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OFFICE MEMORANDUM

Subject: Encouraging Development and Commercialization of Inventions and Innovations: A new impetus.

1. The Government of India has approved the proposal of DSIR on **Encouraging Development and Commercialization of Inventions and Innovations: A new impetus**. The key components of the proposal approved for implementation are:

   i. Permitting the researchers to have an equity stake in scientific enterprises / spin offs while in professional employment with their research and academic organizations (universities, academic and research institutions, herein after referred to as Scientific Establishment);

   ii. Permitting the Scientific Establishment to invest knowledgebase as equity in the enterprises;

   iii. Encouraging the Scientific Establishment to set up incubation centers; and

   iv. Facilitating mobility of researchers between industry and scientific establishment.

2. A brief write up on the components is given at Annexure-1.

3. Who can implement the scheme: Scientific Establishments such as Council of Scientific & Industrial Research (CSIR), Indian Council of Agricultural Research (ICAR), Indian Council of Medical Research (ICMR), Central and State Universities and affiliated colleges, Indian Institutes of Technology (IITs), National Institutes of Technology (NITs), Indian Institutes of Information Technology (IIITs), Indian Institute of Science (IISc), Indian Institutes of Science Education & Research (IISERs), National Institute of Science Education & Research (NISER), and the scientists engaged in Department of Science & Technology (DST), Department of Bio-technology (DBT), Department of Scientific & Industrial Research (DSIR), Ministry of Earth Sciences, Ministry of Communications and Information Technology, Department of Pharmaceuticals-Ministry of Chemicals & Fertilizers and Department of Health Research-Ministry of Health and Family Welfare as well as the autonomous institutions under them.

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4. The Annexures 2 to 5 define the broad guidelines for implementing the scheme. These are: Annexure-2-Broad principles guiding Scientific Entrepreneurship Scheme; Annexure-3-Broad principles guiding Knowledge for Equity Scheme; Annexure-4-Broad principles guiding the initiative on Setting up of Technology Incubation Centers; and Annexure-5-Broad principles guiding Mobility of researchers among research institutions, academic institutions, universities and industries. Based on these guidelines, the substantive rules and regulations shall be evolved, following the due consultative process, by the respective Scientific Establishment. The Scientific Establishment after seeking the concurrence of their administrative ministry shall seek the approval of its Governing Council/Body for implementing the schemes in their respective establishments.

5. For implementing the provision at para 1(i) by Scientific Establishment that is following CCS (Conduct) Rules, the Government has approved exemption in CCS (Conduct) Rules such as 15 (relating to private trade and employment), 16 (relating to investments, lending and borrowing), 18 (relating to movable/immovable property) and FR-11 and other related rules. However, only those scientists will be exempted from CCS (Conduct) Rules, who are permitted to have equity stake in companies by the Competent Authority. Remaining scientists of the Scientific Establishment will continue to be governed by the CCS (Conduct) Rules. If the Scientific Establishment is following its own conduct rules, then it has to provide exemption to the relevant rules to enable scientists permitted by the Competent Authority to avail the provision.

6. The Committee of Secretaries chaired by Cabinet Secretary with Secretaries of DSIR, DBT, DST, Department of Higher Education and DARE as members, is empowered to add any additional Scientific Establishment for implementing the provisions of the scheme. DSIR will act as the nodal department for seeking such approvals as well as notification of the same.

7. This OM is issued for implementation of the scheme.

(R.R. ABHYANKAR)
Scientist `G'

(1) All Secretaries to Govt. of India
(2) All Chief Secretaries of all States and Union Territories
(3) Directors of all IITs, NITs, IISc, IISERs, NISERs, NIPERs,
(4) Chairman, University Grant Commission
(5) Chairman, AICTE
(6) Vice-Chancellors of all Central and State Universities

Annexure – 1

Salient features of the Scheme

1.0 SCIENTIFIC ENTREPRENEURSHIP SCHEME

1.1 Many developed nations world over encourage and enable their researchers from publicly funded research organizations such as universities, academic and other research institutions to set up commercial entities while in professional employment with the organizations. This measure not only ensures the continued involvement of the researcher in translating the inventions or innovations to commercializable knowledge but also unleashes the entrepreneurial skills of researchers and thereby contributing to the economic development of the nation. Creation of scientist-based companies is the key indicator of the effectiveness of a national innovation system.

1.2 Scientific enterprises (ventures that leverage scientific research, know-how, inventions, innovations and expertise) are a special class of new ventures that have peculiar needs and resource requirements. Strong domain expertise, contemporary skills and access to specialized manpower, facilities and know-how are often essential for nucleating new scientific enterprises. Given these requirements, it is no surprise that such enterprises are often founded on the campuses of research institutes and universities with the active involvement of the staff of these institutions. Universities and Research Institutes in many countries and regions have thus become drivers of local economy. For example, in the bay area, University of California seems to be the key driver of the local economy.

1.3 The potential of this approach in transforming regional economies by creation of new companies is best exemplified by the start-up companies that have emerged from MIT (Boston, USA), Stanford (Silicon Valley, USA) and the University of Cambridge (UK). It is also well established that research staff of leading research institutes and universities have been instrumental in founding many new path-breaking knowledge-based enterprises. An inevitable conclusion of the global analysis is that we must permit and enable our researchers to set up science driven enterprises, with continued active research in the laboratories/universities and while being in the employment with their respective organizations.

1.4 Thus promoting science and engineering based enterprises and entrepreneurship is the future challenge for Indian R&D institutes and universities as the way to create continued impact on society and the economy. This measure will encourage not only creation of new businesses / spin off companies but also employment opportunities for highly skilled technical and scientific personnel. This would further enable our researchers to create practical solutions meeting social challenges, and to create and sustain a globally competitive industry for decades to come.

1.5 Based on a proposal of DSIR/CSIR, Government has approved to permit the researchers (scientists, engineers, professors) working in Scientific Establishments to have an equity stake in scientific enterprises / spin offs while in professional employment with their organizations. Such an equity stake can be taken at any stage of the entity through investment of their personal money.

2.0 KNOWLEDGE TO EQUITY SCHEME

2.1 Governments all over the world endeavor to find newer means to support the start up companies bubbling with new ideas, having innovative capacity, possessing considerable intellectual portfolios and are ready to seek new frontiers in the realm of technology and business. Studies indicate in the developed countries that the inventive capacity of start-up companies or early stage companies are significantly higher than the bigger companies. Further their risk taking capacity is also equally higher, which results in new and cutting edge technologies. Here the support of Government on one hand and Scientific Establishment on the other are essential to keep the high confidence levels of techno-entrepreneurs.

2.2 Launching a new product or setting a knowledge-based new Entity requires investment on many fronts particularly for capital-intensive infrastructure, manpower, technology costs, working capital etc. Thus, the requirement of heavy investment discourages many aspiring techno-entrepreneurs and companies to launch new projects/products. Governments try to support entrepreneurs in different ways to ease the burden of initial investment including offer of knowledgebase in exchange for equity.

2.3 Although the offer of technology/knowledge for equity by the Scientific Establishment is small when compared to overall investment in the Entity, it enhances the confidence among the entrepreneurs, as the Scientific Establishment is behind them for further development of the, technology/knowledge. Often such confidence boosting measures attract investors to invest in such ventures. Thus, the spin off benefits of such a small measure could at times be immense. Further, the offer of equity in lieu of knowledgebase besides playing a catalytic role for industrial growth in the country would provide more financial returns to Scientific Establishment compared to that obtained from premia and royalty.

2.4 Thus, one of the initiative that would be necessary to put in place is to permit Scientific Establishments and Scientific and Industrial Research Organizations (SIROs) recognized by Department of Scientific and Industrial Research (DSIR) to invest Knowledgebase (as defined in Annexure-2) as well as cost of support services as equity in private sector companies.

3.0 SETTING UP OF TECHNOLOGY INCUBATION CENTERS

3.1 Nurturing early stage innovations and developing them to technologies and products is the key to success. Early stage scientific enterprises are special class of ventures that have peculiar needs and resource requirements. Thus, proximity and ready access to strong domain expertise, business skills, centralized modern infrastructure, problem solving capabilities and knowledge base shall go a long way in nucleating the scientific enterprises. The concept of 'incubation centres' has served well in moving innovations to marketplace in advanced countries. Further, making a success of business from early stage innovations is associated with considerable risks, requires large investment of risk capital and significant effort by the entrepreneur. This measure would contain the initial capital investments in converting the innovations into commercializable knowledge.

3.2 Institutions like CSIR, IISc and IITs have devised mechanisms to open incubation centers on their campuses to nurture start up companies. Partial funding is provided by National Science and Technology Entrepreneurship Development Board (NSTEDB) under Department of Science & Technology for setting up such technology incubation centres. However these technology incubation centres need to be established in large numbers, in and around other Scientific Establishments and Scientific and Industrial Research Organizations (SIROs) as also private institutions in order to nurture start up companies. Such technology incubation centres shall compliment and help the researchers who wish to utilize the scientific entrepreneurship scheme as mentioned earlier.

3.3 Thus one of the initiatives that would be necessary to put in place is to allow Scientific Establishments to set up Technology Incubation Centers in their campuses. The proposed technology incubation centers would be a multipurpose facility. On one hand, it would aim to provide high quality infrastructure and ecosystem to entrepreneurs while on the other, it would help to nurture start up companies and encourage early stage innovation through appropriate handholding mechanisms. It will work towards commercialization of technologies/products and shall provide a breeding ground for start up companies and technopreneurs.

4.0 MOBILITY OF RESEARCHERS AMONG RESEARCH INSTITUTIONS, ACADEMIC INSTITUTIONS, UNIVERSITIES AND INDUSTRY

4.1 For setting up of scientific enterprises, Scientific Establishments need to inculcate entrepreneurship skills in its scientists. One of the most effective mechanisms for developing entrepreneurship skills in scientists working in Scientific Establishments is prior exposure to industry environment. This exposure can be brought about in two ways; by allowing scientists of Scientific Establishments to work in industry for certain duration, and/or by

accepting scientists from private industry to work in Scientific Establishments. The movement of scientists from one Scientific Establishment to other and to industry and vice versa is termed as mobility of researchers. Thus, the mobility of scientists/ technologists/ engineers among Scientific Establishments is an essential component of seamless transfer of knowledge and technologies, besides imparting newer skills as well as for fostering long lasting relationships. The mobility could be used for leveraging knowledge, commercialization and/or further development of knowledgebase jointly and for developing / learning together newer specialized skills. This type of interaction would enhance the technical knowledgebase of the industry.

4.2 In order to build newer skills, competencies and capabilities in scientists, a new initiative is proposed to conscientiously promote and encourage seamless mobility of scientists / technologists / engineers among Scientific Establishments.

4.3 The mobility will build newer skills, capabilities and competencies in the scientists of Scientific Establishment by providing them exposure to industry and to other organizations. This will help in seamless transfer of knowledge from one organization to other and from industry to Scientific Establishment. Mobility from industry will give them first hand account of research and development being pursued in Scientific Establishments. Thus the proposed scheme will bring amalgamation of ideas and skills across the entire spectrum of R&D in the country. Further, there is shortage of competent manpower to manage new institutions being established by the Government. The mobility scheme will ease this problem temporarily and provide time to new Scientific Establishments to recruit competent people. The mobility will be for research, teaching, R&D activities including further development of innovation and inventions as well as associated functions such as technology dissemination and diffusion, business development, knowledge management, technology and IP management, quality assurance, informatics, information technology etc. and also for the technology driven production, quality control and marketing at any relevant organization in India.

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Annexure – 2

Broad principles guiding Scientific Entrepreneurship Scheme

1. **Short Title:**

These guidelines may be called the **"Scientific Establishment special provisions 2008".**

2. **Definitions:**

2.1 In these guidelines, unless the context otherwise requires –

(a) "Government" means the Central Government;

(b) "Entity" means a legal person constituted primarily to commercialize Knowledgebase;

(c) "Scientific Enterprise" means a special class of new Entity that leverages scientific research, inventions and innovations and transform into commercializable technologies/products.

(d) "Scientific Establishment" means the bodies such as CSIR, ICAR, ICMR, Central and State Universities and affiliated colleges, IITs, NITs, IIITs, IISc, IISERs, NISER, and DST, DBT, DSIR, Ministry of Earth Sciences, Ministry of Information Technology, Ministry of Chemical & Fertilizers and Ministry of Health as well as the autonomous institutions under them. The Government may add to, delete from, amend or modify this list;

(e) "Scientists" means such categories of staff as notified by the Scientific Establishment from time to time and shall include scientists and engineers in the case of department and offices of the Government and the autonomous organizations and academic staff in the case of Academic institutions / Universities;

(f) "Knowledgebase" means all inventions / innovations (whether patentable or not) invention / innovation disclosures, trade secrets, know-how, proprietary information, technical data, documentation, data collections, databases, concepts, processes, software, designs drawings, materials, support services and the like, whether or not the foregoing are in tangible or intangible form.

3. **Procedure:**

(a) Every Scientific Establishment, within a reasonable period of the date of the notification of these schemes, shall establish procedures for handling requests from Scientists for permission to have a stake in an Entity and to be associated with the Entity as non-executive director;

(b) Any Scientist who desiring permission shall apply to the Scientific Establishment in prescribed format; and

(c) The Scientific Establishment shall examine each application for permission in accordance with procedures established by it and after giving the Scientist opportunity for personal hearing if necessary, either:

- refuse permission; or
- accord permission subject to such terms and conditions as appropriate.

4. Operative provisions:

(a) The scheme shall be applicable to Scientists / Engineers and Academic staff such as Lecturers, Assistant Professors, Associate Professors, Professors, etc.;

(b) Not withstanding anything contrary contained in any other rule, order or notification but subject to the provisions of this Scheme, Scientific Establishment shall permit a Scientist to have an equity stake in Scientific Enterprise;

(c) The Entity should not be construed an agent or representative or part of the Scientific Establishment. The Entity is solely responsible for the activities undertaken by the Entity or for any liabilities that may arise from the activities of the Entity;

(d) The primary responsibility of the Scientist is to the Scientific Establishment and will be bound by any instructions, general or specific, that the Scientific Establishment may issue from time to time.

(e) The Scientists shall bring potential conflict of interest issues to the knowledge of the Scientific Establishment and be guided by the instructions that the Scientific Establishment may issue. Each Scientific Establishment may issue guidelines for management of conflict of interest, relevant to such Scientific Establishment if necessary;

(f) The Entity can utilize the resources of the Scientific Establishment (the term 'resources' shall be construed widely and include, without limitation, laboratories, equipments, personnel and space of the Scientific Establishment) with prior approval in writing and on such terms and conditions as the Scientific Establishment may prescribe;

(g) Subject to the existing rights or licenses, the Entity shall have the option to license Knowledgebase from the Scientific Establishment by paying royalty (upfront or staggered with milestones or a combination of both). The Scientific Establishment in its discretion may take equity stake in the Entity in lieu of royalty. In such case the Scientific Establishment decides to disinvest the equity, it will be first offered to the promoters of the Entity;

(h) Scientific Establishment shall license Knowledgebase to the Entity on terms that are no worse than the terms on which the Scientific Establishment would have licensed the Knowledgebase to another person on arms length basis;

(i) The Entity shall continue to be liable to the Scientific Establishment for payment of royalty even if the Scientist disinvests his/her stake in the Entity;

(j) Notwithstanding any permission granted to a Scientist, no scientist shall directly or indirectly

(i) associate himself/ herself with any process to license knowledge base to the Entity;
(ii) associate himself/ herself with any process for the purchase or hiring of any goods and services from the Entity;
(iii) associate himself/ herself with the evaluation of any goods or services that compete with the goods or services of the Entity;

(k) The scientist could provide professional advice to the Entity, on such terms and conditions as the Scientific Establishment may prescribe;

(l) If the scientist desires to be associated with the company in the initial stage, he/she has to take lien from the Scientific Establishment. Such lien can be taken for a maximum period of 3 years.

(m) The competent authority to approve the individual proposal will be Head of Scientific Establishment or any officer nominated by him/her.

5. Disputes:

All disputes between the Scientist and the Scientific Establishment relatable to the permission granted under these Rules shall be settled by arbitration in accordance with the procedural and substantive law of India. The place of arbitration shall, in the discretion of the Scientific Establishment, be the Headquarters of the Scientific Establishment or the location of the laboratory where the Knowledgebase was developed or the location where the Scientist was employed when permission as hereinbefore was granted. The language of arbitration shall be English.

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Annexure – 3

Broad principles guiding Knowledge for Equity Scheme

1. Equity Investment would be permitted / made by Scientific Establishments listed at para-3 of OM;

2. Equity investment shall be made in lieu of royalty (upfront or staggered with milestones or a combination of both) resulting or expected from Knowledgebase as defined in Annexure-2 through a valid licensing agreement only. Such Scientific Establishments could also invest the cost of support services as equity;

3. Scientific Establishments shall not take the management of such joint ventures in hand. Management of such companies shall vest in the promoters or next majority stakeholder;

4. Scientific Establishments shall be allowed to nominate its representative on the Board of Directors of the company;

5. The dividend received from such companies as well as divestiture of equity shall be distributable with the innovators and staff as per the extant rules of the Scientific Establishment;

6. Dividend received from the income of such companies as well as the amount received due to divestiture of equity shall be ploughed back by Scientific Establishments in furthering its research objectives;

7. Scientific Establishments at an appropriate opportunity, on their discretion, shall be allowed to divest their equity as per the financial norms and they shall be allowed to utilize the services of financial institutions for managing the portfolio.

8. As the whole objective of this scheme is to help private company to commercialize Knowledgebase developed at Scientific Establishments, the spirit of camaraderie should reflect in divestiture of equity also. Thus, the company shall be given the first right to buy back the equity, without compromising on financial returns; and

9. Powers to approve investment of Knowledgebase as well as cost of support services as equity in private sector companies shall vest with the competent authority of the Scientific Establishment.

Based on the above broad guidelines, the Scientific Establishments shall evolve Rules & Regulations to implement the Scheme.

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Annexure – 4

Broad principles guiding the initiative on Setting up of Technology Incubation Centers

1. The Technology Incubation Center will function as an independent entity under Section 25 company mode or a society and will be professionally managed;

2. The Incubation Center would endeavor to be a self-sustaining entity within a reasonable period of its commencement;

3. In case the research organization has spare built up area, the same could be utilized for setting up of the incubation center. Other necessary facilities could be set up through grants-in-aid support from government or other agencies. Wherever, spare built up space is not available, the same may permitted to be constructed within the budgetary provisions of the Scientific Establishment;

4. All the support services that are provided by the institute/university to incubation center will be separately costed and recovered from the incubation center on a regular basis;

5. Head of the Scientific Establishment / an eminent scientist nominated by the Head of the Scientific Establishment shall act as Chairman of the Board of Directors of the Section 25 company or society specifically set up to operationalize the incubation center. He/She will have the over all authority for running the incubation center (of the concerned Scientific Establishment). The Board of Directors and Managing Director or CEO shall assist the Chairman in the management of the incubation center. The company shall have the powers, among others, to select the applicants based on a rigorous assessment of the applications received;

6. The Board of Directors would meet at least once in six months to discuss and take decisions for smooth running of incubation centre;

7. The incubation centre can identify a suitable person from the Scientific Establishment or hire the services of a professional as Managing Director or CEO (at competitive market prices) to manage the incubation centre. He/She would be responsible for the day-to-day operations and assist the Chairman for smooth running of the company;

8. Each such incubation centre shall endeavor to tie-up with venture capital funds to facilitate financing of the companies in the incubation centre; and

9. The performance of the incubation centre shall be reviewed form time to time through an external committee and a decision on their continuance or otherwise, would be taken.

Based on the above broad guidelines, the Scientific Establishment shall evolve Rules & Regulations to implement the Scheme.

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Annexure – 5

Broad principles guiding Mobility of researchers among research institutions, academic institutions, universities and industry

1. The mobility of researchers may be permitted between academia, research institutes and industry including approved Scientific and Industrial Research Organizations (SIROs). The objective of such mobility must clearly be defined;

2. Mobility shall be permitted only within the country;

3. The mobility under the scheme will be admissible to researchers working in Scientific Establishments listed at para-3 / industry / SIROs, as recognized by DSIR, and notified who have rendered at least three years of service;

4. The mobility will be for research, teaching, R&D activities including further development of innovation and inventions as well as associated functions such as technology dissemination and diffusion, business development, knowledge management, technology and IP management, quality assurance, informatics, information technology etc. and also for the technology driven production, quality control and marketing at any relevant organization in India;

5. Around 10-20% of researchers/faculty of any Scientific Establishment may be permitted to avail the scheme at any given moment of time. The host institute may be permitted to engage temporary staff during the period for sustaining the activities;

6. Each faculty member/researcher may spend up to 10-15% of his/her service period on mobility. This could be in small periods, but a minimum period of 2 months and a maximum period of two years at a stretch may be permitted;

7. The researcher/faculty shall receive his/her salary from the parent organization, whereas the accepting organization shall provide dislocation allowance of a minimum of 20% of his basic salary in addition to TA/DA. In case of mobility to industry/SIROs, the person concerned will be allowed to retain allowances offered by industry without any restrictions;

8. Family members retained at his/her headquarters shall be extended with medical and other facilities as applicable to other researchers;

9. During the period of mobility, the person concerned will be allowed to retain the accommodation on the same terms and conditions as are applicable to other researchers;

10. For all purposes, the mobility period under the scheme will be treated not only as a period on duty but also be counted for all future benefits and assessments. However the rigour of evaluation for professional advancement shall not be diluted;

11. Accepting organization shall provide all logistic support to the researchers;

12. The researchers on mobility and the faculty of accepting institutions shall be encouraged to write joint project proposals and jointly guide the research students;

13. The person being considered under the Mobility scheme must have at least 2 years of residual service after completion of Mobility period under the scheme; and

14. In case of mobility form industry to Scientific Establishments, the researchers concerned shall be paid competitive and consolidated salary by Scientific Establishment. Consolidated salary will be decided by the organization on the basis of its location, experience of the incumbent and area of the proposed work. The organization could provide accommodation and charge for the same as per rules. Further, the incumbents shall also be allowed to retain any payment on account of salary etc. from their parent organisation.

Based on the above broad guidelines, the Scientific Establishment shall evolve Rules Regulations to implement the Scheme.

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