



UNIVERSITY OF LONDON KING'S COLLEGE

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DEPARTMENT OF PLANT SCIENCES
SCHOOL OF BIOLOGICAL SCIENCES

Professor D. O. Hall
Professor of Biology

7th December 1976

Herewith a contribution to what the Americans call "junk mail". I've taken the precaution of printing on only one side so that you can use the sheets as scrap paper.

I'm sorry that I cannot send out reprints (we all know how expensive they now are) but if you wish any specific articles I may have a few copies available.

In lieu of a Christmas/New Year card please accept my greetings and best wishes.

Yours sincerely,

David Hall
David Hall



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DEPARTMENT OF PLANT SCIENCES
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Professor D. O. Hall
Professor of Plant Physiology

4th January, 1977

Dr. S. Ranganayaki
Chemistry Department
Allahabad University
68 Dilkusha
New Katra
Allahabad 211002
INDIA

Dear Dr. Ranganayaki:

Thank you very much for your interesting letter with all the information about the microstructures which you have been able to make and also the peptides. I have sent by separate mail a number of our reprints and other material which may be of interest to you. I certainly hope that you will send me copies of the reprints which you mentioned since I do have a copy of the Barcelona meeting abstracts.

I think it would be very nice if you could do these experiments in the presence of sulphur or sulphide or H_2S in order to see whether you could possibly form iron-sulphur peptides. You will see from our reprints that we have suggested that the iron-sulphur centre is very easy to make and that to wrap a minimal peptide ^{around it} is all that is required. We are unable to do these experiments but would be very willing to collaborate with you on checking any of the products from your experiments using our biological and electron paramagnetic resonance techniques. I certainly think there is a distinct possibility that it might be possible to form a very simple type of iron-sulphur protein and we could detect the ^{occurrence} ~~accounts~~ of these proteins quite easily. There is quite a lot of work now going on on the synthesis of artificial iron-sulphur centres and then trying to wrap peptides around them. This is the work of Dr. Holm in California. However, no one as far as I know is trying to do the synthesis the way that you possibly could do this.

I suggest that you consider this matter carefully and ready some of our reprints and we will also read yours. Then we could devise some form of collaboration if you thought it was worthwhile. I would like to point out that there is a distinct possibility that I will be in New Delhi in November next year ⁽¹⁹⁷⁷⁾ at the International Solar Energy Conference which you yourself might be attending. Otherwise I could come and visit you at your University if it would be considered worthwhile.

With best regards for the New Year,

Yours sincerely,

D. O. Hall
D. O. Hall

25.8.77

Dear Dr. D. O. Hall,

With reference to your letter dated 4th Jan. 1977

I wish to inform you that we have succeeded in incorporating some iron in ~~the~~ the particles which are formed photochemically.

~~The~~ I am herewith sending particles in a polythene bag.

The particles were prepared by exposing a mixture prepared by mixing 1 vol. of 4% (w/v) ammonium molybdate, 2 vol. of 3% (w/v) diammonium hydrogen phosphate, 1 vol. of mineral solution prepared by dissolving 20 mg. of each of NaCl, K₂SO₄, Calcium acetate, MgSO₄

~~and~~ FeSO₄ and KH₂PO₄ and 1 vol. of formaldehyde (36%). For preparing the mixture ^{50 ml. of} first the first three solutions were first mixed in

a ~~250~~ 500 ml. ~~of~~ conical flask. The flask was cotton plugged and sterilised at 15 lb. pressure for 30 min. After ~~the~~ cooling

50 ml. of 36% formaldehyde was aseptically added in the mixture and after gentle ~~to~~ shaking the mixture was exposed

to sunlight for three days giving 5 hrs. ^{exposure} ~~light~~ each day.

After this the mixture was filtered to separate the ^{particles} and they were dried in desiccator. I am sending you

three particles
chest

Please see whether there are of any ^{interest} to you. ~~It~~ Then contain very small amount of iron.

~~by ~~the~~ ~~way~~ ~~of~~ ~~the~~ ~~particles~~ ~~we~~ ~~are~~ ~~trying~~ ~~to~~ ~~incorporate~~ ~~more~~ ~~iron~~ ~~into~~ ~~the~~ ~~particles~~~~ We are trying to ^{increase} the percentage of iron in these particles. If there are not

satisfying I will send to you the particles with high ^{concentration} conc. of iron i.e. ~~if ~~it~~ ~~is~~ ~~not~~ ~~successful~~ ~~we~~ ~~are~~ ~~not~~ ~~able~~ ~~to~~ ~~do~~ ~~so~~~~ ^{experiments} or experiments

are successful. I have ^{interest} read with great ^{interest} your reprints and are enclosing ~~some~~ one of ours. Hoping to hear from you ^{along} with our best regards

Send Saplos (3) on 14/12/77

Yours sincerely
S. Ramnarayan
17/9/77