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Dr. Yves Brun Systems Biology/Microbiology Faculty Search Department of Biology, Indiana University Jordan Hall 142, 1001 E 3rd Street Bloomington, IN 47405-7005 USA

IN CONFIDENCE

Dear Dr. Brun:

I am very happy indeed to write on behalf of Dr. P. **Robin Hiesinger**, who is an applicant for the position of Assistant Professor in Systems Biology in your department.

Robin was with me for a period of time during 1999-2000, from Karl Fischbach's lab in Freiburg. He pursued EM studies on the first optic neuropile of the fly's visual system, the lamina, that extended his thesis work on the action of tetanus toxin light chain on optic lobe neurogenesis. His results appeared in the Journal of Neuroscience, and were, in my view, completely novel. They supported a role for activity during early neurogenesis, a role that was totally unexpected and one that implicated secretory activity of the sort traditionally envisaged only during release of neurotransmitter at the presynaptic terminal. As I'm sure he will explain elsewhere in his application, it is now becoming clear that secretory and trafficking activity also have quite different roles, to alter locally the pattern of expression of cell adhesion molecules at the cell membrane, during the morphogenesis of nerve terminals. Although he is still evaluating their significance, Robin thus made an extremely strong start to his career. This was immediately recognised by his being invited to give talks at two major meetings, first a symposium talk at the Göttingen Neurobiologentagung, a major European neurobiology meeting in vertebrate and invertebrate neurobiology with mostly European participants, and at the 2001 Cold Spring Harbor Neurobiology of Drosophila meeting. With this start and the EM experience he gained in my lab, he has since done a great deal more during his four years of postdoctoral work in Hugo Bellen's lab, into which he introduced EM methods learned in my lab and where he has participated in a major screen using the ey-FLP method. His more recent studies have led him to investigate V-ATPases and their role in neuron function, and he was just selected to present these as a lecture at the 2005 Cold Spring Harbor Drosophila Neurobiology meeting.

Let me say something about Robin's qualifications as both a scientist and person. One way to confirm that Robin is always in the top group is to point out the awards he has won. He received a Boehringer Ingelheim stipend to come to my lab, and then was awarded a highly competitive EMBO fellowship to start work in Hugo Bellen's lab at Baylor (for which I think the success rate was only 5%). Later he received an HHMI Research Associateship to remain with Hugo. I can assure you that he's everything he seems to be: extremely bright, dedicated and intent on science, capable of critical thought and quick to learn. He has outstanding computer skills, especially in 3-D reconstruction, database and bioinformatics methods, many of which he learned while still in Germany. There he helped found a computer-based company, and worked closely with the group at the Konrad-Zuse Centre in Berlin who developed the AMIRA software that has rapidly become an industry standard for 3-D volume reconstructions of confocal and other serial-section datasets in neurobiology. He is one of the most

skilful *Drosophila* brain imagers in the world. He has of course learned a great deal more in the Bellen lab, particularly in genetics and the art of publishing in Cell Press, and his recent Cell paper on a V-ATPase mutant is testament to his ability to publish to the very highest critical and competitive standards. He has been involved in major screens in Houston, from which a number of significant mutants have been isolated, which will fuel his future development. More than this, he is enormously energetic and knows how to run a project, to work long and hard, to make progress and, simply how to organise others as well. Yet, at heart I think he likes hands-on science and still wants to do lab work. Thus, while he may exchange ideas in a wide forum, he loves lab work and shows loyalty to a smaller group. Robin came to work on *Drosophila* from his interest in neuronal plasticity. It was this interest and our special expertise that initially drew him to my lab. In the Bellen lab these interests were made secondary to the projects he undertook with Hugo, which provided him with the training in molecular and hard-core genetics methods, but his interests in all forms of neuronal plasticity, from neurite morphogenesis to synaptic function, are his abiding concerns, to which he now plans to harness the skills acquired during his postdoctoral training. It is the theme of neuronal plasticity that most closely fits his scientific profile, and which he would contribute to your department.

To add to this already strong suite, Robin has great social skills. He has enormous charm, simply enormous. From the experience when he came to my lab, which even as a visiting graduate student he turned upside down to get projects started, I can attest to his remarkable effectiveness with people. I was happy to let him have his head, because he was so remarkably effective in the lab, and I gave him the attention I thought he deserved, and possibly also needed, in return for which he has been most helpful to me and to the other people in the lab at that time. Thus, even though he is intent on his own projects, and is highly competitive, he is also loyal and generous to others with his time and ideas, and always reveals with total openness what he is doing or thinking of doing. His entire personality is in fact open, intense and somewhat emotional, and it's always obvious when he's enthused or pleased about something. The other side of the openness of his feelings is that he has had to learn to accept set backs, especially upsets in the form of criticisms from reviewers, which initially I think he found rather hurtful. His sensitivity probably arises from an insecurity with people, rather than with science. He has matured considerably during his years with the Bellen lab, and not surprisingly has learned there to deal with criticism and engage in penetrating discussion. His abilities with people will add life, colour and energy to his scientific qualifications in whatever appointment he takes.

Given that his mother tongue is German, I should also add that Robin speaks English with complete clarity, faster even than many native English speakers I would say. Like any good European he still knows to use the subjunctive tense that many in North America have almost forgotten. He's highly verbal in all ways, in fact, more so than quantitative, and communicates most effectively by speaking. He can work alone, but Robin is not by nature a solitary person, moreover, but one who is naturally interactive, brought up on the fruits of collaborative partnerships in science, and with plenty to offer his collaborators, in real substance as well in addition to his rather charismatic personality. Overall, Robin is the most powerful young scientist to have passed through my lab, ever, and I believe he would be ideally suited to your position, with the skills not only to develop good projects but also to attract trainees and build a powerful group.

Yours sincerely,

I.A. Meinertzhagen, Ph.D., D.Sc.

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