

**COMMISSION OF THE EUROPEAN COMMUNITIES**

**Directorate-General  
for Science, Research and Development**

Directorate  
Biology, Radiation Protection and Medical Research

**Directorate-General  
Employment and Social Affairs**

Directorate  
Health and Safety

**1980-1984**  
**Radiation Protection  
Research Programme**

**CATALOGUE OF CONTRACTS**

**Volume I**

***PROGRAMME MANAGEMENT DATA***

**February 1982**

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Directorate-General  
for Science, Research and Development

Directorate-General  
Employment and Social Affairs

Directorate  
Biology, Radiation Protection and Medical Research

Directorate  
Health and Safety

**KATALOG OVER KONTRAKTER**  
Forskningsprogrammet "Strålingsbeskyttelse"

**FÖRDERUNGSKATALOG**  
Forschungsprogramm „Strahlenschutz“

**CATALOGUE OF CONTRACTS**  
Research programme "Radiation Protection"

**CATALOGUE DES CONTRATS**  
Programme de recherche "Radioprotection"

**ΚΑΤΑΛΟΓΟΣ ΤΩΝ ΣΥΜΒΑΣΕΩΝ**  
Πρόγραμμα έρευνας «Προστασία από τις ακτινοβολίες»

**CATALOGO DEI CONTRATTI**  
Programma di ricerca "Radioprotezione"

**CATALOGUS VAN CONTRACTEN**  
Onderzoeksprogramma „Stralingsbescherming“

**1980-1984**

**Volume I** : Programme Management Data  
**Volume II** : Description of Research Programmes  
**First Edition**

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## Forord

Kommissionen har tidligere offentliggjort to udgaver af sit "Katalog over kontrakter" vedrørende dens program "Strålingsbeskyttelse". Formålet med disse publikationer var at give et tydeligere indtryk af Kommissionens program og at virke som en hjælp til dets forvaltning. Publikationerne indeholdt oplysninger om forskningskontrakterne, såsom navne på kontrahenter, ledere af forskningsgrupper, løbetid, budget m.v., som har vist sig at være nyttige for kontrahenterne samt for nationale og internationale myndigheder. De tidligere publikationer indeholdt ikke detaljerede videnskabelige oplysninger om hver enkelt forskningskontrakt, men det er blevet foreslået at medtage sådanne oplysninger i en ny udgave.

Det er derfor blevet besluttet at offentliggøre det nye katalog i to særskilte bind, idet det første bind indeholder administrative oplysninger, mens det andet omfatter en fuldstændig beskrivelse af den forskning, der skal gennemføres under hver enkelt kontrakt. Alle forskningskontrakter, der blev godkendt inden udgangen af december 1981, er medtaget. Senere indgåede forskningskontrakter vil blive omhandlet i kommende udgaver af kataloget.

Af hensyn til læserne er kontrakterne blevet opdelt i seks større grupper, nemlig, strålingsdosimetri og dens betydning, optræden af og kontrol med radionuklider i miljøet, kortsigtede somatiske virkninger af ioniserende stråling, sene somatiske virkninger af ioniserende stråling, genetiske virkninger af ioniserende stråling samt vurdering af strålingsrisikoen. Omfatter en forskningskontrakt flere projekter, der henhører under forskellige grupper, er den klassificeret efter dens hovedforskningsområde. Der er endvidere vedføjjet skemaer med visse programforvaltningsdata i tillægget til første bind.

Det er vort håb, at dette katalog vil være til nytte for såvel administratorer som videnskabsmænd. Det bør dog understreges, at der desuden vil blive offentliggjort detaljerede videnskabelige oplysninger i de årlige rapporter om programmet "Strålingsbeskyttelse", og specielle emner behandles i monografier og meddelelser om forskningen i strålingsbeskyttelse.

F. VAN HOECK

A.E. BENNETT

## Vorwort

Die Kommission hat bereits früher zwei Ausgaben des "Förderungskatalogs" ihres Strahlenschutzprogramms veröffentlicht. Das Ziel dieser Kataloge war es, ein übersichtliches Bild des Kommissionsprogramms aufzustellen und eine Hilfe für die Programmverwaltung zu sein. Sie enthielten Informationen zu den Forschungsverträgen, zum Beispiel Namen der Vertragspartner, Leiter der Forschungsgruppen, Vertragsdauer, Budgetangaben usw. Alle diese Informationen erwiesen sich als nützlich sowohl für die Vertragspartner, als auch für nationale und internationale Behörden. Einzelheiten über die wissenschaftlichen Aufgaben der Forschungsverträge waren in den früheren Ausgaben nicht enthalten. Es wurde jedoch vorgeschlagen, diese in einer neuen Ausgabe aufzunehmen.

So wird jetzt der neue vorliegende Katalog in zwei Bänden veröffentlicht. Der erste Band umfasst die verwaltungstechnischen Informationen, der zweite enthält ausführliche Beschreibungen der in den jeweiligen Verträgen vorgesehenen Forschungsarbeiten. Alle Verträge des Programms Strahlenschutz, die vor Ende Dezember 1981 abgeschlossen wurden, sind aufgeführt. Nach diesem Datum abgeschlossene Verträge werden in zukünftigen Ausgaben berücksichtigt.

Aus Zweckmässigkeitsgründen wurden die Verträge sechs Hauptgebieten zugeordnet, nämlich Strahlendosimetrie und ihre Interpretation, Verhalten und Kontrolle von Radionukliden in der Umwelt, somatische Sofortwirkungen, somatische Spätwirkungen sowie genetische Wirkungen ionisierender Strahlung und Abschätzung des Strahlenrisikos. Wenn Forschungsverträge mehrere Projekte enthalten, die zu verschiedenen Gebieten gehören, so wurden sie entsprechend ihrem Hauptforschungsgebiet eingeordnet. Tabellen mit Angaben zur Programmdurchführung befinden sich im Anhang zum ersten Band.

Wir hoffen, dass dieser Katalog sowohl für den Wissenschaftler als auch für den Verwaltungsbeamten von Nutzen sein wird. Es soll noch darauf hingewiesen werden, dass detaillierte wissenschaftliche Angaben aus dem Strahlenschutzprogramm in den jährlichen Tätigkeitsberichten und spezielle Themen in Monographien und Tagungsberichten veröffentlicht werden.

F. VAN HOECK

A.E. BENNETT

Préface

La Commission a déjà publié deux éditions du "Catalogue des contrats" de son programme "Radioprotection". Ces publications visaient à donner une idée plus claire du programme de la Commission et à faciliter sa gestion. Elles comprenaient des informations sur les contrats de recherche, telles que les noms des contractants, des responsables des équipes de recherche, la durée des contrats, leur budget etc. qui se sont toutes avérées utiles aux contractants et aux autorités nationales et internationales. Il y manquait cependant une description scientifique détaillée de chaque contrat de recherche, et c'est pourquoi il a été suggéré de la faire figurer dans une nouvelle édition.

La Commission a donc décidé de publier le nouveau catalogue en deux volumes séparés, le premier comprenant les informations administratives et le deuxième donnant une description complète des recherches à effectuer dans le cadre de chaque contrat. Tous les contrats de recherche acceptés avant la fin du mois de décembre 1981 y ont été inclus. Les contrats de recherche conclus depuis figureront dans les prochaines éditions du Catalogue.

Pour la commodité du lecteur, les contrats ont été répartis en six grandes catégories, à savoir la dosimétrie et son interprétation, le comportement et le contrôle des radionucléides dans l'environnement, les effets somatiques à court terme des rayonnements ionisants, les effets somatiques tardifs des rayonnements ionisants, les effets génétiques des rayonnements ionisants et l'évaluation des risques dûs à l'irradiation. Si un contrat de recherche est composé de plusieurs projets faisant partie de catégories différentes, il est classé d'après son principal domaine de recherche. De plus, des tableaux comprenant certaines données sur la gestion des programmes figurent à l'annexe du premier volume.

Il faut espérer que ce catalogue s'avérera utile à la fois aux administrateurs et aux scientifiques. Il convient toutefois de souligner que des informations scientifiques détaillées seront également publiées dans les rapports annuels du programme "Radioprotection" et que des thèmes particuliers seront traités dans les séries de monographies et de comptes rendus portant sur la recherche en matière de radioprotection.

F. VAN HOECK

A.E. BENNETT

Preface

The Commission has previously published two editions of a "Catalogue of Contracts" of its Radiation Protection Programme. The aim of the publications was to convey a clear impression of the Commission's programme and to serve as an aid for its management. These publications contained information on the research contracts, such as names of contractors, heads of research teams, duration, budget, etc. all of which proved to be useful for the contractors, and for national and international authorities. Detailed scientific information on each of the research contracts was not given in the previous publications, however it has been suggested that this be included in a new edition.

It has therefore been decided to publish the new Catalogue in two separate volumes, the first volume giving the administrative information, the second one giving a full description of the research to be carried out during each contract. All research contracts accepted before the end of December 1981 have been included. More recently concluded research contracts will be included in forthcoming editions of the Catalogue.

For the convenience of the reader, the contracts have been assigned to six major sectors, i.e. radiation dosimetry and its interpretation, behaviour and control of radionuclides in the environment, short-term somatic effects of ionizing radiation, late somatic effects of ionizing radiation, genetic effects of ionizing radiation, and evaluation of radiation risks. Whenever a research contract is composed of several projects belonging to different sections, it is categorized according to its main research area. Furthermore, tables with some programme management data are given in the appendix to the first volume.

It is to be hoped that this Catalogue will prove useful for both administrators and scientists. However, it should be emphasized that in addition, detailed scientific information will also be published in the Annual Reports of the Radiation Protection Programme, and special topics will be dealt with in the Radiation Protection Research monographs and proceedings series.

F. VAN HOECK

A.E. BENNETT

## Είσαγωγή

Ἡ Ἐπιτροπή ἔχει δημοσιεύσει στό παρελθόν δύο ἐκδόσεις "καταλόγου Συμβολαίων" τοῦ Προγράμματος τῆς Προστασίας ἀπό Ἀκτινοβολίες. Ὁ σκοπός τῶν ἐκδόσεων αὐτῶν ἦταν νά δώσουν μία σαφέστερη ἐντύπωση τοῦ Προγράμματος τῆς Ἐπιτροπῆς καί νά χρησιμεύσουν σάν βοήθημα γιά τή διαχείρισή του. Οἱ ἐκδόσεις αὐτές περιεῖχαν πληροφορίες γιά τά ἐρευνητικά συμβόλαια, ὅπως ἐπωνυμίες τῶν ἐργοληπτῶν, τοὺς προϊσταμένους τῶν ἐρευνητικῶν ομάδων, διάρκεια, προϋπολογισμό κλπ. Οἱ πληροφορίες αὐτές ὑπῆρξαν χρήσιμες γιά τοὺς ἐργολῆπτες καί γιά τίς ἐθνικές καί διεθνεῖς ἀρχές. Στίς προηγούμενες ἐκδόσεις δέν εἶχαν δοθεῖ λεπτομερεῖς ἐπιστημονικές πληροφορίες γιά τό κάθε ἓνα ἀπό τά ἐρευνητικά συμβόλαια, προτείνεται ὅμως νά περιληφθοῦν σέ μία καινούργια ἔκδοση.

Ἦς ἐκ τούτου, ἀπεφασίσθη ὁ καινούργιος κατάλογος νά δημοσιευτεῖ σέ δύο χωριστοὺς τόμους, ἐκ τῶν ὁποίων ὁ πρῶτος θά δίνει τίς πληροφορίες διοικητικῆς φύσεως, καί ὁ δεῦτερος πλήρη περιγραφή τῆς ἔρευνας πού θά ἐκπονεῖται μέ κάθε συμβόλαιο. Ὅλα τά ἐρευνητικά συμβόλαια πού εἶχαν γίνει ἀποδεκτά μέχρι τέλους τοῦ 1981 ἔχουν συμπεριληφθεῖ. Τά ἐρευνητικά συμβόλαια πού ἔχουν συναφθεῖ πιό πρόσφατα θά περιληφθοῦν σέ προσεχεῖς ἐκδόσεις τοῦ καταλόγου.

Γιά τή διευκόλυνση τοῦ ἀναγνώστη τά συμβόλαια ἔχουν χωρισθεῖ σέ ἔξι εὐρεῖς τομεῖς, δηλαδή δοσομετρία ἀκτινοβολιῶν καί ἐρμηνεία τῆς, συμπεριφορά καί ἔλεγχος τῶν ραδιονουκλεΐδιων στό περιβάλλον, βραχυχρόνιες σημαντικές ἐπιδράσεις ἀπό ἰονίζουσες ἀκτινοβολίες, μακροπρόθεσμες σωματικές ἐπιπτώσεις ἀπό ἰονίζουσες ἀκτινοβολίες καί ἀξιολόγηση τῶν κινδύνων ἀπό τίς ἀκτινοβολίες. Σέ ὅσες περιπτώσεις ἕνα ἐρευνητικό συμβόλαιο ἀποτελεῖται ἀπό περισσότερα ἀπό ἕνα προγράμματα πού ἀνήκουν σέ διαφορετικούς τομεῖς τότε αὐτό ταξινομεῖται σύμφωνα μέ τό ἀντικείμενο τοῦ βασικοῦ του ἐρευνητικοῦ τομέα. Ἐπίσης, πίνακες μέ ὀρισμένα στοιχεῖα διαχειρίσεως τοῦ προγράμματος δίνονται στά παραρτήματα τοῦ πρώτου τόμου.

Ἐλπίζεται ὅτι αὐτός ὁ Κατάλογος θά φανεῖ χρήσιμος τόσο σέ διοικητικούς ὑπαλλήλους ὅσο καί σέ ἐπιστήμονες. Πρέπει ὅμως νά τονισθεῖ ὅτι λεπτομερεῖς ἐπιστημονικές πληροφορίες θά δημοσιευθοῦν ἐπίσης στίς ἐτήσιες ἐκθέσεις τοῦ Προγράμματος Προστασίας ἀπό Ἀκτινοβολίες, καί τά εἰδικά θέματα θά ἀντιμετωπισθοῦν στίς σειρές Μονογραφιῶν καί Πρακτικῶν τῆς Ἐρευνας γιά Προστασία ἀπό Ἀκτινοβολίες.

### Prefazione

La Commissione ha pubblicato in passato due edizioni di un "Catalogo dei contratti" conclusi nel quadro del Programma di Radioprotezione, nello scopo di meglio illustrare tale programma e di renderne più agevole la gestione. Le informazioni riguardanti i contratti di ricerca, come per esempio i nomi dei contraenti e dei responsabili dei gruppi di ricerca, la durata dei progetti, il bilancio previsto, ecc. si sono rivelate utili sia per i contraenti che per le autorità nazionali ed internazionali. Di nessuno dei contratti di ricerca si comunicavano dati scientifici, ma è stato suggerito di includere questo aspetto in una nuova edizione.

Si è pertanto deciso di pubblicare il nuovo catalogo in due volumi distinti, il primo contenente informazioni amministrative, il secondo una descrizione completa delle attività di ricerca previste in ogni contratto. Nel catalogo figurano tutti i contratti di ricerca conclusi prima della fine del 1981. I contratti più recenti figureranno invece in future edizioni del catalogo.

Per comodità di lettura i contratti sono stati ripartiti in sei settori principali: dosimetria delle radiazioni e sua interpretazione, comportamento e controllo dei radionuclidi presenti nell'ambiente, effetti somatici a breve termine delle radiazioni ionizzanti, effetti somatici tardivi delle radiazioni ionizzanti, effetti genetici delle radiazioni ionizzanti, valutazione dei rischi da radiazione. I contratti articolati in più progetti, relativi a settori diversi, sono repertoriati nel settore corrispondente al progetto più importante. Infine, tabelle contenenti dati di gestione del programma sono contenute nell'appendice allegata al primo volume.

Si spera che questo catalogo si riveli utile sia per i responsabili amministrativi che per i ricercatori impegnati nei vari contratti. Desideriamo comunque far presente che altre informazioni scientifiche dettagliate saranno pubblicate nelle relazioni annuali del Programma di Radioprotezione e che argomenti particolari faranno oggetto di monografie e di rapporti dedicati alla ricerca nel campo della Radioprotezione.

F. VAN HOECK

A.E. BENNETT

### Voorwoord

De Commissie publiceerde reeds eerder twee uitgaven van een "Catalogus van Contracten" van haar onderzoeksprogramma Stralingsbescherming. Met de publikatie ervan werd beoogd een beter inzicht te geven in het programma van de Commissie en een hulpmiddel te vormen bij het beheer van dat programma. De publikaties in kwestie bevatten informatie over de onderzoekscontracten, zoals naam van de contractanten, leiders van de onderzoeksgroepen, duur, uitgetrokken kredieten, enz. Al die gegevens zijn nuttig gebleken voor de contractanten, alsmede voor de nationale en internationale instanties. Een gedetailleerde wetenschappelijke informatie met betrekking tot ieder van de vermelde onderzoekscontracten was in de vroegere publikaties evenwel niet opgenomen; wel werd voorgesteld dit soort informatie in een nieuwe uitgave te verstrekken.

Er werd derhalve besloten de nieuwe catalogus in twee afzonderlijke delen te publiceren, namelijk een deel met de administratieve informatie en een ander met een volledige beschrijving van de onderzoekswerkzaamheden die in het kader van ieder contract moeten worden uitgevoerd. Alle voor het einde van december 1981 goedgekeurde onderzoekscontracten zijn in de lijst opgenomen. De contracten die op latere data werden afgesloten, zullen in de komende edities van de catalogus worden opgenomen.

Ten gerieve van de lezer zijn de contracten in zes hoofdsecties ingedeeld, namelijk stralingsdosimetrie en de interpretatie hiervan, gedrag van en controle op radionucliden in het milieu, vroege somatische effecten van ioniserende straling, late somatische effecten van ioniserende straling, genetische effecten van ioniserende straling en beoordeling van stralingsrisico's. Telkens wanneer een onderzoekscontract projecten omvat die tot verschillende secties behoren, is dit volgens het belangrijkste onderzoeksgebied ingedeeld. Bovendien zijn in het eerste deel tabellen opgenomen met bepaalde gegevens inzake het programmabeheer.

Deze catalogus zal hopelijk van nut zijn zowel voor administrateurs als voor wetenschappers. Gedetailleerde wetenschappelijke informatie zal voorts nog worden gepubliceerd in de jaarverslagen van het programma Stralingsbescherming, terwijl speciale onderwerpen zullen worden behandeld in de monografieën en rapporten betreffende het onderzoek op het gebied van de stralingsbescherming.

F. VAN HOECK

A.E. BENNETT

INTRODUCTION

THE RADIATION PROTECTION RESEARCH PROGRAMME  
OF THE COMMISSION OF THE EUROPEAN COMMUNITIES

Research on radiation protection was one of the subjects originally mentioned in the Treaty of Rome. Since 1959, when the first research contracts with national institutions were signed, the Commission has continued and developed this Radiation Protection Programme. Considering the progress of knowledge, but also the changing requirements for protection in the Community, an important evolution in the scientific content of the programme has taken place. A new 5 year research programme 1980-1984 is currently being carried out.

Recent events have indicated the pertinence of radiation protection. In any accidental situation the first problems to be solved concern the safety of the population. The first questions to be answered concern the risk for the population, the detriment, the late effects to be anticipated and the prevention, control and treatment of potential radiation damage to man and his environment.

The role of this scientific research programme is to supply sufficient information to contribute to a framework so that informed decisions can be made on issues to which public opinion has become very sensitive. Therefore, the Radiation Protection Programme of the Commission is designed to gain a satisfactory understanding and control of radiation risks with two main objectives:

- improvement of scientific and technical knowledge with a view to updating basic standards for the health protection of the general public and workers against the hazards arising from ionizing radiation,
- evaluation of the biological and ecological consequences of nuclear activities and of the use of nuclear energy and ionizing radiation, in order to ensure an adequate protection of man and of the environment whenever unacceptable harm could otherwise be caused to them.

It is evident that these objectives directly concern Community policies of undisputed importance: the social, the environment and the energy policies. To reach these objectives, a co-operative European effort is necessary on a broad variety of subjects forming a closely integrated programme in radiation protection research including measurement of radiation dose, environmental pathways, degree and control of environmental radiocontamination, prevention and treatment of short-term and late somatic effects and their consequences, the role of genetic effects for future generations and the assessment of consequences of radiation for man and his environment.

The scope of the subjects ranges from very pertinent problems, such as the effects of low level irradiation, technologically enhanced levels of exposure from natural radioactivity, indoor exposure, and comparative risk assessment, to others becoming more important in the future, when fusion energy might be available, such as the radiotoxicity of tritium. Studies on the biological consequences of handling of waste, effluent and fuels throughout their cycles are important for decisions on safe energy provision, while others aim at reducing the most important source of man-made irradiation of the whole population by improving radiation techniques used in medical diagnosis.

In 1981, more than 900 scientists in the Community worked full- or part-time within more than 190 contracts including some 310 research projects, to achieve these vital goals.

This effort, expressed in man-years for the total duration of the contracts, amounts to up to more than 1100 man-years of scientific input and over 1000 man-years of input by other collaborators. The total cost of the planned research adds up to about 103 MioECU with a financial participation of the Commission of the European Communities of over 37 MioECU.

The collection of research contracts included in this edition of the "Catalogue of Contracts" reflects the situation as of 31 December 1981. Meanwhile new proposals have been submitted to the Commission and they have been discussed by the Advisory Committee on Programme Management. They will be included in a forthcoming updated edition.

**I. LIST OF CONTRACTS**

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

REP-Institutes of the  
Organization for Health  
Research, TNO  
P.O.Box 5815  
NL-2280 HV Rijswijk

**Contract no.:** BIO-A-300-81-NL

**Head(s) of research team(s):**

Prof. G.W. Barendsen  
Radiobiological Institute  
TNO  
P.O.Box 5815  
NL-2280 HV Rijswijk

**General subject of the contract:**

Evaluation of the biological effectiveness of various types of radiation for different types of damages in cultured mammalian cells.

**List of projects:**

1. Measurement of the biological effectiveness of fast neutrons of different energies for cell reproductive death and for chromosome aberrations in different types of cultured mammalian cells.
2. Measurement of the biological effectiveness of different radiations for malignant transformation of cultured cells.

**Total cost (for 4 years):**

HFL 1.211.300 = 434.313 ECU

**Ceiling of CEC contribution:**

HFL 484.520 = 173.725 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 3.4

**Others (man years):** 4.8

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Association pour le Développement de la Physique Atomique, ADPA Route de Narbonne 118 F-31077 Toulouse-Cédex	<b>Contract no.:</b> BIO-A-295-81-F
<b>Head(s) of research team(s):</b> Prof. D. Blanc Centre de Physique Atomique Université Paul Sabatier Route de Narbonne 118 F-31077 Toulouse-Cédex	
<b>General subject of the contract:</b> Transport simulation of particles, and measurement of the ionization potential of some polar liquids approximating to biological media.	
<b>List of projects:</b> 1. Transport simulation of particles : applications to dosimetry, microdosimetry, radioprotection and radiobiology. 2. Measurement of the ionization potential of some polar liquids approximating to biological media.	
<b>Total cost (for 4 years):</b> FF 2.065.000 = 343.480 ECU	<b>Ceiling of CEC contribution:</b> FF 516.250 = 85.870 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 4,6	<b>Others (man years):</b>
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Association pour le Développement  
de la Physique Atomique, ADPA  
Route de Narbonne 118  
F-31077 Toulouse Cédex

**Contract no.:** BIO-A-296-81-F

**Head(s) of research team(s):**

Prof. D. Blanc  
Centre de Physique Atomique  
Université Paul Sabatier  
Route de Narbonne 118  
F-31077 Toulouse Cédex

Prof. J.L. Teyssier  
Lab. des Radiations Ionis.  
Université de Limoges  
Rue A. Thomas 123  
F-87060 Limoges Cédex

**General subject of the contract:**

Dosimetry of low doses by the electret and tracks effect. Application to the individual dosimetry of fast neutrons.

**List of projects:**

1. Dosimetry of low doses by the electret and tracks effect in polymers. Development of a read out system adapted to radiation protection.

**Total cost (for 4 years):**

FF 376.340 = 62.598 ECU

**Ceiling of CEC contribution:**

FF 150.000 = 24.950 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 0.8

**Others (man years):** 2.7

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>			
<b>Contractor:</b> Istituto Nazionale di Fisica Nucleare, INFN P.O.Box 56 I-00044 Frascati (Roma)	<b>Contract no.:</b> BIO-A-297-81-I		
<b>Head(s) of research team(s):</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">                             Prof. P. Blasi                              Lab. Nazionali di Legnaro                              INFN                              Via Romea 4                              I-35020 Legnaro-Padova                         </td> <td style="width: 50%; vertical-align: top;">                             Prof. G. Moschini                              Lab. Nazionale di Legnaro                              INFN                              Via Romea 4                              I-35020 Legnaro-Padova                         </td> </tr> </table>		Prof. P. Blasi Lab. Nazionali di Legnaro INFN Via Romea 4 I-35020 Legnaro-Padova	Prof. G. Moschini Lab. Nazionale di Legnaro INFN Via Romea 4 I-35020 Legnaro-Padova
Prof. P. Blasi Lab. Nazionali di Legnaro INFN Via Romea 4 I-35020 Legnaro-Padova	Prof. G. Moschini Lab. Nazionale di Legnaro INFN Via Romea 4 I-35020 Legnaro-Padova		
<b>General subject of the contract:</b> Dosimetry and hazards of neutrons at energies between 15 and 50 MeV.			
<b>List of projects:</b> 1. Dosimetry and hazards of neutrons at energies between 15 and 50 MeV.			
<b>Total cost (for 4 years):</b> LIT 369.000.000 = 293.790 ECU	<b>Ceiling of CEC contribution:</b> LIT 146.600.000 = 116.720 ECU		
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>		
<b>Scientists (man years):</b> 2.3	<b>Others (man years):</b> 2.3		
<b>Remarks:</b> Collaboration with the University of Dundee, U.K. and the University of Padova, I.			

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> REP-Institutes of the Organization for Health Research, TNO P.O.Box 5815 NL-2280 HV Rijswijk	<b>Contract no.:</b> BIO-A-302-81-NL
<b>Head(s) of research team(s):</b> Dr. J. J. Broerse Radiobiological Institute TNO P.O.Box 5815 NL-2280 HV Rijswijk	
<b>General subject of the contract:</b> Neutron dosimetry instrumentation for radiation protection and radiobiology.	
<b>List of projects:</b> 1. Neutron dosimetry instrumentation for radiation protection and radiobiology.	
<b>Total cost (for 4 years):</b> HFL 610.100 = 218.752 ECU	<b>Ceiling of CEC contribution:</b> HFL 244.040 = 87.501
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.4	<b>Others (man years):</b> 3.0
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> United Kingdom Atomic Energy Authority, UKAEA Charles II Street 11 GB-London SW1Y 4QP	<b>Contract no.:</b> BIO-A-434-81-UK
<b>Head(s) of research team(s):</b> Dr. A.C. Chamberlain Env. & Medical Sciences Div. AERE Harwell, Didcot GB-Oxon OX11 0RA Dr. D. Newton Env. & Medical Sciences Div. AERE Harwell, Didcot GB-Oxon OX11 0RA	
<b>General subject of the contract:</b> Development of improved X-ray counters for assessment of plutonium in lungs.	
<b>List of projects:</b> 1. Development of improved X-ray counters for assessment of plutonium in lungs.	
<b>Total cost (for 4 years):</b> UKL 125.000 = 223.934 ECU	<b>Ceiling of CEC contribution:</b> UKL 50.000 = 89.574 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.2	<b>Others (man years):</b> 1.0
<b>Remarks:</b> In collaboration with: Dr. J.W. Leake Instrum. & Appl. Phys. Div. AERE Harwell, Didcot GB-Oxon OX11 0RA	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

National Physical Laboratory  
NPL  
Teddington  
GB-Middlesex TW11 0LW

**Contract no.:** B10-A-307-81-UK

**Head(s) of research team(s):**

Dr. P. Christmas  
Div. Radiation Science  
and Acoustics, NPL  
Teddington  
GB-Middlesex TW11 0LW

**General subject of the contract:**

A study of the dosimetric applications of thermally stimulated  
exo-electron emission in beryllium oxide.

**List of projects:**

1. Thermally stimulated exo-electron emission (TSEE) dosimetry in  
beta-ray, X-ray and mixed neutron/gamma-ray fields.

**Total cost (for 2 years):**

UKL 21.700 = 38.875 ECU

**Ceiling of CEC contribution:**

UKL 8.680 = 15.550 ECU

**Duration:**

01.01.1981 - 31.12.1982

**CEC staff:**

**Scientists (man years):** 0.5

**Others (man years):** 0.3

**Remarks:**

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Commissariat à l'Énergie Atomique CEN de Grenoble B.P.n° 85 X F-38041 Grenoble Cédex	<b>Contract no.:</b> BIO-A-293-81-F
<b>Head(s) of research team(s):</b> Dr. H. de Choudens Service de Protection CEA - CEN de Grenoble B.P.n° 85 X F-38041 Grenoble Cédex	
<b>General subject of the contract:</b> Design and construction of a dosimetry system for the determination of the quality factor and the dose equivalent in neutron-gamma mixed fields.	
<b>List of projects:</b> 1. Design and construction of a dosimetry system for the determination of the quality factor and the dose equivalent in neutron-gamma mixed fields.	
<b>Total cost (for 4 years):</b> FF 2.348.000 = 390.552 ECU	<b>Ceiling of CEC contribution:</b> FF 587.000 = 97.638 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 3.1	<b>Others (man years):</b> 1.6
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Kernforschungsanlage  
Jülich GmbH., KFA  
Postfach 1913  
D-5170 Jülich 1

**Contract no.:** BIO-A-288-81-D

**Head(s) of research team(s):**

Prof.Dr. L.E. Feinendegen  
Institut für Medizin  
KFA Jülich GmbH.  
Postfach 1913  
D-5170 Jülich 1

**General subject of the contract:**

Biological effectiveness of incorporated radioactive nuclides and fast neutrons.

**List of projects:**

1. Biological effectiveness of incorporated radioactive nuclides other than bone seekers.
2. Assessment of the quality factor of neutrons and gamma-rays.
3. In vivo studies of biochemical reaction rates from low dose irradiation.

**Total cost (for 4 years):**

DM 5.211.547 = 2.075.487 ECU

**Ceiling of CEC contribution:**

DM 1.659.900 = 661.051 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

1 scientist  
1 engineer

**Scientists (man years):** 11.0

**Others (man years):** 12.0

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>			
<b>Contractor:</b> Gesellschaft für Strahlen- und Umweltforschung mbH. GSF Ingolstädter Landstr.1 D-8042 Neuherberg	<b>Contract no.:</b> BIO-A-287-81-D		
<b>Head(s) of research team(s):</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">                             Prof.Dr. W.Jacobi                              Institut für Strahlenschutz                              GSF                              Ingolstädter Landstr.1                              D-8042 Neuherberg                         </td> <td style="width: 50%; vertical-align: top;">                             Dr. G. Burger                              Institut für Strahlenschutz                              GSF                              Ingolstädter Landstr.1                              D-8042 Neuherberg                         </td> </tr> </table>		Prof.Dr. W.Jacobi Institut für Strahlenschutz GSF Ingolstädter Landstr.1 D-8042 Neuherberg	Dr. G. Burger Institut für Strahlenschutz GSF Ingolstädter Landstr.1 D-8042 Neuherberg
Prof.Dr. W.Jacobi Institut für Strahlenschutz GSF Ingolstädter Landstr.1 D-8042 Neuherberg	Dr. G. Burger Institut für Strahlenschutz GSF Ingolstädter Landstr.1 D-8042 Neuherberg		
<b>General subject of the contract:</b> Determination of effective organ doses.			
<b>List of projects:</b> 1. Determination of effective organ doses.			
<b>Total cost (for 4 years):</b> DM 2.029.100 = 808.084 ECU	<b>Ceiling of CEC contribution:</b> DM 801.000 = 318.996 ECU		
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>		
<b>Scientists (man years):</b> 9,3	<b>Others (man years):</b> 9,7		
<b>Remarks:</b>			

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>			
<b>Contractor:</b> Physikalisch-Technische Bundesanstalt, PTB Bundesallee 100 D-3300 Braunschweig	<b>Contract no.:</b> B10-A-284-80-D		
<b>Head(s) of research team(s):</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">                             Prof.Dr. R. Jahr                              Neutronendosimetrie                              PTB                              Bundesallee 100                              D-3300 Braunschweig                         </td> <td style="width: 50%; vertical-align: top;">                             Prof.Dr. H. Reich                              Phot.&amp; Elektronendosimetrie                              PTB                              Bundesallee 100                              D-3300 Braunschweig                         </td> </tr> </table>		Prof.Dr. R. Jahr Neutronendosimetrie PTB Bundesallee 100 D-3300 Braunschweig	Prof.Dr. H. Reich Phot.& Elektronendosimetrie PTB Bundesallee 100 D-3300 Braunschweig
Prof.Dr. R. Jahr Neutronendosimetrie PTB Bundesallee 100 D-3300 Braunschweig	Prof.Dr. H. Reich Phot.& Elektronendosimetrie PTB Bundesallee 100 D-3300 Braunschweig		
<b>General subject of the contract:</b> Investigation of different dose equivalent quantities in phantoms externally irradiated with photons, electrons and neutrons.			
<b>List of projects:</b> 1. Investigation of different dose equivalent quantities in phantoms externally irradiated with photons, electrons and neutrons.			
<b>Total cost (for 4.5 years):</b> DM 1.872.500 = 745.719 ECU	<b>Ceiling of CEC contribution:</b> DM 520.640 = 207.344 ECU		
<b>Duration:</b> 01.07.1980 - 31.12.1984	<b>CEC staff:</b>		
<b>Scientists (man years):</b> 21.6	<b>Others (man years):</b> 4.0		
<b>Remarks:</b>			

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Universität Würzburg Sanderring 2 D-8700 Würzburg	<b>Contract no.:</b> BIO-A-286-81-D
<b>Head(s) of research team(s):</b> Prof.Dr. A.M. Kellerer Inst.für Med.Strahlenkunde Univ. Würzburg Versbacher Strasse 5 D-8700 Würzburg	
<b>General subject of the contract:</b> Microdosimetric studies and risk assessment for late somatic effects.	
<b>List of projects:</b> <ol style="list-style-type: none"><li>1. Studies in microdosimetry for application to radiation protection.</li><li>2. Biophysical and epidemiological studies of neoplasms in the Japanese survivors of the atomic bomb explosions.</li></ol>	
<b>Total cost (for 4 years):</b> DM 994.720 = 396.145 ECU	<b>Ceiling of CEC contribution:</b> DM 397.320 = 158.232 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 5.0	<b>Others (man years):</b> 9.7
<b>Remarks:</b> Project 2 is carried out in close collaboration with the Colombia University (U.S.A.) and the Radiation Effects Research Foundation (Japan).	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

University of Aberdeen  
Old Aberdeen  
Regent Walk  
GB-Aberdeen AB9 2ZD

**Contract no.:** BIO-A-310-81-UK

**Head(s) of research team(s):**

Prof. J. R. Mallard  
University of Aberdeen  
Foresterhill  
UK-Aberdeen AB9 2ZD

Dr. K.V. Ettinger  
University of Aberdeen  
Foresterhill  
UK-Aberdeen AB9 2ZD

**General subject of the contract:**

Application of lyoluminescence to radiation dosimetry and radiation protection.

**List of projects:**

1. Lyoluminescence dosimetry of incorporated emitters.
2. Lyoluminescence accident dosimetry with desiccated human tissue and personal effects of the victim.

**Total cost (for 4 years):**

UKL 97.135 = 174.015 ECU

**Ceiling of CEC contribution:**

UKL 24.360 = 43.640 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 2.8

**Others (man years):** 12.8

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> University of Dundee Nethergate GB-Dundee DD1 4HN	<b>Contract no.:</b> BIO-A-463-81-UK
<b>Head(s) of research team(s):</b> Prof. J.H. Martin Dep. of Medical Biophysics University of Dundee GB-Dundee DD1 4HN	Dr. D.E. Watt Dep. of Medical Biophysics University of Dundee GB-Dundee DD1 4HN
<b>General subject of the contract:</b> Dosimetry and microdosimetry of intermediate energy neutrons.	
<b>List of projects:</b> 1. Dosimetry and microdosimetry of intermediate energy neutrons.	
<b>Total cost (for 3,5 years):</b> UKL 88.708 = 158.918 ECU	<b>Ceiling of CEC contribution:</b> UKL 18.540 = 33.214 ECU
<b>Duration:</b> 01.07.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 0.9	<b>Others (man years):</b> 4.0
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Comitato Nazionale per l'Energia Nucleare, CNEN Viale Regina Margherita 125 I-00198 Roma	<b>Contract no.:</b> BIO-A-298-81-I
<b>Head(s) of research team(s):</b> Prof. P. Metallì Div. Fisica e Scienze Biomediche CSN della Casaccia, CNEN C.P. 2400 I-00100 Roma	
<b>General subject of the contract:</b> Microdosimetric studies of radiological effects at low doses.	
<b>List of projects:</b> 1. Microdosimetric studies of radiobiological effects at low doses.	
<b>Total cost (for 4 years):</b> LIT 690.000.000 = 549.363 ECU	<b>Ceiling of CEC contribution:</b> LIT 276.000.000 = 219.745 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 1 scientist
<b>Scientists (man years):</b> 7.1	<b>Others (man years):</b> 6.7
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Comitato Nazionale per l'Energia Nucleare, CNEN Viale Regina Margherita 125 I-00198 Roma	<b>Contract no.:</b> BIO-A-299-81-I
<b>Head(s) of research team(s):</b> Prof. P. Metalli Div.Fisica e Scienze Biomediche CSN della Casaccia, CNEN C.P. 2400 I-00100 Roma	Dr. L. Tommasino Div.Fisica e Scienze Biomediche CSN della Casaccia, CNEN C.P. 2400 I-00100 Roma
<b>General subject of the contract:</b> Personal dosimetry and area monitoring.	
<b>List of projects:</b> <ol style="list-style-type: none"><li>1. Personal neutron dosimetry by electrochemically etched CR-39 detectors.</li><li>2. Further developments of thin-film breakdown counters.</li><li>3. Electrochemically etched track detectors for the counting and spectrometry of alpha particles and their applications.</li></ol>	
<b>Total cost (for 4 years):</b> LIT 897.735.000 = 714.757 ECU	<b>Ceiling of CEC contribution:</b> LIT 263.200.000 = 209.554 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 4.6	<b>Others (man years):</b> 5.2
<b>Remarks:</b>	

Commission of the European Communities	
RADIATION PROTECTION PROGRAMME	
<b>Contractor:</b> Universität des Saarlandes Stadtwald D-6600 Saarbrücken	<b>Contract no.:</b> B10-A-289-81-D
<b>Head(s) of research team(s):</b> Prof.Dr. H. Muth Institut für Biophysik der Univ. des Saarlandes Boris Rajewsky Institut D-6650 Homburg (Saar)	Prof.Dr. R.E. Grillmaier Institut für Biophysik der Univ. des Saarlandes Boris Rajewsky Institut D-6650 Homburg (Saar)
<b>General subject of the contract:</b> In vitro and in vivo investigations of radiation induced chromosome damages and microdosimetric techniques for neutrons and high-LET radiations.	
<b>List of projects:</b> <ol style="list-style-type: none"><li>1. In vitro and in vivo investigations of radiation induced chromosome damages and of the underlying primary mechanisms with regard to applications in biological dosimetry.</li><li>2. Application of microdosimetric techniques to practical problems in dosimetry of neutrons and high-LET radiations and in radiation protection dosimetry.</li></ol>	
<b>Total cost (for 4 years):</b> DM 2.061.020 = 820.797 ECU	<b>Ceiling of CEC contribution:</b> DM 810.540 = 322.796 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 12.0	<b>Others (man years):</b> 16.0
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Commissariat à l'Energie Atomique, CEA CEN de Fontenay-aux-Roses B.P. n°6 F-92260 Fontenay-aux-Roses	<b>Contract no.:</b> BIO-A-433-81-F
<b>Head(s) of research team(s):</b> Dr. N. Parmentier IPSN - DPR CEA - CEN FAR B.P. n°6 F-92260 Fontenay-aux-Roses	
<b>General subject of the contract:</b> Device for dose equivalent measurement in mixed fields.	
<b>List of projects:</b> 1. Device for dose equivalent measurement in mixed fields.	
<b>Total cost (for 3 years):</b> FF 1.725.000 = 286.926 ECU	<b>Ceiling of CEC contribution:</b> FF 690.000 = 114.770 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1983	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.7	<b>Others (man years):</b> 2.3
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> United Kingdom Atomic Energy Authority, UKAEA Charles II Street 11 GB-London SW1Y 4QP	<b>Contract no.:</b> BIO-A-305-81-UK
<b>Head(s) of research team(s):</b> Dr. D.H. Peirson Env. & Medical Sciences Div. AERE Harwell, Didcot GB-Oxon OX11 0RA	
<b>General subject of the contract:</b> Radiation dosimetry and spectrometry.	
<b>List of projects:</b> 1. Neutron spectrometry. 2. Development of a fast neutron personnel dosimeter using recoil ions.	
<b>Total cost (for 4 years):</b> UKL 298.000 = 533.859 ECU	<b>Ceiling of CEC contribution:</b> UKL 119.200 = 213.544 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 4.6	<b>Others (man years):</b> 1.8
<b>Remarks:</b> A closely related research programme is reflected under contract n° BIO-A-459-81-UK.	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> United Kingdom Atomic Energy Authority, UKAEA Charles II Street 11 GB-London SW1Y 4QP	<b>Contract no.:</b> BIO-A-306-81-UK
<b>Head(s) of research team(s):</b> Dr. D.H. Peirson Env. & Medical Sciences Div. AERE Harwell, Didcot GB-Oxon OX11 0RA	
<b>General subject of the contract:</b> Studies in microdosimetry, cellular radiobiology and track structure.	
<b>List of projects:</b> 1. Cellular radiobiology. 2. Track parameters of ionizing radiations.	
<b>Total cost (for 4 years):</b> UKL 455.000 = 815.120 ECU	<b>Ceiling of CEC contribution:</b> UKL 113.750 = 203.780 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 6.2	<b>Others (man years):</b> 2.0
<b>Remarks:</b> A closely related research programme is reflected under contract n° BIO-E-460-81-UK.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

United Kingdom Atomic Energy  
Authority, UKAEA  
Charles II Street 11  
GB-London SW1Y 4QP

**Contract no.:** BIO-A-459-81-UK

**Head(s) of research team(s):**

Dr. D.H. Peirson  
Env. & Medical Sciences Div.  
AERE  
Harwell, Didcot  
GB-Oxon OX11 0RA

**General subject of the contract:**

Radiation dosimetry and spectrometry.

**List of projects:**

1. Examination of the photo transfer process in TL materials.

**Total cost (for 4 years):**

UKL 105.000 = 188.105 ECU

**Ceiling of CEC contribution:**

UKL 26.250 = 47.026 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 1.3

**Others (man years):** 1.3

**Remarks:** A closely related research programme is reflected under contract n° BIO-A-305-81-UK.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Commissariat à l'Energie Atomique, CEA CEN de Fontenay-aux-Roses B.P. n°6 F-92260 Fontenay-aux-Roses	<b>Contract no.:</b> BIO-A-292-81-F
<b>Head(s) of research team(s):</b> Dr. G. Portal Serv.Techn.d'Equipt.de Prot. CEA - CEN FAR B.P. n°6 F-92260 Fontenay-aux-Roses	
<b>General subject of the contract:</b> Dosimetry of neutrons around installations using or processing nuclear fuel.	
<b>List of projects:</b> 1. Design and construction of individual neutron dosimeters. 2. Design and construction of a portable environmental neutron dosimeter.	
<b>Total cost (for 4 years):</b> FF 2.386.725 = 396.994 ECU	<b>Ceiling of CEC contribution:</b> FF 954.690 = 158.797 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2.3	<b>Others (man years):</b> 2.2
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Université Louis Pasteur  
Rue Humann 11  
F-67085 Strasbourg

**Contract no.:** BIO-A-294-81-F

**Head(s) of research team(s):**

Dr. R.V. Rechenmann  
LBRM - INSERM U.220  
Université Louis Pasteur  
Rue Humann 11  
F-67085 Strasbourg

**General subject of the contract:**

Theoretical and experimental analysis of the ionizing track pattern in dense tissue-like media.

**List of projects:**

1. Theoretical and experimental analysis of the ionizing track pattern in dense tissue-like media - Consequences for radiation protection.

**Total cost (for 4 years):**  
FF 1.847.500 = 307.302 ECU

**Ceiling of CEC contribution:**  
FF 738.900 = 122.904 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 6.0

**Others (man years):** 7.0

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> The National Radiological Protection Board, NRPB Chilton, Didcot GB-Oxon OX11 0RQ	<b>Contract no.:</b> BIO-A-309-81-UK
<b>Head(s) of research team(s):</b> Dr. J.A. Reissland Physics Department, NRPB Chilton, Didcot GB-Oxfordshire OX11 0RQ	
<b>General subject of the contract:</b> Solid state physics underlying the properties of luminophors used in luminescence dosimetry.	
<b>List of projects:</b> <ol style="list-style-type: none"><li>1. The implementation of thermo luminescence techniques, including reassessment of absorbed dose, to dose measurement under operational conditions.</li><li>2. Studies of the practical application of lyoluminescence materials to clinical and criticality dosimetry.</li></ol>	
<b>Total cost (for 4 years):</b> UKL 309.471 = 554.409 ECU	<b>Ceiling of CEC contribution:</b> UKL 58.580 = 104.944 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 4.0	<b>Others (man years):</b> 4.0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Physikalisch-Technische  
Bundesanstalt, PTB  
Bundesallee 100  
D-3300 Braunschweig

**Contract no.:** BIO-A-291-81-D

**Head(s) of research team(s):**

Prof.Dr. V.Siegel  
PTB - Reaktorstrahlung  
Bundesallee 100  
D-3300 Braunschweig

**General subject of the contract:**

Development, investigation and application of reference beams of monoenergetic neutrons.

**List of projects:**

1. Reference beams for thermal, 2 keV and 24 keV neutrons for the calibration of neutron dosimeters to be used in radiation protection.

**Total cost (for 4 years):**  
DM 144.000 = 57.348 ECU

**Ceiling of CEC contribution:**  
DM 52.200 = 20.789 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 4.0

**Others (man years):** 5.3

**Remarks:**

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> The National Radiological Protection Board, NRPB Chilton, Didcot GB-Oxon OX11 0RQ	<b>Contract no.:</b> BIO-A-308-81-UK
<b>Head(s) of research team(s):</b> Dr. D.F. White Instrumentation and Equipment NRPB Chilton, Didcot GB-Oxon OX11 0RQ	
<b>General subject of the contract:</b> The development of a rationalised approach to the dosimetry of external beta and photon radiation for radiological protection purposes.	
<b>List of projects:</b> <ol style="list-style-type: none"><li>1. Study of the principles to be embodied in detectors for the practical estimation of new quantities in radiation protection for area monitoring and personal monitoring.</li><li>2. Development of beta and gamma calibration standards for the direct determination of new radiation protection quantities.</li></ol>	
<b>Total cost (for 4 years):</b> UKL 544.833 = 976.053 ECU	<b>Ceiling of CEC contribution:</b> UKL 175.680 = 314.726 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 7,2	<b>Others (man years):</b> 5,2
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

CENDOS  
Radiobiological Institute TNO  
P.O. Box 5815  
NL-2280 HV Rijswijk

**Contract no.:** BIO-A-311-81-NL

**Head(s) of research team(s):**

CENDOS Committee  
Radiobiological Institute TNO  
P.O. Box 5815  
NL-2280 HV Rijswijk

**General subject of the contract:**

Collection and evaluation of neutron dosimetry data.

**List of projects:**

1. Collection and evaluation of neutron dosimetry data (CENDOS).

**Total cost (for 3,6 years):**

HFL 665.000 = 238.437 ECU

**Ceiling of CEC contribution:**

HFL 270.000 = 96.809 ECU

**Duration:**

01.06.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):**

**Others (man years):**

**Remarks:** Cooperative European Research Project coordinated by D.K. Bewley, J.J. Broerse (Chairman), G. Burger (Vice-chairman), M. Coppola (Secretary), J.A.B. Gibson, N. Parmentier, W. Pohlit, and G.Portal.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> International Commission on Radiation Units and Measurements, ICRU 7910 Woodmont Av., Suite 1016 USA-Bethesda, MD 20814	<b>Contract no.:</b> BIO-A-312-81-US
<b>Head(s) of research team(s):</b> Dr. H. O. Wyckoff ICRU 7910 Woodmont Avenue, Suite 1016 USA-Bethesda, MD 20814,	
<b>General subject of the contract:</b> Quantities, units and measurements techniques for ionizing radiation.	
<b>List of projects:</b> 1. Quantities, units and measurements techniques for ionizing radiation.	
<b>Total cost (for 4 years):</b> USD 368.400 = 359.415 ECU	<b>Ceiling of CEC contribution:</b> USD 92.100 = 89.854 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.0	<b>Others (man years):</b> 3.2
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-B-339-81-DK

Risø National Laboratory  
DK-4000 Roskilde

**Head(s) of research team(s):**

Dr. A. Aarkrog  
Health Physics Department  
Risø National Laboratory  
DK-4000 Roskilde

**General subject of the contract:**

Radioecological studies in temperate and arctic waters of the North Atlantic region with emphasis on transuranic elements.

**List of projects:**

1. Uptake and loss of certain transuranic-, fission- and activation - nuclides by *Mytilus* and *Fucus* with special emphasis on physicochemical form and the effect of low temperatures.
2. Studies of transuranic elements, radiocaesium, tritium and cobalt in seawater, sediments, seaplants and mussels.
3. Environmental studies of plutonium and americium at Thule, Greenland.

**Total cost (for 4 years):**

DKR 3.552.000 = 451.793 ECU

**Ceiling of CEC contribution:**

DKR 1.065.600 = 135.538 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 4.2

**Others (man years):** 13.2

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Natural Environment Research Council Polaris House North Star Avenue GB-Swindon SN2 1EU	<b>Contract no.:</b> BIO-B-439-81-UK
<b>Head(s) of research team(s):</b> Mr. S.E. Allen Inst. of Terrestrial Ecology Merlewood Research Station Grange-over-Sands CB-Cumbria LA11 6JU	
<b>General subject of the contract:</b> Radionuclide pollutants in natural plant-soil ecosystems.	
<b>List of projects:</b> 1. Radionuclide pollutants in natural plant- soil ecosystems.	
<b>Total cost (for 2 years):</b> UKL 241.000 = 431.745 ECU	<b>Ceiling of CEC contribution:</b> UKL 60.250 = 107.936 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1982	<b>CEC staff:</b>
<b>Scientists (man years):</b> 9.4	<b>Others (man years):</b> 2.0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-B-465-81-F

Commissariat à l'Energie  
Atomique, CEA  
CEN de Fontenay-aux-Roses  
B.P. n°6  
F-92260 Fontenay-aux-Roses

**Head(s) of research team(s):**

Dr. G. Baudin  
Service d'Etudes Analytiques  
CEA - CEN de Fontenay-aux-Roses  
B.P. n°6  
F-92260 Fontenay-aux-Roses

**General subject of the contract:**

Development of a method of determining traces of long-lived beta-emitters by opto-galvanic spectroscopy and assisted fluorescence.

**List of projects:**

1. Development of a method of determining traces of long-lived beta-emitters, such as Tc-99, by opto-galvanic spectroscopy and assisted fluorescence.

**Total cost (for 2,5 years):**  
FF 900.000 = 149.701 ECU

**Ceiling of CEC contribution:**  
FF 215.500 = 35.845 ECU

**Duration:**  
01.07.1981 - 31.12.1983

**CEC staff:**

**Scientists (man years):** 0,8

**Others (man years):** 0,8

**Remarks:**

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Commissariat à l'Energie Atomique, CEA CEN de Cadarache B.P. n° 1 F-13115 Saint-Paul-lez-Durance	<b>Contract no.:</b> BIO-B-340-81-F
<b>Head(s) of research team(s):</b> Dr. Y. Belot SERE-DPR CEA - CEN de Fontenay-aux-Roses B.P. n°6 F-92260 Fontenay-aux-Roses	
<b>General subject of the contract:</b> Simulation of tritium transfer in the environment; study of organic tritium transfer in the aquatic environment, the soil-plant and the plant-mammal system.	
<b>List of projects:</b> 1. Development of a tritium behaviour model.	
<b>Total cost (for 4 years):</b> FF 1.062.500 = 176.730 ECU	<b>Ceiling of CEC contribution:</b> FF 425.000 = 70.692 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1	<b>Others (man years):</b> 1.2
<b>Remarks:</b> This work is carried out in association with CEN/SCK Belgium (BIO-B-431-81-B), Agricultural University Wageningen, The Netherlands (BIO-B-432-81-NL) and KFA Jülich, Germany.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-B-324-81-I

Comitato Nazionale per  
l'Energia Nucleare, CNEN  
Viale Regina Margherita 125  
I-00198 Roma

**Head(s) of research team(s):**

Dr. G. Busuoli  
Lab. di Fisica Sanitaria  
CNEN  
Via Mazzini 2  
I-40138 Bologna

Dr. V. Prodi.  
Lab. di Fisica Sanitaria  
CNEN  
Via Mazzini 2  
I-40138 Bologna

**General subject of the contract:**

Characterization of particulate contamination of the air and its deposition in the airways.

**List of projects:**

1. Characterization of particulate contamination in the air and its deposition in the airways, with particular regard to alpha emitting aerosols in special working environments.

**Total cost (for 4 years):**  
LIT 219.000.000 = 174.363 ECU

**Ceiling of CEC contribution:**  
LIT 71.000.000 = 56.529 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 1.1

**Others (man years):** 1.6

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Commissariat à l'Energie Atomique, CEA CEN de Cadarache B.P. n° 1 F-13115 Saint-Paul-lez-Durance	<b>Contract no.:</b> BIO-B-466-81-F
<b>Head(s) of research team(s):</b> Dr. C. Caput SERE-DPR-IPSN CEA-CEN de Fontenay-aux-Roses B.P. n° 6 F-92260 Fontenay-aux-Roses	
<b>General subject of the contract:</b> Resuspension of radioactive nuclides released from the ocean surface.	
<b>List of projects:</b> 1. Resuspension of radioactive nuclides released from the ocean surface.	
<b>Total cost (for 3.5 years):</b> FF 1.800.000 = 299.401 ECU	<b>Ceiling of CEC contribution:</b> FF 450.000 = 74.850 ECU
<b>Duration:</b> 01.07.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2.6	<b>Others (man years):</b> 1.8
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

United Kingdom Atomic Energy  
Authority, UKAEA  
Charles II Street 11  
GB-London SW1Y 4QP

**Contract no.:** BIO-B-440-81-UK

**Head(s) of research team(s):**

Dr. A.C. Chamberlain  
Env. & Med. Sciences Div.  
AERE  
Harwell, Didcot  
GB-Oxon OX11 0RA

**General subject of the contract:**

Behaviour of tritiated water in trees and other vegetation.

**List of projects:**

1. Behaviour of tritiated water in the environment.

**Total cost (for 4 years):**  
UKL 180.000 = 322.465 ECU

**Ceiling of CEC contribution:**  
UKL 45.000 = 80.616 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 2.5

**Others (man years):** 3.0

**Remarks:** Collaboration with Dr. Belot (CEA - France) and Dr. Gerber (CEN/SCK - Mol)

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Comitato Nazionale per l'Energia Nucleare, CNEN Viale Regina Margherita 125 I-00198 Roma	<b>Contract no.:</b> BIO-B-322-81-I
<b>Head(s) of research team(s):</b>  Prof. A. Cigna Centro St. Amb. Mar., CNEN Santa Teresa Casella Postale 316 I-19100 La Spezia	
<b>General subject of the contract:</b> Environmental and health protection implications from nuclear plants discharging into coastal marine ecosystems.	
<b>List of projects:</b>  1. Description and classification of typical marine coastal ecosystems. 2. Laboratory studies on the behaviour of long-lived radionuclides in the marine environment.	
<b>Total cost (for 4 years):</b> LIT 3.793.000.000 = 3.019.904 ECU	<b>Ceiling of CEC contribution:</b> LIT 948.250.000 = 754.976 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 2 scientists
<b>Scientists (man years):</b> 21.3	<b>Others (man years):</b> 22.7
<b>Remarks:</b>  	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Comitato Nazionale per l'Energia Nucleare, CNEN Viale Regina Margherita 125 I-00198 Roma	<b>Contract no.:</b> BIO-B-323-81-I
<b>Head(s) of research team(s):</b> Dr. G.F. Clemente Divisione Scienze Ambientali CSN della Casaccia, CNEN C.P. 2400 I-00100 Roma	
<b>General subject of the contract:</b> Biological and environmental aspects of toxicology of plutonium.	
<b>List of projects:</b> 1. Late effects and metabolic behaviour of plutonium in mice. 2. Fallout plutonium content in the italian diet and in members of the general public. 3. Behaviour of fallout plutonium in italian soils and sediments.	
<b>Total cost (for 4 years):</b> LIT 879.000.000 = 699.841 ECU	<b>Ceiling of CEC contribution:</b> LIT 298.000.000 = 237.261 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 9	<b>Others (man years):</b> 10.5
<b>Remarks:</b>	

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Delta Institute for Hydrobiological Research Vierstraat 28 NL-4401 EA Yerseke	<b>Contract no.:</b> BIO-B-326-81-NL
<b>Head(s) of research team(s):</b>  Dr. E.K. Duursma Delta Institute Vierstraat 28 NL-4401 EA Yerseke	
Dr. M. J. Frissel * Dr. J. M. Martin **	
<b>General subject of the contract:</b> Differential migration of plutonium in the delta estuaries of Rhine, Meuse and Scheldt.	
<b>List of projects:</b>  1. Differential migration of plutonium in the delta estuaries of Rhine, Meuse and Scheldt.	
<b>Total cost (for 4 years):</b> HFL 990.000 = 354.966 ECU	<b>Ceiling of CEC contribution:</b> HFL 297.000 = 106.490 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.1	<b>Others (man years):</b> 7.4
<b>Remarks:</b> Joint proposal of three laboratories. * Association EURATOM-ITAL, postbus 48, NL-6700 AA Wageningen. ** Lab. Géologie, Ecole Normale Supérieure, Rue d'Ulm 46, F-75230 Paris.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Commissariat à l'Energie  
Atomique, CEA  
CEN de Fontenay-aux-Roses  
B.P. n°6  
F-92260 Fontenay-aux-Roses

**Contract no.:** BIO-B-464-81-F

**Head(s) of research team(s):**

Dr. R. Fontaine  
Serv. d'Etudes Analytiques  
CEA-CEN de Fontenay-aux-Roses  
B.P. n° 6  
F-92260 Fontenay-aux-Roses

**General subject of the contract:**

Identification of the nature and the valency states (U-IV, U-VI) of uranium compounds in dusts.

**List of projects:**

1. Identification of the nature and the valency states (U-IV, U-VI) of uranium compounds in dusts.

**Total cost (for 1.4 years):**  
FF 310.000 = 51.564 ECU

**Ceiling of CEC contribution:**  
FF 85.000 = 14.138 ECU

**Duration:**  
01.08.1981 - 31.12.1982

**CEC staff:**

**Scientists (man years):** 0.1

**Others (man years):** 0.4

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Stichting ITAL Postbus 48 NL-6700 AA Wageningen	<b>Contract no.:</b> BIO-B-325-81-NL
<b>Head(s) of research team(s):</b> Dr. M. J. Frissel Association Euratom - Ital Postbus 48 NL-6700 AA Wageningen	
<b>General subject of the contract:</b> Evaluation of long-term behaviour of radiocontaminants - transuranics and activated corrosion and fission products - in different soils and vegetation.	
<b>List of projects:</b>  1. Investigation of the behaviour in soils and uptake by plants of transuranics (Ra included) for different European Soil types. 2. Evaluation of the long-term behaviour of radiocontaminants in terrestrial ecosystems: the soil-plant transfer.	
<b>Total cost (for 4 years):</b> HFL 13.040.135 = 4.675.559 ECU	<b>Ceiling of CEC contribution:</b> HFL 3.846.840 = 1.379.290 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 2,3 scientists
<b>Scientists (man years):</b> 30.8	<b>Others (man years):</b> 36.0
<b>Remarks:</b> This work is carried out within the framework of the Association EURATOM-ITAL.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Commissariat à l'Energie  
Atomique, CEA  
CEN de Cadarache  
B.P. n° 1  
F-13115 Saint-Paul-lez-Durance

**Contract no.:** BIO-B-317-81-F

**Head(s) of research team(s):**

Dr. A. Grauby  
SERE-DPR-IPSN  
CEA-CEN de Cadarache  
B.P. n° 1  
F-13115 Saint-Paul-lez-Durance

**General subject of the contract:**

Behaviour of freshwater entrained radionuclides in the event of contact with seawater.

**List of projects:**

1. Behaviour of freshwater entrained radionuclides in the event of contact with seawater.

**Total cost (for 4 years):**  
FF 2.192.250 = 364.646 ECU

**Ceiling of CEC contribution:**  
FF 876.900 = 145.858 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 1.3

**Others (man years):** 1.3

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Commissariat à l'Energie Atomique, CEA CEN de Cadarache B.P. n° 1 F-13115 Saint-Paul-lez-Durance	<b>Contract no.:</b> BIO-B-318-81-F
<b>Head(s) of research team(s):</b> Dr. A. Grauby SERE-DPR-IPSN CEA-CEN de Cadarache B.P. n°1 F-13115 Saint-Paul-lez-Durance	
<b>General subject of the contract:</b> Physico-chemical changes of transuranic elements in the environment : transfer through the food chain towards man.	
<b>List of projects:</b> <ol style="list-style-type: none"> <li>1. Synergistic effects between transuranic elements, uranium matrix and soil parameters and effects on soil-plant transfer.</li> <li>2. Influence of the deposited quantity of transuranic elements on the soil-plant transfer coefficient.</li> <li>3. Field study of soil-plant-animal transfer; practical aspects of methods of cultivation and fertilization.</li> <li>4. Soil-plant transfer with the uranium-sodium-transuranic matrix and with the glass leaching solution matrix from a vitrification plant or waste storage area.</li> <li>5. Effect of the macro-and micro-constituents of reprocessed waste effluents on physico-chemical evolution, soil mobility and soil-plant transfer of transuranics.</li> </ol>	
<b>Total cost (for 4 years):</b> FF 2.635.686 = 438.404 ECU	<b>Ceiling of CEC contribution:</b> FF 1.052.280 = 175.030 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 0.7	<b>Others (man years):</b> 4.6
<b>Remarks:</b>	

**Commission of the European Communities**  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-B-321-81-F

Commissariat à l'Energie  
Atomique, CEA  
CEN de Cadarache  
B.P. n°1  
F-13115 Saint-Paul-lez-Durance

**Head(s) of research team(s):**

Dr. A. Grauby  
SERE-DPR-IPSN  
CEA-CEN de Cadarache  
B.P. n° 1  
F-13115 Saint-Paul-lez-Durance

Dr. Ph. Picat  
SERE-DPR-IPSN  
CEA-CEN de Cadarache  
B.P. n° 1  
F-13115 Saint-Paul-lez-Durance

**General subject of the contract:**

Evaluation of the impact on the population of the dispersion of radium-226 in mining areas. In situ research on the radionuclide transfer in rivers, irrigated land and processed foodstuffs.

**List of projects:**

1. Study of the environmental impact of mining sites and processing plants of uranium.

**Total cost (for 2 years):**

FF 1.043.750 = 173.611 ECU

**Ceiling of CEC contribution:**

FF 417.500 = 69.444 ECU

**Duration:**

01.01.1981 - 31.12.1982

**CEC staff:**

**Scientists (man years):** 1.8

**Others (man years):**

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>			
<b>Contractor:</b>  Commissariat à l'Energie Atomique, CEA CEN de Cadarache B.P. n° 1 F-13115 Saint-Paul-lez-Durance	<b>Contract no.:</b> BIO-B-315-81-F		
<b>Head(s) of research team(s):</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">                             Dr. A. Grauby                              SERE-DPR-IPSN                              CEA-CEN de Cadarache                              B.P. n° 1                              F-13115 Saint-Paul-lez-Durance                         </td> <td style="width: 50%; vertical-align: top;">                             Dr. A. Saas                              SERE-DPR-IPSN                              CEA-CEN de Cadarache                              B.P. n° 1                              F-13115 Saint-Paul-lez-Durance                         </td> </tr> </table>		Dr. A. Grauby SERE-DPR-IPSN CEA-CEN de Cadarache B.P. n° 1 F-13115 Saint-Paul-lez-Durance	Dr. A. Saas SERE-DPR-IPSN CEA-CEN de Cadarache B.P. n° 1 F-13115 Saint-Paul-lez-Durance
Dr. A. Grauby SERE-DPR-IPSN CEA-CEN de Cadarache B.P. n° 1 F-13115 Saint-Paul-lez-Durance	Dr. A. Saas SERE-DPR-IPSN CEA-CEN de Cadarache B.P. n° 1 F-13115 Saint-Paul-lez-Durance		
<b>General subject of the contract:</b> Transfer and evolution of certain long-lived beta emitters in terrestrial food chains leading to man.			
<b>List of projects:</b> <ol style="list-style-type: none"> <li>1. Transfer of technetium in the terrestrial environment.</li> <li>2. Transfer of iodine in the terrestrial environment.</li> <li>3. Transfer of selenium and nickel in the terrestrial environment.</li> </ol>			
<b>Total cost (for 4 years):</b> FF 2.478.075 = 412.188 ECU	<b>Ceiling of CEC contribution:</b> FF 964.590 = 160.444 ECU		
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>		
<b>Scientists (man years):</b> 0.7	<b>Others (man years):</b> 4.4		
<b>Remarks:</b>			

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Commissariat à l'Energie  
Atomique, CEA  
CEN de Cadarache  
B.P. n°1  
F-13115 Saint-Paul-lez-Durance

**Contract no.:** BIO-B-316-81-F

**Head(s) of research team(s):**

Dr. M. Guegueniat  
SERE-DPR-IPSN  
CEA-CEN  
B.P. 209  
F-50107 Cherbourg

**General subject of the contract:**

Actinides in the marine environment : study of their physico-chemical behaviour in seawater and marine sediments and their transfer between sediments and benthic species.

**List of projects:**

1. Sorption of actinides on different types of marine sediments and their transfer to molluscs.

**Total cost (for 4 years):**  
FF 2.740.310 = 455.807 ECU

**Ceiling of CEC contribution:**  
FF 1.096.124 = 182.323 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 2.2

**Others (man years):** 2.2

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Natural Environment Research Council Polaris House North Star Avenue GB-Swindon SN2 1EU	<b>Contract no.:</b> BIO-B-438-81-UK
<b>Head(s) of research team(s):</b> Dr. E. I. Hamilton Inst. Marine Env. Research Prospect Place - The Hoe GB-Devon PL1 3DH	
<b>General subject of the contract:</b> Cellular biochemistry of uranium, plutonium, americium and curium in the common marine mussel <u>Mytilus edulis</u> L.	
<b>List of projects:</b> 1. Organ and cellular concentrations and distribution of U, Pu, Am and Cm in <u>Mytilus edulis</u> . 2. Ecological aspects of alpha emitting radionuclides in aquatic environments; development of an assessment methodology.	
<b>Total cost (for 4 years):</b> UKL 177.600 = 318.166 ECU	<b>Ceiling of CEC contribution:</b> UKL 44.400 = 79.541 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2.9	<b>Others (man years):</b> 1.6
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Rijksuniversiteit Gent Sint Pietersnieuwstraat 25 B-9000 Gent	<b>Contract no.:</b> BIO-B-327-81-B
<b>Head(s) of research team(s):</b> Dr. A. Janssens Lab. voor Kernfysika Inst. voor Nukleaire Wetenschappen Proeftuinstraat 86 B-9000 Gent	
<b>General subject of the contract:</b> Measurement and analysis of the evolution of the krypton-85 activity in the atmosphere and study of its synergistic action with chemical pollution.	
<b>List of projects:</b> 1. Measurement and analysis of the evolution of the krypton-85 activity in the atmosphere and study of the synergistic action of krypton -85 and chemical pollution.	
<b>Total cost (for 4 years):</b> BFR 13.582.385 = 330.472 ECU	<b>Ceiling of CEC contribution:</b> BFR 4.100.000 = 99.757 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 6.0	<b>Others (man years):</b> 4.0
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>			
<b>Contractor:</b>  Bundesgesundheitsamt Institut für Strahlenhygiene Ingolstädter Landstrasse 1 D-8042 Neuherberg	<b>Contract no.:</b> BIO-B-313-81-D		
<b>Head(s) of research team(s):</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">                             Dr. A. Kaul                              Institut für Strahlenhygiene                              BGA                              Ingolstädter Landstrasse 1                              D-8042 Neuherberg                         </td> <td style="width: 50%; vertical-align: top;">                             Dr. G. N. Kistner                              Institut für Strahlenhygiene                              BGA                              Ingolstädter Landstrasse 1                              D-8042 Neuherberg                         </td> </tr> </table>		Dr. A. Kaul Institut für Strahlenhygiene BGA Ingolstädter Landstrasse 1 D-8042 Neuherberg	Dr. G. N. Kistner Institut für Strahlenhygiene BGA Ingolstädter Landstrasse 1 D-8042 Neuherberg
Dr. A. Kaul Institut für Strahlenhygiene BGA Ingolstädter Landstrasse 1 D-8042 Neuherberg	Dr. G. N. Kistner Institut für Strahlenhygiene BGA Ingolstädter Landstrasse 1 D-8042 Neuherberg		
<b>General subject of the contract:</b> Distribution of tritium- and carbon-14-compounds over the aqueous and organic phases of various structures of aquatic and terrestrial food chains.			
<b>List of projects:</b>  1. Distribution of tritium- and carbon -14- compounds over the aqueous and organic phases of various structures of aquatic and terrestrial food chains.			
<b>Total cost (for 4 years):</b> DM 1.511.550 = 601.971 ECU	<b>Ceiling of CEC contribution:</b> DM 604.500 = 240.741 ECU		
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>		
<b>Scientists (man years):</b> 15.0	<b>Others (man years):</b> 4.0		
<b>Remarks:</b> In collaboration with SCK/CEN (Belgium), department of radiobiology and laboratory for radioecology and agronomy (Dr. Kirchmann, Dr. Bonnotto)			

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Centre d'Etude de l'Energie Nucléaire, CEN/SCK Avenue Plasky 144 B-1040 Bruxelles	<b>Contract no.:</b> BIO-B-431-81-B
<b>Head(s) of research team(s):</b> Dr. R. Kirchmann Département de Radio- biologie, CEN/SCK Boeretang 200 B-2400 Mol	
<b>General subject of the contract:</b> Simulation of tritium transfer in the environment : study of organic tritium transfer in the aquatic environment, the soil-plant and the plant-mammal system.	
<b>List of projects:</b> 1. Behaviour of tritium in different chemical forms in the freshwater environment. 2. Behaviour of tritium in the soil-plant system.	
<b>Total cost (for 4 years):</b> BFR 22.629.000 = 550.584 ECU	<b>Ceiling of CEC contribution:</b> BFR 5.909.000 = 143.771 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 3.3	<b>Others (man years):</b> 3.7
<b>Remarks:</b> This work is carried out in association with CEA, France (BIO-B-340-81-F), Agricultural University Wageningen, The Netherlands (BIO-B-432-81-NL) and KFA Jülich, Germany.	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Centre d'Etude de l'Energie Nucléaire, CEN/SCK Avenue E. Plasky 144 B-1040 Bruxelles	<b>Contract no.:</b> BIO-B-467-81-B
<b>Head(s) of research team(s):</b> Ir. R. Kirchmann Département de Radio- biologie, CEN/SCK Boeretang 200 B-2400 Mol	
<b>General subject of the contract:</b> Technetium transfer in the animal food chain.	
<b>List of projects:</b> 1. Technetium transfer in the animal food chain.	
<b>Total cost (for 3,5 years):</b> BFR 23.822.669 = 579.627 ECU	<b>Ceiling of CEC contribution:</b> BFR 6.020.000 = 146.472 ECU
<b>Duration:</b> 01.07.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 5,3	<b>Others (man years):</b> 1,3
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Gesellschaft für Strahlen- und Umweltforschung mbH. GSF Ingolstädter Landstr. 1 D-8042 Neuherberg	<b>Contract no.:</b> BIO-B-314-81-D
<b>Head(s) of research team(s):</b> Prof. Dr. W. Kühn Ökologische Physik Inst. für Angewandte Physik Herrenhäuser Strasse 2 D-3000 Hannover 21	
<b>General subject of the contract:</b> The influence of topography on the dispersion of nuclear pollutants, exchange processes of HTO vapor between soil and atmosphere and accumulation of I-129 in the human thyroid.	
<b>List of projects:</b> <ol style="list-style-type: none"><li>1. Investigations on the influence of topography and surface roughness on the dispersion of nuclear pollutants.</li><li>2. Study of exchange processes of HTO vapor in the soil-plant atmosphere system.</li><li>3. Investigations on the accumulations of iodine -129 in vegetation, milk, and human thyroid glands in the vicinity of nuclear facilities.</li></ol>	
<b>Total cost (for 4 years):</b> DM 959.840 = 382.254 ECU	<b>Ceiling of CEC contribution:</b> DM 332.050 = 132.238 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 6.8	<b>Others (man years):</b> 4.4
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>	<b>Contract no.:</b> BIO-B-328-81-B
Univ. Catholique de Louvain Halles Universitaires Place de l'Université 1 B-1348 Louvain-la-Neuve	
<b>Head(s) of research team(s):</b>	
Prof. H. Laudelout Laboratoire de Pédologie UCL Place Croix du Sud 2 B-1348 Louvain-la-Neuve	
<b>General subject of the contract:</b>	
Hydrological and biogeochemical characteristics which condition the environmental behaviour of the mobile long-lived radionuclides. Application to the ultimate biological availability of Tc.	
<b>List of projects:</b>	
1. Hydrological and geochemical characteristics which condition the regional behaviour of the mobile long-lived radionuclides. 2. Study of the environmental behaviour of technetium ( $TcO_4^-$ ).	
<b>Total cost (for 4 years):</b> BFR 29.285.500 = 712.543 ECU	<b>Ceiling of CEC contribution:</b> BFR 7.314.250 = 177.962 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 0.1 scientist 1.0 technician
<b>Scientists (man years):</b> 8.4	<b>Others (man years):</b> 8.6
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Commissariat à l'Energie  
Atomique, CEA  
CEN de Fontenay-aux-Roses  
B.P. n° 6  
F-92260 Fontenay-aux-Roses

**Contract no.:** BIO-B-436-81-F

**Head(s) of research team(s):**

Dr. G. Madelaine  
Lab. de Physique de l'Atmosphère  
CEA - CEN de Fontenay-aux-Roses  
B.P. n° 6  
F-92260 Fontenay-aux-Roses

**General subject of the contract:**

Study of the physicochemical properties of alpha and beta emitting aerosols aiming at the measurement of the associated nuisances.

**List of projects:**

1. Study of the physico-chemical characteristics of radioactive aerosols.

**Total cost (for 4 years):**  
FF 1.281.250 = 213.115 ECU

**Ceiling of CEC contribution:**  
FF 512.500 = 85.246 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 1.3

**Others (man years):** 1.2

**Remarks:**

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Centre d'Etude de l'Energie Nucléaire, CEN/SCK Avenue Plasky 144 B-1040 Bruxelles	<b>Contract no.:</b> BIO-B-330-81-B
<b>Head(s) of research team(s):</b> Dr. J. Maisin Département de Radio- biologie, CEN/SCK Boeretang 200 B-2400 Mol	
<b>General subject of the contract:</b> Study of the impact of waste from PWR nuclear power stations on the fresh water ecosystem.	
<b>List of projects:</b> 1. Study of the impact of waste from PWR nuclear power stations on the fresh water ecosystem.	
<b>Total cost (for 4 years):</b> BFR 27.165.875 = 660.970 ECU	<b>Ceiling of CEC contribution:</b> BFR 7.984.130 = 194.261 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 15.9	<b>Others (man years):</b> 36.0
<b>Remarks:</b> In collaboration with the Institut d'Hygiène et d'Epidémiologie, Bruxelles, the Université de Liège, the Facultés Universitaires Notre Dame de la Paix, Namur and the Université Catholique de Louvain, Louvain-la-Neuve.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-B-338-81-EIR

University of Dublin  
Trinity College  
IRL-Dublin 2

**Head(s) of research team(s):**

Dr. I.R. McAulay  
Dept. of Pure and Applied Physics  
Trinity College  
IRL-Dublin 2

**General subject of the contract:**

Measurement of levels of radioactivity in the marine life and waters of the Irish Sea and their contribution to radiation dosage of the population.

**List of projects:**

1. Measurement of levels of radioactivity in the marine life and waters of the Irish Sea and their contribution to radiation dosage of the population.

**Total cost (for 3 years):**  
IRL 49.170 = 71.468 ECU

**Ceiling of CEC contribution:**  
IRL 15.715 = 22.842 ECU

**Duration:**  
01.01.1981 - 31.12.1983

**CEC staff:**

**Scientists (man years):** 4.3

**Others (man years):** 0.4

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Ministry of Agriculture, Fisheries and Food Fisheries Laboratory Pakefield Road Lowestoft GB-Suffolk NR33 OHT	<b>Contract no.:</b> BIO-B-331-81-UK
<b>Head(s) of research team(s):</b> Dr. N.T. Mitchell Fisheries Radiobiol. Lab. Pakefield Road Lowestoft GB-Suffolk NR33 OHT	
<b>General subject of the contract:</b> Behaviour of radionuclides in the marine environment in support of the disposal of wastes arising from the utilization of nuclear energy.	
<b>List of projects:</b> 1. Behaviour of transuranic and long-lived fission product nuclides in coastal waters. 2. Deep sea radioecology.	
<b>Total cost (for 4 years):</b> UKL 760.200 = 1.361.878 ECU	<b>Ceiling of CEC contribution:</b> UKL 192.150 = 344.232 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 10.4	<b>Others (man years):</b>
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

United Kingdom Atomic Energy  
Authority, UKAEA  
Charles II Street 11  
GB-London SW1Y 4QP

**Contract no.:** BIO-B-334-81-UK

**Head(s) of research team(s):**

Dr. A. Morgan  
Env. & Med. Sciences Div.  
AERE  
Harwell, Didcot  
GB-Oxon OX11 0RA

**General subject of the contract:**

The remobilisation of actinides from contaminated intertidal sediments.

**List of projects:**

1. Remobilisation of actinides from contaminated intertidal sediments.

**Total cost (for 2 years):**  
UKL 68.060 = 121.928 ECU

**Ceiling of CEC contribution:**  
UKL 17.000 = 30.455 ECU

**Duration:**  
01.01.1981 - 31.12.1982

**CEC staff:**

**Scientists (man years):** 0.6

**Others (man years):** 1.4

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> United Kingdom Atomic Energy Authority, UKAEA Charles II Street 11 GB-London SW1Y 4QP	<b>Contract no.:</b> BIO-B-332-81-UK
<b>Head(s) of research team(s):</b> Dr. D.H. Peirson Env. & Med. Sciences Div. AERE Harwell, Didcot GB-Oxon OX11 0RA	
<b>General subject of the contract:</b> Measurement of particulate airborne radioactive materials.	
<b>List of projects:</b> 1. Measurement of particulate airborne radioactive materials.	
<b>Total cost (for 4 years):</b> UKL 245.000 = 438.911 ECU	<b>Ceiling of CEC contribution:</b> UKL 61.250 = 109.728 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 3.2	<b>Others (man years):</b> 1.2
<b>Remarks:</b>	

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> United Kingdom Atomic Energy Authority, UKAEA Charles II Street 11 GB-London SW1Y 4QP	<b>Contract no.:</b> BIO-B-333-81-UK
<b>Head(s) of research team(s):</b> Dr. D.H. Peirson Env. & Med. Sciences Div. AERE Harwell, Didcot GB-Oxon OX11 0RA	
<b>General subject of the contract:</b> Environmental studies of artificial radioactivity in soil, plants and the sea-air interface.	
<b>List of projects:</b> 1. Radionuclides in arable soils and crops. 2. Radionuclide enrichment of the sea - surface microlayer and transfer to the atmospheric aerosol.	
<b>Total cost (for 4 years):</b> UKL 220.000 = 394.124 ECU	<b>Ceiling of CEC contribution:</b> UKL 55.000 = 98.531 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2.0	<b>Others (man years):</b> 1.3
<b>Remarks:</b>	

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Université de Nantes Laboratoire de Biochimie Chemin de la Houssinière 2 F-44072 Nantes Cédex	<b>Contract no.:</b> BIO-B-435-81-F
<b>Head(s) of research team(s):</b> Prof. J. Pieri Lab. de Biochimie Université de Nantes Chemin de la Houssinière 2 F-44072 Nantes Cédex	
<b>General subject of the contract:</b> Chelation of radioelements (plutonium-239 and -237) in the marine environment - Roles of microorganisms and various natural and bioorganic degradation compounds.	
<b>List of projects:</b> 1. Chelation of plutonium-239 and -237 in the marine environment - Roles of microorganisms and various natural and bioorganic degradation compounds.	
<b>Total cost (for 2 years):</b> FF 866.600 = 144.145 ECU	<b>Ceiling of CEC contribution:</b> FF 259.980 = 43.244 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1982	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2	<b>Others (man years):</b>
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

National Radiological  
Protection Board, NRPB  
Chilton, Didcot  
GB-Oxon OX11 0RQ

**Contract no.:** BIO-B-336-81-UK

**Head(s) of research team(s):**

Dr. H. Smith  
Biology Department  
NRPB  
Chilton, Didcot  
GB-Oxon OX11 0RQ

**General subject of the contract:**

Experimental studies of environmental factors influencing the uptake of radionuclides by man.

**List of projects:**

1. Uptake of nuclides into foodstuffs grown in contaminated soil.

**Total cost (for 4 years):**  
UKL 232.633 = 416.756 ECU

**Ceiling of CEC contribution:**  
UKL 58.160 = 104.192 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 2.8

**Others (man years):** 1.6

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Landbouwhogeschool Wageningen Laboratorium Dierfysiologie Haarweg 10 NL-Wageningen	<b>Contract no.:</b> BIO-B-432-81-NL
<b>Head(s) of research team(s):</b>  Dr. J. van den Hoek Lab. Dierfysiologie Landbouwhogeschool Haarweg 10 NL-Wageningen	
<b>General subject of the contract:</b> Simulation of tritium transfer in the environment; study of organic tritium transfer in the aquatic environment, the soil-plant and the plant-mammal system.	
<b>List of projects:</b>  1. Behaviour of tritium in mammals.	
<b>Total cost (for 4 years):</b> HFL 801.620 = 287.422 ECU	<b>Ceiling of CEC contribution:</b> HFL 200.405 = 71.856 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.3	<b>Others (man years):</b> 7.7
<b>Remarks:</b> This work is carried out in association with CEA France (BIO-B-340-81-F), CEN/SCK, Belgium (BIO-B-431-81-B) and KFA Jülich, Germany.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Studiecentrum voor  
 Kernenergie, SCK/CEN  
 Plaskyiaan 144  
 B-1040 Bruxelles

**Contract no.:** BIO-B-329-81-B

**Head(s) of research team(s):**

Prof. O. Vanderborght  
 Departement Radio-  
 biologie, SCK/CEN  
 Boeretang 200  
 B-2400 Mol

**General subject of the contract:**

Bioavailability of actinides in selected freshwater, estuarine and seawater species and the related effects of environmental factors on the modeling of their behaviour.

**List of projects:**

1. Biological availability of transuranics in freshwater ecosystems.
2. Biological availability of transuranics in estuarine and coastal systems.
3. Chemical speciation of transuranics and their bioaccumulation.
4. Mathematical models on the mechanisms affecting bioavailability of transuranics.

**Total cost (for 4 years):**

BFR 19.837.176 = 482.656 ECU

**Ceiling of CEC contribution:**

BFR 6.700.000 = 163.017 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 4.6 (16.6)

**Others (man years):** 8.0 (12.0)

**Remarks:** Cooperative project between SCK/CEN, Mol (project 1), Biologische Anstalt Helgoland, Prof. Dr. M. Hoppenheit (project 2) and ISPRA, Dr. N. Murray (projects 3 and 4). Financial participation limited to project 1 ; full staff between brackets.

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  International Union of Radioecologist, IUR Rue Card. Cardyn 5 B-4480 Oupeye	<b>Contract no.:</b> BIO-B-468-81-F
<b>Head(s) of research team(s):</b>  Ir. P. Bovard Président de l'IUR Rue Card. Cardyn 5 B-4480 Oupeye	
<b>General subject of the contract:</b> Promotion of research and exchange of information in radioecology.	
<b>List of projects:</b>  1. Promotion of research and exchange of information in radioecology.	
<b>Total cost (for 2 years):</b> BFR 4.992.000 = 121.460 ECU	<b>Ceiling of CEC contribution:</b> BFR 1.248.600 = 30.380 ECU
<b>Duration:</b> 01.07.1981 - 31.06.1983	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.1	<b>Others (man years):</b> 0.2
<b>Remarks:</b> I.U.R. council consists of P. Bovard (France), G. Kistner (F.R. Germany), J. van den Hoek (The Netherlands), P.O Agnedal (Sweden) and R. Kirchmann (Belgium)	

**Commission of the European Communities**  
**RADIATION PROTECTION PROGRAMME**

<b>Contractor:</b> Institute of Cancer Research 34, Summer Place GB-London SW7	<b>Contract no.:</b> BIO-C-363-81-UK
<b>Head(s) of research team(s):</b> Prof. G. E. Adams Institute of Cancer Research Radiobiology Unit Clifton Avenue, Sutton GB-Surrey SM2 5PX	Dr. E. M. Fielden Institute of Cancer Research Radiobiology Unit Clifton Avenue, Sutton GB-Surrey SM2 5PX
<b>General subject of the contract:</b> Molecular processes involved in radiation damage and protection at the cellular and sub-cellular level.	
<b>List of projects:</b> <ol style="list-style-type: none"> <li>1. Investigation of the properties of radiation induced radicals derived from DNA and membranes.</li> <li>2. Time scale of DNA damage and repair and its modification by radioprotective agents.</li> <li>3. Application of rapid mixing techniques in the study of mechanisms of radiation action and protection.</li> </ol>	
<b>Total cost (for 4 years):</b> UKL 283.710 = 508.259 ECU	<b>Ceiling of CEC contribution:</b> UKL 113.484 = 203.303 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 7.3	<b>Others (man years):</b> 1.7
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Institut Curie Section de Physique et de Chimie Rue Pierre et Marie Curie 11 F-75231 Paris Cédex 05	<b>Contract no.:</b> BIO-C-349-81-F
<b>Head(s) of research team(s):</b> Dr. S. Apelgot Sect. de Physique et de Chimie Inst. Curie Rue Pierre et Marie Curie 11 F-75231 Paris Cédex 05	
<b>General subject of the contract:</b> Lethal effects induced by the transmutation of P-32, P-33, Cu-64 and I-125 incorporated in DNA molecules.	
<b>List of projects:</b> 1. Comparison between the fragility of a single - or a double - stranded DNA : study with P-32 and P-33.	
<b>Total cost (for 4 years):</b> FF 864.869 = 143.857 ECU	<b>Ceiling of CEC contribution:</b> FF 216.360 = 35.988 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b>	<b>Others (man years):</b>
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

<b>Contractor:</b>		<b>Contract no.:</b> BIO-C-361-81-UK	
Medical Research Council MRC Park Crescent, 20 GB-London W1N 4AL			
<b>Head(s) of research team(s):</b> Dr. W. A. Cramp Biology section MRC - Cyclotron Unit Hammersmith Hospital Du Cane Road GB-London W12 0HS			
<b>General subject of the contract:</b> Radiation damage to cellular membranes at dose levels encountered in industrial and clinical use of radiation.			
<b>List of projects:</b> 1. Effects of membrane pertubation on radiation response. 2. Directly induced membrane changes by radiation.			
<b>Total cost (for 4 years):</b> UKL 145.000 = 259.764 ECU		<b>Ceiling of CEC contribution:</b> UKL 58.000 = 103.905 ECU	
<b>Duration:</b> 01.01.1981 - 31.12.1984		<b>CEC staff:</b>	
<b>Scientists (man years):</b> 2.0		<b>Others (man years):</b> 4.0	
<b>Remarks:</b>			

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Université Libre de Bruxelles Avenue F. D. Roosevelt 50 B-1050 Bruxelles	<b>Contract no.:</b> BIO-C-359-81-B
<b>Head(s) of research team(s):</b> Prof. M. Errera Dép. de Biologie Moléculaire ULB Rue des Chevaux 67 B-1640 Rhode-St.-Genèse	
<b>General subject of the contract:</b> Effects of irradiation on the stability and expression of genetic information.	
<b>List of projects:</b> <ol style="list-style-type: none"> <li>1. Structures and reaction pathways of free radicals induced in DNA-protein complexes.</li> <li>2. Genetics and biochemistry of DNA repair, mutagenesis and recombination in procaryotes and eucaryotes.</li> <li>3. Genetic versus epigenetic effects of ionizing radiations and the mechanisms of chromosomal rearrangements.</li> <li>4. Radiosensitivity of mammalian cells (mouse and human).</li> <li>5. Low dose irradiation, autoimmunity and immuno competent radiation chimaeras.</li> </ol>	
<b>Total cost (for 4 years):</b> BFR 63.388.000 = 1.542.287 ECU	<b>Ceiling of CEC contribution:</b> BFR 25.424.000 = 618.589 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 0.6 scientist
<b>Scientists (man years):</b> 25.8	<b>Others (man years):</b> 8.0
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Gesellschaft für Strahlen- und Umweltforschung mbH GSF Ingolstädter Landstr. 1 D-8042 Neuherberg	<b>Contract no.:</b> BIO-C-343-81-D
<b>Head(s) of research team(s):</b> Prof. Dr. U. Hagen Inst. für Biologie GSF Ingolstädter Landstrasse 1 D-8042 Neuherberg	
<b>General subject of the contract:</b> Radiation induced degradation of nucleobases in DNA : primary effects and structural changes.	
<b>List of projects:</b> 1. Radiation induced degradation of nucleobases in DNA : primary effects and structural changes.	
<b>Total cost (for 4 years):</b> DM 1.615.650 = 643.429 ECU	<b>Ceiling of CEC contribution:</b> DM 503.000 = 200.319 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 4,0	<b>Others (man years):</b> 8,0
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Universität Regensburg Postfach 397 D-8400 Regensburg	<b>Contract no.:</b> BIO-C-342-81-D
<b>Head(s) of research team(s):</b>  Prof. Dr. J. Hüttermann Universität Regensburg Postfach 397 D-8400 Regensburg	  Prof. Dr. A. Müller-Broich Universität Regensburg Postfach 397 D-8400 Regensburg
<b>General subject of the contract:</b>  Studies of the effects of ionizing radiation on DNA and its constituents.	
<b>List of projects:</b>  1. Free-radical mediated DNA-strand-break induction.	
<b>Total cost (for 4 years):</b> DM 576.021 = 229.399 ECU	<b>Ceiling of CEC contribution:</b> DM 230.915 = 91.961 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 4,7	<b>Others (man years):</b> 1,6
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Universität Münster  
Westring 5  
D-4400 Münster

**Contract no.:** BIO-C-470-81-D

**Head(s) of research team(s):**

Prof. Dr. W. Köhnlein  
Institut für Strahlenbiologie  
Universität Münster  
Hittorfstrasse 17  
D-4400 Münster

**General subject of the contract:**

Effects of ionizing radiation and chemical agents in combination at the molecular level, over the dose range encountered in clinical and industrial use.

**List of projects:**

1. Combined effects at the molecular level of radiation and chemicals acting specifically on DNA.

**Total cost (for 3.5 years):**  
DM 507.460 = 202.095 ECU

**Ceiling of CEC contribution:**  
DM 202.980 = 80.836 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 4,9

**Others (man years):** 2,5

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Vrije Universiteit De Boelelaan 1081 NL-1081 HV Amsterdam	<b>Contract no.:</b> BIO-C-356-81-NL
<b>Head(s) of research team(s):</b>  Prof. Dr. H. Loman Natuurkundig Laboratorium VU De Boelelaan 1081 NL-1081 HV Amsterdam	
<b>General subject of the contract:</b>  Investigation of the relationship between radiation induced primary damage in DNA and the biological activity of DNA.	
<b>List of projects:</b>  1. Relationship between radiation induced primary damage in DNA and the biological activity of DNA.	
<b>Total cost (for 4 years):</b> HFL 891.500 = 319.649 ECU	<b>Ceiling of CEC contribution:</b> HFL 275.000 = 98.602 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 4.8	<b>Others (man years):</b> 1.0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Hahn Meitner-Institut für  
Kernforschung Berlin GmbH  
Postfach 390128  
D-1000 Berlin 39

**Contract no.:** BIO-C-469-81-D

**Head(s) of research team(s):**

Prof. Dr. W. Schnabel  
HMI für Kernforschung Berlin  
Postfach 390128  
D-1000 Berlin 39

**General subject of the contract:**

The influence of protecting agents on radiation damage processes in biomolecules.

**List of projects:**

1. The influence of protecting agents on radiation damage processes in biomolecules.

**Total cost (for 2 years):**  
DM 729.873 = 290.670 ECU

**Ceiling of CEC contribution:**  
DM 141.540 = 56.368 ECU

**Duration:**  
01.01.1981 - 31.12.1982

**CEC staff:**

**Scientists (man years):** 2.2

**Others (man years):** 2.0

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>			
<b>Contractor:</b> Max-Planck-Gesellschaft zur Förderung der Wissenschaften Postfach 647 D-8000 München	<b>Contract no.:</b> BIO-C-341-81-D		
<b>Head(s) of research team(s):</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">                             Prof. Dr. D. Schulte-Frohlinde                              MPI für Strahlenchemie                              Stiftstrasse 34-36                              D-4330 Mülheim                         </td> <td style="width: 50%; vertical-align: top;">                             Prof. Dr. C. von Sonntag                              MPI für Strahlenchemie                              Stiftstrasse 34-36                              D-4330 Mülheim                         </td> </tr> </table>		Prof. Dr. D. Schulte-Frohlinde MPI für Strahlenchemie Stiftstrasse 34-36 D-4330 Mülheim	Prof. Dr. C. von Sonntag MPI für Strahlenchemie Stiftstrasse 34-36 D-4330 Mülheim
Prof. Dr. D. Schulte-Frohlinde MPI für Strahlenchemie Stiftstrasse 34-36 D-4330 Mülheim	Prof. Dr. C. von Sonntag MPI für Strahlenchemie Stiftstrasse 34-36 D-4330 Mülheim		
<b>General subject of the contract:</b> Chemical studies of chain breaks in DNA induced by gamma-irradiation.			
<b>List of projects:</b> 1. Chemical studies of chain breaks in DNA induced by gamma-irradiation.			
<b>Total cost (for 4 years):</b> DM 612.653 = 243.988 ECU	<b>Ceiling of CEC contribution:</b> DM 214.428 = 85.395 ECU		
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>		
<b>Scientists (man years):</b> 3.3	<b>Others (man years):</b>		
<b>Remarks:</b>			

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> The University of Leicester University Road GB-Leicester LE1 7RH	<b>Contract no.:</b> BIO-C-362-81-UK
<b>Head(s) of research team(s):</b> Prof. M.C.R. Symons Department of Chemistry University of Leicester GB-Leicester LE1 7RH	
<b>General subject of the contract:</b> Application of spectroscopic techniques especially e.s.r. to the study of radiation effects in DNA and DNA-protein complexes.	
<b>List of projects:</b> 1. Application of spectroscopic techniques especially e.s.r. to the study of radiation effects in DNA, DNA complexes, and related materials.	
<b>Total cost (for 4 years):</b> UKL 127,202 = 227,879 ECU	<b>Ceiling of CEC contribution:</b> UKL 47,410 = 84,934 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 10.1	<b>Others (man years):</b> 4.3
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Commissariat à l'Energie Atomique, CEA CEN de Grenoble B.P. n° 85 X F-38041 Grenoble Cédex	<b>Contract no.:</b> BIO-C-350-81-F
<b>Head(s) of research team(s):</b> Dr. R. Téoule Lab. de Radiobiologie CEA - CEN de Grenoble B.P. n° 85 X F-38041 Grenoble Cédex	
<b>General subject of the contract:</b> Study of DNA injury caused by ionizing radiation.	
<b>List of projects:</b>  1. Study of DNA injury caused by ionizing radiation.	
<b>Total cost (for 4 years):</b> FF 1.065.362 = 177.206 ECU	<b>Ceiling of CEC contribution:</b> FF 303.990 = 50.564 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 0,9	<b>Others (man years):</b> 0,9
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Univ. Catholique de Louvain  
UCL  
Halles Universitaires  
Place de l'Université 1  
B-1348 Louvain-la-Neuve

**Contract no.:** BIO-C-358-81-B

**Head(s) of research team(s):**

Dr. H. Bazin  
Faculté de Médecine  
UCL 3056  
Clos Chapelle aux Champs 30  
B-1200 Bruxelles

**General subject of the contract:**

The effects of ionizing radiation on the defence mechanisms against infections.

**List of projects:**

1. Influence of irradiations on the local intestinal immunity.  
Prevention and treatment of their effects.

**Total cost (for 2 years):**

BFR 11.200.000 = 272.506 ECU

**Ceiling of CEC contribution:**

BFR 3.680.000 = 89.538 ECU

**Duration:**

01.01.1981 - 31.12.1982

**CEC staff:** 1 scientist

**Scientists (man years):** 2,0

**Others (man years):** 3,0

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Institut National de la Santé et de la Recherche Médicale INSERM Rue de Tolbiac 101 F-75645 Paris Cédex 13	<b>Contract no.:</b> BIO-C-351-81-F
<b>Head(s) of research team(s):</b> Dr. Y. Courtois ERA 842 CNRS, U. 118 INSERM Rue Wilhem 29 F-75016 Paris	
<b>General subject of the contract:</b> Molecular mechanisms of X-ray and UV induced cataracts : study of the DNA stability and genetic expression of lens proteins using tissue culture methods.	
<b>List of projects:</b> 1. Molecular mechanisms of cataractogenesis.	
<b>Total cost (for 4 years):</b> FF 600.000 = 99.800 ECU	<b>Ceiling of CEC contribution:</b> FF 198.000 = 32.934 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 20,0	<b>Others (man years):</b> 8,0
<b>Remarks:</b> In collaboration with Dr. M.F. Counis and Dr. J. Treton.	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Comitato Nazionale per l'Energia Nucleare, CNEN Viale Regina Margherita 125 I-00198 Roma	<b>Contract no.:</b> BIO-C-354-81-I
<b>Head(s) of research team(s):</b> Prof. G. Doria Div. di Radioprotezione CSN della Casaccia, CNEN C.P. 2400 I-00100 Roma	
<b>General subject of the contract:</b> Radiation damage and recovery of the immune system.	
<b>List of projects:</b> 1. Radiation damage and recovery of the immune system.	
<b>Total cost (for 4 years):</b> LIT 1.280.000.000 = 1.019.108 ECU	<b>Ceiling of CEC contribution:</b> LIT 400.000.000 = 318.471 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 1 scientist
<b>Scientists (man years):</b> 16.0	<b>Others (man years):</b> 20.0
<b>Remarks:</b>	

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Université Libre de Bruxelles ULB Avenue F.D.Roosevelt 50 B-1000 Bruxelles	<b>Contract no.:</b> BIO-C-360-81-B
<b>Head(s) of research team(s):</b>  Dr. J. E. Dumont IRIBHN Inst. of Interdiscipl. Res. Route de Lennik 808 B-1070 Bruxelles	
<b>General subject of the contract:</b>  Thyroid irradiation : Radiobiological consequences of irradiation in cell culture systems and in humans.	
<b>List of projects:</b>  1. Radiobiology of the thyroid. 2. Irradiation and the human thyroid.	
<b>Total cost (for 4 years):</b> BFR 21.100.000 = 513.382 ECU	<b>Ceiling of CEC contribution:</b> BFR 8.300.000 = 201.946 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 1 scientist
<b>Scientists (man years):</b> 8	<b>Others (man years):</b> 4
<b>Remarks:</b> Collaboration with the College of Technology, Dublin Dr. Mallone contract n° BIO-C-364-81-EIR, Inserm, Paris (Dr. Nunez), Institut Bordet, Brussels (Dr. Henry and Dr. Dor).	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Universität Ulm  
Grüner Hof 5c  
D-7900 Ulm

**Contract no.:** BIO-C-345-81-D

**Head(s) of research team(s):**

Prof. Dr. T. M. Fliedner  
Abt. Klin. Phys.u. Arbeitsmed.  
Universität Ulm,  
Oberer Eselsberg M 24  
D-7900 Ulm

**General subject of the contract:**

Consequences of radiation exposure : assessment of impairment and restoration of hemopoietic function.

**List of projects:**

1. Radiobiological mechanisms involved in hemopoietic responses to low level radiation exposure.
2. Blood stem cell determination as a biological indicator of radiation exposure.
3. Reconstitution of radiation induced hemopoietic aplasia by means of blood and fetal liver stem cell transfusions using cell separation and cryo-preservation technics.

**Total cost (for 4 years):**

DM 4.401.250 = 1.752.788 ECU

**Ceiling of CEC contribution:**

DM 1.760.500 = 701.115 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff: 2 scientists**

**Scientists (man years): 32.0**

**Others (man years): 40.0**

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>			
<b>Contractor:</b>  Istituto di Ricerche Farmacologiche "Mario Negri" Via Eritrea 62 I-20157 Milano	<b>Contract no.:</b> BIO-C-355-81-I		
<b>Head(s) of research team(s):</b>  <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">                             Dr. S. Garattini                              Istituto di Ricerche                              Farmacologiche "Mario Negri"                              Via Eritrea 62                              I-20157 Milano                         </td> <td style="width: 50%; vertical-align: top;">                             Dr. F. Spreafico                              Istituto di Ricerche                              Farmacologiche "Mario Negri"                              Via Eritrea 62                              I-20157 Milano                         </td> </tr> </table>		Dr. S. Garattini Istituto di Ricerche Farmacologiche "Mario Negri" Via Eritrea 62 I-20157 Milano	Dr. F. Spreafico Istituto di Ricerche Farmacologiche "Mario Negri" Via Eritrea 62 I-20157 Milano
Dr. S. Garattini Istituto di Ricerche Farmacologiche "Mario Negri" Via Eritrea 62 I-20157 Milano	Dr. F. Spreafico Istituto di Ricerche Farmacologiche "Mario Negri" Via Eritrea 62 I-20157 Milano		
<b>General subject of the contract:</b>  Consequences of radiation exposure and treatment of pathological effects.			
<b>List of projects:</b>  1. Characterization of the mode of action of immuno depressive agents.			
<b>Total cost (for 4 years):</b> LIT 251.350.000 = 200.119 ECU	<b>Ceiling of CEC contribution:</b> LIT 100.540.000 = 80.048 ECU		
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>		
<b>Scientists (man years):</b> 0.3	<b>Others (man years):</b> 1.2		
<b>Remarks:</b>			

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-C-347-81-F

Commissariat à l'Energie  
Atomique, CEA  
Rue de la Fédération 31-33  
F-75752 Paris-Cedex 15

**Head(s) of research team(s):**

Dr. J. Haag  
Département de Protection  
CEA - CEN de Saclay  
F-91191 Gif-sur-Yvette Cedex

**General subject of the contract:**

Experimental study of acute localized radiation lesions in pigs.

**List of projects:**

1. Clinical study of radiolesions of pigs.
2. Caryotypes of fibroblasts of "in vivo" irradiated pigs.

**Total cost (for 4 years):**  
FF 1.753.800 = 291.717 ECU

**Ceiling of CEC contribution:**  
FF 701.520 = 116.687 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 1.9

**Others (man years):** 1.9

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Institut Curie Section Médicale Rue d'Ulm 26 F-75005 Paris	<b>Contract no.:</b> BIO-C-348-81-F
<b>Head(s) of research team(s):</b>  Dr. Jammet Service Radiopathologie Inst. Curie Rue d'Ulm 26 F-75005 Paris	
<b>General subject of the contract:</b>  Physiopathological study of localized radiation injury : diagnostic and therapeutic implications.	
<b>List of projects:</b>  1. Physiopathological study of localized radiations injury : diagnostic and therapeutic implications.	
<b>Total cost (for 4 years):</b> FF 12.259.240 = 2.039.128 ECU	<b>Ceiling of CEC contribution:</b> FF 4.903.696 = 815.651 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 15.1	<b>Others (man years):</b> 43.9
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-C-346-81-F

Commissariat à l'Energie  
Atomique, CEA  
CEN de Fontenay-aux-Roses  
B.P. n°6  
F-92260 Fontenay-aux-Roses

**Head(s) of research team(s):**

Dr. J. Lafuma  
Département de Protection  
CEA - CEN de Fontenay-aux-Roses  
B.P. n°6  
F-92260 Fontenay-aux-Roses

**General subject of the contract:**

Study of the influence of the rate and the fractionation of the dose on the biological effects of gamma radiation at medium and high doses.

**List of projects:**

1. Haematological and anatomopathological studies.
2. Chromosomal aberrations.

**Total cost (for 4 years):**  
FF 2.884.034 = 479.713 ECU

**Ceiling of CEC contribution:**  
FF 865.210 = 143.914 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 2.0

**Others (man years):** 4.3

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Association Claude Bernard Avenue Victoria 3 F-75004 Paris	<b>Contract no.:</b> BIO-C-352-81-F
<b>Head(s) of research team(s):</b> Dr. A. Macleira-Coelho Inst. de Cancérologie et d'Immunogénétique Av. P. Vaillant Couturier 14 F-94800 Villejuif	
<b>General subject of the contract:</b> Influence of ionizing radiations on the <u>in vitro</u> aging and immortalization of fibroblasts.	
<b>List of projects:</b> 1. Influence of ionizing radiations on the <u>in vitro</u> aging and immortalization of fibroblasts.	
<b>Total cost (for 4 years):</b> FF 1.691.680 = 281.384 ECU	<b>Ceiling of CEC contribution:</b> FF 653.600 = 108.716 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 10,0	<b>Others (man years):</b> 8,0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Università di Napoli  
Corso Umberto I 35  
I-80131 Napoli

**Contract no.:** BIO-C-353-81-I

**Head(s) of research team(s):**

Prof. C. Peschle  
Istituto Patologia Medica  
Via S. Pansini 5  
I-80131 Napoli

**General subject of the contract:**

Physiopathology and therapy of radiation induced marrow aplasia :  
role of glycoprotein hormones modulating early hemopoiesis.

**List of projects:**

1. Radiation and marrow aplasia. Role of glycoprotein modulators of early hemopoiesis.

**Total cost (for 4 years):**

LIT 181.412.000 = 144.436 ECU

**Ceiling of CEC contribution:**

LIT 60.900.000 = 48.487 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 10.4

**Others (man years):** 6.0

**Remarks:**

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Universität Essen Hufelandstrasse 55 D-4300 Essen	<b>Contract no.:</b> BIO-C-290-81-D
<b>Head(s) of research team(s):</b>  Prof. Dr. C. Streffer Abt. Med. Strahlenbiologie Universitätsklinikum Essen Hufelandstrasse 55 D-4300 Essen 1	
<b>General subject of the contract:</b>  Investigation on biological dosimetry : Formation of micronuclei in mammalian cells after irradiation with neutrons.	
<b>List of projects:</b>  1. Investigation on biological dosimetry : Formation of micronuclei in mammalian cells after irradiation with neutrons.	
<b>Total cost (for 4 years):</b> DM 604.200 = 240.621 ECU	<b>Ceiling of CEC contribution:</b> DM 151.050 = 60.155 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2,7	<b>Others (man years):</b> 3,2
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-C-364-81-EIR

Dublin Institute of Technology  
College of Technology  
Kevin Street  
IRL-Dublin 8

**Head(s) of research team(s):**

Dr. J. K. Taaffe  
Dept. of Physics  
Coll. of Technology  
Kevin Street  
IRL-Dublin 8

Dr. J.F. Malone  
Dept. of Physics  
Coll. of Technology  
Kevin Street  
IRL-Dublin 8

**General subject of the contract:**

Thyroid irradiation : dosimetry and radiobiological consequences in cell culture systems and in humans.

**List of projects:**

1. Dosimetric aspects of radionuclides of iodine in the human thyroid and in thyroid cell cultures.
2. Radiobiological response of cultured sheep thyroid cells.
3. Radiobiological aspects of the human thyroid.

**Total cost (for 4 years):**  
IRL 221.700 = 322.238 ECU

**Ceiling of CEC contribution:**  
IRL 80.520 = 117.035 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 6.6

**Others (man years):** 3.1

**Remarks:** In collaboration with the Université Libre de Bruxelles, Dr. J.E. Dumont, contract n° BIO-C-360-81-B.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Gesellschaft für Strahlen- und Umweltforschung mbH GSF Ingolstädter Landstrasse 1 D-8042 Neuherberg	<b>Contract no.:</b> BIO-C-344-81-D
<b>Head(s) of research team(s):</b>  Prof. Dr. S. Thierfelder Inst. für Hämatologie, GSF Landwehrstrasse 61 D-8000 München 2	
<b>General subject of the contract:</b>  Treatment of short term effects of radiation injury to the lymphohemopoietic system.	
<b>List of projects:</b>  1. Recovery from radiation injury after maximal doses of fractionated total and partial body irradiation and bone marrow transplantation. 2. Removal by antisera of anti-host immune reactivity in irradiated bone marrow recipients. 3. Repopulation of the lymphatic tissue after total body irradiation.	
<b>Total cost (for 4 years):</b> DM 4.153.510 = 1.654.126 ECU	<b>Ceiling of CEC contribution:</b> DM 1.257.500 = 500.796 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 14.0	<b>Others (man years):</b> 12.0
<b>Remarks:</b> This work is carried out within the framework of the Association EURATOM-GSF.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

<b>Contractor:</b> REP-Institutes of the Organization for Health Research TNO P.O. Box 5815 NL-2280 HV Rijswijk		<b>Contract no.:</b> B10-C-357-81-NL
<b>Head(s) of research team(s):</b> Prof. Dr. D. W. van Bekkum Radiobiological Institute TNO P.O. Box 5815 NL-2280 HV Rijswijk		
<b>General subject of the contract:</b> Development of safe procedures for transplantation of mismatched bone marrow.		
<b>List of projects:</b> <ol style="list-style-type: none"><li>1. Search for optimal conditioning protocol.</li><li>2. Influence of microflora on bone marrow repopulation and GvHD.</li><li>3. Immune reconstitution after bone marrow transplantation across MHC barriers.</li></ol>		
<b>Total cost (for 4 years):</b> HFL 2.125.350 = 762.047 ECU	<b>Ceiling of CEC contribution:</b> HFL 827.400 = 296.665 ECU	
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 1 scientist	
<b>Scientists (man years):</b> 8.4	<b>Others (man years):</b> 14.0	
<b>Remarks:</b>		

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> International Bone Marrow Transplant Registry, IBMTR Mt. Sinai Med. Center P.O.Box 342 USA-Milwaukee WI 53201	<b>Contract no.:</b> BIO-C-471-81-US
<b>Head(s) of research team(s):</b> Dr. M.M. Bortin Scientific Director IBMTR Mt. Sinai Med. Center P.O.Box 342 USA-Milwaukee WI 53201	
<b>General subject of the contract:</b> Clinical investigations on bone marrow transplantations.	
<b>List of projects:</b>  1. Clinical investigations on bone marrow transplantations.	
<b>Total cost (for 1 years):</b>	<b>Ceiling of CEC contribution:</b> USD 13.000 = 12.683 ECU
<b>Duration:</b> 01.07.1981 - 30.06.1982	<b>CEC staff:</b>
<b>Scientists (man years):</b>	<b>Others (man years):</b>
<b>Remarks:</b> The International Bone Marrow Transplant Registry is a working group directed by Dr. M.M. Bortin and Dr. A.A. Rimm and is supervised by an International Advisory Committee.	

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> REP-Institutes of the Organisation for Health Research TNO P.O. Box 5815 NL-2280 HV Rijswijk	<b>Contract no.:</b> BIO-D-376-81-NL
<b>Head(s) of research team(s):</b> Dr. P.A.J. Bentvelzen Radiobiological Institute TNO P.O. Box 5815 NL-2280 HV Rijswijk	
<b>General subject of the contract:</b> Fundamental studies on the possible mechanisms of radiation carcinogenesis.	
<b>List of projects:</b> 1. Fundamental studies on the possible mechanisms of radiation carcinogenesis.	
<b>Total cost (for 4 years):</b> HFL 1.585.400 = 568.447 ECU	<b>Ceiling of CEC contribution:</b> HFL 551.600 = 197.777 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 6,8	<b>Others (man years):</b> 12,0
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> REP-Institutes of the Organization for Health Research TNO P.O. Box 5815 NL-2280 HV Rijswijk	<b>Contract no.:</b> BIO-D-375-81-NL
<b>Head(s) of research team(s):</b> Dr. J. J. Broerse Radiobiological Institute TNO P.O. Box 5815 NL-2280 HV Rijswijk	
<b>General subject of the contract:</b> Influence of repeated low dose irradiation on mammary gland carcinogenesis.	
<b>List of projects:</b> 1. Influence of repeated low dose irradiation on mammary gland carcinogenesis.	
<b>Total cost (for 4 years):</b> HFL 914.300 = 327.824 ECU	<b>Ceiling of CEC contribution:</b> HFL 365.680 = 131.115 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2.8	<b>Others (man years):</b> 2.8
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-D-372-81-F

Commissariat à l'Energie  
Atomique, CEA  
Département de Protection  
B.P. 510  
F-75752 Paris Cédex 15

**Head(s) of research team(s):**

Dr. J. Chalabreysse  
Service d'Hygiène Industrielle  
CEA-CEN de Pierrelatte  
B.P. 38  
F-26700 Pierrelatte

**General subject of the contract:**

Study of uranium metabolism and of actual health hazards in the uranium industry (natural and enriched).

**List of projects:**

1. Study of the pollutant and the conditions of exposure.
2. Study of the metabolism of incorporated uranium and of the health of the workers.

**Total cost (for 4 years):**

FF 2.365.500 = 393.463 ECU

**Ceiling of CEC contribution:**

FF 946.200 = 157.385 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 1.4

**Others (man years):** 2.1

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Fondation Bergonié Centre Rég. Anti-Cancéreux Rue de Saint-Genès 180 F-33076 Bordeaux Cédex	<b>Contract no.:</b> BIO-D-371-81-F
<b>Head(s) of research team(s):</b> Dr. J. F. Duplan Unité de Rech. Radiobiologie Expérimentale et Cancérologie Rue de Saint-Genès 180 F-33076 Bordeaux Cédex	
<b>General subject of the contract:</b> Genetic recombination as a mechanism of induction of leukemia upon irradiation and its impairment.	
<b>List of projects:</b> 1. Occurrence of a leukomogenic recombinant in radiation induced tumours. Kinetics of expression of endogeneous C57BL virus and localization of the viral expression in different tissues.	
<b>Total cost (for 4 years):</b> FF 2.574.181 = 428.174 ECU	<b>Ceiling of CEC contribution:</b> FF 858.240 = 142.754 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 5.0	<b>Others (man years):</b> 9.0
<b>Remarks:</b> In collaboration with Dr. M. Janowski, CEN/SCK, Mol, Belgium, contract n° BIO-D-379-81-B	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Medical Research Council  
MRC  
Park Crescent 20  
GB-London W1N 4AL

**Contract no.:** BIO-D-474-81-UK

**Head(s) of research team(s):**

Dr. S. B. Field  
Cyclotron Unit - Biology Dep.  
MRC  
Ducane Road  
GB-London W12 0HS

**General subject of the contract:**

Non-stochastic effects of radiation on normal tissues relevant to radiotherapy and radiation protection.

**List of projects:**

1. Cell kinetics and radiation damage.
2. Vascular injury and late radiation damage.

**Total cost (for 3.5 years):**  
UKL 162.500 = 291.114 ECU

**Ceiling of CEC contribution:**  
UKL 65.000 = 116.446 ECU

**Duration:**  
01.07.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 7.2

**Others (man years):** 3.4

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Gesellschaft für Strahlen- und Umweltforschung mbH. GSF Ingolstädter Landstrasse 1 D-8042 Neuherberg	<b>Contract no.:</b> BIO-D-366-81-D
<b>Head(s) of research team(s):</b> Prof. Dr. W. Gössner Inst. Biologie GSF Ingolstädter Landstrasse 1 D-8042 Neuherberg	
<b>General subject of the contract:</b> Pathogenesis of late somatic effects of radiation.	
<b>List of projects:</b> <ol style="list-style-type: none"><li>1. The dependence of radiation induced osteosarcoma risk on dose, time and quality of radiation.</li><li>2. The pathogenesis of radiation induced bone tumours.</li><li>3. The role of various endogenous and exogenous factors in regard to radiation induced late effects.</li></ol>	
<b>Total cost (for 4 years):</b> DM 10.015.900 = 3.988.809 ECU	<b>Ceiling of CEC contribution:</b> DM 3.041.000 = 1.211.071 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 28.0	<b>Others (man years):</b> 52.0
<b>Remarks:</b> This work is carried out within the frame work of the Association EURATOM-GSF.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-D-461-81-D

Gesellschaft für Strahlen-  
 und Umweltforschung mbH.  
 GSF  
 Ingolstädter Landstrasse 1  
 D-8042 Neuherberg

**Head(s) of research team(s):**

Prof. Dr. W. Gössner  
 Institut für Biologie  
 GSF  
 Ingolstädter Landstrasse 1  
 D-8042 Neuherberg

Prof. Dr. A.M. Kellerer\*  
 Prof. Dr. H. Spiess\*

**General subject of the contract:**

Epidemiological studies of the radiation carcinogenesis and its  
 biophysical basis.

**List of projects:**

1. Late effects in Ra -224 treated patients.
2. Epidemiological studies on Ra - 224 treated patients.
3. Epidemiology of experimental radiation carcinogenesis.

**Total cost (for 4 years):**  
 DM 1.850.000 = 736.758 ECU

**Ceiling of CEC contribution:**  
 DM 740.000 = 294.703 ECU

**Duration:**  
 01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 4,0

**Others (man years):** 1,5

**Remarks:** \* This research programme is carried out in coordination with the "Institut für Medizinische Strahlenkunde der Universität Würzburg", Prof. Dr. A.M. Kellerer and the "Kinderpoliklinik der Universität München", Prof. Dr. H. Spiess.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> REP-Institutes of the Organisation for Health Research TNO P.O. Box 5815 NL-2280 HV Rijswijk	<b>Contract no.:</b> BIO-D-301-81-NL
<b>Head(s) of research team(s):</b> Dr. B. Hogeweg Radiobiological Institute TNO P.O. Box 5815 NL-2280 HV Rijswijk	Prof. G.W. Barendsen Radiobiological Institute TNO P.O. Box 5815 NL-2280 HV Rijswijk
<b>General subject of the contract:</b> Dosimetric and experimental studies on long-tumour induction by inhalation of radon.	
<b>List of projects:</b> 1. Dosimetric and experimental studies on long-tumour induction by inhalation of radon.	
<b>Total cost (for 4 years):</b> HFL 660.500 = 236.823 ECU	<b>Ceiling of CEC contribution:</b> HFL 275.800 = 98.888 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2.2	<b>Others (man years):</b> 2.0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-D-382-81-UK

University of Oxford  
Research Institute  
Churchill Hospital  
Headington  
GB-Oxford OX3 7LJ

**Head(s) of research team(s):**

Dr. J. W. Hopewell  
University of Oxford  
Research Institute  
Churchill Hospital  
GB-Oxford OX3 7LJ

**General subject of the contract:**

Pathogenesis of early and late radiation reactions in normal tissues.

**List of projects:**

1. Measurement of early and late effects of irradiation in pig skin.
2. Biological effects of non-uniform irradiation on pig skin.
3. Wound healing in irradiated skin.
4. Pathogenesis of late vascular damage in the hamster cheek pouch.

**Total cost (for 4 years):**

UKL 307.065 = 550.099 ECU

**Ceiling of CEC contribution:**

UKL 76.495 = 137.039 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 13.4

**Others (man years):** 17.0

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Medical Research Council MRC Park Crescent 20 GB-London W1N 4AL	<b>Contract no.:</b> BIO-D-442-81-UK
<b>Head(s) of research team(s):</b> Dr. S. Hornsey Cyclotron Unit MRC Ducane Road GB-London W12 0HS	
<b>General subject of the contract:</b> Radiation damage to cells and tissues at dose levels relevant to radiotherapy and protection.	
<b>List of projects:</b>  1. Sensitivity of central nervous system in normal and dystrophic rodents.	
<b>Total cost (for 4 years):</b> UKL 110.140 = 197.313 ECU	<b>Ceiling of CEC contribution:</b> UKL 44.056 = 78.925 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 5,1	<b>Others (man years):</b> 4,0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Contract no.: BIO-D-365-81-D

Gesellschaft für Strahlen-  
und Umweltforschung, mbH.  
GSF  
Ingoldstädter Landstrasse 1  
D-8042 Neuherberg

**Head(s) of research team(s):**

Prof. Dr. H. Kriegel  
Abt. für Nuklearbiologie  
GSF  
Ingoldstädter Landstrasse 1  
D-8042 Neuherberg

**General subject of the contract:**

Decorporation and interruption of transfer of radionuclides;  
especially of radioactive alkalines and alkaline earthes.

**List of projects:**

1. Decorporation and interruption of transfer of radionuclides;  
especially of radioactive alkalines and alkaline earthes.

**Total cost (for 4 years):**

DM 2.523.170 = 1.004.847 ECU

**Ceiling of CEC contribution:**

DM 905.400 = 360.573 ECU

**Duration:**

01.01.1981 - 31.12.1984

CEC staff: 1 scientist

Scientists (man years): 8.0

Others (man years): 14.0

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Commissariat à l'Energie Atomique, CEA Dépt. de la Protection DPS B.P. n°6 F-92260 Fontenay-aux-Roses	<b>Contract no.:</b> BIO-D-370-81-F
<b>Head(s) of research team(s):</b> Dr. J. Lafuma Serv. Radiopath. et Toxicol. Exp. CEA-CEN de Fontenay-aux-Roses B.P. n°6 F-92260 Fontenay-aux-Roses.	
<b>General subject of the contract:</b> Study of the biology of the Pu-tributylphosphate complex; metabolism and possible decorporation.	
<b>List of projects:</b> 1. Metabolism of the Pu-239 tributylphosphate complex.	
<b>Total cost (for 4 years):</b> FF 1.948.700 = 324.135 ECU	<b>Ceiling of CEC contribution:</b> FF 584.600 = 97.239 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2.0	<b>Others (man years):</b> 2,3
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

Contractor:

Contract no.: BIO-D-383-81-UK

St. Bartholomew's Hospital  
West Smithfield  
GB-London EC1A 7BE

Head(s) of research team(s):

Prof. P. J. Lindop  
Dept. Radiobiology  
St. Bartholomew's Hospital  
Charterhouse Square  
GB-London EC1M 6BQ

General subject of the contract:

Radiation damage from inhaled particles in the rodent lung.

List of projects:

1. The effects of exposure of mice to Am-241 aerosols.
2. The effects of exposure of mice to maintained lung burdens of plutonium-239 dioxide.

Total cost (for 4 years):

UKL 336.517 = 602.861 ECU

Ceiling of CEC contribution:

UKL 84.130 = 150.717 ECU

Duration:

01.01.1981 - 31.12.1984

CEC staff:

Scientists (man years): 6.1

Others (man years): 6.2

Remarks: This research programme is carried out in the collaboration with the Inhalation Toxicology Group of the Division of Environmental and Medical Sciences, AERE, Harwell, Dr. A. Morgan, contract n° BIO-D-448-81-UK.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>	<b>Contract no.:</b> BIO-D-447-81-UK
St. Bartholomew's Hospital West Smithfield GB-London EC1A 7BE	
<b>Head(s) of research team(s):</b> Prof. P. J. Lindop Dept. Radiobiology St. Bartholomew's Hospital Charterhouse Square GB-London EC1M 6BQ	
<b>General subject of the contract:</b> Radiation damage from inhaled particles in the rodent lung.	
<b>List of projects:</b>  1. Late effects of exposure of mice to Pu-239 dioxide.	
<b>Total cost (for 2 years):</b>	<b>Ceiling of CEC contribution:</b>
<b>Duration:</b> 01.01.1981 - 31.12.1982	<b>CEC staff:</b>
<b>Scientists (man years):</b>	<b>Others (man years):</b>
<b>Remarks:</b> Contract under negotiation.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Centre d'Etude de l'Energie  
Nucléaire, CEN/SCK  
Avenue Plasky 144  
B-1040 Bruxelles

**Contract no.:** BIO-D-378-81-B

**Head(s) of research team(s):**

Dr. J. R. Maisin  
Dép. Radiobiologie  
CEN/SCK  
Boeretang 200  
B-2400 Mol

**General subject of the contract:**

Late somatic and genetic effects of radiation in mammals.

**List of projects:**

1. Morphological, biochemical and physiological late effects of irradiation in the adult and developing rat brain.
2. Effects of whole body irradiation of the developing organism on the hematopoietic system and on life span and disease incidence.
3. Mechanisms of radiation induced fibrosis in lung.
4. Influence of dose rate and fractionation on life shortening and causes of death of mice irradiated with 50 MeV neutrons and gamma rays.
5. Factors influencing genetic radiosensitivity and their influence on the extrapolation of genetic data from animal to man.
6. Influence of dose and inhomogeneous exposure on the aberration yield in radiotherapy patients.

**Total cost (for 4 years):**

BFR 59.035.384 = 1.436.384 ECU

**Ceiling of CEC contribution:**

BFR 14.760.450 = 359.135 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:** 0.6 scientist

**Scientists (man years):** 7.4

**Others (man years):** 13.2

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Centre d'Etude de l'Energie Nucléaire, CEN/SCK Avenue Plasky 144 B-1040 Bruxelles	<b>Contract no.:</b> BIO-D-379-81-B
<b>Head(s) of research team(s):</b>  Dr. J. R. Maisin Dép. Radiobiologie CEN/SCK Boeretang 200 B-2400 Mol	
<b>General subject of the contract:</b>  Genetic recombination as a mechanisms of induction of leukemia upon irradiation and its impairment.	
<b>List of projects:</b>  1. Genetic recombination as a mechanism of induction of leukemia upon irradiation and its impairment.	
<b>Total cost (for 4 years):</b> BFR 5.912.458 = 143.855 ECU	<b>Ceiling of CEC contribution:</b> BFR 1.625.000 = 39.538 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.0	<b>Others (man years):</b> 0.6
<b>Remarks:</b> In collaboration with Dr. J. F. Duplan, Foundation Bergonié, Bordeaux, France, contract n° BIO-D-371-81-F.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

United Kingdom Atomic Energy  
Authority, UKAEA  
Charles II Street 11  
GB-London SW1Y 4QP

**Contract no.:** BIO-D-386-81-UK

**Head(s) of research team(s):**

Dr. A. Morgan  
Env. and Med. Sciences Div.  
AERE  
Harwell, Didcot,  
GB-Oxon OX11 0RA

**General subject of the contract:**

The effect of firing temperature on the solubility in lung of Pu-238 dioxide and Pu-239 dioxide; implications in biological monitoring.

**List of projects:**

1. The effect of firing temperature on the solubility in lung of Pu-238 dioxide and Pu-239 dioxide; implications in biological monitoring.

**Total cost (for 3 years):**  
UKL 185.000 = 331.422 ECU

**Ceiling of CEC contribution:**  
UKL 74.000 = 132.569 ECU

**Duration:**  
01.01.1981 - 31.12.1983

**CEC staff:**

**Scientists (man years):** 1.4

**Others (man years):** 3.8

**Remarks:**

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> United Kingdom Atomic Energy Authority, UKAEA Charles II Street 11 GB-London SW1Y 4QP	
<b>Contract no.:</b> BIO-D-448-81-UK	
<b>Head(s) of research team(s):</b> Dr. A. Morgan Env. and Med. Sciences Div. AERE Harwell, Didcot GB-Oxon OX11 0RA	
<b>General subject of the contract:</b> The induction by actinides of non-neoplastic changes in rodent lung.	
<b>List of projects:</b> 1. The induction by actinides of non-neoplastic changes in rodent lung.	
<b>Total cost (for 4 years):</b> UKL 200.000 = 358.295 ECU	<b>Ceiling of CEC contribution:</b> UKL 56.000 = 100.322 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2.3	<b>Others (man years):</b> 3.7
<b>Remarks:</b> This research programme is carried out in collaboration with the Department of Radiobiology Medical College of St. Bartholomew's Hospital, London, Prof. P. J. Lindop, contract n° BIO-D-383-81-UK.	

**Commission of the European Communities**  
**RADIATION PROTECTION PROGRAMME**

<b>Contractor:</b>		<b>Contract no.:</b> BIO-D-380-81-UK	
United Kingdom Atomic Energy Authority, UKAEA Atomic Energy Establishment Winfrith Dorchester GB-Dorset DT2 8DH			
<b>Head(s) of research team(s):</b>			
Dr. G. H. Palmer Radiological & Safety Div. Atomic Energy Est. Winfrith Dorchester GB-Dorset DT2 8DH		Dr. D. Ramsden Radiological & Safety Div. Atomic Energy Est. Winfrith Dorchester GB-Dorset DT2 8DH	
<b>General subject of the contract:</b>			
Plutonium exposures in man : direct monitoring of the lung, re-assessment of the ICRP lung model, and solubility studies.			
<b>List of projects:</b>			
1. Distribution of plutonium activity within the lung. 2. Lung models. 3. Solubility studies on industrial plutonium dusts.			
<b>Total cost (for 4 years):</b>		<b>Ceiling of CEC contribution:</b>	
UKL 200.000 = 358.295 ECU		UKL 50.000 = 89.574 ECU	
<b>Duration:</b>		<b>CEC staff:</b>	
01.01.1981 - 31.12.1984			
<b>Scientists (man years):</b> 2.3		<b>Others (man years):</b> 1.4	
<b>Remarks:</b>			

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Polytechnic of Central London Regent Street 309 GB-London W1R 8AL	<b>Contract no.:</b> BIO-D-381-81-UK
<b>Head(s) of research team(s):</b>  Dr. J. A. Simmons Polytechnic of Central London New Cavendish Street 115 GB-London W1M 8JS	
<b>General subject of the contract:</b>  Microdosimetry of lung.	
<b>List of projects:</b>  1. Image analysis of alpha tracks through lung tissue. 2. Radiosensitivity of lung cells to alpha particles.	
<b>Total cost (for 4 years):</b> UKL 59.072 = 105.826 ECU	<b>Ceiling of CEC contribution:</b> UKL 19.280 = 34.540 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.0	<b>Others (man years):</b> 5.9
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

National Radiological  
Protection Board, NRPB  
Chilton, Didcot  
GB-Chilton, Oxon OX11 0RQ

**Contract no.:** BIO-D-388-81-UK

**Head(s) of research team(s):**

Dr. H. Smith  
Biology Department  
NRPB  
Chilton, Didcot  
GB-Oxon OX11 0RQ

**General subject of the contract:**

The transport in and clearance from the body of radionuclides.

**List of projects:**

1. Studies of the uptake of radionuclides from the gut of rodents and rabbits.
2. Studies of mechanisms influencing the transport of actinides within the body.
3. Optimisation of treatment regimes for removing radionuclides from the body.

**Total cost (for 4 years):**  
UKL 788.919 = 1.413.327 ECU

**Ceiling of CEC contribution:**  
UKL 224.480 = 402.150 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 8.4

**Others (man years):** 8.4

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Kernforschungszentrum Postfach 3640 D-7500 Karlsruhe 1	<b>Contract no.:</b> BIO-D-367-81-D
<b>Head(s) of research team(s):</b> Prof. Dr. D. M. Taylor Inst. für Genetik Kernforschungszentrum Postfach 3640 D-7500 Karlsruhe 1	
<b>General subject of the contract:</b> Chelation therapy of actinides : biochemical basis and improvement of treatment procedures.	
<b>List of projects:</b> 1. Chelation therapy of actinides : biochemical basis and improvement of treatment procedures.	
<b>Total cost (for 4 years):</b> DM 1.457.240 = 580.342 ECU	<b>Ceiling of CEC contribution:</b> DM 480.890 = 191.513 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 8,0	<b>Others (man years):</b> 0,8
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-D-377-81-B

Studiecentrum voor Kernenergie  
SCK/CEN.  
Plaskyiaan 144  
B-1040 Brussel

**Head(s) of research team(s):**

Prof. O. Vanderborcht  
Departement Radiobiologie  
SCK/CEN.  
Kraaibossen, 25  
B-2440 Geel

**General subject of the contract:**

Decorporation of heavy alkaline - earth metals and transuranics.

**List of projects:**

1. Decorporation of heavy alkaline - earth metals and transuranics.

**Total cost (for 4 years):**

BFR 23.113.278 = 562.367 ECU

**Ceiling of CEC contribution:**

BFR 8.128.000 = 197.762 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 3,8

**Others (man years):** 3,8

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> REP-Institutes of the Organisation for Health Research TNO P.O. Box 5815 NL-2280 HV Rijswijk	<b>Contract no.:</b> BIO-D-374-81-NL
<b>Head(s) of research team(s):</b> Prof. Dr. L. M. van Putten Radiobiological Institute TNO P.O. Box 5815 NL-2280 HV Rijswijk	
<b>General subject of the contract:</b> Carcinogenicity of iodine-123, -125 and -131 in the mouse.	
<b>List of projects:</b> 1. Carcinogenicity of iodine-123, -125 and -131 in the mouse.	
<b>Total cost (for 4 years):</b> HFL 303.400 = 108.785 ECU	<b>Ceiling of CEC contribution:</b> HFL 110.320 = 39.555 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 0.8	<b>Others (man years):</b> 2.9
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>											
<b>Contractor:</b>  Medical Research Council MRC Park Crescent 20 GB-London WIN 4AL	<b>Contract no.:</b> B10-D-384-81-UK										
<b>Head(s) of research team(s):</b>  <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Dr. J. Vennart</td> <td style="width: 50%;">Dr. L.M. Cobb</td> </tr> <tr> <td>Radiobiology Unit</td> <td>Radiobiology Unit</td> </tr> <tr> <td>MRC</td> <td>MRC</td> </tr> <tr> <td>Harwell - Didcot</td> <td>Harwell - Didcot</td> </tr> <tr> <td>GB-Oxon OX11 ORD</td> <td>GB-Oxon OX11 ORD</td> </tr> </table>		Dr. J. Vennart	Dr. L.M. Cobb	Radiobiology Unit	Radiobiology Unit	MRC	MRC	Harwell - Didcot	Harwell - Didcot	GB-Oxon OX11 ORD	GB-Oxon OX11 ORD
Dr. J. Vennart	Dr. L.M. Cobb										
Radiobiology Unit	Radiobiology Unit										
MRC	MRC										
Harwell - Didcot	Harwell - Didcot										
GB-Oxon OX11 ORD	GB-Oxon OX11 ORD										
<b>General subject of the contract:</b>  Distribution and long-term retention of insoluble radioactive particles in the lungs of man and rat.											
<b>List of projects:</b>  1. Long-term retention of insoluble particles in the lungs of man. 2. Long-term retention of insoluble particles in the lungs of rats. 3. Interaction <u>in vitro</u> of human and rat lung macrophages with insoluble actinide particles.											
<b>Total cost (for 4 years):</b> UKL 375.706 = 673.067 ECU	<b>Ceiling of CEC contribution:</b> UKL 147.700 = 264.601 ECU										
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>										
<b>Scientists (man years):</b> 9.4	<b>Others (man years):</b> 7.2										
<b>Remarks:</b>											

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>		
<b>Contractor:</b>  Medical Research Council MRC Park Crescent 20 GB-London WIN 4AL	<b>Contract no.:</b> BIO-D-385-81-UK	
<b>Head(s) of research team(s):</b>  Dr. J. Vennart Radiobiology Unit MRC Harwell-Didcot GB-Oxon OX11 ORD		  Dr. E.V. Hulse Radiobiology Unit MRC Harwell-Didcot GB-Oxon OX11 ORD
<b>General subject of the contract:</b>  Studies in radiation - carcinogenesis and the interaction of radiation and chemical carcinogens.		
<b>List of projects:</b>  1. Radiation induced skin tumours in mice. 2. Effects of radiation on ENU induced tumours in rats. 3. Radiation carcinogenesis in rabbits.		
<b>Total cost (for 4 years):</b> UKL 274.632 = 491.996 ECU	<b>Ceiling of CEC contribution:</b> UKL 72.945 = 130.679 ECU	
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>	
<b>Scientists (man years):</b> 2.8	<b>Others (man years):</b> 10.0	
<b>Remarks:</b>		

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

The European Late Effects  
Project Group-EULEP  
Avenue E. Plasky 144  
B-1040 Bruxelles

**Contract no.:** BIO-D-390-81-D

**Head(s) of research team(s):**

Dr. J. F. Duplan  
Chairman of EULEP  
Rue de Saint-Genès 180  
F-33076 Bordeaux Cedex

**General subject of the contract:**

Late somatic effect of ionizing radiation in the mammalian organism.

**List of projects:**

1. Late somatic effects of ionizing radiation in the mammalian organism.

**Total cost (for 4 years):**

DM 5.542.000 = 2.207.089 ECU

**Ceiling of CEC contribution:**

DM 1.358.100 = 540.860 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):**

**Others (man years):**

**Remarks:** The European Late Effects Project group consists of more than 85 scientists in the field of Radiation Biology which are "associate members" coming from 20 "voting member" laboratories.

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Erasmus University Rotterdam Postbus 1738 NL-3000 DR Rotterdam	<b>Contract no.:</b> BIO-E-404-81-NL
<b>Head(s) of research team(s):</b> Prof. Dr. D. Bootsma Dept. Cell Biology and Genetics P.O. Box 1738 NL-3000 DR Rotterdam	
<b>General subject of the contract:</b> The genetic and biochemical basis of radiation sensitivity in human and other cells in culture.	
<b>List of projects:</b> 1. Genetic analysis of DNA repair. 2. Biochemical analysis of DNA repair in eukaryotic cells. 3. Consequences of DNA damage and repair.	
<b>Total cost (for 4 years):</b> HFL 1.232.565 = 441.938 ECU	<b>Ceiling of CEC contribution:</b> HFL 493.000 = 176.766 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 12.7	<b>Others (man years):</b>
<b>Remarks:</b> In collaboration with University of Sussex, Prof. Bridges, contract n° BIO-E-414-81-UK, Medical Biological Laboratory TNO, Dr. Lohman, contract n° BIO-E-403-81-NL, Leiden State University, Dr. Simons, contract n° BIO-E-407-81-NL.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Medical Research Council  
MRC  
Park Crescent 20  
GB-London W1N 4AL

**Contract no.:** BIO-E-414-81-UK

**Head(s) of research team(s):**

Prof. B.A. Bridges  
Cell Mutation Unit, MRC  
University of Sussex  
GB-Falmer, Brighton BN1 9QC

**General subject of the contract:**

The genetic and biochemical basis of radiation sensitivity in human and other cells in culture.

**List of projects:**

1. Genetic analysis of DNA repair.
2. Biochemical analysis of DNA repair.
3. Consequences of DNA damage and repair.

**Total cost (for 4 years):**  
UKL 300.856 = 538.975 ECU

**Ceiling of CEC contribution:**  
UKL 115.194 = 206.367 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 19.2

**Others (man years):** 5.8

**Remarks:** In collaboration with Erasmus University Rotterdam, Prof. Bootsma, contract n° BIO-E-404-81-NL; Medical Biological Laboratory TNO, Dr. Lohman, contract n° BIO-E-403-81-NL; Leiden State University, Dr. Simons, contract n° BIO-E-407-81-NL

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Aarhus University Department of Chemistry Langelandsgade 140 DK-8000 Aarhus C	<b>Contract no.:</b> BIO-E-416-81-DK
<b>Head(s) of research team(s):</b> Dr. J.E. Celis Chemistry Institute Aarhus University DK-8000 Aarhus C	
<b>General subject of the contract:</b> Changes in gene expression resulting from primary mutational events accompanying X-ray irradiation induced transformation in human cells.	
<b>List of projects:</b> 1. Use of X-ray irradiated cells in a search for differences at the polypeptide synthesis level between normal and malignant cells.	
<b>Total cost (for 4 years):</b> DKR 1.476.370 = 187.786 ECU	<b>Ceiling of CEC contribution:</b> DKR 590.550 = 75.114 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.7	<b>Others (man years):</b> 4.0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-E-479-81-UK

The Polytechnic of Central London  
PCL  
Regent Street 309  
GB-London W1R 8AL

**Head(s) of research team(s):**

Dr. P. Cohn

PCL

New Cavendish Street 115

GB-London W1M 8JS

Prof. G. Holt

PCL

New Cavendish Street 115

GB-London W1M 8JS

**General subject of the contract:**

Studies of radio-induced recombination in eukaryotic cells.

**List of projects:**

1. Radio-induced recombination in eukaryotic cells.

**Total cost (for 3.5 years):**  
UKL 115.966 = 209.779 ECU

**Ceiling of CEC contribution:**  
UKL 34.725 = 62.817 ECU

**Duration:**  
01.07.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 4.7

**Others (man years):** 3.5

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Institut National de la Recherche Agronomique INRA Rue de Grenelle 149 F-75007 Paris	<b>Contract no :</b> BIO-E-419-81-F
<b>Head(s) of research team(s):</b> Dr. M. Dalebroux Station d'Amélioration des Plantes, INRA B.V. 1540 F-21034 Dijon Cédex	
<b>General subject of the contract:</b> Study of irradiation effects on genetic markers.	
<b>List of projects:</b> 1. Research on the nature of radio-induced genetic events in the $a_1 - a_2$ system of tobacco and study of their relative frequencies in terms of varying doses of acute and chronic irradiation - search for repair deficient mutants. 2. Study of the genetic effects of low and very low external and internal chronic irradiations (natural and artificial) - comparison and interactions with other environmental factors.	
<b>Total cost (for 2 years):</b> FF 1.402.913 = 233.352 ECU	<b>Ceiling of CEC contribution:</b> FF 561.165 = 93.341 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1982	<b>CEC staff:</b> 1 scientist
<b>Scientists (man years):</b> 2.5	<b>Others (man years):</b> 3.5
<b>Remarks:</b> Joint programme with the Université Paul Sabatier, Delpoux, contract n° BIO-E-430-81-F. Data on man-power are computed for the joint research programme.	

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Landbouwhogeschool Wageningen Salverdaplein 10 NL-6701 DB Wageningen	<b>Contract no.:</b> BIO-E-402-81-NL
<b>Head(s) of research team(s):</b> Dr. Ir. P. de Boer Lab. Erfelijkheidisleer Gen. Foulkesweg 53 NL-6703 BM Wageningen	
<b>General subject of the contract:</b> The exploration of methods for evaluating the induction of autosomal meiotic non-disjunction in the mouse.	
<b>List of projects:</b> 1. The exploration of methods for evaluating the induction by ionizing irradiation of autosomal meiotic non-disjunction in the mouse.	
<b>Total cost (for 4 years):</b> HFL 1.026.596 = 368.087 ECU	<b>Ceiling of CEC contribution:</b> HFL 318.000 = 114.019 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 6.5	<b>Others (man years):</b> 4.3
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Université Paul Sabatier Route de Narbonne 118 F-31077 Toulouse Cédex	<b>Contract no.:</b> BIO-E-430-81-F
<b>Head(s) of research team(s):</b> Dr. M. Delpoux Service de Botanique et Biogéographie Allées J. Guesde 39 F-31077 Toulouse Cédex	
<b>General subject of the contract:</b> Study of irradiation effects on genetic markers.	
<b>List of projects:</b> <ol style="list-style-type: none"> <li>1. Research on the nature of radio-induced genetic events in the <math>a_1 - a_2</math> system of tobacco and study of their relative frequencies in terms of varying doses of acute and chronic irradiation - search for repair deficient mutants.</li> <li>2. Study of the genetic effects of low and very low, external and internal, chronic irradiations (natural and artificial) - comparison and interactions with other environmental factors.</li> </ol>	
<b>Total cost (for 2 years):</b> FF 327.350 = 54.449 ECU	<b>Ceiling of CEC contribution:</b> 86.935 = 14.460 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1982	<b>CEC staff:</b> 1 scientist
<b>Scientists (man years):</b> 2.5	<b>Others (man years):</b> 3.5
<b>Remarks:</b> Joint programme with the "Institut National de la Recherche Agronomique", Dalebroux, contract n° BIO-E-419-81-F. Data on man-power are computed for the joint research programme.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Centre National de la  
Recherche Scientifique  
CNRS  
Quai Anatole France 15  
F-75007 Paris

Contract no.: BIO-E-426-81-F

**Head(s) of research team(s):**

Dr. R. Devoret  
Laboratoire d'Enzymologie  
CNRS  
F-91190 Gif-sur-Yvette

**General subject of the contract:**

Genetic effects induced by radiation and chemical carcinogens :  
mechanisms common to DNA repair, replication, recombination and  
mutagenesis.

**List of projects:**

1. Repair, mutagenesis and induction of dormant viruses following DNA  
damaging treatments in E. coli.

**Total cost (for 4 years):**  
FF 2.750.000 = 457.419 ECU

**Ceiling of CEC contribution:**  
FF 730.000 = 121.424 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 10.0

**Others (man years):** 5.3

**Remarks:** In collaboration with U.L.B., Bruxelles, Dr. Radman;  
contract n° BIO-E-420-81-B; C.N.R.S., Villejuif, Dr. Sarasin,  
contract n° BIO-E-427-81-F; C.N.R., Pavia, Dr. Falaschi,  
contract n° BIO-E-428-81-F.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Commissariat à l'Energie Atomique, CEA CEN de Fontenay-aux-Roses F-92260 Fontenay-aux-Roses	<b>Contract no.:</b> BIO-E-398-81-F
<b>Head(s) of research team(s):</b> Dr. B. Dutrillaux Institut de Progénèse Rue de l'Ecole de Médecine 15 F-75006 Paris	
<b>General subject of the contract:</b> Radiation induced and transmissible chromosome aberrations : Comparative sensitivity of mammals, risk assessment in man and interference of genetically radiation - sensitive constitutions.	
<b>List of projects:</b> <ol style="list-style-type: none"><li>1. Comparison of chromosomes and their mutagenesis in different species of mammals.</li><li>2. Risk estimate of chromosome aberration after induction of structural rearrangements in man.</li><li>3. Detection of radiosensitive persons by a cytogenic test.</li></ol>	
<b>Total cost (for 4 years):</b> FF 3.126.175 = 519.989 ECU	<b>Ceiling of CEC contribution:</b> FF 1.250.000 = 207.917 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 9.7	<b>Others (man years):</b> 9.1
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Gesellschaft für Strahlen- und  
Umweltforschung mbH, GSF  
Ingolstädter Landstrasse 1  
D-8042 Neuherberg

**Contract no.:** BIO-E-395-81-D

**Head(s) of research team(s):**

Dr. U. H. Ehling  
Institut für Genetik  
GSF  
Ingolstädter Landstrasse 1  
D-8042 Neuherberg

**General subject of the contract:**

Radiation-induced gene mutation in mice.

**List of projects:**

1. Radiation-induced dominant cataract mutations in mice.

**Total cost (for 4 years):**

DM 2.537.450 = 1.010.534 ECU

**Ceiling of CEC contribution:**

DM 676.030 = 269.227 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 8.0

**Others (man years):** 12.0

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Finseninstitutet Strandboulevarden 49 DK-2100 Kobenhavn 0	<b>Contract no.:</b> BIO-E-455-81-DK
<b>Head(s) of research team(s):</b> Prof. Dr. M. Faber Finsenlaboratoriet Finseninstitutet Strandboulevarden 49 DK-2100 Kobenhavn 0	
<b>General subject of the contract:</b> DNA - repair capacity in patients with multiple malignant tumours.	
<b>List of projects:</b> 1. Measuring methods for DNA repair capacity. 2. Epidemiological studies on groups of patients with multiple tumours. 3. Control studies on DNA repair capacity in other diseases.	
<b>Total cost (for 4 years):</b> DKR 3.200.000 = 407.021 ECU	<b>Ceiling of CEC contribution:</b> DKR 1.250.000 = 158.993 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.7	<b>Others (man years):</b> 2.0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

<b>Contractor:</b> Consiglio Nazionale delle Ricerche, CNR Piazzale Aldo Moro 7 I-00185 Roma		<b>Contract no.:</b> BIO-E-428-81-I
<b>Head(s) of research team(s):</b> Dr. A. Falaschi Istituto di Genetica Biochimica ed Evoluzionistica, CNR Via S. Epifanio 14 I-27100 Pavia		Dr. U. Bertazzoni Istituto di Genetica Biochimica ed Evoluzionistica, CNR Via S. Epifanio 14 I-27100 Pavia
<b>General subject of the contract:</b> Genetic effects induced by radiation and chemical carcinogens : mechanisms common to DNA repair, replication, recombination and mutagenesis.		
<b>List of projects:</b> 1. Study of enzymes of DNA metabolism and isolation of subcellular DNA repair systems from animal cells.		
<b>Total cost (for 4 years):</b> LIT 889.000.000 = 707.803 ECU	<b>Ceiling of CEC contribution:</b> LIT 266.520.000 = 212.197 ECU	
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 1 scientist	
<b>Scientists (man years):</b> 2.0	<b>Others (man years):</b> 3.5	
<b>Remarks:</b> In collaboration with U.L.B, Bruxelles, Dr. Radman, contract n° BIO-E-420-81-B; C.N.R.S., Gif-sur-Yvette, Dr. Devoret, contract n° BIO-E-426-81-F; C.N.R.S., Villejuif, Dr. Sarasin, contract n° BIO-E-427-81-F		

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Ente Nazionale per l'Energia Elettrica, ENEL Via G. B. Martini 3 I-00100 Roma	<b>Contract no.:</b> BIO-E-401-81-I
<b>Head(s) of research team(s):</b> Prof. A. Farulla Centro di ricerche biologiche Via Cuboni 10 I-00197 Roma	
<b>General subject of the contract:</b> The problem of individual radiosensitivity in radioprotection : the use of radiosensitivity-tests for the screening of heterozygotes for the "chromosomal instability" syndromes.	
<b>List of projects:</b> 1. Individual radiosensitivity in radioprotection : use of radiosensitivity-tests for screening of heterozygotes for "chromosomal instability" syndromes.	
<b>Total cost (for 4 years):</b> LIT 417.000.000 = 332.006 ECU	<b>Ceiling of CEC contribution:</b> LIT 154.600.000 = 123.089 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 4.0	<b>Others (man years):</b> 8.0
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Université Catholique de Louvain, UCL Halles Universitaires Place de l'Université 1 B-1348 Louvain-la-Neuve	<b>Contract no.:</b> BIO-E-410-81-B
<b>Head(s) of research team(s):</b> Prof. Dr. A. Goffeau Laboratoire d'Enzymologie UCL Place Croix du Sud 1 B-1348 Louvain-la-Neuve	
<b>General subject of the contract:</b> Radiobiology of mitochondrial DNA.	
<b>List of projects:</b> 1. Repair of yeast mitochondrial DNA after gamma-irradiation.	
<b>Total cost (for 4 years):</b> BFR 21.930.090 = 533.579 ECU	<b>Ceiling of CEC contribution:</b> BFR 8.778.240 = 213.582 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 0.6 scientist
<b>Scientists (man years):</b> 13.4	<b>Others (man years):</b> 5.3
<b>Remarks:</b> Collaboration with the Curie Foundation, Dr. Moustacchi, contract BIO-E-397-81-F	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Universität Göttingen Goslerstrasse 5/7 D-3400 Göttingen	<b>Contract no.:</b> BIO-E-393-81-D
<b>Head(s) of research team(s):</b> Prof. Dr. I. Hansmann Institut für Humangenetik Nikolausberger Weg 5a D-3400 Göttingen	
<b>General subject of the contract:</b> Mechanisms of non-disjunction.	
<b>List of projects:</b> 1. Mechanisms of radiation-induced non-disjunction and genetic effects on germinative cells.	
<b>Total cost (for 4 years):</b> DM 709.030 = 282.370 ECU	<b>Ceiling of CEC contribution:</b> DM 281.630 = 112.159 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 6.0	<b>Others (man years):</b> 4.0
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> University College of Galway  IRL-Galway	<b>Contract no.:</b> BIO-E-415-81-EIR
<b>Head(s) of research team(s):</b> Prof. J.A. Houghton Department of Microbiology University College of Galway IRL-Galway	
<b>General subject of the contract:</b> Radiation repair processes in cyanobacteria and effects of radiation on the chromosomes of human gametes.	
<b>List of projects:</b> 1. Study of radiation repair processes in cyanobacteria. 2. Study of the effects of radiation on the chromosomes of human gametes.	
<b>Total cost (for 4 years):</b> IRL 123.060 = 178.866 ECU	<b>Ceiling of CEC contribution:</b> IRL 49.220 = 71.541 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 5.0	<b>Others (man years):</b> 2.4
<b>Remarks:</b>	

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Universität Hamburg Krankenhaus Eppendorf Martinistrasse 52 D-2000 Hamburg 20	<b>Contract no.:</b> BIO-E-391-81-D
<b>Head(s) of research team(s):</b> Prof. H. Jung Inst. für Biophysik und Strahlenbiologie Martinistrasse 52 D-2000 Hamburg 20	
<b>General subject of the contract:</b> Study of the relationship between DNA-strand breaks, chromosome aberrations and loss of the proliferation capacity of mammalian cells.	
<b>List of projects:</b> 1. Study of the relationship between DNA-strand breaks, chromosome aberrations and loss of the proliferation capacity of mammalian cells.	
<b>Total cost (for 4 years):</b> DM 528.000 = 210.275 ECU	<b>Ceiling of CEC contribution:</b> DM 176.000 = 70.092 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 5.0	<b>Others (man years):</b> 4.0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Justus Liebig-Universität  
Ludwigstrasse 23  
D-6300 Giessen

**Contract no.:** BIO-E-392-81-D

**Head(s) of research team(s):**

Prof. J. Kiefer  
Strahlencentrum  
Univ. Giessen  
Leihgesterner Weg 217  
D-6300 Giessen

**General subject of the contract:**

Mutation induction and biochemical damages by heavy-ion and low dose-rate gamma-irradiation.

**List of projects:**

1. Mutation induction in continuous cultures of yeast exposed to low dose-rate gamma-irradiation.

**Total cost (for 4 years):**  
DM 378.415 = 150.703 ECU

**Ceiling of CEC contribution:**  
DM 130.945 = 52.149 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 2.4

**Others (man years):** 4.0

**Remarks:**

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Stichting ITAL Postbus 48 NL-6700 AA Wageningen	<b>Contract no.:</b> BIO-E-409-81-NL
<b>Head(s) of research team(s):</b> Dr. H. P. Leenhouts Association Euratom - ITAL Postbus 48 NL-6700 AA Wageningen	
<b>General subject of the contract:</b> An investigation to quantify the effect of synergism between radiation and other mutagenic agents at low radiation doses in eukaryotic cells.	
<b>List of projects:</b> 1. Investigation to quantify the effect of synergism between radiation and other mutagenic agents at low radiation doses in eukaryotic cells.	
<b>Total cost (for 2 years):</b> HFL 1.027.516 = 368.417 ECU	<b>Ceiling of CEC contribution:</b> HFL 202.400 = 72.571 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1982	<b>CEC staff:</b> 1 scientist
<b>Scientists (man years):</b> 6.4	<b>Others (man years):</b> 2.0
<b>Remarks:</b> This work is carried out within the framework of the Association Euratom - Ital (European Community of Atomic Energy and Stichting ITAL).	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

**Contract no.:** BIO-E-451-81-B

Centre d'Etude de l'Energie  
Nucléaire, CEN/SCK  
Avenue Plasky 144  
B-1040 Bruxelles

**Head(s) of research team(s):**

Dr. A. Léonard  
Département de Radio-  
biologie, CEN/SCK  
Boeretang 200  
B-2400 Mol

**General subject of the contract:**

Experimental studies on the teratogenic effects of small doses of radiation delivered during the preimplantation period.

**List of projects:**

1. Studies on sensitivity of embryos to low doses of radiation during the first day of pregnancy.

**Total cost (for 4 years):**  
BFR 15.560.187 = 378.593 ECU

**Ceiling of CEC contribution:**  
BFR 3.890.000 = 94.647 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 3.3

**Others (man years):** 0.4

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> REP-Institute of the Organization for Health Research TNO P.O. Box 5815 NL-2280 HV Rijswijk	<b>Contract no.:</b> BIO-E-403-81-NL
<b>Head(s) of research team(s):</b> Dr. P.H.M. Lohman Medical Biological Laboratory TNO P.O. Box 45 NL-2280 AA Rijswijk	
<b>General subject of the contract:</b> The genetic and biochemical basis of radiation sensitivity in human and other cells in culture.	
<b>List of projects:</b> 1. Genetic analysis of DNA repair. 2. Biochemical analysis of DNA repair. 3. Consequences of DNA damage and repair.	
<b>Total cost (for 4 years):</b> HFL 1.084.431 = 375.916 ECU	<b>Ceiling of CEC contribution:</b> HFL 291.245 = 104.426 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 5.0	<b>Others (man years):</b> 8.4
<b>Remarks:</b> In collaboration with University of Sussex, Prof. Bridges, contract n° BIO-E-414-81-UK; Erasmus University Rotterdam, Prof. Bootsma, contract n° BIO-E-404-81-NL; Leiden State University, Dr. Simons, contract n° BIO-E-407-81-NL.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Institut Curie  
Section Biologie  
Rue d'Ulm 26  
F-75231 Paris Cédex 05

**Contract no.:** BIO-E-397-81-F

**Head(s) of research team(s):**

Dr. E. Moustacchi  
Section Biologie  
Institut Curie  
Centre Univ. - Bât. 110  
F-91405 Orsay

**General subject of the contract:**

Nuclear and mitochondrial genetic lesions induced by radiations in a lower eukaryote : mutagenic and recombinogenic processes in relation to replication and repair.

**List of projects:**

1. Repair, nuclear and mitochondrial mutagenesis : relation with DNA replication.
2. Repair, recombination and mitotic cycle after X-ray irradiation in yeast.

**Total cost (for 4 years):**  
FF 2.117.000 = 352.129 ECU

**Ceiling of CEC contribution:**  
FF 529.249 = 88.032 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 27.0

**Others (man years):** 12.7

**Remarks:** Collaboration with the "Université Catholique de Louvain", Prof. Goffeau, contract BIO-E-410-81-B

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Rijksuniversiteit Leiden Stationsweg 46 NL-2300 RA Leiden	<b>Contract no.:</b> BIO-E-421-81-NL
<b>Head(s) of research team(s):</b> Prof. A. T. Natarajan Dep. Radiation Genetics and Chemical Mutagenesis Wassenaarseweg 72 NL-2333 AL Leiden	
<b>General subject of the contract:</b> Development of <u>in vivo</u> mouse models for human X-ray sensitive diseases.	
<b>List of projects:</b> <ol style="list-style-type: none"> <li>1. Breeding of mouse mutants.</li> <li>2. Screening of mouse mutants for chromosomal radiosensitivity.</li> <li>3. Genetic tests on radiosensitive mouse mutants.</li> </ol>	
<b>Total cost (for 4 years):</b> HFL 442.400 = 158.623 ECU	<b>Ceiling of CEC contribution:</b> HFL 110.000 = 39.441 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2.3	<b>Others (man years):</b>
<b>Remarks:</b> Project 1 of this contract is carried out by the Medical Research Council, Dr. Searle, contract n° BIO-E-429-81-UK, project 3 is a collaborative project	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Università di Roma  
Policlinico Umberto I  
I-00100 Roma

**Contract no.:** BIO-E-475-81-I

**Head(s) of research team(s):**

Prof. B. Nicoletti  
Facoltà di Medicina  
Policlinico Umberto I  
I-00100 Roma

**General subject of the contract:**

Studies of the molecular basis of post-replication repair.

**List of projects:**

1. Characterization of the gene of pR plasmid involved in "error prone" repair in E. Coli.

**Total cost (for 3.5 years):**  
LIT 82.396.000 = 65.602 ECU

**Ceiling of CEC contribution:**  
LIT 29.300.000 = 23.328 ECU

**Duration:**  
01.07.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 7.0

**Others (man years):** 10.5

**Remarks:**

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Università di Roma Città Universitaria I-00185 Roma	<b>Contract no.:</b> BIO-E-400-81-I
<b>Head(s) of research team(s):</b> Prof. G. Olivieri Ist. di Genetica Università di Roma Città Universitaria I-00185 Roma	
<b>General subject of the contract:</b> Studies on induced chromosome aberrations for a better evaluation of genetic risk to man.	
<b>List of projects:</b> 1. Mechanisms of chromosome breakage and rejoining in <i>Drosophila</i> and their relationships with known repair processes.	
<b>Total cost (for 4 years):</b> LIT 215.500.000 = 171.576 ECU	<b>Ceiling of CEC contribution:</b> LIT 53.866.000 = 42.887 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b>	<b>Others (man years):</b>
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Università di Roma  
Città Universitaria  
I-00185 Roma

**Contract no.:** BIO-E-450-81-I

**Head(s) of research team(s):**

Prof. G. Olivieri  
Ist. di Genetica  
Università di Roma  
Città Universitaria  
I-00185 Roma

**General subject of the contract:**

Relationships between chromosome structure and induced chromosome rearrangements.

**List of projects:**

1. Sensitivity to chromosome aberrations and SCE's of different heterochromatic regions and of euchromatic - heterochromatic junctions.
2. Studies on the genetic control of the stability of different chromosome regions.

**Total cost (for 4 years):**  
LIT 182.000.000 = 144.904 ECU

**Ceiling of CEC contribution:**  
LIT 45.500.000 = 36.226 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):**

**Others (man years):**

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> University College of Swansea Singleton Park GB-Swansea SA2 8PP	<b>Contract no.:</b> BIO-E-411-81-UK
<b>Head(s) of research team(s):</b> Dr. J. M. Parry Department of Genetics University College of Swansea GB-Swansea SA2 8PP	
<b>General subject of the contract:</b> Radiation damage, repair and genetic change in eukaryotic cells.	
<b>List of projects:</b> 1. Radiation damage and repair in yeast cultures undergoing mitotic and meiotic cell division. 2. Comparative study of genetic change in eukaryotic cells irradiated during mitotic and meiotic cell division.	
<b>Total cost (for 4 years):</b> UKL 140.548 =251.788 ECU	<b>Ceiling of CEC contribution:</b> UKL 56.219 = 100.715 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 8.1	<b>Others (man years):</b>
<b>Remarks:</b> Collaboration with The Curie Foundation, Dr. Moustacchi, contract n° BIO-E-397-81-F	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

United Kingdom Atomic Energy  
Authority, UKAEA  
Charles II Street 11  
GB-London SW1Y 4QP

**Contract no.:** BIO-E-460-81-UK

**Head(s) of research team(s):**

Dr. D.H. Peirson  
Env. & Medical Sciences Div.  
AERE  
Harwell, Didcot  
GB-Oxon OX11 0RA

**General subject of the contract:**

Studies in microdosimetry, cellular radiobiology and track structure.

**List of projects:**

1. Theoretical microdosimetry.

**Total cost (for 4 years):**

UKL 112.000 = 200.645 ECU

**Ceiling of CEC contribution:**

UKL 44.800 = 80.258 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 2.1

**Others (man years):**

**Remarks:** A closely related research programme is reflected under contract n° BIO-A-306-81-UK

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Gesellschaft für Strahlen- und Umweltforschung mbH, GSF Ingolstädter Landstrasse 1 D-8042 Neuherberg	
<b>Contract no.:</b> BIO-E-394-81-D	
<b>Head(s) of research team(s):</b> Prof. Dr. W. Pohlit Abt. für Biophysikalische Strahlenforschung, GSF Paul-Ehrlich-Strasse 20 D-6000 Frankfurt 70	
<b>General subject of the contract:</b> Investigation of radiation induced damage to DNA in eukaryotic cell systems and its possible relationship to survival.	
<b>List of projects:</b> 1. Quantitative determination of unrepaired and misrepaired DNA double - strand breaks and their possible relevance to radiation killing of yeast cells. 2. Measurement of induction and repair of double - strand breaks in mammalian cells.	
<b>Total cost (for 4 years):</b> DM 2.225.880 = 886.452 ECU	<b>Ceiling of CEC contribution:</b> DM 880.250 = 350.558 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 1 scientist
<b>Scientists (man years):</b> 16.0	<b>Others (man years):</b> 6.0
<b>Remarks:</b>	

**Commission of the European Communities**  
**RADIATION PROTECTION PROGRAMME**

<b>Contractor:</b> Université Libre de Bruxelles ULB Av. F. D. Roosevelt 50 B-1050 Bruxelles	<b>Contract no.:</b> BIO-E-420-81-B
<b>Head(s) of research team(s):</b> Prof. M. Radman Dept. de Biologie Moléculaire ULB Rue des Chevaux 67 B-1640 Rhode-St.-Genèse	
<b>General subject of the contract:</b> Genetic effects induced by radiations and chemical carcinogens : mechanisms common to DNA repair, replication, recombination and mutagenesis.	
<b>List of projects:</b> 1. Radiation induced mutagenesis and chromosomal rearrangements : molecular mechanisms of their induction and prevention and their role in carcinogenesis.	
<b>Total cost (for 4 years):</b> BFR 12.272.000 = 298.589 ECU	<b>Ceiling of CEC contribution:</b> BFR 4.876.000 = 118.637 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 3.2	<b>Others (man years):</b> 4.2
<b>Remarks:</b> In collaboration with C.N.R.S., Gif-sur-Yvette, Dr. Devoret, contract n° BIO-E-426-81-F; C.N.R.S, Villejuif, Dr. Sarasin, contract n° BIO-E-427-81-F; C.N.R., Pavia, Dr. Falaschi, contract n° BIO-E-428-81-I	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>			
<b>Contractor:</b> Rijksuniversiteit Leiden Stationsweg 46 NL-2300 RA Leiden	<b>Contract no.:</b> BIO-E-408-81-NL		
<b>Head(s) of research team(s):</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">                             Prof. A. Rörsch                              Lab. Molecular Genetics                              and Biochemical Lab.                              Wassenaarseweg 64                              NL-2333 AL Leiden                         </td> <td style="width: 50%; vertical-align: top;">                             Prof. P. van de Putte                              Lab. Molecular Genetics                              and Biochemical Lab.                              Wassenaarseweg 64                              NL-2333 AL Leiden                         </td> </tr> </table>		Prof. A. Rörsch Lab. Molecular Genetics and Biochemical Lab. Wassenaarseweg 64 NL-2333 AL Leiden	Prof. P. van de Putte Lab. Molecular Genetics and Biochemical Lab. Wassenaarseweg 64 NL-2333 AL Leiden
Prof. A. Rörsch Lab. Molecular Genetics and Biochemical Lab. Wassenaarseweg 64 NL-2333 AL Leiden	Prof. P. van de Putte Lab. Molecular Genetics and Biochemical Lab. Wassenaarseweg 64 NL-2333 AL Leiden		
<b>General subject of the contract:</b> The genetic control and enzymology of DNA repair of radiation damage in prokaryotes and eukaryotes.			
<b>List of projects:</b> <ol style="list-style-type: none"> <li>1. Mechanism of the excision - repair process in <u>Escherichia coli</u> and its regulation.</li> <li>2. Mechanism of mutagenesis : role of radiation in the activation of transposable elements.</li> <li>3. Mechanisms of DNA repair in human cells.</li> </ol>			
<b>Total cost (for 4 years):</b> HFL 2.426.960 = 870.190 ECU	<b>Ceiling of CEC contribution:</b> HFL 606.704 = 217.535 ECU		
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>		
<b>Scientists (man years):</b> 12.7	<b>Others (man years):</b>		
<b>Remarks:</b> The third project is carried out in collaboration with the Sylvius Laboratories, Leiden, the Medical Biological Laboratory TNO, Rijswijk, and the Department of Cell Biology of the Erasmus University, Rotterdam			

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Centre National de la  
Recherche Scientifique  
CNRS  
Quai Anatole France 15  
F-75007 Paris

**Contract no.:** BIO-E-427-81-F

**Head(s) of research team(s):**

Dr. A. Sarasin  
Inst. de Rech. Scient.  
sur le Cancer, CNRS  
B.P. n°8  
F-94800 Villejuif

**General subject of the contract:**

Genetic effects induced by radiation and chemical carcinogens :  
mechanisms common to DNA repair, replication, recombination and  
mutagenesis.

**List of projects:**

1. Analysis of SOS functions induced in mammalian cells by radiations  
and chemical carcinogens.

**Total cost (for 4 years):**  
FF 1.848.000 = 307.385 ECU

**Ceiling of CEC contribution:**  
FF 498.960 = 82.994 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 2.0

**Others (man years):** 2.0

**Remarks:** In collaboration with U.L.B., Bruxelles, Dr. Radman,  
contract n° BIO-E-420-81-B; C.N.R.S., Gif-sur-Yvette, Dr. Devoret,  
contract n° BIO-E-426-81-F; C.N.R., Pavia, Dr. Falaschi,  
contract n° BIO-E-428-81-I

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Medical Research Council MRC Park Crescent 20 GB-London W1N 4AL	<b>Contract no.:</b> BIO-E-429-81-UK
<b>Head(s) of research team(s):</b> Dr. A. G. Searle Radiobiology Unit MRC Harwell, Didcot GB-Oxon OX11 ORD	
<b>General subject of the contract:</b> Development of <u>in vivo</u> mouse models for human X-ray sensitive diseases.	
<b>List of projects:</b> <ol style="list-style-type: none"> <li>1. Breeding of mouse mutants.</li> <li>2. Screening of mouse mutants for chromosomal radiosensitivity.</li> <li>3. Genetic tests on radiosensitive mouse mutants.</li> </ol>	
<b>Total cost (for 4 years):</b> UKL 16.740 = 29.989 ECU	<b>Ceiling of CEC contribution:</b> UKL 6.695 = 11.994 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 0.3	<b>Others (man years):</b> 2.7
<b>Remarks:</b> Project 2 of this contract is carried out by the Rijksuniversiteit Leiden, Prof. Natarajan, contract n° BIO-E-421-81-NL; project 3 is a collaborative project.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Rijksuniversiteit Leiden  
Stationsweg 46  
NL-2300 RA Leiden

**Contract no.:** BIO-E-407-81-NL

**Head(s) of research team(s):**

Dr. J.W.I.M. Simons  
Dep. Radiation Genetics  
and Chemical Mutagenesis  
Wassenaarseweg 72  
NL-2333 AL Leiden

**General subject of the contract:**

The genetic and biochemical basis of radiation sensitivity in human and other cells in culture.

**List of projects:**

1. Genetic analysis of DNA repair.
2. Biochemical analysis of DNA repair.
3. Consequences of DNA damage and repair.

**Total cost (for 4 years):**  
HFL 496.431 = 177.996 ECU

**Ceiling of CEC contribution:**  
HFL 124.100 = 44.496 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 2.6

**Others (man years):**

**Remarks:** In collaboration with University of Sussex, Prof. Bridges contract n° BIO-E-414-81-UK; Erasmus University, Rotterdam, Prof. Bootsma, contract n° BIO-E-404-81-NL; Medical Biological Laboratory TNO, Dr. Lohman, contract n° BIO-E-403-81-NL

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> National Radiological Protection Board, NRPB Chilton, Didcot GB-Oxon OX11 0RQ	<b>Contract no.:</b> BIO-E-413-81-UK
<b>Head(s) of research team(s):</b> Dr. H. Smith Biology Department NRPB Chilton, Didcot GB-Oxon OX11 0RQ	
<b>General subject of the contract:</b> The production of chromosome aberrations in human lymphocytes by ionizing radiations.	
<b>List of projects:</b> 1. Dependence of radiation induced chromosome aberrations on radiation quality. 2. Studies of break repair kinetics in the production of chromosome aberrations in human lymphocytes.	
<b>Total cost (for 4 years):</b> UKL 360.317 = 645.498 ECU	<b>Ceiling of CEC contribution:</b> UKL 76.130 = 136.385 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.3	<b>Others (man years):</b> 1.5
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Rijksuniversiteit Leiden  
Stationsweg 46  
NL-2300 RA Leiden

**Contract no.:** BIO-E-406-81-NL

**Head(s) of research team(s):**

Prof. F. H. Sobels  
Dep. Radiation Genetics  
and Chemical Mutagenesis  
Wassenaarseweg 72  
NL-2333 AL Leiden

**General subject of the contract:**

The genetic effects of radiation in eukaryotes.

**List of projects:**

1. Radiation genetics with *Drosophila melanogaster*.
2. Radiation cytogenetics with mammalian cells in vivo and in vitro.
3. Improvement of mutational assay systems and discrimination between point mutations and deletions in mammalian cells.
4. The genetics and biochemistry of repair phenomena in eukaryotes.

**Total cost (for 4 years):**  
HFL 3.144.000 = 1.127.286 ECU

**Ceiling of CEC contribution:**  
HFL 786.000 = 281.821 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 16.4

**Others (man years):**

**Remarks:**

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b>  Universität K81n  D-5000 K81n 41	<b>Contract no.:</b> BIO-E-396-81-D
<b>Head(s) of research team(s):</b> Prof. Dr. P. Starlinger Institut für Genetik Weyertal 121 D-5000 K81n 41	
<b>General subject of the contract:</b> Isolation of the Zea Mays transposable controlling element.	
<b>List of projects:</b> 1. The role of transposing DNA elements in spontaneous and radiation-induced mutagenesis in Zea Mays.	
<b>Total cost (for 2 years):</b> DM 500.000 = 199.124 ECU	<b>Ceiling of CEC contribution:</b> DM 151.000 = 60.135 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1982	<b>CEC staff:</b>
<b>Scientists (man years):</b> 4.0	<b>Others (man years):</b> 6.0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Università di Roma  
Città Universitaria  
I-00185 Roma

**Contract no.:** BIO-E-399-81-I

**Head(s) of research team(s):**

Prof. R. Strom  
Ist. di Chimica Biologica  
Università di Roma  
Città Universitaria  
I-00185 Roma

**General subject of the contract:**

Repair of DNA in human and animal cells.

**List of projects:**

1. DNA methylation and repair.

**Total cost (for 4 years):**  
LIT 542.566.000 = 431.979 ECU

**Ceiling of CEC contribution:**  
LIT 202.400.000 = 161.146 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:** 1 scientist

**Scientists (man years):** 17.2

**Others (man years):** 6.7

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Landbouwhogeschool Salverdaplein 10 NL-6701 DB Wageningen	<b>Contract no.:</b> BIO-E-477-81-NL
<b>Head(s) of research team(s):</b> Prof. Dr. J. Sybenga Vakgroep Erfelijkheidslcer LH Gen. Foulkesweg 53 NL-6703 BM Wageningen	
<b>General subject of the contract:</b> Genetic background damage accompanying fast neutron and X-ray induced chromosomal aberrations.	
<b>List of projects:</b> 1. Genetic background damage accompanying fast neutron and X-ray induced chromosomal aberrations.	
<b>Total cost (for 3.5 years):</b> HFL 349.000 = 125.134 ECU	<b>Ceiling of CEC contribution:</b> HFL 139.000 = 49.839 ECU
<b>Duration:</b> 01.07.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 0.2	<b>Others (man years):</b> 3.4
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

State University of Leiden  
Stationsweg 46  
NL-2300 AA Leiden

**Contract no.:** BIO-E-405-81-NL

**Head(s) of research team(s):**

Prof. Dr. A.J. van der Eb  
Sylvius Laboratories  
Wassenaarseweg 72  
NL-2333 AL Leiden

**General subject of the contract:**

Molecular biology of the repair of DNA damage in mammalian cells, and its relationship with mutagenesis and oncogenic transformation.

**List of projects:**

1. Relationship between repair of DNA damage, mutagenesis and oncogenic transformation.
2. Identification of repair genes using recombinant DNA technology.

**Total cost (for 4 years):**  
HFL 772.000 = 276.802 ECU

**Ceiling of CEC contribution:**  
HFL 193.000 = 69.200 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 4.0

**Others (man years):** 5.3

**Remarks:** In collaboration with Université Libre de Bruxelles (Prof. Errera), and Erasmus University, Rotterdam (Prof. Bootsma); related work is described under contract n° BIO-E-476-81-NL, Prof. van der Eb, State University of Leiden, the Netherlands.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> State University of Leiden Stationsweg 46 NL-2300 AA Leiden	<b>Contract no.:</b> BIO-E-476-81-NL
<b>Head(s) of research team(s):</b> Prof. Dr. A.J. van der Eb Sylvius Laboratories Wassenaarseweg 72 NL-2333 AL Leiden	
<b>General subject of the contract:</b> Molecular biology of the repair of DNA damage in mammalian cells, and its relationship with mutagenesis and oncogenic transformation.	
<b>List of projects:</b> 1. Studies on host-cell reactivation of SV40, vaccinia virus and herpes simplex virus type 1 in human cells deficient in repair of DNA damage.	
<b>Total cost (for 3.5 years):</b> HFL 294.920 = 105.744 ECU	<b>Ceiling of CEC contribution:</b> HFL 73.730 = 26.436 ECU
<b>Duration:</b> 01.07.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.5	<b>Others (man years):</b> 2.2
<b>Remarks:</b> This research contract is closely related to the work described under contract n° BIO-E-405-81-NL, Prof. van der Eb, State University of Leiden, The Netherlands.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Medical Research Council  
MRC  
Park Crescent 20  
GB-London WIN 4AL

**Contract no.:** BIO-E-453-81-UK

**Head(s) of research team(s):**

Dr. J. Vennart  
Radiobiology Unit  
MRC  
Harwell, Didcot  
GB-Oxon OX11 ORD

Dr. B.M. Cattanach  
Radiobiology Unit  
MRC  
Harwell, Didcot  
GB-Oxon OX11 ORD

**General subject of the contract:**

Factors affecting the yield of mutations from spermatogonial stem cells of mammals.

**List of projects:**

1. Mutation studies in spermatogonial stem cells of the mouse.

**Total cost (for 4 years):**

UKL 59.349 = 106.322 ECU

**Ceiling of CEC contribution:**

UKL 22.730 = 40.720 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 0.8

**Others (man years):** 2.4

**Remarks:**

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Medical Research Council MRC Park Crescent 20 GB-London WIN 4AL	<b>Contract no.:</b> BIO-E-457-81-UK
<b>Head(s) of research team(s):</b> Dr. J. Vennart Radiobiology Unit MRC Harwell, Didcot GB-Oxon OX11 ORD	Dr. B.M. Cattanach Radiobiology Unit MRC Harwell, Didcot GB-Oxon OX11 ORD
<b>General subject of the contract:</b> Non-disjunction studies with Robertsonian translocations in mice.	
<b>List of projects:</b> 1. Non-disjunction studies with Robertsonian translocations in mice.	
<b>Total cost (for 4 years):</b> UKL 88.744 = 158.982 ECU	<b>Ceiling of CEC contribution:</b> UKL 28.420 = 50.914 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.0	<b>Others (man years):</b> 3.2
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Medical Research Council  
MRC  
Park Crescent 20  
GB-London W1N 4AL

Contract no.: BIO-E-412-81-UK

**Head(s) of research team(s):**

Dr. J. Vennart  
Radiobiology Unit  
MRC  
Harwell, Didcot  
GB-Oxon OX11 ORD

Dr. D.T. Goodhead  
Radiobiology Unit  
MRC  
Harwell, Didcot  
GB-Oxon OX11 ORD

**General subject of the contract:**

The radiobiology of cultured mammalian cells.

**List of projects:**

1. Dose-effect relationships for cellular effects with different radiation qualities.
2. Development and characterization of mutation and transformation assays in cultured mammalian cells.
3. Studies on radiosensitive mammalian cells.

**Total cost (for 4 years):**  
UKL 537.467 = 962.857 ECU

**Ceiling of CEC contribution:**  
UKL 148.400 = 262.272 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 6.2

**Others (man years):** 21.6

**Remarks:** In collaboration with Dr. D.T. Goodhead, Dr. J. Thacker and Dr. R. Cox.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Medical Research Council Park Crescent 20 MRC GB-London WIN 4AL	<b>Contract no.:</b> BIO-E-454-81-UK
<b>Head(s) of research team(s):</b> Dr. J. Vennart Radiobiology Unit MRC Harwell, Didcot GB-Oxon OX11 ORD	Dr. J. R. K. Savage Radiobiology Unit MRC Harwell, Didcot GB-Oxon OX11 ORD
<b>General subject of the contract:</b> A study of the induction, transmission and consequences of chromosomal aberrations in the Syrian hamster ( <u>Mesocricetus auratus</u> ).	
<b>List of projects:</b> 1. Study of the induction, transmission and consequences of chromosomal aberrations in the Syrian hamster ( <u>Mesocricetus auratus</u> ).	
<b>Total cost (for 4 years):</b> UKL 154.237 = 276.311 ECU	<b>Ceiling of CEC contribution:</b> UKL 56.830 = 101.809 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 3.2	<b>Others (man years):</b> 4.0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

<b>Contractor:</b> Medical Research Council MRC Park Crescent 20 GB-London W1N 4AL		<b>Contract no.:</b> BIO-E-452-81-UK	
<b>Head(s) of research team(s):</b> Dr. J. Vennart Radiobiology Unit MRC Harwell, Didcot GB-Oxon OX11 ORD			Dr. A. G. Searle Radiobiology Unit MRC Harwell, Didcot GB-Oxon OX11 ORD
<b>General subject of the contract:</b> Development and use of methods for detection and analysis of deletions in the mouse, and of somatic mutations at the cellular level.			
<b>List of projects:</b> 1. Development and use of methods for detection and analysis of deletions in the mouse, and of somatic mutations at the cellular level.			
<b>Total cost (for 4 years):</b> UKL 59.424 = 106.456 ECU		<b>Ceiling of CEC contribution:</b> UKL 22.730 = 40.720 ECU	
<b>Duration:</b> 01.01.1981 - 31.12.1984		<b>CEC staff:</b>	
<b>Scientists (man years):</b> 0.4		<b>Others (man years):</b> 2.4	
<b>Remarks:</b>			

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Carlsberg Laboratory Gamle Carlsberg Vej 10 DK-2500 Copenhagen Valby	<b>Contract no :</b> BIO-E-417-81-DK
<b>Head(s) of research team(s):</b> Prof. D. von Wettstein Department of Physiology Carlsberg Laboratory Gamle Carlsberg Vej 10 DK-2500 Copenhagen Valby	
<b>General subject of the contract:</b> Chromosome pairing and disjunction in human meiosis.	
<b>List of projects:</b> 1. Chromosome pairing and disjunction in human meiosis.	
<b>Total cost (for 4 years):</b> DKR 5.634.000 = 716.612 ECU	<b>Ceiling of CEC contribution:</b> DKR 2.253.600 = 286.645 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 16.4	<b>Others (man years):</b> 8.0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

University of Aarhus  
Department of Molecular Biology  
C.F. Møllers Allé 130  
DK-8000 Aarhus C

**Contract no.:** BIO-E-418-81-DK

**Head(s) of research team(s):**

Prof. O. Westergaard  
Dep. of Molecular Biology  
Aarhus University  
DK-8000 Aarhus C

Prof. O. F. Nielsen  
Dept. of Molecular Biology  
Aarhus University  
DK-8000 Aarhus C

**General subject of the contract:**

Molecular events on the biologically active chromatin form of a single eukaryotic gene in response to radiation.

**List of projects:**

1. Molecular events on the biologically active chromatin form. of a single eukaryotic gene in response to radiation.

**Total cost (for 4 years):**

DKR 4.300.000 = 546.935 ECU

**Ceiling of CEC contribution:**

DKR 1.768.000 = 224.879 ECU

**Duration:**

01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 17.3

**Others (man years):** 4.0

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Commission of the European Communities DG XII-F Biology, Radiation Protection and Medical Research Biology Group - Ispra I-21020 Ispra (Varese)	<b>Contract no.:</b> CEC-DG XII-F-ISPRA
<b>Head(s) of research team(s):</b> Dr. M. Devreux DG XII-F Biology, Radiation Protection and Medical Research Biology Group - Ispra I-21020 Ispra (Varese)	
<b>General subject of the contract:</b> Genetic and biochemical analyses of radiosensitivity and DNA repair.	
<b>List of projects:</b>  1. Genetic and biochemical analyses of radiosensitivity and DNA repair.	
<b>Total cost (for        years):</b>	<b>Ceiling of CEC contribution:</b>
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 6 Scientists 12 Techniciens
<b>Scientists (man years):</b> 24	<b>Others (man years):</b> 48
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Associazione dei Comuni di  
 Ferrara Poggio Renatico,  
 Vigarano Mainarda e Bondeno  
 Via Arturo Cassoli 30  
 I-44100 Ferrara

**Contract no.:** BIO-F-446-81-F

Università di Ferrara  
 Via Paradiso 12  
 I-44100 Ferrara

**Head(s) of research team(s):**

Dr. B. Bagni  
 Serv. di Fisica Sanitaria  
 Ospedale S. Anna  
 I-44100 Ferrara

Prof. O. Rimondi  
 Istituto di Fisica  
 Via Paradiso 12  
 I-44100 Ferrara

**General subject of the contract:**

Reduction of patient exposure preserving image quality in diagnostic radiology.

**List of projects:**

1. Reduction of patient exposure preserving image quality in mammography.

**Total cost (for 4 years):**  
 LIT 263.000.000 = 209.395 ECU

**Ceiling of CEC contribution:**  
 LIT 105.200.000 = 83.758 ECU

**Duration:**  
 01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 3.6

**Others (man years):** 4.9

**Remarks:** The work is carried out in collaboration with the "Servizio di Radiologia" of the St. Anna Hospital, the "Istituto di Radiologia" of the University of Ferrara and the Istituto Superiore di Sanità, Roma.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Nuclear Energy Board Lower Hatch Street 20-22 IRL-Dublin 2	<b>Contract no.:</b> BIO-F-449-81-EIR
<b>Head(s) of research team(s):</b> Dr. J.D. Cunningham Nuclear Energy Board Lower Hatch Street 20-22 IRL-Dublin 2	
<b>General subject of the contract:</b> Analysis of radiation doses to patients in diagnostic radiology.	
<b>List of projects:</b> 1. Analysis of radiation doses received by patient, undergoing diagnostic X-ray examinations in Ireland.	
<b>Total cost (for 3 years):</b> IRL 200.000 = 290.698 ECU	<b>Ceiling of CEC contribution:</b> IRL 50.000 = 72.674 ECU
<b>Duration:</b> 01.05.1981 - 30.4.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 3.8	<b>Others (man years):</b> 7.6
<b>Remarks:</b> Work carried out in conjunction with the Department of Health and the Faculty of Radiologists of the Royal College of Surgeons of Ireland.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Università di Pisa  
Dipartimento di Medicina  
Lungarno Pacinotti  
I-56100 Pisa

**Contract no.:** BIO-F-373-81-I

**Head(s) of research team(s):**

Prof. Dr. L. Donato  
Istituto di Patologia Medica  
Università di Pisa  
Via Roma 2  
I-56100 Pisa

**General subject of the contract:**

Radiation protection in medical diagnostic procedures.

**List of projects:**

1. Reduction of radiation dose to young subjects in medical investigation.
2. Improvement of current methods for assessing radiation exposure in medical diagnostic procedures.
3. Assessment of radiation cost versus diagnostic benefit of radiological and radioisotopic procedures.

**Total cost (for 4 years):**  
LIT 260.000.000 = 207.006 ECU

**Ceiling of CEC contribution:**  
LIT 104.000.000 = 82.803 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 12.0

**Others (man years):** 12.0

**Remarks:** This work will be carried out in close collaboration with the MRC Cyclotron Unit at Hammersmith (United Kingdom)

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Gesellschaft für Strahlen- und Umweltforschung mbH. GSF Ingolstädter Landstrasse 1 D-8042 Neuherberg	<b>Contract no.:</b> BIO-F-458-81-D
<b>Head(s) of research team(s):</b> Prof. Dr. W. Jacobi Institut für Strahlenschutz GSF Ingolstädter Landstrasse 1 D-8042 Neuherberg	Dr. G. Drexler Institut für Strahlenschutz GSF Ingolstädter Landstrasse 1 D-8042 Neuherberg
<b>General subject of the contract:</b> Analysis of occupational exposure and exposure in medical diagnosis.	
<b>List of projects:</b> 1. Assessment of occupational exposure. 2. Radiation protection in medical diagnosis.	
<b>Total cost (for 4 years):</b> DM 2.029.875 = 808.393 ECU	<b>Ceiling of CEC contribution:</b> DM 809.000 = 322.182 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 10.0	<b>Others (man years):</b> 10.0
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Medical Research Council  
Cyclotron Unit  
Hammersmith Hospital  
Ducane Road  
GB-London W12 0HS

**Contract no.:** BIO-F-389-81-UK

**Head(s) of research team(s):**

Dr. T. Jones  
Cyclotron Unit, MRC  
Hammersmith Hospital  
Ducane Road  
GB-London W12 0HS

**General subject of the contract:**

The use of cyclotron produced radioisotopes and tomographic recording procedures for studying regional tissue function in man.

**List of projects:**

1. Value and radiation load cost of tomographic radioisotopic studies in clinical medicine and research.

**Total cost (for 4 years):**  
UKL 148.810 = 266.589 ECU

**Ceiling of CEC contribution:**  
UKL 48.800 = 87.424 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 8.0

**Others (man years):** 2.0

**Remarks:** In collaboration with the Università di Pisa, Pisa, Italy.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Univ. Erlangen - Nürnberg Schlossplatz 4 D-8520 Erlangen	<b>Contract no.:</b> BIO-F-368-81-D
<b>Head(s) of research team(s):</b> Prof. Dr. H. Pauly Univ. Erlangen - Nürnberg Krankenhausstrasse 12 D-8520 Erlangen	
<b>General subject of the contract:</b> Effective dose equivalent due to X-ray diagnostic procedures and dose equivalent resulting from natural radiation exposure including the enhanced technological exposure in a typical urban agglomeration.	
<b>List of projects:</b> <ol style="list-style-type: none"><li>1. Population exposure and risk assessment in X-ray diagnostic procedures.</li><li>2. Population exposure due to natural radiation, including technologically enhanced natural radiation, as a basis for reference risk assessment.</li></ol>	
<b>Total cost (for 4 years):</b> DM 1.056.300 = 420.669 ECU	<b>Ceiling of CEC contribution:</b> DM 422.520 = 168.268 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 4.7	<b>Others (man years):</b> 5.7
<b>Remarks:</b>	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

National Radiological  
Protection Board, NRPB  
Chilton, Didcot  
GB-Oxon OX11 0RQ

Contract no.: BIO-F-387-80-UK

**Head(s) of research team(s):**

Dr. J. A. Reissland  
Physics Department  
NRPB  
Chilton, Didcot  
GB-Oxon OX11 0RQ

**General subject of the contract:**

Measurement of doses to patients from the medical uses of radiation.

**List of projects:**

1. Measurement of somatic doses arising from diagnostic X-ray examinations.

**Total cost (for 4.5 years):**  
UKL 255.036 = 456.890 ECU

**Ceiling of CEC contribution:**  
UKL 87.840 = 157.363 ECU

**Duration:**  
01.07.1980 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 4.1

**Others (man years):** 2.3

**Remarks:**

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> National Radiological Protection Board, NRPB Chilton, Didcot GB-Oxon OX11 0RQ	<b>Contract no.:</b> BIO-F-424-80-UK
<b>Head(s) of research team(s):</b> Dr. R. H. Clarke Nuclear Assessments Dep. NRPB Chilton, Didcot GB-Oxon OX11 0RQ	
<b>General subject of the contract:</b> The development of methodologies for evaluating and controlling the risks associated with planned and accidental releases of radioactivity.	
<b>List of projects:</b> 1. Methodologies for the estimation of the radiological consequences of accidents and their application. 2. Methodologies for the evaluation and control of exposure from effluents during normal operation.	
<b>Total cost (for 4.5 years):</b> UKL 252.190 = 451.791 ECU	<b>Ceiling of CEC contribution:</b> UKL 100.875 = 180.715 ECU
<b>Duration:</b> 01.07.1980 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 5.4	<b>Others (man years):</b>
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Comitato Nazionale per l'Energia Nucleare, CNEN Viale Regina Margherita 125 I-00198 Roma	<b>Contract no.:</b> BIO-F-480-81-I
<b>Head(s) of research team(s):</b> Dr. G.F. Clemente Divisione Scienze Ambientali CSN della Casaccia, CNEN C.P. 2400 I-00100 Roma	
<b>General subject of the contract:</b> Assessment of the indoor dose in Italy.	
<b>List of projects:</b> 1. Assessment of indoor exposure in Italy.	
<b>Total cost (for 3.3 years):</b> LIT 549.600.000 = 437.580 ECU	<b>Ceiling of CEC contribution:</b> LIT 109.500.000 = 87.182 ECU
<b>Duration:</b> 01.09.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 0.7	<b>Others (man years):</b> 2.2
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Centre de Développement des Etudes et Applications en Hygiène et Sécurité, CEDHYS Avenue Fontcouverte 18 F-84000 Avignon	<b>Contract no.:</b> BIO-F-320-81-F
<b>Head(s) of research team(s):</b> Dr. R. Coulon Service d'Etudes Générales de Protection, CEN B.P. n°6 F-92260 Fontenay-aux-Roses	
<b>General subject of the contract:</b> Comparative study of the impact of conventional and nuclear industries on the environment and the public from the twofold standpoint of radioactive and chemical releases.	
<b>List of projects:</b> 1. Comparative study of the radioactive and chemical impact on the population of atmospheric releases of conventional and nuclear electricity generating industries.	
<b>Total cost (for 4 years):</b> FF 12.750.000 = 2.120.758 ECU	<b>Ceiling of CEC contribution:</b> FF 5.100.000 = 848.303 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 14.1	<b>Others (man years):</b> 4.8
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Centre d'Etudes sur l'Eval. de la Prot. dans le Domaine Nucléaire, CEPN Fondation Curie F-75005 Paris	<b>Contract no.:</b> BIO-F-444-81-F
<b>Head(s) of research team(s):</b> Dr. F. Fagnani CEPN B.P. n° 48 F-92260 Fontenay-aux-Roses	
<b>General subject of the contract:</b> Analysis of occupational exposure and diagnostic medical irradiations.	
<b>List of projects:</b> 1. Evaluation of occupational irradiation in pressurized water reactor (PWR) plants. 2. Evaluation of diagnostic medical irradiations.	
<b>Total cost (for 2 years):</b> FF 2.859.220 = 475.585 ECU	<b>Ceiling of CEC contribution:</b> FF 1.080.000 = 179.641 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1982	<b>CEC staff:</b>
<b>Scientists (man years):</b> 8.3	<b>Others (man years):</b> 4.0
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Institut National de la Santé et de la Recherche Médicale, INSERM Rue de Tolbiac 101 F-75645 Paris Cédex 13	<b>Contract no.:</b> BIO-F-445-81-F
<b>Head(s) of research team(s):</b> Dr. D. Hémon INSERM - U 170 Av. P. Vaillant Couturier 16 bis F-94800 Villejuif	
<b>General subject of the contract:</b> Radiodiagnostic irradiation of men and reproduction.	
<b>List of projects:</b> 1. Feasibility study on the frequency of preconceptual X-ray examinations and their consequences.	
<b>Total cost (for 2 years):</b> FF 576.000 = 95.808 ECU	<b>Ceiling of CEC contribution:</b> FF 197.200 = 32.801 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1982	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.3	<b>Others (man years):</b> 1.2
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Gesellschaft für Strahlen- und Umweltforschung mbH. GSF Ingolstädter Landstrasse 1 D-8042 Neuherberg	<b>Contract no.:</b> BIO-F-422-80-D
<b>Head(s) of research team(s):</b> Prof. Dr. W. Jacobi Institut für Strahlenschutz GSF Ingolstädter Landstrasse 1 D-8042 Neuherberg	Dr. H.G. Paretzke Institut für Strahlenschutz GSF Ingolstädter Landstrasse 1 D-8042 Neuherberg
<b>General subject of the contract:</b> Quantification of radiation risks.	
<b>List of projects:</b> 1. Quantification of radiation risks.	
<b>Total cost (for 4.5 years):</b> DM 1.835.980 = 731.175 ECU	<b>Ceiling of CEC contribution:</b> DM 727.540 = 289.741 ECU
<b>Duration:</b> 01.07.1980 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 16.2	<b>Others (man years):</b>
<b>Remarks:</b> Work to be carried out in co-operation with Dr. J. A. Reissland, NRPB, Chilton, UK, contract n° BIO-F-337-80-UK	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Commissariat à l'Energie Atomique Rue de la Fédération 29-33 B.P. 510 F-75752 Paris Cédex 15	<b>Contract no.:</b> B10-F-319-81-F
<b>Head(s) of research team(s):</b> Dr. J. C. Nenot Département de Protection CEA-CEN de Fontenay-aux-Roses B.P. n° 6 F-92260 Fontenay-aux-Roses	
<b>General subject of the contract:</b> Study of the various components of natural irradiation associated with the dwelling place.	
<b>List of projects:</b> 1. Various components of natural irradiation associated with the dwelling place.	
<b>Total cost (for 4 years):</b> FF 2.923.000 = 486.194 ECU	<b>Ceiling of CEC contribution:</b> FF 1.169.200 = 194.478 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2	<b>Others (man years):</b> 3.8
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> National Radiological Protection Board, NRPB Chilton, Didcot GB-Oxon OX11 0RQ	<b>Contract no.:</b> B10-F-335-81-UK
<b>Head(s) of research team(s):</b> Dr. J. A. Reissland Physics Department NRPB Chilton, Didcot GB-Oxon OX11 0RQ	
<b>General subject of the contract:</b> Environmental factors influencing the doses from inhaled radon daughters.	
<b>List of projects:</b> 1. Experimental and theoretical assessment of aerosol size distribution in different environments.	
<b>Total cost (for 4 years):</b> UKL 112.249 = 201.091 ECU	<b>Ceiling of CEC contribution:</b> UKL 25.825 = 46.265 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 1.6	<b>Others (man years):</b> 0.8
<b>Remarks:</b>	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> National Radiological Protection Board, NRPB Chilton, Didcot GB-Oxon OX11 0RQ	<b>Contract no.:</b> BIO-F-337-80-UK
<b>Head(s) of research team(s):</b> Dr. J. A. Reissland Physics Department NRPB Chilton, Didcot GB-Oxon OX11 0RQ	
<b>General subject of the contract:</b> Quantification of risks associated with ionizing radiation using data from human studies.	
<b>List of projects:</b> <ol style="list-style-type: none"> <li>1. Assessment of the findings which emerge from radiation epidemiology.</li> <li>2. Investigation of relative, absolute and multifactorial risk models.</li> <li>3. Comparative risk studies of radiation and other industrial factors.</li> </ol>	
<b>Total cost (for 4.5 years):</b> UKL 193.762 = 347.119 ECU	<b>Ceiling of CEC contribution:</b> UKL 48.800 = 87.424 ECU
<b>Duration:</b> 01.07.1980 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 2.9	<b>Others (man years):</b> 0.9
<b>Remarks:</b> Work to be carried out in co-operation with Dr. H. G. Paretzke, GSF, Institute for Radiation Protection, Neuherberg, West-Germany, contract n° BIO-F-422-80-D	

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Deutsches Krebsforschungs- zentrum Institut für Nuklearmedizin Im Neuenheimer Feld 280 D-6900 Heidelberg 1	<b>Contract no.:</b> BIO-F-369-81-D
<b>Head(s) of research team(s):</b> Prof. Dr. med. K. E. Scheer Institut für Nuklearmedizin DKFZ Im Neuenheimer Feld 280 D-6900 Heidelberg 1	
<b>General subject of the contract:</b> Research Project "Thorotrast" : Follow-up study.	
<b>List of projects:</b> 1. Investigations to evaluate the long-term effects caused by artificial radiation in man (Thorotrast patients) - Thorotrast follow-up study.	
<b>Total cost (for 4 years):</b> DM 1.460.028 = 581.453 ECU	<b>Ceiling of CEC contribution:</b> DM 584.010 = 232.581 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b>
<b>Scientists (man years):</b> 8.0	<b>Others (man years):</b> 12.0
<b>Remarks:</b> In collaboration with Institut für Biophysik, Universität Saarlandes; Institut für Pathologie, Städtischen Krankenanstalten Ludwigshafen; Institut für Nuklearmedizin, Freien Universität Berlin and Institut für Dokumentation, Information und Statistik, DKFZ, Heidelberg	

<b>Commission of the European Communities</b> <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Commissariat à l'Energie Atomique Rue de la Fédération 31-33 F-75752 Paris Cédex 15	<b>Contract no.:</b> BIO-F-423-81-F
<b>Head(s) of research team(s):</b> Dr. G. Uzzan Inst. de Protection et de Sur. Nucl. CEA-CEN de Fontenay-aux-Roses B.P. n°6 F-92260 Fontenay-aux-Roses	
<b>General subject of the contract:</b> Methods for evaluating the consequences of irradiation of the public.	
<b>List of projects:</b> 1. Methods for evaluating individual and collective doses resulting from various types of exposure to ionizing radiation. 2. Methods for evaluating the radiological detriment and its cost.	
<b>Total cost (for 4 years):</b> FF 22.000.000 = 3.659.348 ECU	<b>Ceiling of CEC contribution:</b> FF 8.800.000 = 1.463.739 ECU
<b>Duration:</b> 01.01.1981 - 31.12.1984	<b>CEC staff:</b> 2 scientists 1 technician
<b>Scientists (man years):</b> 24.0	<b>Others (man years):</b> 11.0
<b>Remarks:</b> This work is carried out within the framework of the Association EURATOM - CEA.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Centre d'Etudes sur l'Eval.  
de la Prot. dans le Domaine  
Nucléaire, CEPN  
Rue d'Ulm 26  
F-75005 Paris

**Contract no.:** B10-F-423-81-F

sub-contract : SC-002-F

**Head(s) of research team(s):**

Dr. F. Fagnani  
CEPN  
B.P. n° 48  
F-92260 Fontenay-aux-Roses

**General subject of the contract:**

Contribution to the study of medical irradiation : systematic  
diagnostic radiology in France.

**List of projects:**

1. Contribution to the study of medical irradiation : systematic  
diagnostic radiology in France.

**Ceiling of CEC contribution (for 1 years):**

FF 200.000 = 33.267 ECU

**Duration:**

01.06.1981 - 31.05.1982

**CEC staff:**

**Scientists (man/years):**

-Others (man/years):

**Remarks:** Sub-contract accepted by the Management Committee of the Association Euratom-CEA on a contractual basis stating the ceiling of the contribution of the Association.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Centre d'Etudes sur l'Eval. de la Prot. dans le Domaine Nucléaire, CEPN Rue d'Ulm 26 F-75005 Paris	<b>Contract no.:</b> BI0-F-423-81-F  <b>sub-contract:</b> SC-003-F
<b>Head(s) of research team(s):</b> Dr. F. Fagnani CEPN B.P. n° 48 F-92260 Fontenay-aux-Roses	
<b>General subject of the contract:</b> Research to define the implicit values of an occupational health hazard : methodological approach applied to uranium extraction.	
<b>List of projects:</b> 1. Research to define the implicit values of an occupational health hazard : methodological approach applied to uranium extraction.	
<b>Ceiling of CEC contribution (for 1 years):</b> FF 150.000 = 24.950 ECU	
<b>Duration:</b> 01.06.1981 - 31.05.1982	<b>CEC staff:</b>
<b>Scientists (man/years):</b>	<b>Others (man/years):</b>
<b>Remarks:</b> Sub-contract accepted by the Management Committee of the Association Euratom-CEA on a contractual basis stating the ceiling of the contribution of the Association.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Centre d'Etudes sur l'Eval.  
de la Prot. dans le Domaine  
Nucléaire, CEPN  
Rue d'Ulm 26  
F-75005 Paris

**Contract no.:** BI0-F-423-81-F

sub-contract : SC-004-F

**Head(s) of research team(s):**

Dr. F. Fagnani  
CEPN  
B.P. n° 48  
F-92260 Fontenay-aux-Roses

**General subject of the contract:**

Research to define the implicit values of an occupational health hazard : the case of vinyl-chloride-monomer.

**List of projects:**

1. Research to define the implicit values of an occupational health hazard : the case of vinyl-chloride-monomer.

**Ceiling of CEC contribution (for 1 years):**  
FF 200.000 = 33.267 ECU

**Duration:**  
01.06.1981 - 31.05.1982

**CEC staff:**

**Scientists (man/years):**

**Others (man/years):**

**Remarks:** Sub-contract accepted by the Management Committee of the Association Euratom-CEA on a contractual basis stating the ceiling of the contribution of the Association.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Imperial College of Science and Technology Exhibition Road GB-London SW7 2BX	<b>Contract no.:</b> B10-F-423-81-F  sub-contract : SC-001-UK
<b>Head(s) of research team(s):</b> Dr. A.J.H. Goddard Mechanical Engineering Dep. Imp. Coll. of Sc. and Techn. Exhibition Road GB-London SW7 2BX	
<b>General subject of the contract:</b> Assessment of collective doses from planned and unplanned releases to the atmosphere.	
<b>List of projects:</b> 1. Assessment of collective doses from planned and unplanned releases to the atmosphere.	
<b>Ceiling of CEC contribution (for 1.3 years):</b> UKL 18.000 = 32.247 ECU	
<b>Duration:</b> 01.01.1981 - 31.03.1982	<b>CEC staff:</b>
<b>Scientists (man/years):</b>	<b>Others (man/years):</b>
<b>Remarks:</b> Sub-contract accepted by the Management Committee of the Association Euratom-CEA on a contractual basis stating the ceiling of the contribution of the Association.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

Laboratoire de Statistiques et  
d'Etudes, Economiques et  
Sociales, LSEES  
Rue d'Ulm 26  
F-75005 Paris

**Contract no.:** BI0-F-423-81-F

sub-contract : SC-005-F

**Head(s) of research team(s):**

Dr. J. P. Pagès  
LSEES  
B.P. n° 48  
F-92260 Fontenay-aux-Roses

**General subject of the contract:**

The variability of individual doses as a factor in the assessment of the costs of the man-Sievert.

**List of projects:**

1. The variability of individual doses as a factor in the assessment of the costs of the man-Sievert.

**Ceiling of CEC contribution (for 1 years):**

FF 100.000 = 16.634 ECU

**Duration:**

01.06.1981 - 31.05.1982

**CEC staff:**

**Scientists (man/years):**

**Others (man/years):**

**Remarks:** Sub-contract accepted by the Management Committee of the Association Euratom-CEA on a contractual basis stating the ceiling of the contribution of the Association.

Commission of the European Communities <b>RADIATION PROTECTION PROGRAMME</b>	
<b>Contractor:</b> Laboratoire de Statistiques et d'Etudes Economiques et Sociales, LSEES Rue d'Ulm 26 F-75005 Paris	<b>Contract no.:</b> B10-F-423-81-F  sub-contract : SC-006-F
<b>Head(s) of research team(s):</b> Dr. J.P. Pagès LSEES B.P. n°48 F-92260 Fontenay-aux-Roses	
<b>General subject of the contract:</b> Comparative analysis of diffusion and transfer models for releases in marine waters.	
<b>List of projects:</b> 1. Comparative analysis of diffusion and transfer models for releases in marine waters.	
<b>Ceiling of CEC contribution (for 1 years):</b> FF 100.000 = 16.634 ECU	
<b>Duration:</b> 01.07.1981 - 30.06.1982	<b>CEC staff:</b>
<b>Scientists (man/years):</b>	<b>Others (man/years):</b>
<b>Remarks:</b> Sub-contract accepted by the Management Committee of the Association Euratom-CEA on a contractual basis stating the ceiling of the contribution of the Association.	

Commission of the European Communities  
**RADIATION PROTECTION PROGRAMME**

**Contractor:**

International Commission on  
Radiological Protection  
Clifton Avenue  
Sutton  
GB-Surrey SM2 5PU

**Contract no.:** BIO-F-425-81-UK

**Head(s) of research team(s):**

Dr. F. D. Sowby  
ICRP  
Clifton Avenue  
Sutton  
GB-Surrey SM2 5PU

**General subject of the contract:**

Development of fundamental data for radiation protection.

**List of projects:**

1. Examination of the scientific problems related to radiation protection with a view to improve the planning and application of the results of research to this problem.

**Total cost (for 4 years):**  
UKL 127.000 = 227.517 ECU

**Ceiling of CEC contribution:**  
UKL 45.810 = 82.067 ECU

**Duration:**  
01.01.1981 - 31.12.1984

**CEC staff:**

**Scientists (man years):** 4.0

**Others (man years):** 4.0

**Remarks:**

## II. APPENDIX

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Belgie/ Belgique	CEN/SCK 49,50,54,63, 107,108,115,139	Bruxelles 68,80, 149 Gent 47 Louvain 52,77, 133	
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Country	Research Institutions	Universities	Others
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United Kingdom	MAFF 56 MRC 67,97,102,117, 118,121,152,161, 162,163,164,165, 173 NERC 30,46 NPL 7 NRPB 24,26,61,113, 154,175,176,183, 184 PCL 112,123 UKAEA 6,19,20,21,35, 57,58,59,109,110, 111,147	Aberdeen 13 Dundee 14 Leicester 75 London 105,106, 190 Oxford 101 Swansea 146	Inst.Canc.Res. 65
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Conversion rates  
of the  
European Currency Unit  
ECU

Rates as of 01.09.1981

1 ECU =	BFR	41,10	(Belgische frank/franc belge)
	DKR	7,862	(Dansk krone)
	DM	2,511	(Deutsche Mark)
	DRA	61,08	(Δραχμή)
	FF	6,012	(Franc français)
	HFL	2,789	(Nederlandse gulden)
	IRL	0,6880	(Irish Pound)
	LIT	1256,0	(Lira italiana)
	UKL	0,5582	(Pound Sterling)
	USA	1,025	(United States dollar)

The total cost of each research contract and the ceiling of the contribution of the Commission are given in national currency and in European Currency Units. The latter figure is based on the conversion rates of 1 September 1981 as given in the table.

Budgetary situation of the  
Radiation Protection Programme  
1980 - 1984  
(situation as of 31.12.1981)

Total costs of the research contracts and financial participation of the Commission.

Sector *	Total Costs (ECU)	Distribution (%)	Funding CEC ECU	Distribution (%)
A	13.164.000	13	4.353.000	12
B	20.895.000	20	6.106.000	16
C	14.862.000	14	5.356.000	14
D	18.402.000	18	5.157.000	14
E **	23.584.000	23	11.634.000	31
F	12.475.000	12	4.699.000	13
Total	103.382.000	100	37.305.000	100

\* A : Radiation dosimetry and its interpretation.

B : Behaviour and control of radionuclides in the environment.

C : Short-term somatic effects of ionizing radiation.

D : Late somatic effects of ionizing radiation.

E : Genetic effects of ionizing radiation.

F : Evaluation of radiation risks.

\*\* Including the Biology Group Ispra.

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