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PROJECT ARIEL II.

1. 22/ 1/63. Letter from Dr. Haselbach enclosing -
  - 1A. Draft Proposal for Extension of the ARIEL project.
2. 24/ 1/63. Suggested Schedule for Experiments agreed between Drs. Schachner, Felton and Hughes.
3. 24/ 1/63. Dr. Felton's letter reporting on Dr. Schachner's visit to R.&D., and enclosing 2.
4. Amended draft Proposal for ARIEL II.
5. 28/ 1/63. Sir Charles Ellis' letter to Dr. Haselbach enclosing amended draft Proposal [4] - suggesting the incorporation of Schedule of Experiments [2] as an Appendix, also that the Project should be extended from nine to twelve months' duration.
6. 31/ 1/63. Letter from H. Schachner to D.G. Felton asking for a further supply of W-428 cigarettes and Cambridge filters.
7. 5/ 2/63. I.W. Hughes' acknowledgment of 6, stating 500 cigarettes and a supply of Cambridge filters were being sent off.
8. 8/ 2/63. Letter from Dr. Haselbach stating he was sending the Official Proposal for ARIEL II to Dr. Schwick to-day.
9. 11/ 2/63. Letter from Dr. Schwick enclosing the Proposal for Extension of Project Ariel. [See 11B].
10. 12/ 2/63. Letter to Dr. Haselbach confirming receipt of Ariel Proposal.
11. 13/ 2/63. Confidential note to Mr. Hobson, giving brief outline of the work and progress on ARIEL to date, with
  - 11A. Appendix A - Provision Patent Specification 2177/63,
  - 11B. Appendix B - Proposal for Extension of Project ARIEL, and recommending that 11B be accepted.
12. 18/ 2/63. Letter-Report on ARIEL - Study of Extraction Procedures - Choice of Additive - Study of Effect of Additive and Choice of Extract - Study of Conditions for Maximum Transfer - Preparation of the Practical Devices demonstrated on 9th January 1963.
13. 20/ 2/63. Schachner's letter acknowledging W-428 cigarettes and Cambridge filters, and referring to different extraction procedures and clay-tubes.
14. 22/ 2/63. Confidential letter to Dr. Green enclosing copy of Letter-Report 12 for comments. Also drawing his attention to the valuable comments and technical advice in Mr. Tugwood's letter 14A, and enclosing copy of Provisional Specification 14B.

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15. 1/ 3/63. Note of a talk with Mr. Bruton concerning the press notice of Elia Salzman's idea that scientists should develop 'instant smoke' in tubes. Mr. Bruton read through the relevant papers on MAD HATTER I and MAD HATTER III files dealing with Elia Salzman.
16. 1/ 3/63. Letter to Dr. Schwick enclosing the two copies of Agreement for ARIEL II for him to initial the amended date, and to return to us our copy.
17. 4/ 3/ 63. Confidential note to H.D.A. telling him the Board have agreed to extend Project ARIEL for a further 12 months to February 29th, 1964.
18. 4/ 3/63. Confidential letter to Dr. Green telling him the extension of Project ARIEL for a further 12 months had been agreed.
19. 6/ 3/63. Confidential letter to H.A.J. Freestone sending him the B.-A.T. copy of Agreement for Project Ariel II for lodging with Mr. Kemsley.
20. 7/ 3/63. Suggested draft letter from Mr. Langford to Mr. Yeaman.
21. 8/ 3/63. Letter to Mr. Yeaman telling him ARIEL II had now been agreed, and enclosing the Proposal for Extension of the Project for Dan Kane's information, at the same time asking if he had any suggestions to make.
22. 11/ 3/63. I.W. Hughes' letter to Dr. Schachner re ceramic tubes.
23. 13/ 3/63. Acknowledgment of Letter-Report [12].
24. 13/ 3/63. Dr. Green's reply to 14 and Letter-Report [12]. Suggests work on orange oil and other additives might be started a little earlier.
25. 15/ 3/63. 1st invoice for ARIEL II - March 1963 - £1,500.0.0.
26. 18/ 3/63. Sir Charles Ellis' reply to Letter-Report [12], also enclosing a copy of Tugwood's letter 14A [study of the patent literature bearing on Ariel], and giving Dr. Haselbach and Dr. Schachner freedom to modify the provisional programme should they find it desirable to do so.
27. 27/ 3/63. Letter from J.N. Ravlin to Mr. Langford, enclosing -
  - 27A. Letter from Dan Kane of March 13th, referring to Mr. Langford's two letters File 1, encls. 12 and 11, and commenting on Mr. Tugwood's letter of 6th Feb. See also encl. 21.
  - 27B. Letter from Dan Kane to Jim Ravlin of March 8th, concerning a British provisional specification - [referred to in 27A].

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28. 29/ 3/63. Letter from J.N. Ravlin to Mr. Langford, replying to 21, and enclosing -  
28A File note prepared by Dan Kane after reviewing Project for Ariel II, and asking for certain additional data.
29. 29/ 3/63. Dr. Schachner's acknowledgment of 22.
30. 29/ 3/63. Dr. Haselbach's letter acknowledging 26, and suggesting a visit from Sir Charles Ellis at the end of May and a visit from Dr. Hughes a little earlier.
31. 1/ 4/63. Sir Charles Ellis' acknowledgment of 30 and agreeing the two visits.
32. 1/ 4/63. Letter to Dr. Green regarding Dr. Hughes' visit to Geneva soon after Easter.
33. 1/ 4/63. 2nd invoice for ARIEL II - April 1963 - £1,500.0.0. [£3,000].
34. 2/ 4/63. Sir Charles Ellis' note to Mr. Hobson concerning his proposed visit to Geneva in the near future.
35. 2/ 4/63. Draft letter for consideration of Mr. Langford in reply to 27 and 28.
36. 3/ 4/63. Letter from Mr. T.E. Davies to Mr. Ravlin as at 35.
37. 4/ 4/63. I.W. Hughes' letter to Dr. Schachner advising despatch of further ceramic tubes.
38. 8/ 4/63. Sir Charles Ellis' letter to Dr. Green, following on 32, giving him relevant extracts of Daniel Kane's letter of March 13th [27A] for Dr. Hughes' information before he visits Geneva.
39. 8/ 4/63. Personal letter to Dr. Haselbach suggesting a visit to Geneva about June 4th. [Received 'phone call from Dr. Schwick on 10th April stating Dr. Haselbach would be on military service at the beginning of June but would be free during the week or fortnight 20th - 31st May. 23rd May a Bank holiday.]
40. 11/ 4/63. Dr. Schachner's acknowledgment of 37 and welcoming Dr. Hughes' visit on 21 - 23 April.
41. 9/ 4/63. LETTER-REPORT on Ariel covering period 25th January to 31st March 1963 - the three different extraction procedures have been examined.
42. 17/ 4/63. Confidential letter to Dr. Green enclosing 41.
43. 18/ 4/63. Acknowledgment to Dr. Schachner of Letter-Report 41.
44. 23/ 4/63. Sir Charles Ellis' note - History of the Development of the key ideas in Project Ariel. [For reply to J.N. Ravlin.]
45. 24/ 4/63. Draft letter to J. N. Ravlin from T.E. Davies enclosing 44.
46. 26/ 4/63. Letter to J. N. Ravlin as at 45.
- 46A. 23/ 4/63. Reference to Louis Bromberg's filter.

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47. 29/ 4/63. Sir Charles Ellis' summary of his conversation with Dr. I.W. Hughes on his return from Geneva.
48. 30/ 4/63. Copy of J.N. Ravlin's letter to Daniel Kane enclosing a copy of 44, and suggesting he should telephone C.D.S.
49. 1/ 5/63. 3rd invoice for ARIEL II, May, 1963 - £,155.0.0.  
[2,350.]
50. 2/ 5/63. Dr. Schachner's letter to Dr. Hughes giving results of experimental work - ceramic tube A-2 - cig.W-428 connected to Cambridge filter with a plastic tube - aluminium foil connected to the Cambridge filter with plastic tube - aluminium foil inserted into the Cambridge filter with a stopper.
51. 2/ 5/63. Letter from Dr. Hughes to Sir Charles Ellis mentioning a new idea - modification of Figs 1 and 3.
52. 3/ 5/63. Sir Charles Ellis' acknowledgment of 51
53. 3/ 5/63. Sir Charles Ellis' letter to J.N. Ravlin, referring to his letter [48], and saying he would be in New York in June and suggesting a meeting with Daniel Kane then.
54. 2/ 5/63. Letter from Dan Kane to J.N. Ravlin, acknowledging 44, 46 and 48, commenting on "certain notebook entries" which had been made re Ariel, and stating that the complete facts should be reviewed with Sir Charles Ellis.
55. 6/ 5/63. Letter from J.N. Ravlin to T.E. Davies enclosing copy of 54.
56. 6/ 5/63. Acknowledgment of 53 - Daniel Kane holding open June 6th and 7th for meeting with Sir Charles Ellis.
57. 9/ 5/63. Sir Charles Ellis' confirmation of June 6th for meeting with Dan. Kane.
58. 9/ 5/63. Strictly Confidential - Memo. on conversation with Dr. Schwick and Dr. Haselbach at Millbank office on 8th May, 1963.
59. 15/ 5/63. Letter from Daniel Kane suggesting 10.30 - 11.0 a.m. for meeting on June 6th, to be followed by lunch.
60. 17/ 5/63. Dr. Hughes' letter to Dr. Schachner acknowledging results of experiments, and enclosing -  
60A. Notes on PH4 Distillation.  
60B. Notes on Small Scale Nicotine Analysis.
61. 21/ 5/63. Sir Charles Ellis' acknowledgment of 59 with his thanks.
62. 31/ 5/63. LETTER-REPORT on Ariel covering period 1st April to 31st May, 1963.  
Part I - Study of the effect of inorganic solid additives  
Part II - Work on Fig. 1 - device - optimum size of the nucleation chamber required.

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63. 4/ 6/63. 4th invoice for ARIEL II, June 1963 - £1,350.C.O.  
[£5,700.]
64. 5/ 6/63. Acknowledgment to Dr. Schachner of his Letter-Report [62]
65. 5/ 6/63. Note to Dr. Hughes sending him a copy of the Letter-Report [62].
66. 6/ 6/63. Sir Charles Ellis' personal notes of a meeting with Daniel Kane on Thursday June 6th, on patent for Ariel device.
67. 7/ 6/63. Letter from Daniel Kane to Sir Charles Ellis at Louisville, confirming their meeting of June 6th [see 66].
68. 20/ 6/63. Dr. Hughes' letter to Dr. Schachner commenting on his Letter-Report [62].
69. 20/ 6/63. Dr. Hughes letter to Sir Charles Ellis, enclosing 68 and suggesting a further visit to Geneva.
70. 21/ 6/63. Dr. Schachner's reply to Dr. Hughes' letter [60].
71. 26/ 6/63. Dr. Hughes' reply to 70, and sending Dr. Schachner a further supply of W428 cigarettes and some powdered tobacco - laminated and extruded tobaccos to follow.  
[See 81]
72. 1/ 7/63. 5th invoice for ARIEL II, July 1963 - £1,350. [£7,050.]
73. 4/ 7/63. Sir Charles Ellis' letter to Daniel Kane, enclosing  
73A A copy of the Provisional Patent application which answers [1] and [2] in his letter [67]. Information against [3], [4], [5] and [6] to follow.  
[See 78]
- 74 9/ 7/63. Daniel Kane's acknowledgment of 73.
75. 16/ 7/63. Sir Charles Ellis' letter to Dr. Hughes stressing the desirability of letting our Patent Agents have some idea how the early experiments are developing with a view to their drafting the Final Application, and enclosing -  
75A Draft of the data that we hope to submit to the Patent Agents - Experimental Work on Special Smoking Device.  
[See 77]
76. 25/ 7/63. Dr. Hughes' reply to 75 and enclosing -  
76A. Additional information required for 75A.
77. 31/ 7/63. Data sent to Daniel Kane and J.H. Tugwood - Experimental Work on Special Smoking Device.
78. 31/ 7/63. Sir Charles Ellis' letter to D.H. Kane, enclosing a copy of 77 which supplies the information asked for in his letter 67.
79. 31/ 7/63. Note to Mr. T.E. Davies, enclosing -  
79A. Draft of a suggested letter to Mr. Tugwood enclosing memorandum 77.
80. 31/ 7/63. Letter from Mr. T.E. Davies to Mr. Tugwood as at 79A.

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31. 31/ 7/63. Dr. Hughes' letter to Dr. Schachner advising him of despatch of the laminated and extruded tobacco samples.
32. 1/ 8/63. Mr. Tugwood's acknowledgment of 30.
33. Sir Charles Ellis' personal notes made on visit to Geneva 8th July 1963.
34. 1/ 8/63. 6th invoice for ARIEL II, August 1963 - £1,350.0.0.  
[ 28,400.
35. 6/ 8/63. Mr. Tugwood's reply to 30 which enclosed 77.

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