good progress is simple — we try hard to understand the proteins that we work with. We study the structure and function of ion channels in one small laboratory. I do not have a ‘structure group’ and a ‘function group’; young scientists who come to work with me pursue the structural and functional sides of their projects as a single endeavour. If you want to solve the structure of an ion channel it helps to understand ion channels. To understand ion channels you must study their function. Our approach is not profound, it is traditional hypothesis-driven science, and it works.

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Opportunities for women in science (Russia, 1912)

Sir — Caroline Herzenberg (*Nature* **414**, 843; 2001) is correct to suggest in Correspondence that the two women in the photograph of Ivan Petrovich Pavlov and his group are Maria Kapitonovna Petrova and Maria Nikolaevna Erofeeva (alternatively spelt “Nikolayevna Yerofejeva”). The original, taken in Pavlov’s Department of Physiology at the Military Medical Academy in 1912, includes Pavlov, seventeen male co-workers and the two female co-workers.

Erofeeva and Petrova were members of the first generation of women to enter Pavlov’s laboratory, capitalizing on the expanded opportunities for women in the wake of the 1905 revolution. Erofeeva performed important experiments in 1910–12 that supported Pavlov’s view that any environmental agent could, in principle, become a conditional stimulus. She defended her doctoral thesis in 1912 and, unlike most of Pavlov’s co-workers, continued to work in his laboratory until taking a position at the Petropavlovsk Hospital and the P. F. Lesgaft scientific institute, where she continued her research until her death in 1925.

Petrova completed her doctoral thesis, on the nature and interaction of excitation and inhibition, in 1914. She and Pavlov became lovers that same year, Petrova becoming Pavlov’s most important

co-worker from about 1921 until his death in 1936. She created and was the principal force behind the laboratory’s increasingly important line of investigation into “the experimental pathology and therapeutics of higher nervous activity”. She directed the department of physiology and pathophysiology of higher nervous activity at the Leningrad Institute for the Improvement of Physicians from 1935 to 1941, and was also a prolific researcher and laboratory director at the Physiological Institute of the USSR Academy of Sciences. She survived the siege of Leningrad, won a Stalin prize for scientific research in 1946, and died in 1948.

Pavlov himself conducted very few of the experiments underlying his Nobel Prize-winning research on digestion and his more famous investigations on conditional reflexes, so his co-workers were central to his laboratory’s research — a subject I have previously covered in *Pavlov’s Physiology Factory: Experiment, Interpretation, Laboratory Enterprise* (Johns Hopkins University Press, Baltimore and London, 2002). I hope to rescue Erofeeva, Petrova and other equally interesting co-workers of the later period from obscurity in my forthcoming biography of Pavlov.

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Job-seekers, be careful of what you’re signing

Sir — My colleagues and I now strongly advise all our undergraduate and graduate students planning to enter industry to “read the fine print” — specifically, any exclusion clauses. It pays to check out this apparently small but possibly very significant detail before firmly accepting an offer, certainly before signing a contract or relocating. We feel that this precaution is valuable to any professional considering a change of employer, in addition to the familiar considerations of job satisfaction (of prime importance); type of work; size, type and health of company; location; and company benefits.

Some companies ask new employees to sign an agreement covering issues of patent ownership and confidentiality, for example agreeing that the company is the owner of any technical idea developed by the employee; or that the employee must not disclose or use outside the company any information that is proprietary to the

company, either while an employee or afterwards. Such agreements, which must be signed upon starting a new job, are commonplace to cover the legitimate right of the company to protect its proprietary ideas and technology.

But some companies attempt to impose other, considerably more demanding, requirements. One might be that a new employee agrees, for a stipulated time after taking employment with a different company, not to work in areas of research or technology in which he or she had been directly involved while working for the present company. A more extreme requirement is that the employee is not allowed to work or consult for a competitor for a stated period of time after leaving the company, sometimes for as long as two years.

Typically, of course, a person accepting a position with a new company has no thought of working elsewhere. But who can count on anything lasting forever? The level of job satisfaction could change over time; the employee may wish to move; the work environment might become degraded through economies or ineffective management; staff could be laid off, as happens often in industry these days; or the employee might simply find a new opportunity with another company. Such reasons for change can arise relatively early in a person’s career or after many years.

When embarking on a possible career move, the employee may have forgotten signing the agreement, but the company management will remember, and will remind the employee of the binding nature and implications of agreements that operate beyond the term of employment with the new employer.

So, our core advice to our students is that — before they make their final decision among different job offers, and before they have left their university town or home town — they ask any company offering them a job to send them copies of all agreements that they will be asked to sign when they join the organization. They can then seek legal advice in case of troubling ‘non-compete’ clauses. The requirements written into confidentiality agreements range widely from the quite mild and reasonably undemanding to those that go beyond the bounds of what I personally think ethically justifiable and proper.

Whatever the specifics, all these agreements are written in the interest of giving the company the protection that it feels it needs, and not for the benefit of the individual employee.

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