>	<u> </u>

The average weekly number of employees of UCL working for the Liver Group during the year was 5 (2001: 3). At the year-end there were 5 employees of UCL working on the Liver Group research..

Trustees' expenses reimbursed during the year amounted to £ nil (2001: £nil).

2. Designated funds

Designated funds of £1,200,000 have been set aside by the Trustees for the purposes of the "Liver for Life" project.

3. Restricted funds

	Balance b/f at 1 January 2002	Incoming resources	Resources expended	Balance c/f at 31 December 2002
Dunhill Medical Trust Fellowship	31,242	36,500	(36,493)	31,249
Billingsgate Christian Mission Charitable Trust Studentship	1,500	-	-	1,500
	<u>£32,742</u>	<u>£36,500</u>	<u>£(36,493)</u>	<u>£32,749</u>

4. Financial commitments

At 31 December 2002, the charity, through UCL, was committed to staff contracts amounting to £482,000 (2001: £520,165) for varying periods to end of January 2006.

THE LIVER GROUP

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2002

Liver for Life” – List of donors to date

We are grateful to the following for donations to the “Liver for Life” Appeal:

Associated British Ports	The Thomas Sivewright Catto Charitable Settlement
BAE Systems	The Wolfson Foundation
Bank of England	Violet M Richards Charity
Barclays Bank (Knightsbridge Limited)	Wilkinson Hardware Stores Ltd
Billingsgate Christian Mission Charitable Trust (The Fishmongers’ Company	Anonymous
Boots Plc	Anonymous
Bowring Plc	The Telegraph Plc
British Aerospace	Pfizer Ltd
BTR Plc	Schroders Plc
Charles Littlewood Charitable Trust	Brian Wright Esq.
Citybank	C E Heath Plc
Clydesdale Bank/Yorkshire Bank	Morgan Crucible Company Plc
Commercial Union	Honeywell Plc
Communis plc	Thomson Corporation
Cookson Group Plc	Life Technologies
Council of Forte Trust Fund	Lloyds Bank Plc
Courage Plc	Price Waterhouse Plc
Coutts and Co	IBJ
D M Wilton	Seagrams Distillers Plc
Dako Limited	In Memoriam
Economist Plc	Jardine Insurance Services Ltd
EJH Stephenson (Deceased) Charitable Trust	KPMG Peat Marwick
Friends Provident	Laing, London
Glaxo Plc	Royal London Insurance Ltd
Guardian Royal Exchange Plc	Tomkins Plc
HJ Heinz Co. Ltd Charitable Trust	Morgan Grenfell
Hon C A Pearson's Charity Trust	Robert Fleming Holdings Ltd
Mars UK Corporate ServicesLtd	New Brunswick Plc
Menzies Group	Sunlife Assurance Plc
Rio Tinto plc	Smiths Industries
Societe Generale United kingdom Charitable Trust	Vauxhall Plc
The Bergqvist Charitable Trust	Pharmaceutical Brand Consultancy Int.
The Bowerman Memorial Trust	The Really Useful Group Ltd
The Clothworkers’ Foundation	Richard Wilkinson Esq
The Dunhill Medical Trust	Rudolf Wolff & Co. Ltd
The Fitton Trust	Securicor Plc
The Garfield Weston Foundation	Special Trustees for Hammersmith and Acton Hospitals
The Haberdashers Company	Racal Charitable Trust
The Hamamelis Trust	TI Group
The Hartnett Charitable Trust	Land Securities Plc
The John Ellerman Foundation	
The Mercers Company	
The Paul Balint Charitable Trust	
The Sobell Foundation	
The Stella Symons Charitable Trust	

THE LIVER GROUP
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2002

Publications in 2002 arising from work in the Liver Group Laboratory

1. **Malik R, Hodgson H.** The relationship between the thyroid gland and the liver. *QJM*. 95(9):559-69. 2002
2. **Rahman TM, Selden AC, Hodgson HJ.** A novel model of acetaminophen-induced acute hepatic failure in rabbits. *J Surg Res*. 106(2):264-72. 2002
3. **McCloskey P, Tootle R, Selden C, Larsen F, Roberts E, Hodgson HJ.** Modulation of hepatocyte function in an immortalized human hepatocyte cell line following exposure to liver-failure plasma. *Artif Organs*. 26(4):340-8. 2002
4. **Hodgson H, Rahman TM, Selden C.** Co-transplantation of hepatocytes and non-parenchymal cells. *Hepatocyte Transplantation. Falk Symposium 126*. Eds. Gupta S, Jansen P, Klempnauer J, Manns M. Chapter 5. 51-59. Kluwer Ac Publishers. 2002
5. **C Selden and HJF Hodgson.** Engineering the liver. In "Future strategies for tissue and organ replacement" Eds JM Polak, L Hench, P Kemp, Imperial College Press, 2002, p141-182
6. **Malik R, Mellor N, Selden C and Hodgson HJ.** Mitogenic therapy directed at the liver. *Journal of Hepatology; (Suppl. 1) 34: 78;7* 2002
7. **S Choudhury, C Selden, M Hubank and HJF Hodgson.** Stress protein expression in human hepatocyte cell lines cultured as in three-dimensional (3-D) spheroids in alginate. *Clinical Science* 102; 2002
8. **L.H. Damelin, J. Cox, N. Robertson, M. Khalil, R. Tootle, S. Choudhury, H.J.F. Hodgson and C. Selden.** Lowered ATP production corresponds with a decline in liver-specific function in 3-D hepatocyte culture. *Hepatology* 36(4Pt2); 473A, 2002
9. **Clare Selden, Alberto Quaglia, Richard Standish, Amar Dhillon , Humphrey Hodgson.** Derivation of epithelial cells from explant livers of patients with sub-fulminant hepatic failure. Presented at the FALK symposium 132, 2002

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