SCIENTIFIC ARCHIVISTS GROUP

NEWSLETTER

Autumn Meeting

BRANDSHATCH 1989

SCIENTIFIC ARCHIVIST GROUP

AUTUMN MEETING

at

THE BRANDS HATCH HOTEL

DARTFORD

KENT

Hosted by Wellcome Research

Chaired by Mrs. Margaret McCabe

Dear Member,

I now know how everybody else felt when they were elected to take over the Minutes! I can remember going to a committee meeting, and over a working lunch with my mouth full, being asked/told that I would be taking the Minutes; with one's mouth full, noises can be interpreted as YES or NO.

The evening get-together was once again an occasion not only to get to know one another but to exchange ideas and also talk over problems on archiving. An added bonus to the evening was a number of demonstrations which had been arranged by our hosts. These included demonstrations by Chubb Securities, Surrey Microfilm, Incremental Systems who are currently developing a software package for specifically for archiving in conjunction with member companies and Scan Media.

Many thanks to our host, Tony Buick of Wellcome, for arranging such an enjoyable evening. The sherry reception at the beginning was an excellent idea!

May I take this opportunity to ask for volunteers to host future meetings and also ask those who have not done so to remember to return their membership forms which should be included in this Newsletter.

See you all in the Spring.

June Pease
20th October 1989

WELCOME AND NOTICES

Margaret McCabe welcomed members new and old, and thanked Wellcome for playing host to the Autumn meeting.

Apologies for absence were sent from Andre Baxter (Nestles), Peter Davis (I.C.I.), Janis Bernie (SK&F) and Mrs Joan Flynn (Rhone Poulenc).

Members were asked to complete a new membership form and hand it back to Margaret McCabe before the end of the meeting.

The levy for the meeting had been set at £3 per head; it is hoped that it will be kept at this amount for further meetings, but will be periodically reviewed.

Yvonne Arrowsmith informed the group that a bank account had now been opened and all monies were to be paid into the account and guest speakers will in future be paid by cheque.

Jane Pennick is retiring from the committee after giving three years' valuable service taking the minutes and compiling the newsletter. Her contribution as a committee member has been a great asset.

Ian Robinson (Pfizer) agreed to stand for election to the committee to fill the vacancy and was unanimously elected.

INTRODUCTION TO WELLCOME

Dr D.S. Freestone welcomed us to Wellcome on behalf of his company. He regretted that the meeting could not be held at the Beckenham site, but hoped to welcome us there on a future occasion. Dr Freestone gave a very interesting talk on the history of Wellcome from the start of the business in 1880 when Henry Wellcome and Sylus (is this right - normal spelling of it is Silas) Burrough started business in London as Burroughs Wellcome & Co. The company name became Wellcome in 1895 on

the death of Silas Burrough. Mr Freestone also mentioned some of his company's well known products such as Retrovir, Interferon and Benylin and, in closing, wished the meeting every success.

QA UPDATE

Keith Painter of Wellcome presented an update on GLP, QA issues which have occurred since the Spring SAG meeting. His talk was very informative and the attached notes will be of help to all archivists dealing with GLP.

ROYAL BOTANICAL GARDENS, KEW

Dr D. Cutler opened his talk by saying that part of the work at Kew was to identify and classify rare plants. He mentioned that the seeds of a plant found in South America might be a help in the search for a cure for AIDS. He showed some colourful slides of plants and plant houses at Kew.

Like everybody else, they also have problems with archiving. Dried seeds are housed in a large building which needs to be enlarged every 30 years. For archiving purposes, dried specimens are mounted and stored flat to prevent movement of the plants and classification is by plant, family species.

The Mary Ann North Archives were built in 1882 to house the paintings of plants that she collected from all over the world.

OPTICAL DISC/MICROFILM

Gary Tapper, the Chairman of the British Standards Institute Committee Micrographics and Imaging Technology Consultants, gave an informative talk on optical disc and microfilm.

He agreed to give his notes for inclusion in the Newsletter, as the various pros and cons for these systems are quite complex.

PUBLIC RECORDS OFFICE

Mr Walford said it was a pleasure to be speaking to SAG members. He went on to give the history of the Office, which was established in 1883, then called Legal Records and located in 60 centres.

The Chancery Lane building was constructed in the 19th century and this building is now used to bring all the records together. The Record Office is responsible for the records of 250 bodies, such as the King's Court, the Exchequer, the Assize Court and also records of defunct organisations. Altogether they hold 90 miles of records, which includes the Doomsday Book which is 900 years old.

There is also a new Records Office at Kew.

POLICIES AND PROCEDURES - IN-HOUSE TRIALS

Dr Colin Broom, head of the Clinical Pharmacology Unit at SK&F, explained the policies and procedures that have to be fulfilled before a drug can go into man. Dr Broom also described the work the CPU does and showed a short video which SK&F use for recruiting volunteers, during which he emphasised the important role of the ethics committee, and the confidentiality of the work.

A copy of Dr Broom's overheads are included with the newsletter.

MEMBERS QUESTIONS

Jane Pennick asked if members had experienced deterioration of ECGs on thermal paper and if so, were there any suggestions on how to preserve the ECGs. Members suggested photocopying or microfilming.

The safety aspect of Halon fire extinguishers was mentioned. The concentrations of Halon used for fire protection in gas flood systems pose no significant risk.

At the close of the meeting, Margaret McCabe said that following Gary Tapper's discussion with the DOH regarding the acceptance of microfilm, she would be writing to the DOH for confirmation. The content of her letter would be discussed at the next committee meeting.

Margaret went on to ask if anyone were interested in a visit to either Kew Gardens or the Records Office; if so, please let her know.

Margaret read out two letters she had received and said they would be included in the newsletter.

The meeting was closed with Margaret once again thanking the speakers and our host, Wellcome, for providing excellent facilities for the meeting.

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NEXT MEETING

" The Scientific Archivists Group Spring Meeting will be held at the County Hotel, Canterbury, on Wednesday 9th May to Thursday 10th May, 1990.

Pfizer Central Research welcomes you to Canterbury. A tour of parts of the city and Cathedral is being arranged, and a visit to the Cathedral Archive is also planned.

Look forward to seeing you all in Canterbury,

Ian Robinson."

SPEAKERS NOTES

The following notes are attached

Appendix 1 GLP UPDATE - IMPACT ON ARCHIVISTS
Mr K Painter
GLP Quality Asssurance Unit
Wellcome Research
Beckenham, Kent

Appendix 2 OPTICAL DISC/MICROFILM
Mr G. Tapper
Chairman of the British Standards Institute
Committee Micrographics and Imaging Technology
Consultants.

Appendix 3 POLICIES AND PROCEDURES - IN-HOUSE TRIALS
Dr C Broom
Head of the Clinical Pharmacology Unit
Smith Kline and French

GLP UPDATE - IMPACT ON ARCHIVISTS

Presented at the 1989 Autumn Meeting of the Scientific Archivists Group at The Brands Hatch Thistle Hotel, Dartford, Kent on 4th October, 1989.

Presented by: Mr K R Painter
GLP Quality Assurance Unit
The Wellcome Foundation Limited
Beckenham, Kent.

There have been a number of changes to various GLP guidelines since the last SAG Conference.

In November 1988:	Memorandum of Understanding (MoU) signed between Japan and the United Kingdom.
In December 1988:	MoU was signed between USA and Italy. MoU was signed between USA and W. Germany. MoU was signed between USA and Holland. UK, DoH publish Advisory Leaflet "The Application of GLP Principles to Computer Systems".
In June 1989:	Japanese Ministry of Health and Welfare issued revised "GLP Checklist".
In July 1989:	UK, DoH publish revised version of the "Blue Book" - "Good Laboratory Practice - The UK Compliance Programme".
In August 1989:	EPA publish revised FIFRA and TSCA GLP Standards.

The MoU signed between the United Kingdom and Japan last year will mean less regulatory inspections. The chances of independent inspections by Japanese Regulatory Authorities has been reduced so that now the two yearly visit by the DoH is likely to be the only GLP regulatory inspection we are likely to see. However, it is worth noting that both the Japanese and American Inspectors reserve the right to accompany the DoH on their facility inspections within the UK. Similarly, inspectors from the appropriate Government Agencies, accompanied by representatives from the DoH, can still conduct "For Cause" inspections if the Regulatory Authorities of that country are unhappy about some aspect of a Regulatory submission provided by a Company.

The Memoranda of Understanding signed in December 1988 do not specifically impact on UK operations, however the DoH Advisory Leaflet on the "Application of GLP Principles to Computer Systems" does.

The main points which may have a direct impact on the work of Company Archivists can be summarised in the following statements:-

1. Procedures for archiving computer data should be defined in SOPs. In general these SOPs will reflect the principles already established for archiving paper data.

2. Heroic measures do not have to be taken to preserve electronically stored data. Thus out of date computers do not have to be kept for reading old data, nor do conversion programmes have to be prepared to permit reading of old tapes and discs on a new computer.

3. Magnetic media holding raw data may not be deliberately destroyed, nor should electronically stored data be deleted without good reason.

   The reasons and signature of the person taking the decision to destroy electronically stored raw data together with the date upon which the destruction took place should be recorded in writing and kept in the archives with other data relating to the study. Where practicable an authenticated printout of the raw data should be taken prior to destruction of the magnetic media.

June of this year saw the publication of the revised "GLP Checklist" by the Japanese Ministry of Health and Welfare.

The changes contained in the checklist can be outlined as follows:-

1. That the QAU confirm that data appearing in "Expert Reports" are the same as that appearing in final reports.

2. That QA inspects test facilities.

3. That apparatus is **appropriately** and **adequately maintained** and managed.

4. That **SOPs** exist covering the **handling**, **mixing** with the carrier and **sampling** of the test and control substance.

5. That records confirming the **identity** and **content** of the test substance are retained.

6. That records confirming that the stability of the test substance in mixtures was measured are retained.

7. That all data designated in the test protocol have been recorded and that records of any **abnormalities** which occurred during the test were taken.

8. There is also a Section on GLP inspections of computer systems.

All these points will have some effect on increasing the volume of records to be stored in the archive. However, all except the first are familiar to other GLP guidelines and most of the records are already being routinely retained.

Probably the most important event occurred in July of this year, when the DoH, after close liaison with the UK Pharmaceutical Industry, issued their revised version of the "Blue Book" detailing the UK GLP Compliance Programme.

The section relating to the archives described in the "Principles of GLP" remained unchanged, however, there were several alterations made to other parts of the document which do impact on the role of the Archivist:-

1. Section 26(a) dealing with Physico/Chemical Test Systems has been considerably extended to cover the identification, maintenance, calibration, use of reference standards and quality of machine generated raw data.

2. Section 30(e) has been extended to require that records and materials are retained under **suitable** conditions.

3. On Page 18, the definition of raw data has been extended to include on-line data capture by computer systems. Also only in certain circumstances may raw data be subtitled by verified copies. The "certain circumstances" are not defined.

The second point will be the one which has most impact on archivists. Other revisions were also made to this document. In general most of the revisions will require more data to be collected and retained for indefinite storage.

In August the EPA issued their revised FIFRA and TSCA GLP Standards.

Amendments to both sets of standards largely incorporate the changes made by the FDA to their GLP standards in September 1987. However, the FIFRA standards have been extended to cover field testing, investigation of ecological effects, chemical fate and residue chemistry of pesticide products.

The scope of the TSCA standards is also extended to cover field testing.

Changes relating specifically to archives and data storage in both sets of standards are as follows:-

1. The EPA have complied with the FDA modifications by deleting the need to retain specimens of blood, urine, faeces and biological fluids. The EPA have also added soil specimens, water and plants to these exclusions.

2. The need to index archived material by test substance, date of study, test system and nature of study has been relaxed.

3. In order to comply with FDA regulations, a true copy of raw data (e.g. photocopies and microfilm) may be substituted for the original data.

As can be seen, Points 1 and 2 merely clarify previous rulings.

However, Point 3, could cause some conflict with the DoH who are unhappy about microfilm/microfiche replacing original raw data in the archives. Industry is in discussion with the DoH for a definition on the "certain circumstances" whereby substitution of raw data with verified copies can occur. Initial discussions would indicate "certain circumstances" to mean situations where there is a danger to health e.g. if the original paper copy has become contaminated with radiolabelled chemicals or biological agents etc.

In conclusion, the past year has seen numerous revisions to various GLP guidelines. The main effect of these changes will be that study files are going to get thicker and more data is going to be deposited in the archives.

With the increase in data being stored as a result of GLP, not to mention GCRP, I believe the role of the Company Archivist is going to be growing in value for many years to come.

K R Painter
KRP/PAW

9.10.89

Appendix 2

T H E T E C H N O L O G I E S

OPTICAL DISK simply another computer peripheral with different uses comes in various forms and sizes - 3.5 to 14"

some ODs are well established - others are quite novel certain aspects are similar to a gramophone record and CD invariably tellurium or similar coating in glass or plastic

written and read by laser - very small picture elements can contain data, text, image, graphics, voice, music digital storage very high - starts at c800Mb on 5.25"

not discussing video which is analogue rather than digital

CD-ROM similar to music CDs but with text and/or data or graphics as with CDs, mastering expensive, duplicates cheap

used generally in micro-publishing - will become very common place as externally provided information source in most organisations - applications proliferating

usually attached or built into PC - readers are very cheap

WORM Write Once Read Many - user writes but once written cannot be erased - information can be data or image - not often text

comes in various forms from small stand-alone entry-level systems at around £30,000 to large juke-box based up to £1M

the technology most likely to be used in offices because of its flexibility and functionality - software behind hardware

now competing with magnetic tape as an archiving medium

ERASABLE very novel and only just available for testing -

will compete with magnetic disk as data storage medium

CD-I
CD-V variants of CD used in training or entertainment
CD-R

circulate sample

Factors for decision include:

value of information

use to which it will be put

ability of users to use information

impact on other systems

is it really needed- barrow/bonfire

costs - value for money

existing system considerations

indexing

OPTICAL DISK TYPES

small PC based systems starting to proliferate - for small office/single application typical configuration - 5.25 optical disk player - flatbed or single sheet scanner laser printer - all driven by PC in a workstation at around £15,000 - problems with ability of PC to handle images - also low resolution of screen

entry level system for medium office and several users - 5.25 or 12" OD player - rotary scanner - laser printer - all driven by large micro/small minicomputer with up to 8 user screens - up to £50,000 - potential problems with contention

multi-user systems for large departmental applications - 12" ODs in juke-box - 2 or more scanning stations - several laser printers - driven by large minicomputer - c £250,000 contention/organisation problems -

large multi-user corporate systems with several applications - 12" ODs in juke box paper, microfilm scanners, output laser printers and COM devices, remote and local users - driven by large mini/mainframe computer - around £1M - sever organisation implementation problems - FOR PIONEERS ONLY

Appendix 2

MICROFILM ADVANTAGES

saves space

Low cost relatively

permanent record

comprehensive record

organises information

no misfiles

can be read anywhere

well established standards

Legally acceptable

Disaster or security backup

easy to duplicate/replicate

cheap and easy to distribute

easy to use

established technology

stable vendors

production can be delegated (bureaux)

MICROFILM DISADVANTAGES

Speed of production - usually slow

Speed of retrieval - relatively slow

User acceptability -generally poor at first

Back record conversion or two systems

Low technology - no sex appeal

Poor relation to I T

Not taken seriously eg quality, indexing

Difficult to integrate with other systems

Photography intimidates most people

OPTICAL DISK ADVANTAGES

Speed of retrieval - fastish

Relative speed of production/input

Fits in modern office

May integrate with existing systems?

Lots of high tech

Large volumes of information on one disk

Annotation of data - text - voice

OPTICAL DISK DISADVANTAGES

High risk - not yet established

High cost

vendor fallout

little standardisation

long implementation time

heavy indexing committment

customised software usually

slow production rate

high quality control requirement

dramatic change in work practices

dual system until implemented

back record conversion

contention when in use

not legally admissible

replication difficulties

archival life

expensive security requirements

competing technologies -

- high density magnetic medium
- optical paper
- digital optical tape

T Y P E S O F S Y S T E M S

No hard or fast rules but here are a few generalisations

3 Types of system PASSIVE, ACTIVE, HYPER-ACTIVE

PASSIVE paper has done its work - circulated, annotated, copied, reply created, computer updated & transaction completed will now be filed for very occasional retrieval in future -

solution always microfilm - indexing can be rudimentary - during or after filming - can often be CAR sometimes related to the initial computer input from the paper

ACTIVE paper initiates activity requiring further information from within organisation - retrieval is not urgent - often routine and expected - process is simple - volumes usually large

solution could be microfilm or optical disk based with invariably interaction with the computer

microfilm could be CAR backed up by COM
paper could be converted early - updatable, S & R or jackets

or integrated into image information base at end of process
Optical disk systems are now being used - cheap entry-level

HYPERACTIVE usually when there is plenty of paper - all of it valuable and relevant and requiring very fast access at random to supporting information to enable quick decisions to be made

Invariably large optical disk system solution linked to corporate computer(s) - fully networked handling image, text data graphics and voice and linked with DTP, fax, CD-ROM and other related technologies. Full Integration

A few pioneers at present but the future for many

some fully automated microfilm systems exist - in USA - being replaced by OD

Appendix 2

P R O B L E M S

COST the more modern the technology the higher the cost
will always be more than doing nothing
can be enormous - will often be wasted

IMPLEMENTATION effort required will be heavy
staff will need training and often regrading and CHANGE
back record conversion or Day 1 - extra staff or bureau -
bureau - can you trust them - do they know hat theyre doing
do they understand YOUR business
software - not particularly well developed - will need
tailoring - how much at what cost??

TECHNOLOGY will it fit with existing or planned - is there a
corporate strategy - whats a strategy - back to basics

CHANGE bound to be resisted - nobody ever satisfies anyone - can
the organisation stand it - can the staff - will it happen
overnight - is there a plan - trial, pilot, small scale

COMMS get it right straight away - fibre optics the ONLY way to
move reasonable quantities of image

STANDARDS non-existent for Optical disk - backing a loser - ask ATG

OBSOLESCENCE heard of 1.23 gigabytes on an 8" Wini or 2 gigabytes on
an audio cassette - why use optical
what about DAT, digital paper, erasable optical, optical
computers - all just round the corner

TECHNICAL indexing WILL be a problem - needs verifying
back up can be a nightmare - how many levels - how is it done

LEGAL not yet for OD - will it ever in view of its flexibility

SECURITY how do we protect all that valuable information and yet
make its availability widespread - no computer room door to
hide it behind - no weird digital code to put it in

ARCHIVE 10, 20, 30 or 50 years - take your pick - believe the
salesman - how old is he will there be kit to read it on
regular dumping the solution?? It takes 22 days nonstop to
copy a full juke box.

ALL the above relate to optical disk - some relate to microfilm

ALL need to be answered to ENSURE success

T H E F U T U R E

The future has already arrived. The pioneers went out and brought it back Now weve got to work out how to deal with it

Computerised microfilm or optical disk (and sometimes both) based systems are proliferating - particularly in the USA and Japan

Any imaging scenario envisaged is being addressed - including yours Integration with fax, DTP, voice, CAD/CAM, mainframe to PC, graphics, colour video, etc etc the 1990's will be the decade of the image - the 2000's will be when we start to get it right

Why is not taken up here - we still only have 1% document info on electronic media, 5% on microfilm and 94% on paper

The answer is plain - we like paper better and we dont like change - it has to forced on us - it is being forced on us and we will eventually be equipped to manage it - but it will take time

THANK YOU

LEGAL ACCEPTABILITY OF MICROFILM

Statements

1. MICROFILM IS, AND HAS BEEN FOR MANY YEARS, PERFECTLY ACCEPTABLE AS EVIDENCE IN COURTS OF LAW.

2. UNTIL VERY RECENTLY THERE HAS BEEN NO SPECIFIC LEGISLATION WHICH STATES THAT MICROFILM IS ACCEPTABLE AS EVIDENCE.

Practice and Trends

I will confine the first part of my discussion to the situation in Great Britain, apologies to any slight differences in Northern Ireland or Scotland - these are covered in the Standard. Throughout the World, the laws of evidence differ from country to country and the acceptability of microfilm varies from 'not-at-all' to 'completely'.

The Law

There are two types of law - Civil and Criminal. The Civil Evidence Act 1968, which applies to litigation and disputes between individuals or organisation, admits business records as hearsay evidence and specifically In Civil law what is known as 'best evidence' must be produced - it means therefore that if microfilm copies of documents are made but the documents retained then original documents must be presented in evidence as required. If documents are destroyed in order to obtain the benefits of microfilm, ie saving of space, the microfilm is admissible. Civil Evidence Act & Finance Act. To enable the microfilm to be unable to be challanged as a true facsimile record of the original the BS Guide 6498:84 was produced after 3 years of deliberation in Committee and taking advice from several external sources.

The Standard sets out what the committee felt at the time was the best guidance it could give to enable organisations using microfilm to produce it in court, insofar as it recommended roll microfilm fully certified at the front and end of each roll and between any splices. In conventional Practice however this does not mean that other forms of microfilm should be excluded. For example an aperture card of a plan or drawing can be certified and is normally certified during production in the bottom right corner. Similarly certain non erasable updatable fiche can and do carry certificates on each frame as could strip output from a camera/ processor or fiche from a step and repeat camera. Equally COM output can be satisfactorily certified as a true record but COM is part of another problem -

that of computer output which I shall deal with later.

Some examples of microfilm being used regularly as evidence quite readily are:-

1. Television Rental Agreements -(Radio Rental
   (DER
   (Multibroadcast

2. VAT Records - Southend.

3. Securicor Parcels - proof of delivery notes.

4. Birds Eye Walls - delivery notes.

5. Driver and Vehicle Licence applications.

6. Inland Revenue 'Lump' - building subcontractor voucher system.

Now turning to Criminal Law the new Police and Criminal Evidence Act 1984 specifically states in paragraph 68 that the production of an enlargement of a microfilm copy is acceptable. The type of microfilm is not specified nor are any specific conditions placed on production or certification. This part of the Act was implemented on 1 January 1986 but microfilm has regularly been used as best evidence by the police in the past. Interestingly all our criminal records are held on microfilm with the indentification system held on mainframe and a current proposal to use COM as a back-up.

As I said earlier COM output is subject to the same constraints and problems as any computer output - currently there is no clear cut definition for legal acceptance of evidence provided by computers. A recent initiative in CCTA is looking at the total problem and implications of computer output as evidence. Hopefully some definitive statements will be produced and I shall be following the progress of the study for the implicationson COM and Optical Disk.

EJD 3/87

Appendix 2

LEGAL ADMISSIBILITY OF MICROFORMS

For several years the International Standards Organisation has discussed the problem of producing an International Standard for the production of microforms that might be used in evidence in a Court of Law.

It was felt desirable that such a standard should be fully acceptable internationally. A questionnaire was sent out to all participating and observing countries of ISO Technical Committee TC171, the main ISO Committee for Micrographics. The results of the questionnaire together with information previously gathered by members of the ISO Working Group 7 on the subject, showed that there were wide differences in legal systems between countries and their attitudes varied from complete acceptance of microforms as a true facsimile of the original to reliance on original paper documents only.

It was therefore decided at the meeting of Working Group 7 in Stockholm in June 1985 to prepare an advisory document to assist those concerned with the preparation of microforms that might be used in evidence. This would be in the form of an ISO Technical Report consisting of two major sections. The first section would be recommendations for microfilming procedures to enable the microforms to be accepted as adequate substitutes for originals and therefore legally acceptable if the laws of the country provide. The second section would be the Legal status of microfilm in various countries as known to the committee at the time. It is intended that all countries in the world should contribute to this section by either providing the current status information if not already listed, or by updating or complementing the existing information in the Technical Report. By this means it is hoped that the full international status of the Legal Admissibility of Microforms will be established and maintained. It is further hoped that countries, whether members of the ISO or not, will be able to use the information contained in both sections of the Technical Report to determine the best situation for themselves.

Appendix 2

At its meeting in Washington in November 1986 Working Group 7 delegates from Canada, China, France, Japan and the United States under the Chairmanship of the United Kingdon resolved to restructure a previously circulated draft Technical Report and send out copies of the new draft by January 1987 for comment. This work has now been completed and the final draft was confirmed at the meeting of TC171 in June 1988. The Technical report is expected to be published at the end of 1988 or early 1989. In the meantime copies of the final draft are available from the Convenor of TC171/WG7.

Any questions or information should be sent to the Convenor of the WG7/71.

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Nov. 1988.

IN-HOUSE CLINICAL TRIALS

- Policies and Procedures

Dr. C. Broom
Director of Clinical Pharmacology
SK&F Research

EXTENT OF "IN-HOUSE" STUDIES

Approximately 15 companies based in the UK conduct "in-house" studies, usually on their own premises - in purpose-built Clinical Pharmacology/Human Pharmacology Units.

Majority of studies in healthy volunteers (Phase I).
In the UK, studies are performed in healthy volunteers, usually derived from company employees.
Non company employees eg. students, local people, sometimes used by a minority of companies.

Very rarely studies in patients eg. hypertensives, (Phase IIa); these are usually conducted in hospitals.

OBJECTIVES OF CPU'S

- Evaluate novel research compounds - development
  - research feedback
- Study new formulations/new indications of marketed compounds
- Methodology development

FACILITIES

[ABPI guidelines on minimum facilities, 1989]

Similar to hospital environment:

- intensive monitoring equipment
- specialized equipment
- emergency equipment and drugs

Contact with local hospital(s) and staff desirable.

STAFFING

Specialist, experienced Physicians/Clinical Pharmacologists

Medical Scientists

Experienced Clinical Research Nurses

Administrative and Secretarial

- additional support: Archivists, Computing, Statistics, Drug Analysts and Pharmacokineticists.

PRE STUDY PROCEDURES

Preclinical information to justify administration to man.

Drug development plan (or general study rationale)

Protocol - initial draft - peer/department review.
- second draft - internal approval
- final protocol - independent Ethics Committee review.

NB

UK - CTX for patient studies, but not required for volunteer studies. Guidelines by Royal College of Physicians (1986) and ABPI (1987) exist.

- ARSAC approval for studies with radiolabelled compounds.

US - IND studies include volunteer studies
- require additional information to be forwarded to the FDA.

INDEPENDENT ETHICS COMMITTEE

Royal College of Physicians guidelines (1984).

(FDA regulations also exist for the US).

- Independence from the Company
- Membership should include medical, scientific and "lay" members
- Review protocols at formal meetings (or by post)
- Formal documentation - meetings minutes
  - correspondence
  - notice of approval

STUDY PARTICIPANTS - VOLUNTEERS/SUBJECTS

Declaration of Helsinki (inc. Venice amendment, 1984)

- Participation of their own free will

- Free to withdraw

- Written, informed consent.

Company Employees

- Number of advantages over students etc

- Number of mainly theoretical disadvantages
  - obligation/pressure to participate
  - confidentiality

- Panel of volunteers interested in studies

- Payment for inconvenience of participation (not risk).

STUDY CONDUCT (i)

Recruitment of volunteers by general notice.

Determine health - extensive medical examination including laboratory screening, drug screening and infectious diseases.

- information and approval from General Practioner.

- ensure confidentiality.

- written, informed consent.

STUDY CONDUCT (ii)

Drug supply.

Treatment order/randomisation code.

Case record forms - (often separate from medical information)

- drug administration record

- recording of study data.

Safe storage of "raw" data generated from studies.

STUDY REPORTING

Data analysis by relevant departments
- including drug analysis, statistics.

Firts draft report - reviewed by co-authors and relevant departments.

Second draft - peer review, regulatory review and audit.

Final draft - issued and used for regulatory and reference purposes.

SUMMARY

In-house studies must be conducted to the highest ethical, medical and scientific standards.

Emphasis on safety of subjects.

High standards of documentation and its storage essential.

Confidentiality of subject information is mandatory.