

**THE LIVER GROUP**  
**ANNUAL REPORT AND ACCOUNTS**  
**FOR THE YEAR ENDED 31 DECEMBER 2010**



*A. Hepatica*

# THE LIVER GROUP

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**THE LIVER GROUP**  
**ASSOCIATION INFORMATION**  
**FOR THE YEAR ENDING 31 DECEMBER 2010**

**Patron:** The RT Hon Lord Bingham of Cornhill  
Senior Law Lord (deceased 12/9/10)

**Trustees:** David Clifford  
Ciáran Devane  
Kay Glendinning MBE  
Prof Humphrey Hodgson FRCP, F Med Sci  
Prof David Kerr CBE  
Prof Sir Roger Penrose OM FRS  
Clare Selden  
Sarah Bates  
Sue Eggleton

**Principal office:** The Liver Group  
Centre for Hepatology  
Department of Medicine  
Royal Free Campus  
University College Medical School  
Rowland Hill Street  
Hampstead  
London NW3 2PF

**Charity registration number:** 1024533

**Bankers:** HSBC  
Oxford Circus Branch  
London W1A 1EZ  
  
CCLA Investment Management Ltd  
80 Cheapside  
London  
EC2V 6DZ

**Auditors:** Andrew Wilson  
Simpson Wreford & Co  
Wellesley House  
Duke of Wellington Avenue  
Royal Arsenal  
London SE18 6SS

**THE LIVER GROUP**  
**TRUSTEES' REPORT**  
**FOR THE YEAR ENDING 31 DECEMBER 2010**

The Trustees submit their annual report and the audited financial statements for the year ended 31 December 2010. The Trustees have adopted the provisions of the Statement of Recommended Practice (SORP) "Accounting and Reporting by Charities" issued in 2005 in preparing the annual report and financial statements of the Charity which have been prepared under section 45 of the Charities Act 1993. The organisation is a Charity constituted under a Trust Deed dated 28 May 1993.

The administrative information set out on page 1 forms part of this report.

**Objectives and activities**

The objects of the charity are:

- i) The relief of patients suffering from disease of the liver and genetic defects affecting the liver
- ii) The promotion of research into the causes and treatment of diseases of the liver on terms that the results of such research are published.

The principal activity of the Charity currently 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.

The Board of Management comprises eight Trustees, seven elected, one co-opted. The members are able to draw on relevant board experience in board deliberations. The Board is collectively responsible for the competent management of the organisation in accordance with its objectives which are set out in the Trust Deed. The Board meets twice a year to monitor the organisation's strategy and activities.

The Charity does not have any employees and its day to day activities are carried out by University College London under the supervision of two Trustees. If the need arose to appoint a new trustee the remaining trustees would identify and appoint an appropriate person. The current Trustees are responsible for the induction of any new trustee which involves making them aware of the Trustees' responsibilities, the governing documents, administrative procedures and the history and philosophical approach of the charity. The Trustees have agreed a position that should any profits arise from the intellectual property in the research being carried out by the team, and in conjunction with the various other parties involved in that work, the Charity may/would be entitled to up to 50% of such amounts.

**Achievements and performance**

- Research output, intellectual property gained and achievement of milestones towards moving the Bioartificial Liver project from the bench to the bedside.
- Administrative charitable activities are limited to fundraising for the research endeavour. This is achieved by written applications to known grant giving organisations, small and large companies via the CEOs or other appropriate individual or wealthy individual donors. The Charity also has a web-page with an opportunity to donate via CAF. 140,597 (2009 £157,016) was raised in this financial year from donations; other income was generated from interest earned on cash deposits.
- Indicators of achievements are success in the research aims and, in addition, the total funds raised in a particular year. These rarely exceed our expenditure for the year.

**THE LIVER GROUP**  
**TRUSTEES' REPORT**  
**FOR THE YEAR ENDING 31 DECEMBER 2010**  
**(Continued)**

- The Charity is one of many sourcing the same research funding; given the difficult position most UK universities find themselves in, there is increasing competition for funds. Until government resources fill the gap between the costs and current funding of medical research the Charity's efforts will become more difficult each year. Notwithstanding this difficult climate, the Charity continues to explore every avenue to increase funding from grants and donations.

**Financial review**

The organisation is funded mainly by donations. They are a mixture of individual, corporate and charitable trust donations.

The majority of funds are spent on paying the salaries of researchers, as well as the required consumables and equipment for the research to continue. As evidenced by the publications, the Charity's current aim to develop a bioartificial liver machine (BAL) has moved forward from the very small scale to medium scale. The following period will see a scale up to human scale for this machine. Each of these steps is associated with a considerable increase in research personnel, consumable and equipment expenditure.

Except for such funds as the Trustees consider prudent to maintain for the purpose of management and administration of the Charity for the foreseeable future, all unrestricted funds are applied for the purposes of the "Liver for Life" project and the general charitable objects of the Charity.

As at 31 December 2010 the unrestricted fund had a committed surplus of £527,491 (2009 – £563,332), and the restricted fund has a surplus of £50,896 (2009 - £58,231). The Charity's unrestricted fund is already committed to existing research and PhD students and their necessary consumables.

As the bioartificial liver project nears clinical scale and development for clinical trial, the costs are rapidly increasing necessitating considerable further fund-raising.

**Risk management**

The Trustees confirm that there are ongoing processes for identifying, evaluating and managing significant risks faced by the organisation.

**Public benefit**

All the donations made by the Charity were in furtherance of the Charity's long term objective of providing the relief of patients suffering from diseases of the liver and genetic defects affecting the liver, and promoting research into the causes and treatment of liver disease. The Charity has complied with section 4 of the Charities Act 2006 having due regard of the public benefit guidance published by the Commission.

**Plans for future periods**

The Charity aims to continue its medical research goals, at a pace commensurate with funding opportunities. With appropriate funding it sees the bioartificial liver machine project reach the clinical trial assessment within five years.

**THE LIVER GROUP**  
**TRUSTEES' REPORT**  
**FOR THE YEAR ENDING 31 DECEMBER 2010**  
**(Continued)**

**Statement of Trustees' responsibilities**

The Trustees are responsible for preparing the Trustees' Report and the financial statement in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

The law applicable to charities in England & Wales requires the trustees to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the charity and of the incoming resources and application of resources of the charity for that period. In preparing these financial statements, the trustees are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities SORP;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in business.

The trustees are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the charity and to enable them to ensure that the financial statements comply with the Charities Act 1993, the Charity (Accounts and Reports) Regulation 2008 and the provisions of the trust deed. 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.

**Auditors**

A resolution to re-appoint Simpson Wreford & Co as auditors will be proposed at the next AGM.

The report was approved by the Trustees on 28<sup>th</sup> September 2011

and signed on their behalf by.....

**Humphrey Hodgson**  
**Trustee**

**THE LIVER GROUP**  
**CHAIRMAN'S REPORT**  
**FOR THE YEAR ENDING 31 DECEMBER 2010**

2010 was a year of significant progress in our aim to create an effective device to save the lives of patients with severe liver disease with a bio-artificial liver that can temporarily take of deficient liver function, and thus allow time for a patient's own liver to recover.

Completion of this project needs various strands of work to be woven together. The first – which has for many years been the major component of the work, is the creation of an adequate functioning cell mass; the second is the engineering – with appropriate safety features – the machine, or bioreactor, in which the cells grow and which is then connected to a patient's blood circulation; and the third is the demonstration that benefit is conferred by its use in liver failure. I am pleased that there have been substantial advances in all these areas.

The process for growing the cell mass has been progressively developed so that now the liver cells we can place in the bio-reactor equate to approximately 30% of the factory-cells of the liver; this work, with collaboration with biochemical engineers elsewhere in UCL, has involved designing and testing optimal protocols for nourishing and oxygenating the cells as they grow. We have established collaborations with the University of Miskolc in Hungary to purify the alginate, the jelly-like beads - in which the cells are nourished. One of our PhD students has tested the filter systems that will be needed to prevent the transfer of any unwanted material from damaged cells in the bio-reactor into the patient. And perhaps most impressively, the very complex logistical and practical exercise of our large animal trial, performed in the University of Cape Town in collaboration with the Dept of Surgery, in the Christian Barnard centre and Department of Medicine in Groottes Schuur, neared completion (achieved by March 2011). Most encouragingly there was substantial evidence of the efficacy of our system.

There are two 'next moves'. The first must be to gain the major tranche of funding that will be required to specify and manufacture the bioreactor to the stringent quality control and regulatory standards that will be required before a 'first-in-man' experiment can be tried. For that 2010 has seen a major application the Wellcome Trust – and result of that is pending. There could be better financial climates for seeking major Charity and government funding!

The second 'next move' is a further scientific challenge – to adapt our bioreactor system so that the bioreactor with cells within it can be cryo-preserved – deep frozen - so that the bio-artificial liver can be readily transported and thawed as and when needed. We have begun work on that, moving from simple approaches which can be used when there are only a few cells in a small volume of fluid, to the more complex processes that need to be developed for the large numbers of cells in alginate beads that our bioreactors contain.

So 2011 presents us again with challenges, both scientific and in fund-raising. I and all the trustees wish to express our immense gratitude to our supporters, without whom our work would not be possible; to our colleagues in the laboratory at UCL who have worked so hard to progress the project; and to our auditors. I must add my personal thanks to my fellow trustees for all their dedication and help.



Humphrey Hodgson  
Chairman

**INDEPENDENT AUDITOR'S REPORT**  
**TO THE TRUSTEES OF THE LIVER GROUP**  
**FOR THE YEAR ENDED 31 DECEMBER 2010**

We have audited the financial statements of The Liver Group for the year ended 31 December 2010 which comprise the Statement of Financial Activities, the Balance Sheet and the related notes. The financial statements have been prepared under the accounting policies set out therein and the requirements of the Financial Reporting Standard for Smaller Entities (effective April 2008).

This report is made solely to the Trustees, as a body, in accordance with Section 43 of the Charities Act 1993 and the regulations made under section 44 of that Act. Our audit work has been undertaken so that we might state to the charity's 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 charity and the charity's Trustees as a body, for our audit work, for this report or for the opinions we have formed.

**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 (United Kingdom Generally Accepted Accounting Practice) are set out in the Statement of Trustees Responsibilities.

We have been appointed under section 43 of the Charities Act 1993 and report in accordance with regulations made under section 44 of that act. Our responsibility is to audit and express an opinion on the financial statements in accordance with relevant legal and regulatory requirements and International Standards on Auditing (UK & Ireland). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

**Scope of the audit**

An audit involves obtaining evidence about amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the charity's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the trustees; and the overall presentation of the financial statements.

**Opinion on financial statements**

In our opinion the financial statements:

- give a true and fair view of the state of the Charity's affairs as at 31 December 2010 and of its incoming resources and application of resources in the year then ended, and
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice (applicable to Smaller Entities); and
- have been prepared in accordance with the Charities Act 1993.

**INDEPENDENT AUDITORS' REPORT**  
**TO THE TRUSTEES OF THE LIVER GROUP**  
**FOR THE YEAR ENDED 31 DECEMBER 2010**  
(Continued)

**Matters on which we are required to report by exception**

We have nothing to report in respect of the following matters where the Charities Act 1993 requires us to report to you, in our opinion:

- the information given in the Trustees' Annual Report is inconsistent in any material respect with the financial statements; or
- sufficient accounting records have not been kept; or
- the financial statements are not in agreement with the accounting records and returns; or
- we have not received all the information and explanations we require for our audit.

.....

SIMPSON WREFORD & CO  
Statutory Auditors  
Wellesley House  
Duke of Wellington Avenue  
Royal Arsenal  
London SE18 6SS

Dated: .....

**THE LIVER GROUP**

**STATEMENT OF FINANCIAL ACTIVITIES**

**FOR THE YEAR ENDED 31 DECEMBER 2010**

	Notes	Unrestricted Funds £	Restricted Funds £	Total 2010 £	Total 2009 £
<b>Incoming resources</b>	2				
<i>Incoming resources from generating funds</i>					
Voluntary income		85,722	54,875	140,597	157,016
Investment income		<u>2,679</u>	-	<u>2,679</u>	<u>5,757</u>
<b>Incoming resources for the year</b>		<u>88,401</u>	<u>54,875</u>	<u>143,276</u>	<u>162,773</u>
<b>Resources expended</b>	3				
Charitable activities		121,492	62,210	183,702	188,494
Governance costs		<u>2,750</u>	-	<u>2,750</u>	<u>2,955</u>
		<u>124,242</u>	<u>62,210</u>	<u>186,452</u>	<u>191,449</u>
<b>Net outgoing resources for the year</b>		(35,841)	(7,335)	(43,176)	(28,676)
Transfers		-	-	-	-
<b>Fund balances at 1 January 2010</b>		<u>563,332</u>	<u>58,231</u>	<u>621,563</u>	<u>650,239</u>
<b>Fund balances at 31 December 2010</b>		<u>527,491</u>	<u>50,896</u>	<u>578,387</u>	<u>621,563</u>

**THE LIVER GROUP**  
**BALANCE SHEET AT 31 DECEMBER 2010**

	Notes	2010 £	2009 £
<b>Current assets</b>			
Cash at bank and in hand		<u>695,675</u>	<u>699,291</u>
<b>Less: Creditors</b>			
Amounts falling due within one year	4	<u>(117,288)</u>	<u>(77,728)</u>
<b>Net assets</b>		<u><u>578,387</u></u>	<u><u>621,563</u></u>
 <b>Financed by</b>			
Unrestricted fund		527,491	563,332
Restricted funds	5	<u>50,896</u>	<u>58,231</u>
<b>Total funds</b>		<u><u>578,387</u></u>	<u><u>621,563</u></u>

These accounts have been prepared in accordance with the Financial Reporting Standard for Smaller Entities (effective April 2008)

Approved by the Trustees on 28<sup>th</sup> September 2011

Signed on their behalf by.....

Clare Selden  
Trustee

**THE LIVER GROUP****NOTES TO THE FINANCIAL STATEMENTS****FOR THE YEAR TO 31 DECEMBER 2010****1. Accounting Policies****Basis of accounting**

The accounts have been prepared under the historical cost convention and in accordance with applicable Accounting Standards, the Charities Act 1993 and the Statement of Recommended Practice "Accounting for and reporting by Charities" (SORP 2005), and the Financial Reporting Standard for Smaller Entities (effective April 2008).

**Voluntary income**

Donations represent amounts received during the period and arise with the United Kingdom. Covenant and Gift-Aid income is included in gross 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.

**Charitable activities**

Charitable activities are the research expenditure incurred on behalf of the Charity and recharged to The Liver Group by University College London (UCL). These are charged to the statement of financial activities (SOFA) on an accruals basis. This expenditure includes amounts paid for capital equipment and laboratory infrastructure which are regarded as expenditure in these accounts

**Governance costs**

Governance costs include those costs associated with meeting the constitutional and statutory requirements of the charity and include the costs related to the statutory audit.

**Allocation of overhead and support costs**

All overhead and support costs relate to governance costs and have been allocated as such (note 3).

**Liabilities**

Liabilities are recognised in the accounts where there is an obligation to transfer economic benefit.

**Tangible fixed assets**

Material items are capitalised where they are deemed to have a useful life of greater than a year.

**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 subject to specific restricted conditions imposed by donors. The purpose and use of these funds are set out in the notes to the accounts.

**THE LIVER GROUP**

**NOTES TO THE FINANCIAL STATEMENTS**

**FOR THE YEAR TO 31 DECEMBER 2010**

**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.

**2. Incoming resources**

	2010	2009
	£	£
<b>Voluntary income</b>		
Thriplow	5,000	-
The Coutts Charitable Trust	500	-
The Peter Stebbings Memorial Trust	50,000	50,000
J H Turner	50	-
Tom and Sheila Springer Charity	4,875	6,666
BS & IP Aynscombe	-	20
S & I Donald	-	250
Mr & Mrs Sutcliffe	-	30
Garfield Weston Foundation	75,000	100,000
CAF Bank	2,000	50
The Billingsgate Mission	1,250	-
The Oakdale Trust	1,000	-
Yorkshire & Clyde Bank	400	-
Bank of England	522	-
	<u>140,597</u>	<u>157,016</u>
<b>Investment income</b>		
Bank interest	<u>2,679</u>	<u>5,757</u>

**3. Resources expended**

	2010	2009
	£	£
<b>Charitable activities</b>		
Staff costs (employed on fixed term UCL contracts)	155,510	147,685
Research consumables and laboratory	<u>28,192</u>	<u>40,809</u>
	<u>183,702</u>	<u>188,494</u>
<b>Governance costs</b>		
Auditors' remuneration (including VAT)		
Accounting	962	962
Audit	<u>1,788</u>	<u>1,993</u>
	<u>2,750</u>	<u>2,955</u>

The average weekly number of employees of UCL working for The Liver Group during the year was 3 (2009: 4). At the year end there were 3 employees of UCL working on The Liver Group research. In addition there were 3 PhD students paid a stipend under a 3 year studentship scheme. There were no employees with remuneration above £60,000 for the year ended 31 December 2010

Trustees' expenses reimbursed during the year amounted to £Nil (2009: Nil).

**THE LIVER GROUP**

**NOTES TO THE FINANCIAL STATEMENTS**

**FOR THE YEAR TO 31 DECEMBER 2010**

**4. Creditors**

	2010	2009
	£	£
Accruals	2,703	2,656
Amounts due to UCL	<u>114,585</u>	<u>75,072</u>
	<u>117,288</u>	<u>77,728</u>

**5. Restricted funds**

	Balance at 1 Jan 2010	Incoming Resources	Resources Expended	Transfers	Balance at 31 Dec 2010
	£	£	£	£	£
Billingsgate Christian Mission Charitable Trust Studentship	1,500	-	-	-	1,500
Peter Stebbings Memorial Trust	56,731	50,000	(57,335)	-	49,396
Tom & Sheila Springer Charity	-	4,875	(4,875)	-	-
	<u>58,231</u>	<u>54,875</u>	<u>(62,210)</u>	-	<u>50,896</u>

All restricted funds have arisen from donations received by the Charity from the donors detailed above. The donation from Billingsgate Christian Mission Charitable Trust Studentship is for the use of a sandwich student. The donation from the Peter Stebbings Memorial Trust was for staff and consumables over a 3 year period. The donation from Tom & Sheila Springer Charity was towards the salary of K Lintern. Each fund is applied in accordance with the restrictions imposed.

**6. Other professional services provided by the auditors**

In common with many other charities our size and nature we use our auditors to prepare and assist with the preparation of the financial statements.

**7. Controlling Party**

The ultimate controlling party of the charity is the board of Trustees.

**THE LIVER GROUP**

**NOTES TO THE FINANCIAL STATEMENTS**

**FOR THE YEAR TO 31 DECEMBER 2010**

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

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

**THE LIVER GROUP**

**NOTES TO THE FINANCIAL STATEMENTS**

**FOR THE YEAR TO 31 DECEMBER 2010**

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

BS & IP Aynscombe

S&I Donald

Mr & Mrs Sutcliffe

CAF Bank

The Eranda Foundation

Peter Stebbings Memorial Trust

J H Turner

**THE LIVER GROUP**  
**NOTES TO THE FINANCIAL STATEMENTS**  
**FOR THE YEAR TO 31 DECEMBER 2010**

**Publications arising from the work of The Liver Group Charity in 2010**

**Publications in 2010 from the Liver Group**

Cryopreservation of encapsulated liver spheroids using a cryogen-free cooler: high functional recovery using a multi-step cooling profile.

I. Massie, C. Selden, J. Morris, H. Hodgson, B. Fuller (2011) – accepted 2010

*Cryo Letters* 32(2): 158-65

Inhibition of Na<sup>+</sup>-taurocholate Co-transporting polypeptide-mediated bile acid transport, by cholestatic sulfated progesterone metabolites.

Abu-Hayyeh S, Martinez-Becerra P, Sheikh Abdul Kadir SH, Selden C, Romero MR, Rees M, Marschall HU, Marin JJ, Williamson C.

*J Biol Chem.* 2010 May 28;285(22):16504-12. Epub 2010 Feb 20.

Is the filaggrin-histidine-urocanic acid pathway essential for stratum corneum acidification?

Fluhr JW, Elias PM, Man MQ, Hupe M, Selden C, Sundberg JP, Tschachler E, Eckhart L, Mauro TM, Feingold KR. *J Invest Dermatol.* 2010 Aug;130(8):2141-4. Epub 2010 Apr 8. PubMed PMID: 20376063.

**Presentations at national and international scientific meetings**

I. Massie, J. Ross, N. Mallorqui-Fernandez, E. Gherardi, H. Hodgson, C. Selden, B. Fuller “Reducing Apoptosis following Cryopreservation in Encapsulated Liver Cell Spheroids”

Presented at 47<sup>th</sup> Annual Meeting for Society of Cryobiology, Bristol, UK, 17<sup>th</sup>-20<sup>th</sup> July 2010

Published in *Cryobiology*, vol. 61, issue 3, 2010, p390

I. Massie, J. Ross, N. Mallorqui-Fernandez, E. Gherardi, H. Hodgson, C. Selden, B. Fuller

“Reducing Latent Cryoinjury in Encapsulated HepG2s using an Engineered Form of Hepatocyte Growth Factor, 1K1”

Presented at 45<sup>th</sup> Annual Meeting of the European Association for the Study of the Liver, Vienna, Austria, 14<sup>th</sup>-18<sup>th</sup> April 2010

Published in *Journal of Hepatology*, Supplement No. 1, vol. 52, 2010, pS371.

E. Erro, H. Hodgson, J. Bundy, S. Gerontas, P. Sharratt, R. Molls, C. Selden. “Optimisation of growth of the biomass for the development of a clinical scale bio-artificial liver using a human derived cell line within encapsulated alginate”.

Presented at 45<sup>th</sup> Annual Meeting of the European Association for the Study of the Liver, Vienna, Austria, 14<sup>th</sup>-18<sup>th</sup> April 2010.

Published in *Journal of Hepatology*, Supplement No. 1, vol. 52, 2010, pS322.

A. Gander<sup>1</sup>, H. Hodgson<sup>1</sup>, B. Fuller<sup>2</sup> and C. Selden<sup>1</sup>

**A Barrier between Biomass and Patient: Meeting Regulatory Requirements in a Bioartificial liver System.** Published in *Journal of Hepatology*, Supplement No. 1, vol. 52, 2010, pS208